DOMESTIC TENDER ENQUIRY DOCUMENT

FOR ESTABLISHING RATE CONTRACT & PROCUREMENT OF
Pre-clinical Items
FOR
NEW AIIMS

Under PMSSY Phase-IV &V
FOR

GOVT OF INDIA

MINISTRY OF HEALTH & FAMILY WELFARE

HITES/PCD/AIIMS-IV/RC-20/PRE-CLINICAL/19-20

Through

HLL INFRA TECH SERVICES LIMITED
(Subsidiary of HLL Lifecare Ltd., a Govt. of India Enterprise)
B-14 A, Sector-62, Noida-201 307
Phone: 0120-4071500; Fax: 0120-4071513
URL: www.hllhites.com
Email: pcd@hllhites.com,
bmenoida@hllhites.com

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Table of Contents

SECTION I

NOTICE INVITING TENDER (NIT)

Tender Enquiry No.: **HITES/PCD/AIIMS-IV/20/PRE-CLINICAL/19-20** **dated 16.07.2019**

(1) Procurement & Consultancy Services Division of **HLL Infra Tech Services Limited (HITES),** a fully owned subsidiary of HLL Lifecare Ltd. (HLL), for and on behalf of Govt. of India, Ministry of Health & Family Welfare, invites tenders, from eligible and qualified tenderers for supply of Pre-Clinical items to Government Institutes across India, as and when required by them during the validity of Rate Contract. The Rate contract shall be valid initially for a period of one year, extendable for another one year at the discretion of HITES.

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
1	3000004117	Downdraft ventilated Autopsy Table with Integral Sink	Forensic Medicine &Toxicology	14	1,770.00	1,40,000.00	23-07-2019 at 11:00AM
2	3000004118	Downdraft ventilated, Stainless steel, Dissecting Bench	Forensic Medicine &Toxicology	14	1,770.00	1,40,000.00	23-07-2019 at 11:00AM
3	3000004119	Air purifier	Forensic Medicine &Toxicology	14	1,180.00	70,000.00	23-07-2019 at 11:00AM
4	3000004120	Cadaver lift Conveyor style	Forensic Medicine &Toxicology	14	590.00	19,600.00	23-07-2019 at 11:00AM
5	3000004121	Weighing Machine for dead bodies	Forensic Medicine &Toxicology	14	590.00	28,000.00	23-07-2019 at 11:00AM
6	3000004122	Weighing Machine for organs/fetus (L P)	Forensic Medicine &Toxicology	21	590.00	2,100.00	23-07-2019 at 11:00AM
7	3000004123	Oscillating Electric Autopsy Saw	Forensic Medicine &Toxicology	14	1,770.00	1,40,000.00	23-07-2019 at 11:00AM
8	3000004124	Dissecting Instruments (as per list attached)	Forensic Medicine &Toxicology	14	1,180.00	56,000.00	23-07-2019 at 11:00AM
9	3000004125	Cadaver/ Autopsy carrier (L P)	Forensic Medicine &Toxicology	21	590.00	4,200.00	23-07-2019 at 11:00AM
10	3000004126	Mobile X- Ray system	Forensic Medicine &Toxicology	7	2,950.00	2,10,000.00	23-07-2019 at 11:00AM
11	3000004127	Student upright Binocular Microscopes	Forensic Medicine &Toxicology	140	1,180.00	84,000.00	23-07-2019 at 11:00AM
12	3000004128	Binocular research Microscope with camera attachment	Forensic Medicine &Toxicology	7	1,180.00	1,05,000.00	23-07-2019 at 11:00AM
13	3000004129	Analytical Digital Balance single pan	Forensic Medicine &Toxicology	7	590.00	42,000.00	23-07-2019 at 11:00AM
14	3000004131	Centrifuge Machine	Forensic Medicine &Toxicology	14	590.00	14,000.00	23-07-2019 at 11:00AM
15	3000004133	Dissecting Lights (Double Ceiling Mounts)	Forensic Medicine &Toxicology	14	3,540.00	2,80,000.00	23-07-2019 at 11:00AM
16	3000004134	Deep Freezer 200 L (-40 Deg C)	Forensic Medicine &Toxicology	7	1,180.00	70,000.00	23-07-2019 at 11:00AM
17	3000004135	Mortury Cooler (four Bodies)	Forensic Medicine &Toxicology	14	2,950.00	2,52,000.00	23-07-2019 at 11:00AM
18	3000004136	Ultraviolet/White light	Microbiology	7			24-07-2019 at

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
		transilluminator			590.00	70,000.00	11:00AM
19	3000004137	Analytical Weighing Scale – electronics	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
20	3000004138	Laboratory Autocalve-Microprocessor controlled Stainless steel horizontal	Microbiology	7	1,180.00	70,000.00	24-07-2019 at 11:00AM
21	3000004139	Bio safety cabinet Class II A2	Microbiology	14	2,360.00	70,000.00	24-07-2019 at 11:00AM
22	3000004140	Bio safety cabinet Class II B2	Microbiology	7	2,360.00	70,000.00	24-07-2019 at 11:00AM
23	3000004141	CO2 Incubator	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
24	3000004142	Micro pipette adjustable, 20ul,50ul,100ul,1000ul capacity	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
25	3000004143	Deep freezers -80^{0}C-Vertical	Microbiology	7	1,180.00	70,000.00	24-07-2019 at 11:00AM
26	3000004144	Electronic pipettes digitally adjustable	Microbiology	28	590.00	70,000.00	24-07-2019 at 11:00AM
27	3000004145	Pharmaceutical refrigerators	Microbiology	28	590.00	70,000.00	24-07-2019 at 11:00AM
28	3000004146	Laminar Airflow work station with HEPA filter complete	Microbiology	14	1,180.00	70,000.00	24-07-2019 at 11:00AM
29	3000004147	Automated tissue grinder (Homozenizer)	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
30	3000004148	Automated continuous monitoring stand alone blood culture system	Microbiology	7	3,540.00	70,000.00	24-07-2019 at 11:00AM
31	3000004149	Table top refrigerated centrifuged with accessories with adjustable rotor to hold different size tubes	Microbiology	7	1,180.00	70,000.00	24-07-2019 at 11:00AM
32	3000004150	Walk-in-cooler 4^{o}C (9x8x7 ft)	Microbiology	7	1,770.00	70,000.00	24-07-2019 at 11:00AM
33	3000004151	Multi channel pipette 10-50ul, 20-200 ul	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
34	3000004152	Laboratory centrifuge	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
35	3000004153	Desiccator cabinet	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
36	3000004154	Hot air oven microprocessor control	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
37	3000004155	Digital Standard Lab Bacteriological Incubator	Microbiology	28	590.00	70,000.00	24-07-2019 at 11:00AM

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
38	3000004156	Vertical autoclave	Microbiology	21	590.00	70,000.00	24-07-2019 at 11:00AM
39	3000004157	High Air Flow sampler with media plate for collection of air sample for bacteriological monitoring of O.T, I.C.U etc.	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
40	3000004159	Polycarbonate Anaerobic Jar with charges complete (Gas pack)to hold 5-9 plates	Microbiology	21	590.00	70,000.00	24-07-2019 at 11:00AM
41	3000004160	Membrane filter holder with hand held vacuum pump	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
42	3000004162	Water purification system for ultrapure nuclease free water	Microbiology	7	1,180.00	70,000.00	24-07-2019 at 11:00AM
43	3000004163	Fully automated Gel Documentation system with UPS back up	Microbiology	7	1,770.00	70,000.00	24-07-2019 at 11:00AM
44	3000004164	UV/Visual spectrophotomètre	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
45	3000004165	Gradient Thermal Cycler with stand alone UPS	Microbiology	7	1,180.00	70,000.00	24-07-2019 at 11:00AM
46	3000004166	Dry Heating block for PCR	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
47	3000004167	Gel electrophoresis horizontal with compatible power pack and accessories	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
48	3000004168	Semi automated ELISA system with washers	Microbiology	14	2,950.00	70,000.00	24-07-2019 at 11:00AM
49	3000004169	Water bath microprocessor controlled	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
50	3000004170	Liquid nitrogen cylinder	Microbiology	7	660.80	70,000.00	24-07-2019 at 11:00AM
51	3000004171	Positive pressure pump for tissue culture media prep.	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
52	3000004172	Binocular Microscopes research complete for faculty and with digital imaging and morphometry soft ware with photographic attachment for each section with phase	Microbiology	7	3,540.00	70,000.00	24-07-2019 at 11:00AM

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
		contrast and dark ground with flouroscent attachment					
53	3000004173	Binocular Microscope - Student for UG	Microbiology	700	5,900.00	700,000.00	24-07-2019 at 11:00AM
54	3000004174	Inspissator (Automated microprocessor controlled)	Microbiology	7	1,180.00	70,000.00	24-07-2019 at 11:00AM
55	3000004175	Incubator BOD	Microbiology	14	590.00	70,000.00	24-07-2019 at 11:00AM
56	3000004176	Automated rapid T.B culture and drug sensitivity detection system for 960 samples	Microbiology	7	5,900.00	70,000.00	24-07-2019 at 11:00AM
57	3000004177	Lyophilizer	Microbiology	7	1,770.00	70,000.00	24-07-2019 at 11:00AM
58	3000004178	Automatic Ice Flaking Machine	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
59	3000004179	Orbital shaker	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
60	3000004180	Table top dispenser	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
61	3000004181	Anaerobic work station with gas cylinder complete	Microbiology	7	2,360.00	70,000.00	24-07-2019 at 11:00AM
62	3000004183	Real Time PCR machine with stand alone UPS unit	Microbiology	7	5,310.00	70,000.00	24-07-2019 at 11:00AM
63	3000004184	Forced Air incubators microprocessor controlled 5-60^{0}C	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
64	3000004185	Sonicator	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
65	3000004186	Hybridization chamber system	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
66	3000004188	Automated bacterial identification system	Microbiology	7	4,130.00	70,000.00	24-07-2019 at 11:00AM
67	3000004189	Refrigerated shaker	Microbiology	7	590.00	70,000.00	24-07-2019 at 11:00AM
68	3000004190	Inverted microscope with phase contrast and epi-fluoroscent attachment	Microbiology	14	5,310.00	70,000.00	24-07-2019 at 11:00AM
69	3000004191	Refrigerated Incubator	Microbiology	7	2,360.00	70,000.00	24-07-2019 at 11:00AM
70	3000004192	Analgesiometer - Tail Flick (Digital)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
71	3000004193	Analgesiometer - Eddy's Hot Plate	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
72	3000004194	Polygraph (Sixteen channel research)	Pharmacology	7	2,950.00	70,000.00	25-07-2019 at 11:00AM
73	3000004195	Electro convulsiometer (with ear and corneal	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
		electrodes)					
74	3000004196	Cook's Pole Climbing Apparatus	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
75	3000004197	Rotarod (6 compartments)-	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
76	3000004198	Photoactometer	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
77	3000004199	Elevated Plus Maze	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
78	3000004200	Portable Autoclave (25L)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
79	3000004201	Incubator (20 - 100 degC)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
80	3000004202	Digital Spirometer	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
81	3000004203	Bicycle ergometer with digital display	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
82	3000004204	Double beam UV spectrophotometer (UV-Vis, variable wavelength, glass and quartz cuvettes with data analysis software and computer interface and power back-up)	Pharmacology	7	1,180.00	70,000.00	25-07-2019 at 11:00AM
83	3000004205	Refrigerator -20 deg C (With boxes to store samples)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
84	3000004206	Treadmill (motorized) for humans with cardiac moniter	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
85	3000004207	Multiple Choice Apparatus (with digital display)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
86	3000004208	Critical flicker fusion apparatus	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
87	3000004209	Human Learning Maze	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
88	3000004210	Hand Steadiness Tester (Linear type)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
89	3000004211	Hand Steadiness Tester (Hole Type)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
90	3000004212	Digital Memory Drum	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
91	3000004213	Quartenary FHPLC (Fast High Pressure Liquid Chromatography) with Fluorescence + visible and PDA detectors with columns and autosampler (Inclusive Software programme +	Pharmacology	7	5,900.00	70,000.00	25-07-2019 at 11:00AM

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
		computer + printer+ Online UPS with at least 1 hr backup)					
92	3000004214	Water purification system for HPLC	Pharmacology	7	1,770.00	70,000.00	25-07-2019 at 11:00AM
93	3000004215	Electrolyte Analyzer	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
94	3000004216	Student Electric Kymograph with drum	Pharmacology	28	590.00	70,000.00	25-07-2019 at 11:00AM
95	3000004217	Isolated Organ bath	Pharmacology	28	590.00	70,000.00	25-07-2019 at 11:00AM
96	3000004218	Lab. Centrifuge Machine (Digital)	Pharmacology	14	590.00	70,000.00	25-07-2019 at 11:00AM
97	3000004219	Electronic Balance	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
98	3000004220	Cardiac Monitor	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
99	3000004221	Multi Channel Pipette (Manual)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
100	3000004222	Animal Simulator Software for Pharmacology) (Proprietary: Elsevier with 3 years licence with offline and online both mode)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
101	3000004223	Digital PH Meter(Spec Same as per Biochem/Micro Deptt)	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
102	3000004224	Double Distillation Apparatus	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
103	3000004225	Bioelectrical Impedance Analyzer for bodycomposition	Pharmacology	7	590.00	70,000.00	25-07-2019 at 11:00AM
104	3000004226	Agarose gel electrophoresis system	Biochemistry	100	5,900.00	70,000.00	30-07-2019 at 11:00AM
105	3000004326	BMI Analyser	Communicty Medicine	30	590.00	70,000.00	30-07-2019 at 11:00AM
106	3000004327	Digital Colorimeters	Biochemistry	130	1,180.00	78,000.00	30-07-2019 at 11:00AM
107	3000004328	Fat Extraction	Communicty Medicine	30	2,124.00	70,000.00	30-07-2019 at 11:00AM
108	3000004329	Hemoglobinometer	Communicty Medicine	50	590.00	70,000.00	30-07-2019 at 11:00AM
109	3000004330	Opthalmoscope	Communicty Medicine	100	472.00	70,000.00	30-07-2019 at 11:00AM
110	3000004331	PA system	Communicty Medicine	30	141.60	70,000.00	30-07-2019 at 11:00AM
111	3000004332	Plastination Equipment	Anatomy	30	708.00	70,000.00	31-07-2019 at 11:00AM
112	3000004333	Sound Level Meter	Communicty	30			30-07-2019 at

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
			Medicine		70.80	70,000.00	11:00AM
113	3000004334	Von Frey Aesthesiometer	Physiology	50	1,770.00	70,000.00	31-07-2019 at 11:00AM
114	3000004335	Vortex Mixers	Biochemistry	50	295.00	70,000.00	30-07-2019 at 11:00AM
115	3000004227	Anthropometric set – Digital	Physiology	50	3,540.00	70,000.00	31-07-2019 at 11:00AM
116	3000004336	Electronic muscle stimulator	Physiology	80	66.08	70,000.00	31-07-2019 at 11:00AM
117	3000004337	Mosso's Ergograph	Physiology	50	106.20	70,000.00	31-07-2019 at 11:00AM
118	3000004338	Priestly Smith Perimeter	Physiology	500	2,360.00	70,000.00	31-07-2019 at 11:00AM
119	3000004228	Apparatus for passive movement	Physiology	30	2,360.00	30,000.00	31-07-2019 at 11:00AM
120	3000004229	Chemiluminescence & Gel imaging & analysis system	Biochemistry	30	5,900.00	6,00,000.00	30-07-2019 at 11:00AM
121	3000004230	Densitometer with computer	Biochemistry	50	1,180.00	1,00,000.00	30-07-2019 at 11:00AM
122	3000004231	Fluorescent microscope	Biochemistry	50	5,900.00	12,00,000.00	30-07-2019 at 11:00AM
123	3000004232	Inverted microscope with PC	Anatomy/ Biochemistry	100	5,900.00	30,00,000.00	30-07-2019 at 11:00AM
124	3000004233	Physiograph – three channel	Biochemistry	300	5,900.00	9,00,000.00	30-07-2019 at 11:00AM
125	3000004234	Single channel physiological recorder	Physiology	500	5,900.00	7,50,000.00	31-07-2019 at 11:00AM
126	3000004235	Transilluminator with UV stand and UV torch	Physiology	30	1,180.00	70,000.00	31-07-2019 at 11:00AM
127	3000004236	Ultra Sonicator	Biochemistry	50	5,900.00	70,000.00	30-07-2019 at 11:00AM
128	3000004237	Vertical gel electrophoresis	Biochemistry	100	5,900.00	70,000.00	30-07-2019 at 11:00AM
129	3000004238	Western Blot Apparatus with Compatible Power Pack	Biochemistry	50	2,950.00	70,000.00	30-07-2019 at 11:00AM
130	3000004239	Grossing Station	Biochemistry	7	1,180.00	84,000.00	30-07-2019 at 11:00AM
131	3000004240	ESR Analyser	Lab Medicine & Pathology	7	590.00	10,920.00	30-07-2019 at 11:00AM
132	3000004241	Flocytometer	Lab Medicine & Pathology	7	1,180.00	75,600.00	30-07-2019 at 11:00AM
133	3000004242	Water Bath	Lab Medicine & Pathology	7	590.00	4,200.00	30-07-2019 at 11:00AM
134	3000004243	Weighing Balance	Lab Medicine & Pathology	7	590.00	6,300.00	30-07-2019 at 11:00AM
135	3000004244	Liquid Based Cytology System	Lab Medicine & Pathology	7	590.00	9,520.00	30-07-2019 at 11:00AM
136	3000004245	Elisa Reader with washer	Lab Medicine & Pathology	7	590.00	11,200.00	30-07-2019 at 11:00AM
137	3000004246	High Speed Autoclave	Lab Medicine & Pathology	7	590.00	2,240.00	30-07-2019 at 11:00AM

Sl no.	Event No.	Name of the item	Name of the Dept.	Estimated drawls	Tender processing fee in INR	EMD in INR	Pre-Bid date & Time
138	3000004247	Thermal Cycler	Lab Medicine & Pathology	7	590.00	3,964.80	30-07-2019 at 11:00AM
139	3000004248	Horizontal Gel Electrohoresis system	Lab Medicine & Pathology	7	590.00	70,000.00	30-07-2019 at 11:00AM
140	3000004249	Vertical electrophoresis system	Lab Medicine & Pathology	7	1,770.00	1,40,000.00	30-07-2019 at 11:00AM
141	3000004270	Complete Chromatographic Unit for paper & TLC	Biochemistry	14	590.00	56,000.00	30-07-2019 at 11:00AM
142	3000004272	Double demonstration Eye Pieces	Biochemistry	28	590.00	2,800.00	30-07-2019 at 11:00AM
143	3000004275	Stethograph (computerized)	Physiology	14	590.00	28,000.00	31-07-2019 at 11:00AM
144	3000004269	Fume hood	Anatomy	14	590.00	28,000.00	31-07-2019 at 11:00AM
145	3000004274	Chemical balance	Community Medicine	7	590.00	14,000.00	30-07-2019 at 11:00AM
146	3000004345	Chemiluminiscence & Gel imaging & analysis system	Biochemistry	30	7,080.00	6,00,000.00	30-07-2019 at 11:00AM
147	3000004346	Ophthalmoscope	Community Medicine	70	590.00	28,000.00	30-07-2019 at 11:00AM
148	3000004268	Flow cytometer	Biochemistry	7	5,900.00	7,00,000.00	30-07-2019 at 11:00AM
149	3000004271	HPLC system	Biochemistry	7	4,720.00	4,20,000.00	30-07-2019 at 11:00AM
150	3000004273	Perimeter	Physiology	175	1,180.00	70,000.00	31-07-2019 at 11:00AM

Note:

1. **Tender processing Fee is inclusive of GST @18% (Our GSTIN: 09AADCH4882R1ZP)**

(2) Tender timeline:

Sl. No.	Description	Schedule
a.	Last date for receipt of Pre-bid queries for Dept of Forensic Medicine &Toxicology	22-07-2019 at 11:00 AM
	Last date for receipt of Pre-bid queries for Dept of Microbiology	22-07-2019 at 11:00 AM
	Last date for receipt of Pre-bid queries for Dept of Pharmacology	23-07-2019 at 11:00 AM
	Last date for receipt of Pre-bid queries for Dept of Biochemistry, Communicty Medicine and Lab Medicine & Pathology	28-07-2019 at 11:00 AM
	Last date for receipt of Pre-bid queries for Dept of Anatomy and Physiology	29-07-2019 at 11:00 AM
b.	Pre-bid meeting date, time	Date : **As mentioned in Table above,** HLL Infra Tech Services Limited, Procurement & Consultancy Services Division, B-14 A, Sector-62, Noida-201307
c.	Closing date & time for submission of online bids	27.08.2019 13:00 hrs
d.	Closing date & time for submission of **tender processing fee and EMD in physical form***	27.08.2019 14:00 hrs

Sl. No.	Description	Schedule
e.	Time and date of opening of online bids	27.08.2019 14:30 hrs
f.	Venue for :- • Submission of tender processing fee, EMD in physical form. • Tender Opening-Tech Bid	HLL Infra Tech Services Limited, Procurement & Consultancy Services Division, B-14 A, Sector-62, Noida-201307

***Bidders have to submit Original Bank Instruments for tender processing fee and EMD or proof of EMD exemption as per GIT clause 19.2 (if applicable) within the above mentioned date and time.**

SPECIFIC Instructions for e-Tender Participation:-

(1) Bidders should have valid Class 3-B Digital Signature Certificate with encryption.
(2) Bidders are requested to read the bidders help document on e-tender web site link before proceeding for bidding.
(3) The prospective bidders have to register with the E-procurement system of HLL at https://etender.lifecarehll.com/irj/portal. On completion of the registration process, the bidders will be provided user ID and password within 48 hours (excluding non-working days). In order to submit the bids electronically, bidders are required to have a valid Class 3-B Digital Signature Certificate (signing and encryption/ decryption certificates).
(4) Post receipt of User ID & Password, Bidders can log on for downloading & uploading tender document.
(5) The tenderers shall submit Tender Processing Fee and EMD in physical form at the scheduled time and venue.
(6) Tenderer may download the tender enquiry documents from the web site www.hllhites.com or www.lifecarehll.com or www.eprocure.gov.in/cppp or https://etender.lifecarehll.com/irj/portal .
(7) The bidders shall submit the required Tender Processing Fee (in form of Demand Draft or Banker's Cheque) and EMD (as per GIT clause no. 19.3) in physical form in favour of 'HLL Infra Tech Services Limited' at the scheduled time and venue. **Tender processing Fee is required from all the bidders irrespective of their registration with NSIC or any other Govt. Organisation**.
(8) All the tender related documents to be scanned in .pdf format with lower resolution and 100% readability and submitted online. The bidders shall not submit any other documents in physical form other than the documents mentioned at point no 9 above.
(9) Prospective bidders may send their queries 02 (two) days before the pre-bid meeting so that they can be studied and addressed during pre-bid meeting. Query can also be raised during pre-bid meeting. No queries/ representations will be entertained after pre-bid meeting
(10) All prospective tenderers may attend the Pre Tender meeting. The venue, date and time indicated above.
(11) Bidders shall ensure that their bids complete in all respects, are submitted online through HLL's e-portal (as described above) ONLY. No DEVIATION is acceptable.
(12) Bidders may simulate bid submission (technical & financial) at least one week in advance of the bid submission deadline. No clarifications/troubleshooting regarding any problems being faced during online bid submission shall be entertained in the last week of bid submission

IMPORTANT NOTE:-

Tender Processing Fee and EMD (as applicable) should be deposited within the scheduled date & time in the Tender Box located at:

HLL Infra Tech Services Limited,
Procurement and Consultancy Division,
B-14 A, Sector-62, Noida-201307, Uttar Pradesh

CEO
HLL Infra Tech Services Limited

SECTION - II

GENERAL INSTRUCTIONS TO TENDERERS (GIT)

CONTENTS

GENERAL INSTRUCTIONS TO TENDERERS (GIT)

A. PREAMBLE

1. Definitions and Abbreviations

1.1 The following definitions and abbreviations, which have been used in these documents shall have the meaning as indicated below:

1.2 **Definitions**:

i. "**Purchaser**" means the organization purchasing goods and services.
ii. "**eTender**" means Bids / Quotation / Tender received from a Firm / Tender / Bidder.
iii. "**Tenderer**" means Bidder / the Individual or Firm submitting Bids / Quotation / Tender.
iv. "**Supplier**" means the individual or the firm supplying the goods and services as incorporated in the contract.
v. "**Goods**" means the articles, material, commodities, livestock, furniture, fixtures, raw material, spares, instruments, machinery, equipment, medical equipment, industrial plant, etc. which the supplier is required to supply to the purchaser under the contract.
vi. "**Services**" means services allied and incidental to the supply of goods, such as transportation, installation, commissioning, provision of technical assistance, training, after sales service, maintenance service and other such obligations of the supplier covered under the contract.
vii. "**Earnest Money Deposit"** EMD means Bid Security / monetary or financial guarantee to be furnished by a bidder.
viii. "**Contract**" means the written agreement entered into between the purchaser and/or consignees and the supplier, together with all the documents mentioned therein and including all attachments, annexure etc. therein.
ix. "**Rate Contract**" means contracts for the supply of stores at specified rates ordered during the period covered by the contract. No fixed quantities are mentioned in the contract, and the contractor is bound to execute any order from the HITES at the rates specified in the contract provided the supply order is placed within the rate contract period.
x. "**Supply Order**" means an order on a contractor to supply against Rate Contract. The term "Requisition" will not be used.
xi. "**Performance Security**" means monetary or financial guarantee to be furnished by the successful bidder for due performance of the contract placed on it. Performance Security is also known as Security Deposit.
xii. "**Consignee**" means the Hospital/Institute/Medical College/person to whom the goods are required to be delivered as specified in the Contract. If the goods are required to be delivered to a person as an interim consignee for the purpose of despatch to another person as provided in the Contract then that "another" person is the consignee, also known as the ultimate consignee.
xiii. "**Specification**" means the document/standard that prescribes the requirement with which goods or service has to conform.
xiv. "**Inspection**" means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement to determine conformity.
xv. "**Day**" means calendar day.
xvi. "**HITES**" means HLL Infra Tech Services Limited, a fully owned subsidiary of HLL Lifecare Limited.
xvii. "**Local supplier**" means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed under this Order or by the competent Ministries/ Departments in pursuance of this order.
xviii. "**Local content**" means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent.
xix. **"Margin of purchase preference"** means the maximum extent to which the price quoted by a local supplier may be above the L1 for the purpose of purchase preference.

1.3 **Abbreviations**:

i. "T E Document" means Tender Enquiry Document
ii. "NIT" means Notice Inviting Tenders
iii. "GIT" means General Instructions to Tenderers
iv. "SIT" means Special Instructions to Tenderers
v. "GCC" means General Conditions of Contract
vi. "SCC" means Special Conditions of Contract
vii. "NSIC" means National Small Industries Corporation
viii. "PSU" means Public Sector Undertaking
ix. "CPSU" means Central Public Sector Undertaking
x. "LSI" means Large Scale Industries
xi. "MSEs" means Micro & Small Enterprises
xii. "LC" means Letter of Credit
xiii. "DP" means Deliver Period
xiv. "BG" means Bank Guarantee
xv. "GST" means Goods and Service Tax
xvi. "CD" means Custom Duty
xvii. "RR" means Railway Receipt
xviii. "BL" means Bill of Lading
xix. "EXW" means Ex-Works
xx. "FOB" means Free on Board
xxi. "FCA" means Free Carrier
xxii. "FOR" means Free on Rail
xxiii. "CIF" means Cost, Insurance and Freight
xxiv. "CIP (Destinations)" means Carriage and Insurance Paid up to named port of destination. Additional the Insurance (local transportation and storage) would be extended and borne by the Supplier from warehouse to the consignee site for a period including 3 months beyond date of delivery.
xxv. "DDP" means Delivery Duty Paid named place of destination (consignee site)
xxvi. "INCONTERMS" means International Commercial Terms as on the date of Tender Opening
xxvii. "MoHFW" means Ministry of Health & Family Welfare, Government of India
xxviii. "CMC" means Comprehensive maintenance Contract (labour, spare and preventive maintenance)
xxix. "RT" means Re-Tender
xxx. "RC" means Rate Contract
xxxi. "SO" means Supply Order.

2. Introduction

2.1 The Purchaser has issued these TE documents for purchase of Furniture/goods/equipment and related services as mentioned in Section VI – "List of Requirements", which also indicates, *interalia*, the delivery schedule offered, terms and place of delivery.

2.2 This section (Section II – "General Instructions to Tenderers") provides the relevant information as well as instructions to assist the prospective bidders in preparation and submission of tenders. It also includes the mode and procedure to be adopted by the purchaser for receipt and opening as well security and evaluation of tenders and subsequent placement of contract.

2.3 The bidders shall also read the Special Instructions to Tenderers (SIT) related to this purchase, as contained in Section III of these documents and follow the same accordingly. Whenever there is a conflict between the GIT and the SIT, the provisions contained in the SIT shall prevail over those in the GIT.

2.4 Before formulating the tender and submitting the same to the purchaser, the bidder should read and examine all the terms, conditions, instructions, checklist etc. contained in the TE documents. Failing to

provide and/or comply with the required information, instructions, etc. incorporated in these TE documents may result in rejection of its tender.

2.5 The Rate Contract to be awarded pursuant to this tender enquiry and supply orders placed against the rate contract so awarded will be governed by the terms and conditions as contained in the following sections:

a. General Instructions to Tenderers – Section II
b. Special Instructions to Tenderers – Section III
c. General Conditions of Contract – Section IV
d. Special Conditions of Contract – Section V
e. List of Requirements – Section VI
f. All other contents of the Tender Enquiry Document as mentioned in clause 8.1

3. Rate Contract / Parallel Rate Contract

3.1 Purchaser reserves the rights for placement of Rate Contract/conclusion of parallel Rate contracts. The Purchaser(s) also reserve(s) right (1) to enter into parallel Rate Contract(s) simultaneously or at any time during the period of the rate contract with one or more bidder(s) as he/they may think fit and (2) to place ad-hoc contract or contracts simultaneously or at any time during the period of this contract with one or more supplier(s) / bidder(s) for such quantity of such item or items as the Purchaser (whose decision shall be final) may determine.

3.2 Purchaser also reserves the right to arrive at reasonable eligible L-1 price and make counter offers to higher quoting eligible firms for awarding Parallel Rate Contracts.

3.3 The successful bidders shall note that a supply order may be placed up to the last day of the currency of the Rate Contract.

4. Language of Tender

4.1 The tender submitted by the bidder and all subsequent correspondences and documents relating to the tender exchanged between the bidder and the purchaser, shall be written in the English language, unless otherwise specified in the Tender Enquiry. However, the language of any printed literature furnished by the bidder in connection with its tender may be written in any other language provided the same is accompanied by an English translation and, for the purpose of interpretation of the tender, the English translation shall prevail.

4.2 The tender submitted by the bidder and all subsequent correspondences and documents relating to the tender exchanged between the bidder and the purchaser, may also be written in the Hindi language, provided that the same are accompanied by English translation, in which case, for the purpose of interpretation of the tender etc., the English translations shall prevail.

5. Eligible Bidders

This invitation for tenders is open to all suppliers who fulfil the eligibility criteria specified in these documents.

6. Eligible Goods and Services

All goods and related services to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term "origin" used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied.

7. Tendering Expense

The bidder shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its tender including preparation, mailing and submission of its tender and for subsequent processing the same. The purchaser will, in no case be responsible or liable for any such cost, expenditure etc. regardless of the conduct or outcome of the tendering process.

B. TENDER ENQUIRY DOCUMETNS

The tender document should be read in conjunction with the Notice Inviting Tender (NIT) a copy of which is enclosed with this document. All clauses should be read in conjunction with any other instructions given elsewhere in this document on the same subject matter of the clause.

8. Content of Tender Enquiry Documents

8.1 In addition to Section I – "Notice Inviting Tender" (NIT), the TE document include:

- Section II - General Instructions to Tenderers (GIT)
- Section III - Special Instructions to Tenderers (SIT)
- Section IV - General Conditions of Contract (GCC)
- Section V - Special Conditions of Contract (SCC)
- Section VI - List of Requirements
- Section VII - Technical Specification
- Section VIII - Quality Control Requirement
- Section IX - Qualification Criteria
- Section X - Tender Form
- Section XI - Price Schedules
- Section XII - Questionnaire
- Section XIII - Bank Guarantee Form for EMD
- Section XIV - Manufacturer's Authorisation Form
- Section XV - Bank Guarantee Form for Performance Security / CMC Security
- Section XVI - Contract Forms (Rate Contract and Supply Order)
- Section XVII -Proforma of Consignee Receipt Certificate
- Section XVIII - Proforma of Final Acceptance Certificate by the consignee
- Section XIX - Check List for Bidders
- Section XX - Form for Integrity Pact
- Section XXI -Notice-cum-cancellation letter
- Section XXII - Revocation-cum-cancellation letter
- ***Appendix A – DIPP – Public Procurement (Preference to Make in India), Order 2017***
- ***Appendix B – Integrity pact***

8.2 The relevant details of the required goods/equipment and services, the terms, conditions and procedure for tendering, tender evaluation, placement of contract, the applicable contract terms and, also, the standard formats to be used for this purpose are incorporated in the above mentioned documents. The interested bidders are expected to examine all such details etc. to proceed further.

9. Amendments to TE document

9.1 At any time prior to the deadline for submission of tenders, the purchaser may, for any reason deemed fit by it, modify the TE documents by issuing suitable amendment(s) to it. The amendments, if any shall be posted only in the websites mentioned in NIT (Section-I).

9.2 In order to provide reasonable time to the prospective bidders to take necessary action in preparing their tenders as per the amendment, the purchaser may, at its discretion extend the deadline for the submission of tenders and other allied time frames, which are linked with that deadline.

10. Clarification of TE document

10.1 A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing in their letter head duly signed and scanned through email to pcd@hllhites.com and bmenoida@hllhites.com. The purchaser will respond to such request provided the same is received by the purchaser **one day prior to the pre-bid meeting**. **Any queries/representations received later shall not be taken into cognizance.**

C. PREPARATION OF e TENDERS

11. Documents Comprising the Tender

11.1 The tender(s) shall only be submitted online as mentioned below:

(i) Technical Bid (Consisting of Techno-Commercial bids in excel format provided with the tender enquiry along with the supporting documents i.e. scanned copies of Tender Processing Fee, EMD, Eligibility Criteria & Technical Specifications viz. Product Specification Sheets/Brochures, OEM Certificate, etc.) has to be attached in the C-folder of e-tendering module. Bidders have to ensure that the documents uploaded in pdf format are legible.

(ii) Price Bid has to be submitted in the prescribed excel format provided with the tender enquiry.

Note:

(i) The Tender Processing Fee and EMD, in favor of HLL Infra Tech Services Ltd, are to be submitted in physical form as per Section - I, Notice Inviting Tender, of this tender enquiry.

(ii) The bidders have to follow the steps listed in *Bidding Manual – Attachment Mode* available in the *Bidder Help Documents* of e-tender portal login screen for uploading the Techno-Commercial Bid.

A) <u>Details of Technical Tender (Un priced Tender)</u>

Bidders shall furnish the following information along with technical tender:.

i) Techno-Commercial Bid in excel format provided with the tender enquiry

ii) Earnest money Deposit (EMD) furnished in accordance with GIT clause 19.1 alternatively, documentary evidence as per GIT clause 19.2 for claiming exemption from payment of earnest money.

iii) Tender Form as per Section X (without indicating any prices).

iv) Documentary evidence, as necessary in terms of clauses 5 and 17 establishing that the tenderer is eligible to submit the tender and, also, qualified to perform the contract if its tender is accepted.

v) Tenderer/Agent who quotes for goods manufactured by other manufacturer shall furnish Manufacturer's Authorization strictly as per the prescribed format (Section - XIV).

vi) Power of Attorney issued by Competent Authority in favour of the person who is digitally signing/ uploading the tender(s).

vii) Documents and relevant details to establish in accordance with GIT clause 18 that the goods and the allied services to be supplied by the tenderer conform to the requirement of the TE documents.

viii) Performance Statement as per section IX along with relevant copies of orders and end users' satisfaction certificate.

ix) Price Schedule(s) as per Section XI filled up with all the details including Make, Model etc. of the goods offered with prices blank (without indicating any prices).

x) Certificate of Incorporation.

xi) Self-Attested copies of GST registration certificate and PAN Card.

xii) Non conviction /no pending conviction certification issued by Notary on judicial stamp paper for preceding three years.

xiii) Self-Attested copies of quality certificates i.e. ISO/ US FDA /CE /BIS Certificates issued by competent authority, if applicable.

xiv) Documentary evidence stating the status of bidder.

xv) List of procurement agencies of repute to which the tendered product have been supplied during last 12 months.

xvi) Self-attested copies of annual report, audited balance sheet and profit & loss account for preceding three years from the date of tender opening.

xvii) Notarized affidavit that tenderer does not have any relation with the person authorized to evaluate technically or involve in finalizing the tender or will decide the use of tendered items.

xviii) A self-declaration on Rs. 10/-non-judicial Stamp Paper that the rates quoted in the tender are the lowest and not quoted less than this to any Government Institution (State/Central/ other Institute in India).

xix) Copies of original product catalogues / data sheet must be enclosed of all quoted items.

xx) ***The Integrity pact (At Section XIX) shall be a part and parcel of this document and has to be signed by bidder(s) at the pre-tendering stage itself, as a pre-bid obligation and should be submitted along with the Techno-Commercial Bids. All bidders are bound to comply with the integrity pact clauses. Bids submitted without signing the integrity pact will be ab initio rejected without assigning any reason.***

B) Price Bid:

Prices are to be quoted in the prescribed Price Bid format in excel provided along with the tender enquiry in the e-tender portal. The price should be quoted for the accounting unit indicated in the e-tender document.

Note:

(i) The bidder has to be diligent while filling up the Techno-Commercial Bid and Price Bid provided in excel formats and must not tamper with the contents of the sheets.

(ii) It is the responsibility of bidder to go through the TE document to ensure furnishing all required documents in addition to above, if any.

(iii) The bidders have to follow the steps listed in *Bidding Manual – Attachment Mode* available in the *Bidder Help Documents* of e-tender portal login screen for uploading the Price Bid.

11.2 A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrant that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.

11.3 A tender, which does not fulfill any of the above requirements and/or give evasive information/reply against any such requirement, shall be liable to be ignored.

11.4 Tender sent by fax/telex/cable shall be ignored.

12. Tender Currencies

12.1 The price to be quoted only in Indian Rupees. Tenders, where prices are quoted in any other way shall be treated as non-responsive and rejected.

13. Tender Prices

13.1 The Bidder shall indicate on the Price Schedule provided under Section XI all the specified components of prices shown therein including the unit prices and total tender prices of the goods and services it proposes to supply against the requirement. All the columns shown in the price schedule should be filled up as required.

13.2 If a firm quotes NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.

13.3 The price quoted by the bidder for the goods shall not be higher than the lowest price charged for the goods of the same nature, class or description to an individual/ firm/ organisation or department of Government of India or any state Governments. If it is found that the goods have been supplied at a lower price during the currency of Rate Contract, then such lower price will be applicable to the goods to be supplied or already supplied.

13.4 While filling up the columns of the Price Schedule, the following aspects should be noted for compliance:

a) The price of the goods, quoted ex-factory/ex-showroom/ex-warehouse/off-the-shelf, as applicable, including all taxes and duties i.e. GST. already paid or payable or on the previously imported goods of foreign origin quoted ex-showroom etc.

b) Charges towards Packing & Forwarding, Inland Transportation, Insurance (local transportation and storage) would be borne by the Supplier from warehouse to the consignee site, Loading/Unloading and other local costs incidental to deliver of the goods to their final destination all over India (consignee details shall be indicated in the Supply Order).

c) The prices of annual CMC, if applicable, as mentioned in List of Requirements and Price Schedules.

13.5 **Additional information and instruction on Duties and Taxes:**

13.5.1 If the Bidder desires to ask for any duties or taxes to be paid extra, the same must be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

13.5.2 **Goods and Services Tax (GST) :**

a. If a tenderer asks for Goods and Services Tax to be paid extra, the rate and nature of Goods and Services Tax applicable should be shown separately. The Goods and Services Tax will be paid as per the rate at which it is liable to be assessed or has actually been assessed provided the transaction is legally liable to Goods and Services Tax and is payable as per the terms of the contract. If any refund of Tax is received at a later date, the Supplier must return the amount forth-with to the purchaser.

b. In case within the delivery period stipulated in the contract, there is an increase in the statutory taxes like GST, Custom Duty, or fresh imposition of taxes which may be levied in respect of the goods and services specified in the contract, reimbursement of these statutory variation shall be allowed to the extent of actual quantum of taxes paid by the supplier. This benefit, however, cannot be availed by the supplier in case the period of delivery is extended due to unexcused delay by the supplier.

c. But nevertheless, the Purchaser/Consignee shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty and/or GST or any other duty or tax or levy or on account of any other grounds. In case of downward revision in taxes/duties, the actual quantum of reduction of duty must be reimbursed to the purchaser by the supplier. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the supplier.

13.5.3 For insurance of goods to be supplied, relevant instructions as provided under GCC Clause 11 shall be followed.

13.6 The need for indication of all such price components by the bidders, as required in this clause (viz., GIT clause 13) is for the purpose of comparison of the tenders by the purchaser and will no way restrict the purchaser's right to award the contract on the selected bidder on any of the terms offered.

14. Indian Agent - Deleted

15. Firm Price

15.1 Unless otherwise specified in the SIT, prices quoted by the bidder shall remain firm and fixed during the currency of the contract and not subject to variation on any account.

15.2 However, as regards taxes and duties, if any, chargeable on the goods and payable, the conditions stipulated in GIT clause 13 will apply.

16. Delivery Period

16.1 The delivery period of the goods will be as mentioned in Section VI- List of requirement.
Bidder should however mention quote guaranteed monthly rate of supply and lead time required for commencement of supply after placement of supply order in Section VIII- Quality Control Requirements.

17. Documents Establishing Bidder's Eligibility and Qualifications

17.1 Pursuant to GIT clause 11, the bidder shall furnish, as part of its tender, relevant details and documents establishing its eligibility to quote and its qualifications to perform the contract if its tender is accepted.

17.2 The documentary evidence needed to establish the bidder's qualification shall fulfil the following requirements:

a) In case the bidder offers to supply goods, which are manufactured by some other firm, the bidder has been duly authorised by the goods manufacturer to quote for and supply the goods to the purchaser. The bidder shall submit manufacturer's authorization letter to this effect as per the standard form provided under Section XIV in this document.

b) The bidder has the required financial, technical and production capability necessary to perform the contract and, further, it meets the qualification criteria incorporated in the Section IX in these documents.

c) In case the tenderer is not doing business in India, it is duly represented by an agent stationed in India fully equipped and able to carry out the required contractual functions and duties of the supplier including after sale service, maintenance & repair etc. of the goods in question, stocking of spare parts and fast moving components and other obligations, if any, specified in the conditions of contract and/or technical specifications.

18. Documents establishing Goods' Conformity to TE document.

18.1 The bidder shall provide in its tender the required as well as the relevant documents like technical data, literature, drawing etc. to establish that the goods and services offered in the tender fully conform to the goods and services specified by the purchaser in the TE documents. For this purpose the bidder shall also provide a clause-by-clause commentary of the technical specifications and other technical details incorporated by the purchaser in the TE documents to establish technical responsiveness of the goods and services offered in its tender.

18.2 In case there is any variation and/or deviation between the goods & services prescribed by the purchaser and that offered by the bidder, the bidder shall list out the same in a chart form without ambiguity and provide the same along with its tender.

18.3 If a bidder furnishes wrong and/or misguiding data, statement(s) etc. about technical acceptability of the goods and services offered by it, its tender will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

19. Earnest Money Deposit (EMD)

19.1 Pursuant to GIT clauses 8.1 and 11.1 the bidder shall furnish along with its tender, earnest money for amount as indicated in the NIT and List of Requirements. The earnest money is required to protect the purchaser against the risk of the bidder's unwarranted conduct as amplified under sub-clause 19.7 below.

19.2 The tenderers who are currently registered and, also, will continue to remain registered during the tender validity period as Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy

issued by Department of Micro, Small and Medium Enterprises (MSME) or with National Small Industries Corporation, New Delhi shall be eligible for exemption from EMD. In case the tenderer falls in this category, it should furnish copy of its valid registration details (with MSME or NSIC, as the case may be).

A) The MSE's Bidder to note and ensure that nature of services and goods/items manufactured mentioned in MSE's certificate matches with the nature of the services and goods /items to be supplied as per Tender.

B)Traders/resellers/distributors/authorized agents will not be considered for availing benefits under PP Policy 2012 for MSEs as per MSE guidelines issued by MoMSME.

19.3 The earnest money shall be denominated in Indian Rupees as per GIT clause 12.1. The earnest money shall be furnished in one of the following forms:

i. Account Payee Demand Draft
ii. Banker's cheque
iii. Bank Guarantee
iv. Fixed Deposit Receipt.

19.4 The demand draft or banker's cheque shall be drawn on any scheduled commercial bank in India, in favour of the **"HLL Infra Tech Services Limited"** payable at New Delhi. Fixed Deposit Receipt should also in favour of "HLL Infra Tech Services Limited (A/c: *Name of Bidder*)" from any scheduled commercial bank in India, payable at New Delhi. In case of bank guarantee, the same is to be provided from any scheduled commercial bank in India as per the format specified under Section XIII in these documents.

19.5 The earnest money if submitted in the form of Bank Guarantee or Fixed Deposit Receipt shall be valid for a period of forty-five (45) days beyond the validity period of the tender. As validity period of Tender as per Clause 20 of GIT is 120 days, the EMD shall be valid for a minimum period of 165 days from Techno-Commercial Tender opening date.

19.6 Unsuccessful bidders' earnest money will be returned to them without any interest, after expiry of the tender validity period, but not later than thirty days after conclusion of the resultant contract. **Successful bidder's earnest money will be converted as a security towards performance and operation of Rate Contract and shall be retained /made valid till two months beyond the validity of Rate Contract**.

19.7 Earnest Money is required to protect the purchaser against the risk of the Bidder's conduct, which would warrant the forfeiture of the EMD. Earnest money of a tender will be forfeited, if the bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender or if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged without prejudice to other rights of the purchaser. The successful bidder's earnest money will be forfeited without prejudice to other rights of Purchaser if it fails to furnish the required performance security within the specified period.

20. A. Tender validity

a If not mentioned otherwise in the SIT, the tenders shall remain valid for acceptance for a period of 120 days (one hundred and twenty days) after the date of tender opening prescribed in the TE document. Any tender valid for a shorter period shall be treated as unresponsive and rejected.

b In exceptional cases, the bidders may be requested by the purchaser to extend the validity of their tenders up to a specified period. Such request(s) and responses thereto shall be conveyed by fax/email followed by surface mail. The bidders, who agree to extend the tender validity, are to extend the same without any change or modification of their original tender and they are also to extend the validity period of the EMD accordingly. A bidder, however, may not agree to extend its tender validity without forfeiting its EMD.

c. In case the day up to which the tenders are to remain valid falls on/subsequently declared a holiday or closed day for the purchaser, the tender validity shall automatically be extended up to the next working day.

20. B. Alternative Tenders

Alternative Tenders are not permitted.

However the Tenderers can quote alternate models meeting the tender specifications of same manufacturer with single EMD.

For schedules requiring Manufacturer's Authorization, only one bidder is permitted to quote for a particular manufacturer irrespective of models.

21. Digital Signing of e-Tender

The bidders shall submit their tenders as per the instructions contained in GIT Clause 11. Tenders shall be uploaded with all relevant PDF format. The relevant tender documents should be uploaded by an authorised person having Class 3B digital signature certificate

D. SUBMISSION OF TENDERS

22. Submission of Tenders

22.1 The tender shall be submitted online only.

(i) Pre-qualification and Technical compliance along with the **Techno-Commercial Bid** in excel format:

a) Scanned copies of tender processing fee and EMD

b) Manufacturer's authorization as per Section XIV in case bid is submitted by an Indian agent (A declaration must be attached here in case directly quoted by a manufacturer or a document establishing the relation of the Indian office with the manufacturer in case quoted by Indian office of the manufacturer).

c) Tender Form as per Section X.

d) Compliance of all terms and conditions of TED like- warranty, CMC, delivery period, delivery terms, payment terms, Liquidated Damages Clause, Arbitration clause, etc on letter head.

e) Declaration regarding Fall Clause and Deregistration, debarment from any Govt Dept/ Agencies

f) Copy of PAN & GST Registration Certificate.

g) Certificate of Incorporation/ or a Declaration in case the firm is being a proprietary firm.

h) Abridged Annual report of last 03 years (Balance sheet and Profit & Loss Account) completed till March 2017, in pdf format.

i) Name, address and details of account with respect to bidder.

j) Quality Control Requirements as per Section VIII clearly indicating the production capacity.

k) Performance statement along with required PO copies and its corresponding end user's satisfactory performance certificate as per section IX.

l) Technical Bid along with clause-by-clause technical compliance statement for the quoted goods vis-à-vis the Technical specifications along with product catalogue and data sheet in the tender enquiry.

m) In case the bidder quotes an equipment of a foreign manufacturer and submits the documents as per from the subsidiary company of the foreign Original Equipment Manufacturer in India, the bidder must submit the Power of Attorney given to the subsidiary company by the foreign Original Equipment Manufacturer, authorizing it to do business and perform all obligations for and on behalf of the foreign manufacturer company, in India.

n) The Integrity pact (At Section XX) shall be a part and parcel of this document and has to be signed by bidder(s) at the pre-tendering stage itself, as a pre-bid obligation and should be submitted along with the Techno-Commercial Bids. All bidders are bound to comply with the integrity pact clauses.

(ii) PRICE BID

a) The tenderers must ensure that they submit the Price Bid in prescribed format uploaded along with the tender enquiry. It is the responsibility of the bidder to ensure that the contents of the format are not tampered.
b) The tenderers must ensure that they submit the on-line tenders not later than the closing time and date specified for submission of tenders.

c) Along with price bid recent purchase order copies for the same model and technical configuration issued by institute of National importance and/or reputed central/state government hospitals should be uploaded in pdf form for reasonability of the offered price.

d) The bidder should submit the copy of original proforma invoice from the foreign manufacturer along with the price bid.

e) The supplier shall justify the present quotes based on previous purchase orders for similar project executed either in India or Globally. If they quote any new model or upgraded version of earlier model, they may mention the same in their tender.

22.2 The bidders must ensure that they submit the on-line tenders not later than the closing time and date specified for submission of tenders. They shall also ensure to submit the original Tender Processing Fee and EMD within its scheduled date & time.

23. Late Tender

There is NO PROVISION of uploading late tender beyond stipulated date & time in the e-tendering system.

24. Alteration and Withdrawal of Tender

The tenderer is permitted to change, edit or withdraw its bid on or before the end date & time of bid opening.

E. Opening of e-Tenders

25. Opening of e-tenders

25.1 The purchaser will open the e-tenders at the specified date and time and at the specified place as indicated in the NIT. In case the specified date of tender opening falls on / is subsequently declared a holiday or closed day for the purchaser, the tenders will be opened at the appointed time and place on the next working day.

25.2 Authorized representatives of the bidders, who have submitted tenders on time may attend the tender opening provided they bring with them letters of authority from the corresponding bidders. The tender opening official(s) will prepare a list of the representatives attending the tender opening. The list will contain the representatives "names & signatures and corresponding bidders" names and addresses.

25.3 Two-bid system as mentioned in Para 21.6 above will be as follows:

The Techno-Commercial Tenders are to be opened in the first instance, at the prescribed time and date as indicated in NIT. These Tenders shall be scrutinized and evaluated by the competent committee/authority with reference to parameters prescribed in the TE document. During the Techno - Commercial Tender opening, the tender opening official(s) will read the salient features of the tenders like brief description of the goods offered, delivery period, Earnest Money Deposit and any other special features of the tenders, as deemed fit by the tender opening official(s). Thereafter, in the second stage, the Price Tenders of only the Techno - Commercially acceptable offers (as decided in the first stage) shall be opened for further scrutiny and evaluation on a date notified after the evaluation of the Techno – Commercial tender. The prices, special discount if any of the goods offered etc., as deemed fit by tender opening official(s) will be read out.

F. SCRUTINY AND EVALUATION OF TENDERS

26. Basic Principle

Tenders will be evaluated on the basis of the terms & conditions already incorporated in the TE document, based on which tenders have been received and the terms, conditions etc. mentioned by the bidders in their tenders. No new condition will be brought in while scrutinizing and evaluating the tenders.

27. Preliminary Scrutiny of Tenders

27.1 The Purchaser will examine the Tenders to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished and, whether the documents uploaded are in legible form.

27.2 The Purchaser's determination of a Tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence

27.3 The tenders will be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions etc. as prescribed in the TE document. The tenders, which do not meet the basic requirements, are liable to be treated as non-responsive and will be summarily ignored.

27.4 The following are some of the important aspects, for which a tender shall be declared non-responsive during the evaluation and will be ignored;

(i) Tender validity is shorter than the required period.
(ii) Required EMD or its exemption documents have not been provided.
(iii) Tenderer has not agreed to give the required performance security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section - V – "Special Conditions of Contract", for due performance of the contract.
(iv) Poor/ unsatisfactory past performance.
(v) Tenderers who stand deregistered/banned/blacklisted by any Govt. Authorities.
(vi) Tenderer is not eligible as per GIT Clauses 5.1 & 17.1.
(vii) Tenderer has not agreed to other essential condition(s) specially incorporated in the tender enquiry, like delivery terms, delivery schedule, terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism applicable law.

28. Minor Informality/Irregularity/Non-Conformity

28.1 If during the preliminary examinations, the purchaser find any minor informality and/or irregularity and/or non-conformity in a tender, the purchaser may waive the same provided it does not constitute

any material deviation and financial impact and, also, does not prejudice or affect the ranking order of the bidders. Wherever necessary, the purchaser will convey its observation on such 'minor' issues to the bidder in writing asking the bidder to respond by a specific date. If the bidder does not reply by the specified date or gives evasive reply without clarifying the point at issue in clear terms, that tender will be liable to be ignored.

28.2 The purchaser may seek clarifications of historical nature from the bidders which has no bearings on prices.

29 Discrepancies in Prices

29.1 If, in the price structure quoted by a bidder, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless the purchaser feels that the bidder has made a mistake in placing the decimal point in the unit price, in which case the total price as quoted shall prevail over the unit price and the unit price corrected accordingly.

29.2 If there is an error in a total price, which has been worked out through addition and/or subtraction of subtotals shall prevail and the total corrected; and

29.3 If there is a discrepancy between the amount expressed in words and figures, the amount in words shall prevail, subject to sub clause 29.1 and 29.2 above.

29.4 If, as per the judgement of the purchaser, there is any such arithmetical discrepancy in a tender the same will be suitably conveyed to the bidder. If the bidder does not agree to the observation of the purchaser, the tender is liable to be ignored.

30 Qualification Criteria

30.1 Tenders of the bidders, who do not meet the required Qualification Criteria prescribed in Section IX will be treated as non-responsive and will not be considered further.

30.2 The Purchaser reserves the right to relax the Norms on Prior Experience for Start-ups and Micro & Small Enterprises in Public Procurement.

The Start-ups are defined in Annexure-A of the "Action Plan for Start-ups in India". The same is available on the website of Department of Industrial policy and Promotion (DIPP), Ministry of Commerce & Industry.

The Notification is available in the below link:

http://www.finmin.nic.in/the_ministry/dept_expenditure/ppcell/RelaxNorms_StarupMedEnterprise25072016.pdf

The FAQs are available in the below link:

http://dipp.nic.in/English/Investor/startupindia/FAQs_StartupIndia_30March2016.pdf

Note:- Definition of Startup (only for the purpose of Government schemes)

(Ref: Ministry of Finance Office Memorandum No. F.20/2/2014-PPD(Pt.) dated 25th July 2016.)

Start-up means an entity, incorporated or registered in India not prior to five years, with annual turnover not exceeding INR 25 crore in any preceding financial year, working towards innovation,
development, deployment or commercialization of new products, processes or services driven by technology or intellectual property.

Provided that such entity is not formed by splitting up, or reconstruction, of a business already in existence.

Provided also that an entity shall cease to be a Start-up if its turnover for the previous financial years has exceeded INR 25 crore or it has completed 5 years from the date of incorporation/ registration.

Provided further that a Start-up shall be eligible for tax benefits only after it has obtained certification from the Inter-Ministerial Board, setup for such purpose.

31 Deleted

32 Schedule-wise Evaluation

32.1 In case the List of Requirements contains more than one schedule, the responsive tenders will be evaluated and compared separately for each schedule. The tender for a schedule will not be considered if the complete requirements prescribed in that schedule are not included in the tender.

33 Comparison of Tenders

Unless mentioned otherwise in Section – III – Special Instructions to Tenderers and Section – VI – List of Requirements, the comparison of the responsive tenders shall be carried out on Delivery Duty Paid (DDP) consignee site basis. The quoted Site Modification Work prices and Comprehensive Annual Maintenance charges (CMC) prices will also be added for comparison/ranking purpose for evaluation. **"Net Present value (NPV) of the actual CMC price quoted for the required CMC period after the warranty period shall be considered for bid comparison and the NPV will be calculated after discounting the quoted CMC price by a discounting factor of 10% per annum."**

34 Additional Factors and Parameters for Evaluation and Ranking of Responsive Tenders

34.1 Further to GIT Clause 34 above, the purchaser's evaluation of a tender will include and take into account the following:

i) In the case of goods manufactured in India or goods of foreign origin already located in India, GST or any other taxes which will be contractually payable (to the tenderer), on the goods if a contract is awarded on the tenderer; and

ii)Deleted.

34.2 The purchaser's evaluation of tender will also take into account the additional factors, if any, incorporated in SIT in the manner and to the extent indicated therein.

34.3 The Purchaser reserves the right to give the price preference to small-scale sectors etc. and purchase preference to central public sector undertakings as per the instruction in vogue while evaluating, comparing and ranking the responsive tenders.

i. In exercise of powers conferred in Section 11 of the Micro, Small and Medium Enterprises Development (MSMED) Act 2006, the Government has notified a new Public Procurement Policy for Micro & Small Enterprises effective from 1st April 2012. The policy mandates that 25% of procurement of annual requirement of goods and services by all Central Ministries / Public Sector Undertakings will be from the micro and small enterprises. The Government has also earmarked a sub-target of 4% procurement of goods & services from MSEs owned by SC/ST entrepreneurs out of above said 25% quantity.

ii. In accordance with the above said notification, the participating Micro and Small Enterprises (MSEs) in a tender, quoting price within the band of L 1+15% would also be allowed to supply a portion of the requirement by bringing down their price to the L 1 price, in a situation where L 1 price is from someone other than an MSE. Such MSEs would be allowed to supply up to 25% of the total tendered value. In case there are more than one such eligible MSE, the 25%

supply will be shared equally. Out of 25% of the quantity earmarked for supply from MSEs, 4% quantity is earmarked for procurement from MSEs owned by SC/ST entrepreneurs. However, in the event of failure of such MSEs to participate in the tender process or meet the tender requirements and the L 1 price, the 4% quantity earmarked for MSEs owned by SC/ST entrepreneurs will be met from other participating MSEs.

iii. The MSEs fulfilling the prescribed eligibility criteria and participating in the tender shall enclose with their tender a copy of their valid registration certificate with District Industries Centres or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or any other body specified by Ministry of Micro and Small enterprises in support of their being an MSE, failing which their tender will be liable to be ignored.

iv. Special provision for Micro and Small Enterprise owned by women. Out of the total annual procurement from Micro and Small Enterprises, 3 per cent from within the 25 per cent target shall be earmarked for procurement from Micro and Small Enterprises owned by women.

Note: "If the bidder is a MSME, it shall declare in the bid document the Udyog Aadhar Memorandum Number issued to it under the MSMED Act, 2006. If a MSME bidder do not furnish the UAM Number along with bid documents, such MSME unit will not be eligible for the benefits available under Public Procurement Policy for MSEs Order 2012."

34.4 **Preference to Make in India**: As per the order issued by

i) Department of Industrial Policy and Promotion (DIPP) vide No. P-45021/2/2017-BE-II dated 15.06.2017 &

ii) Department of Pharmaceuticals vide No. F- 31026/36/2016-MD dated 18.05.2018 and the subsequent orders thereof;

the purchaser reserves the right to give preference to the local supplier. A copy of this order is enclosed at **Appendix-A** which will form a part of this TED for evaluation and ranking of bids.

35 Bidder's capability to perform the contract

35.1 The purchaser, through the above process of tender scrutiny and tender evaluation will determine to its satisfaction whether the tenderer, whose tender has been determined as the lowest evaluated responsive tender is eligible, qualified and capable in all respects to perform the contract satisfactorily. If, there is more than one schedule in the List of Requirements, then, such determination will be made separately for each schedule.

35.2 The above mentioned determination will, interalia, take into account the bidder's financial, technical and production capabilities for satisfying all the requirements of the purchaser as incorporated in the TE document. Such determination will be based upon scrutiny and examination of all relevant data and details submitted by the bidder in its tender as well as such other allied information as deemed appropriate by the purchaser.

35.3 Purchaser reserves the right to assess/verify the credentials and capability/capacity of the bidders/manufacturers before awarding the Rate Contracts.

36 Contacting the Purchaser

36.1 From the time of submission of tender to the time of awarding the contract, if a bidder needs to contact the purchaser for any reason relating to this tender enquiry and/or its tender, it should do so only in writing.

36.2 In case a bidder attempts to influence the purchaser in the purchaser's decision on scrutiny, comparison & evaluation of tenders and awarding the contract, the tender of the bidder shall be liable

for rejection in addition to appropriate administrative actions being taken against that bidder, as deemed fit by the purchaser.

G. AWARD OF RATE CONTRACT

37 Purchaser's Right to accept any tender and to reject any or all tenders

The Purchaser reserves the right to accept in part or in full any tender or reject any or more tender(s) without assigning any reason or to cancel the tendering process and reject all tenders at any time prior to award of rate contract, without incurring any liability, whatsoever to the affected bidder or bidders.

38 Award Criteria

38.1 Subject to GIT clause 37 above, the Rate Contract will be awarded to the lowest evaluated responsive bidder decided by the purchaser in terms of GIT Clause 35.

38.2 Provisions for Parallel Rate Contract:

HITES reserves the right to arrive at the reasonable L1 price and to conclude parallel Rate Contracts. In case, where price of L-1 is considered acceptable, Rate Contract will be concluded with the firm and its price will be counter offered to all other higher eligible quoting firms. Those who accept the counter offered prices or below may be awarded parallel rate contracts.

39 Letter of Award

39.1 Before expiry of the tender validity period, the purchaser will notify the successful bidder(s) in writing, by registered/speed post or by fax/email that its tender for goods & services, which have been selected by the purchaser, has been accepted for conclusion of Rate Contract, also briefly indicating therein the essential details like description, specification and delivery of the goods & services and corresponding prices accepted.

39.2 The successful bidder must furnish to the purchaser the required performance security as indicated in the Supply Orders placed against the Rate Contract within thirty days from the date of issue/dispatch of Supply Order. Relevant details about the performance security have been provided under GCC Clause 5 under Section IV.

39.3 The Supply Orders placed against the Rate Contract constitute the conclusion of the contract.

40 Issue of Rate Contract

40.1 Promptly after notification of Rate Contract, the Purchaser will place the Rate Contract form (as per Section XVI) duly completed and signed, in duplicate, to the successful bidder/bidders.

40.2 Within twenty one days from the date of the contract, the successful bidder shall return the original copy of the contract, duly signed and dated, to the Purchaser by registered/speed post.

41 Non-receipt of Performance Security and contract by the Purchaser/Consignee

Failure of the successful bidder in providing performance security and/or returning contract copy duly signed in terms of GIT clauses 39 and 40 above shall make the bidder liable for forfeiture of its EMD and, also, for further actions by the Purchaser against it as per the clause 24 of GCC – Termination of default.

42 Return of EMD

The earnest money of the unsuccessful bidders will be returned to them without any interest, whatsoever, in terms of GIT clause 19.6

43 Publication of Tender Result

The name and address of the successful bidder(s) receiving the Rate Contract(s) will be mentioned in the notice board/bulletin/website of the purchaser.

44 Book examination clause

44.1 The contractor shall whenever called upon and requiring to produce or cause to be produced for examination by the Purchaser, any cost or other account, book of account voucher, receipt, letter, memorandum, paper or writing or any copy of or extract from such document and also furnish information any wise relating to such transaction and produce before the duly authorised representative of the Purchaser returns verified in such manner as may be required relating, in any way to the execution of this contract or relevant for verifying or ascertaining the cost of execution of this contract (the decision of Purchaser on the question of relevancy of any document, information or return being final and binding on the parties). The obligation imposed by this clause is without prejudice to the obligations of the contractor under any statue, rules or orders and shall be binding on the contractor.

44.2 The contractor shall, if the Purchaser so requires (whether before or after the prices have been finally fixed), afford facilities to the Purchaser to visit the contractor's works for the purpose of examining the cost or production of the articles. If any portion of the work be entrusted or carried out by a sub-contractor or any of its subsidiary or allied firm or company, the authorised representative of Purchaser shall have the power to examine all the relevant book of such sub-contract or any subsidiary of allied firm or company shall be open to his inspection as mentioned in clause 44.1.

44.3 If on such examination, it is established that the contracted price is in excess of the actual cost plus reasonable margin of profit, the Purchaser shall have the right to reduce the price and determine the amount to a reasonable level.

44.4 Where a contract provides for book examination clause, to contractor or its agency bound to allow examination of its books within a period of 60 days from the date the notice is received by the contractor, or its agencies calling for the production of documents as under clause 44.1 above. In the event of contractor's or his agencies failure to do so, the contract price would be reduced and determined according to the best judgement of the purchaser which would be final and binding on the contractor and his agencies.

45 Integrity Pact

45.1 The Bidders/bidders may note that it is prescribed to use, practice and observe all the best, clean, ethical, honest and legal means & behaviour maintaining complete transparency and fairness in all activities concerning Bidding, Contracting/Rate Contracting and performance thereto for which the "Integrity Pact" shall be executed between Firm and Purchaser as per the format provided as Section-XX to be attached with the bid duly signed.

46 Cartel Formation

46.1 Cartel Formation and Quoting Prices in Pool – Bidders may note that offers of such firms who resort to unethical practice of cartel formation and quote prices in a pool shall be rejected and their offers shall also not be considered for award of RC for the next two years.

SECTION - III

SPECIAL INSTRUCTIONS TO TENDERERS (SIT)

Sl. No.	GIT Clause No.	Topic	SIT Provision	Page No.
A	1 to 7	Preamble	No Change	
B	8 to 10	TE documents	No Change	
C	11 to 21	Preparation of Tenders	Change	
D	22 to24	Submission of Tenders	Change	
E	25	Tender Opening	No Change	
F	26 to 37	Scrutiny and Evaluation of Tenders	No Change	
G	38 to 45	Award of Contract	No Change	

The following Special Instructions to Tenderers will apply for this purchase. These special instructions will modify/substitute/supplement the corresponding General Instructions to Tenderers (GIT) incorporated in Section II. The corresponding GIT clause numbers have also been indicated in the text below:
In case of any conflict between the provision in the GIT and that in the SIT, the provision contained in the SIT shall prevail.

SUBMISSION OF e-TENDERS

(i) All the necessary documents as prescribed in the NIT shall be prepared and scanned in different files (in PDF format as prescribed) and uploaded for on-line submission of Proposal.

(ii) Except Tender Processing Fee and EMD, all document(s)/ information(s) including the Financial Proposal (i.e. FORMAT FOR SUBMISSION OF FINANCIAL PROPOSAL) should be uploaded **online only** in the prescribed format given in the website. No other mode of submission shall be acceptable.

i) The prospective bidders may **scan the documents in low resolution (75 to 100 DPI)** instead of 200 DPI. The documents may be scanned for further lower resolution (if possible). This would reduce the size of the Cover and would be uploaded faster.

ii) The Individual file size of uploading is restricted up to 5 MB. Bidders may upload multiple files (Not exceeding 5 MB individually) & give relevant file name indicating the contents.

iii) The file name of price bid should match the file of the price bid format uploaded by the purchaser in the portal. This can be downloaded from the **Notes & Attachment** under **Details** of item when the event is in **Display Mode**.

iv) **Bidder have to quote in Indian Rupees only**

SECTION - IV
GENERAL CONDITIONS OF CONTRACT (GCC)

TABLE OF CLAUSES

GENERAL CONDITIONS OF CONTRACT (GCC)

1. Application

1.1 The General Conditions of Contract incorporated in this section shall be applicable for this purchase to the extent the same are not superseded by the Special Conditions of Contract prescribed under Section V, List of requirements under Section VI and Technical Specification under Section VII of this document.

1.2 The parties to the contract, which shall be deemed to be "Rate Contract" and which is intended for the supply of stores of the descriptions set forth in the Tender during the period therein specified shall be the contractor on the one part and the Purchaser(s) named in the Schedule to Tender.

1.3 Subject as hereinafter mentioned, no guarantee can be given as to the number or quantity of the stores which will be ordered during the period of the rate contract which is only in the nature of standing offer from the Contractor but the purchaser(s) undertakes(s) to order from the contractor all stores as detailed in the schedule of stores and prices which he/they require(s) to purchase except that he/they reserve(s) the right (1) of submitting to competition any supply of articles included in the contract the total value of which exceeds such amount as the Purchaser (whose decision shall be final), may determine upon consideration of the tenders, (2) of placing this contract simultaneously at any time during its period with one or more contractors as he/they may think fit, and (3) of obtaining from any source any stores referred to in the contract to meet an emergency, if the Purchaser (whose decision will be final) is satisfied that the contractor is not in a position to supply specific quantities or numbers within the period in which supplies are required

2. Use of contract documents and information

2.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract or any provision thereof including any specification, drawing, sample or any information furnished by or on behalf of the purchaser in connection therewith, to any person other than the person(s) employed by the supplier in the performance of the contract emanating from this TE document. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for the purposes of such performance for this contract.

2.2 Further, the supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC sub-clause 2.1 above except for the sole purpose of performing this contract.

2.3 Except the contract issued to the supplier, each and every other document mentioned in GCC sub-clause 2.1 above shall remain the property of the purchaser and, if advised by the purchaser, all copies of all such documents shall be returned to the purchaser on completion of the supplier's performance and obligations under this contract.

3. Patent Rights

3.1 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

4. Country of Origin

4.1 All goods and services to be supplied and provided for the contract shall have the origin in India or in the countries with which the Government of India has trade relations.

4.2 The word "origin" incorporated in this clause means the place from where the goods are mined, cultivated, grown, manufactured, produced or processed or from where the services are arranged.

4.3 The country of origin may be specified in the Price Schedule

5. Performance Security

5.1 Within fifteen (15) days from date of the placement of supply order against Rate Contract by the Purchaser, the supplier, shall furnish performance security to the Purchaser for an amount equal to ten percent (10%) of the total value of the supply order placed against Rate Contract, valid up to sixty (60) days after the date of completion of all contractual obligations by the supplier, including the warranty obligations.

5.2 The Performance security shall be denominated in Indian Rupees or in the currency of the contract as detailed below:

It shall be in any one of the forms namely Account Payee Demand Draft or Fixed Deposit Receipt drawn from any Scheduled bank in India or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in section XV of this document in favour of the Purchaser/Consignee. The validity of the Fixed Deposit receipt or Bank Guarantee will be for a period up to sixty (60) days beyond Warranty Period.

5.3 In the event of any failure /default of the supplier with or without any quantifiable loss to the government/purchaser including furnishing of consignee wise Bank Guarantee for CMC security as per Proforma in Section XV, the amount of the performance security is liable to be forfeited. The Administration Department may do the needful to cover any failure/default of the supplier with or without any quantifiable loss to the Government/purchaser.

5.4 In the event of any amendment issued to the contract, the supplier shall, within twenty-one (21) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), rendering the same valid in all respects in terms of the contract, as amended.

5.5 The supplier shall enter into Annual Comprehensive Maintenance Contract as per the 'Contract Form – B' in Section XVI with respective consignees, 3 (three) months prior to the completion of Warranty Period. The AMC will commence from the date of expiry of the Warranty Period.

5.6 Subject to GCC sub – clause 5.3 above, the Purchaser/Consignee will release the Performance Security without any interest to the supplier on completion of the supplier's all contractual obligations including the warranty obligations & after receipt of Consignee wise bank guarantee for CMC security in favour of Head of the Institute of the consignee as per the format in Section XV.

6. Technical Specifications and Standards

6.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in 'Technical Specification' and 'Quality Control Requirements' under Sections VII and VIII of this document.

7. Packing and Marking

7.1 The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, (the entire journey during transit to their final destination as indicated in the contract), rough handling, extreme weather conditions etc. so that there is no damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.

7.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications and in SCC. In case the packing requirements are amended due to issue of any amendment to the contract, the same shall also be taken care of by the supplier accordingly.

7.3 Packing instructions:

Unless otherwise mentioned in the Technical Specification and in SCC, the supplier shall make separate packages for each consignee (in case there is more than one consignee mentioned in the contract) and mark each package on three sides with the following with indelible paint of proper quality:

a. Contract number and date
b. Brief description of goods including quantity
c. Packing list reference number
d. Country of origin of goods
e. Consignee's name and full address and
f. Supplier's name and address

8. Inspection, Testing and Quality Control

8.1 The Contractor should satisfy himself that the Stores are in accordance with terms of the Contract and fully conform to the required specification by carrying out a thorough pre-inspection of each lot of the stores before actually tendering the same for inspection to the Inspection Agency nominated under the terms of contract. Such precaution on the part of the Contractor minimises the chances of rejection and the consequences thereof.

8.2 The purchaser and/or its nominated representative(s) will /shall be at consignee site, without any extra cost to the purchaser, inspect and/or test the ordered goods and the related services to confirm their conformity to the contract specifications and other quality control details incorporated in the contract. The purchaser shall inform the supplier in advance, in writing, the purchaser's programme for such inspection and, also the identity of the officials to be deputed for this purpose. The cost towards the transportation, boarding & lodging will be borne by the purchaser and/or its nominated representative(s).

8.3 The Technical Specification and Quality Control Requirements incorporated in the contract shall specify what inspections and tests are to be carried out and, also, where and how they are to be conducted. If such inspections and tests are conducted in the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance, including access to relevant drawings, design details and production data, shall be furnished by the supplier to the purchaser's inspector at no charge to the purchaser.

8.4 If during such inspections and tests the contracted goods fail to conform to the required specifications and standards, the purchaser's inspector may reject them and the supplier shall either replace the rejected goods or make all alterations necessary to meet the specifications and standards, as required, free of cost to the purchaser and resubmit the same to the purchaser's inspector for conducting the inspections and tests again.

8.5 In case the contract stipulates pre-despatch inspection of the ordered goods at supplier's premises, the supplier shall put up the goods for such inspection to the purchaser's inspector well ahead of the contractual delivery period, so that the purchaser's inspector is able to complete the inspection within the contractual delivery period. The goods, should, on no account be dispatched /delivered without getting the same inspected and passed by the inspecting officer stipulated in the contract.

8.6 If the supplier tenders the goods to the purchaser's inspector for inspection at the last moment without providing reasonable time to the inspector for completing the inspection within the contractual delivery period, the inspector may carry out the inspection and complete the formality beyond the contractual delivery period at the risk and expense of the supplier. The fact that the goods have been inspected after the contractual delivery period will not have the effect of keeping the contract alive and this will be without any prejudice to the legal rights and remedies available to the purchaser under the terms & conditions of the contract.

8.7 The purchaser's/consignee's contractual right to inspect, test and, if necessary, reject the goods after the goods' arrival at the final destination shall have no bearing of the fact that the goods have previously been inspected and cleared by purchaser's inspector during pre-despatch inspection mentioned above. On

rejection the supplier shall remove such stores within 14 days of the date of intimation of such rejection from consignee's premises. If such goods are not removed by the supplier within the period aforementioned, the purchaser/consignee may remove the rejected stores and either return the same to the supplier at his risk and cost by such mode of transport as purchaser/consignee may decide, or dispose of such goods at the supplier's risk to recover any expense incurred in connection with such disposals and also the cost of the rejected stores if already paid for.

8.8 Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract, as incorporated under GCC Clause 15.

9. Terms of Delivery

Goods shall be delivered by the supplier in accordance with the terms of delivery as specified in the list of requirement. Please note that the time shall be the essence of the contract.

10. Transportation of Goods

Instructions for transportation of domestic goods including goods already imported by the supplier.

In case no instruction is provided in this regard in the SCC, the supplier will arrange transportation of the ordered goods as per its own procedure. The supplier shall be responsible for all loss, destructions, damage or deterioration of or to the goods from any cause whatsoever while the goods after approval by the inspector are awaiting despatch or delivery.

11. Insurance:

Unless otherwise instructed in the SCC, the supplier shall make arrangements for insuring the goods at his cost against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the following manner:

In case of supply of goods on Consignee site basis, the supplier shall be responsible till the entire stores contracted for arrival in good condition at destination. The transit risk in this respect shall be covered by the Supplier by getting the stores duly insured for an amount equal to 110% of the value of the goods from "warehouse to warehouse" (consignee site) on all risk basis. The insurance cover shall be obtained by the Supplier and should be valid till 3 months after the receipt of goods by the Consignee.

If the equipment is not commissioned and handed over to the consignee within 3 months, the insurance will be extended by the supplier at their cost till the successful installation, testing, commissioning and handing over of the goods to the consignee is completed. In case the delay in the installation and commissioning is due to handing over of the site to the supplier by the consignee, such extensions of the insurance will still be done by the supplier, but the insurance extension charges at actual will be reimbursed.

12. Spare parts

1.1 If specified in the List of Requirements and in the resultant contract, the supplier shall supply/provide any or all of the following materials, information etc. pertaining to spare parts manufactured and/or supplied by the supplier including their prices:

a) Spare Parts list and prices of parts, consumables should be mentioned clearly and quoted. Bidder should also mention regarding the availably of spares for at least ten years.

b) The spare parts as selected by the Purchaser/Consignee to be purchased from the supplier, subject to the condition that such purchase of the spare parts shall not relieve the supplier of any contractual obligation including warranty obligations; and

c) In case the production of the spare parts is discontinued:

i. Sufficient advance notice to the Purchaser/Consignee before such discontinuation to provide adequate time to the purchaser to purchase the required spare parts etc., and

ii. Immediately following such discontinuation, providing the Purchaser/Consignee, free of cost, the designs, drawings, layouts and specifications of the spare parts, as and if requested by the Purchaser/Consignee.

12.2 Supplier shall carry sufficient inventories to assure ex-stock supply of consumables and spares for the goods so that the same are used during warranty and CMC period.

13. Incidental services

Subject to the stipulation, if any, in the SCC (Section – V), List of Requirements (Section – VI) and the Technical Specification (Section – VII), the supplier shall be required to perform the following services.

i) Installation & commissioning, Supervision and Demonstration of the goods
ii) Providing required jigs and tools for assembly, minor civil works required for the completion of the installation.
iii) Training of Consignee's Staff, operators etc. for operating and maintaining the goods
iv) Supplying required number of operation & maintenance manual for the goods

14. Distribution of Dispatch Documents for Clearance/Receipt of Goods

The supplier shall send all the relevant despatch documents well in time to the Purchaser/Consignee to enable the Purchaser/Consignee clear or receive (as the case may be) the goods in terms of the contract.

Unless otherwise specified in the SCC, the usual documents involved and the drill to be followed in general for this purpose are as follows.

Within 24 hours of despatch, the supplier shall notify the purchaser, consignee, and others concerned if mentioned in the contract, the complete details of despatch and also supply the following documents to them:

(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
(ii) Two copies of packing list identifying contents of each package;
(iii) Inspection certificate issued by the nominated Inspection agency, if any.
(iv) Certificate of origin (in case goods are of foreign origin);
(v) Insurance Certificate as per GCC Clause 11.
(vi) Manufacturers/Supplier's warranty certificate & In-house inspection certificate.

15. Warranty

15.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials (*except when the design adopted and/or the material used are as per the Purchaser's/Consignee's specifications*) or workmanship or from any act or omission of the supplier, that may develop under normal use of the supplied goods under the conditions prevailing in India.

15.2 This warranty shall remain valid for the period as mentioned in the SCC Section-V/ List of Requirement Section VI, after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the Purchaser/Consignee in terms of the contract, unless specified otherwise in the SCC.

i. No conditional warranty will be acceptable.

ii. Warranty as well as Comprehensive Maintenance contract will be inclusive of all accessories and Site Modification work and it will also cover the following wherever applicable:-
   a) Any kind of motor.
   b) Plastic & Glass Parts against any manufacturing defects.
   c) All kind of sensors.
   d) All kind of coils, probes and transducers.
   e) Printers and imagers including laser and thermal printers with all parts.
   f) UPS including the replacement of batteries.
   g) Air-conditioners

iii. Replacement and repair will be under taken for the defective goods.
   a) All kinds of painting, civil, HVAC and electrical work

iv. Proper marking has to be made for all spares for identification like printing of installation and repair dates.

15.3 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing to the supplier. The period of the warranty will be as per G.C.C clause number 15.2 above irrespective of any other period mentioned elsewhere in the bidding documents.

15.4 Upon receipt of such notice, the supplier shall, within 24 hours on a 24(hrs) X 7 (days) X 365 (days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non-rectification will be applicable as per tender conditions.

15.5 In case the supplier is not able to rectify the defects to the full satisfaction of the purchaser the goods shall have to be replaced with a new one. The decision of the purchaser in this respect shall be final and binding on the supplier.

15.6 If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s) within 24 hours on a 24(hrs) X 7 (days) X 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.

15.7 During Warranty period, the supplier is required to visit at each consignee's site at least once in 6 months commencing from the date of the installation for preventive maintenance of the goods

15.8 The Purchaser/Consignee reserve the rights to enter into Annual Comprehensive Maintenance Contract between Consignee and the Supplier for the period as mentioned in Section VII, Technical Specifications after the completion of warranty period.

15.9 The supplier along with its Indian Agent and the CMC provider shall ensure continued supply of the spare parts for the machines and equipment supplied by them to the purchaser for 10 years from the date of installation and handing over.

16. Assignment

The Supplier shall not assign, either in whole or in part, its contractual duties, responsibilities and obligations to perform the contract, except with the Purchaser's prior written permission.

17. Sub Contracts

17.1 The Supplier shall notify the Purchaser in writing of all sub contracts awarded under the contract if not already specified in its tender. Such notification, in its original tender or later, shall not relieve the Supplier from any of its liability or obligation under the terms and conditions of the contract.

17.2 Sub contract shall be only for bought out items and sub-assemblies.

17.3 Sub contracts shall also comply with the provisions of GCC Clause 4 ("Country of Origin").

18. Modification of contract

18.1 If necessary, the purchaser may, by a written order given to the supplier at any time during the currency of the contract, amend the contract by making alterations and modifications within the general scope of contract in any one or more of the following:

a) Specifications, drawings, designs etc. where goods to be supplied under the contract are to be specially manufactured for the purchaser,
b) Mode of packing,
c) Incidental services to be provided by the supplier
d) Mode of despatch,
e) Place of delivery, and
f) Any other area(s) of the contract, as felt necessary by the purchaser depending on the merits of the case.

18.2 In the event of any such modification/alteration causing increase or decrease in the cost of goods and services to be supplied and provided, or in the time required by the supplier to perform any obligation under the contract, an equitable adjustment shall be made in the contract price and/or contract delivery schedule, as the case may be, and the contract amended accordingly. If the supplier doesn't agree to the adjustment made by the Purchaser/Consignee, the supplier shall convey its views to the Purchaser/Consignee within twenty-one days from the date of the supplier's receipt of the Purchaser's/Consignee's amendment / modification of the contract.

19. Prices

Prices to be charged by the supplier for supply of goods and provision of services in terms of the contract shall not vary during currency of the Rate Contract period from the corresponding prices quoted by the supplier in its tender and incorporated in the Rate Contract except for any price adjustment authorised in the SCC.

20. Taxes and Duties

20.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.

20.2 For goods Manufactured within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

20.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

21. Terms and Mode of Payment

21.1 Payment Terms

Payment shall be made in Indian Rupees subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner.

A) On delivery:

Eighty percent (80%) payment of the contract price shall be paid on receipt of goods in good condition and upon the submission of the following documents subject to recovery of LD, if any:

(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
(ii) Consignee Receipt Certificate as per Section XVII in original issued by the authorized representative of the consignee;

(iii) Two copies of packing list identifying contents of each package;
(iv) Inspection certificate issued by the nominated Inspection agency, if any.
(v) Insurance Certificate as per GCC Clause 11
(vi) Certificate of origin (in case the goods are of foreign origin).

B) On Acceptance:

Balance Twenty percent (20%)payment would be made against 'Final Acceptance Certificate' as per Section XVIII of goods to be issued by the consignees subject to recoveries, if any, either on account of non-rectification of defects/deficiencies not attended by the Supplier or otherwise. FAC needs to be issued by the designated consignee after installation, commissioning, testing and one to two weeks of successful trail run of the equipment.

C) Payment of Site Modification Work, if any:
Site Modification Work payment will be made to the bidder/ manufacturer's agent or its Indian Office in Indian rupees as indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation / exchange variation. This will be paid on proof of final installation, commission and acceptance of equipment by the consignee.

D) Payment for Annual Comprehensive Maintenance Contract Charges, if applicable:
The consignee may enter into CMC with the supplier at the rates as stipulated in the Rate Contract. The payment of CMC will be made on six monthly basis after satisfactory completion of said period, duly certified by the consignee on receipt of bank guarantee for an amount equivalent to 2.5% of the cost of the Equipment as per contract in the prescribed format given in Section XV valid till 2 months after expiry of entire CMC period.

21.2 The supplier shall not claim any interest on payments under the contract.

21.3 Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other tax as applicable will be made from the bills payable to the Supplier at rates as notified from time to time.

21.4 Deleted

21.5 The payment shall be made in the currency / currencies authorised in the contract.

21.6 The supplier shall send its claim for payment in writing, when contractually due, along with relevant documents etc., duly signed with date, to respective consignees.

21.7 While claiming payment, the supplier is also to certify in the bill that the payment being claimed is strictly in terms of the contract and all the obligations on the part of the supplier for claiming that payment has been fulfilled as required under the contract.

21.8 While claiming reimbursement of duties, taxes etc. (like sales tax, excise duty, custom duty) from the Purchaser/Consignee, as and if permitted under the contract, the supplier shall also certify that, in case it gets any refund out of such taxes and duties from the concerned authorities at a later date, it (the supplier) shall refund to the Purchaser/Consignee forthwith.

21.9 In case where the supplier is not in a position to submit its bill for the balance payment for want of receipted copies of Inspection Note from the consignee and the consignee has not complained about the non-receipt, shortage, or defects in the supplies made, balance amount will be paid by the paying authority without consignee's receipt certificate after three months from the date of the preceding part payment for the goods in question, subject to the following conditions:

(a) The supplier will make good any defect or deficiency that the consignee (s) may report within six months from the date of despatch of goods.
(b) Delay in supplies, if any, has been regularized.

(c) The contract price where it is subject to variation has been finalized.
(d) The supplier furnishes the following undertakings:

"I/We, _____ certify that I/We have not received back the Final Acceptance certificate from consignee or any communication from the purchaser or the consignee about non-receipt, shortage or defects in the goods supplied. I/We _____ agree to make good any defect or deficiency that the consignee may report within three months from the date of receipt of this balance payment.

22. Delivery Schedule

22.1 The supplier shall deliver the goods and perform the services under the contract within the time schedule specified in the Supply Order. **The time for and the date of delivery of the goods stipulated in the schedule shall be deemed to be of the essence of contract and the delivery must be completed not later than the date(s) as specified in the Contract.**

22.2 Subject to the provision under GCC clause 26, any unexcused delay by the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all of the following sanctions:

(i) Imposition of liquidated damages,
(ii) Forfeiture of its performance security and
(iii) Termination of the contract for default.

22.3 If at any time during the currency of the contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform the Purchaser/Consignee in writing about the same and its likely duration and make a request to the Purchaser/Consignee for extension of the delivery schedule accordingly. On receiving the supplier's communication, the Purchaser shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.

22.4 When the period of delivery is extended due to unexcused delay by the supplier, the amendment letter extending the delivery period shall, interalia contain the following conditions:
a) The Purchaser shall recover from the supplier, under the provisions of the clause 23 of the General Conditions of Contract, liquidated damages on the goods and services, which the Supplier has failed to deliver within the delivery period stipulated in the contract.
b) That no increase in price on account of any ground, whatsoever, including any stipulation in the contract for increase in price on any other ground and, also including statutory increase in or fresh imposition of GST or on account of any other tax or duty which may be levied in respect of the goods and services specified in the contract, which takes place after the date of delivery stipulated in the contract shall be admissible on such of the said goods and services as are delivered and performed after the date of the delivery stipulated in the contract.
c) But nevertheless, the Purchaser shall be entitled to the benefit of any decrease in price on account of reduction in or remission of GST or any other duty or tax or levy or on account of any other grounds, which takes place after the expiry of the date of delivery stipulated in the contract.

22.5 The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the Purchaser for extension of delivery period and obtain the same before despatch. In case the supplier dispatches the goods without obtaining an extension, it would be doing so at its own risk and no claim for payment for such supply and / or any other expense related to such supply shall lie against the purchaser.

22.6 Passing of Property:

22.6.1 The property in the goods shall not pass to the purchaser unless and until the goods have been delivered to the consignee in accordance with the conditions of the contract.

22.6.2 Where there is a contract for sale of specific goods and the supplier is bound to do something to the goods for the purpose of putting them into a deliverable state the property does not pass until such thing is done.

22.6.3 Unless otherwise agreed, the goods remain at the supplier's risk until the property therein is transferred to the purchaser.

23. Liquidated damages

Subject to GCC clause 26, if the supplier fails to deliver any or all of the goods or fails to perform the services within the time frame(s) incorporated in the Supply Order, the Purchaser shall, without prejudice to other rights and remedies available to the Purchaser under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 0.5% per week of delay or part thereof on delayed supply of goods and/or services until actual delivery or performance subject to a maximum of 10% of the contract price. Once the maximum is reached Purchaser may consider termination of the contract as per GCC 24. ***Since the Liquidated damages are in virtue of non-performance of services, it will attract GST or any other applicable taxes which in turn shall be deducted from the bidder.***

During the above-mentioned delayed period of supply and / or performance, the conditions incorporated under GCC sub-clause 22.4 above shall also apply.

24. Termination for default

24.1 The Purchaser, without prejudice to any other contractual rights and remedies available to it (the Purchaser), may, by written notice of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC sub-clauses 22.3 and 22.4.

24.2 In the event of the Purchaser terminating the contract in whole or in part, pursuant to GCC sub-clause 24.1 above, the Purchaser will forfeit the performance security and may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit. The supplier shall be liable to the Purchaser for the extra expenditure, if any, incurred by the Purchaser for arranging such procurement.

24.3 Unless otherwise instructed by the Purchaser, the supplier shall continue to perform the contract to the extent not terminated.

24.4 If the Supplier, in the judgement of Purchaser has engaged in fraud and corruption, as defined in GCC Clause 37, in competing or in executing the Contract.

25. Termination for insolvency / Convenience

25.1 If the supplier becomes bankrupt or otherwise insolvent, the purchaser reserves the right to terminate the contract at any time, by serving written notice to the supplier without any compensation, whatsoever, to the supplier, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Purchaser.

25.2 Termination for Convenience

(a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
(b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(i) To have any portion completed and delivered at the Contract terms and prices; and/or
(ii) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

26. Force Majeure

26.1 Notwithstanding the provisions contained in GCC clauses 22, 23 and 24, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure.

26.2 For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of , the party claiming to be affected by such event and which has caused the non-performance or delay in performance. Such events may include, but are not restricted to, acts of the Purchaser/Consignee either in its sovereign or contractual capacity, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes executed by its employees, lockouts executed by its management, and freight embargoes.

26.3 If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

26.4 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.

26.5 In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.

27. Purchaser's Right to Short Close/Revocation/Cancellation of the Rate Contract

27.1 Since the rate contract is a standing offer and is merely a document embodying various terms of the standing offer made by the Contractor, the purchaser can legally cancel the Rate Contract at any time during the currency of the contract giving a reasonable opportunity to the contractor to represent against such cancellation. The revocation/cancellation of the Rate Contract shall take effect immediately thereafter. Any order placed by the Purchaser after the date of cancellation of the Rate Contract should not be taken up by the contractor for execution. The purchaser may, at its option negotiate with the Contractor so as to bring the R/C prices in line with the Market prices, whenever market fluctuation affects prices abnormally. If the negotiation fails, then the Rate Contract will be foreclosed and fresh Rate Contract will be concluded separately.

27.2 Either party namely, the R/C holder/the Purchaser can legally revoke/cancel the Rate Contract at any time during the currency of the Rate Contract giving a notice of 15 days. The revocation of the Rate Contract on the part of R/C holder shall take effect 15 days from the date of the communication of revocation is received by the Purchaser. The cancellation of the Rate Contract by the Purchaser shall take effect 15 days from the date of issue of letter notifying the short closure.

The notice-cum-cancellation of Rate Contract letter to be issued by the Purchaser given in **Section**-XXII and the R/C holder can revoke the Rate Contract by making the application in the Form given in **Section XXII**.

28. Governing language

28.1 The Rate Contract shall be written in English language following the provision as contained in GIT clause 4. All correspondence and other documents pertaining to the Rate Contract, which the parties exchange, shall also be written accordingly in that language. Supply orders placed based on the Rate Contract shall also be written in English language.

29. Notices

29.1 Notice, if any, relating to the contract given by one party to the other, shall be sent in writing or by email or facsimile and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.

29.2 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

30. Resolution of disputes

30.1 If dispute or difference of any kind shall arise between the Purchaser/Consignee and the supplier in connection with or relating to the Rate Contract, the parties shall make every effort to resolve the same amicably by mutual consultations.

30.2 If the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, then, unless otherwise provided in the SCC, either the Purchaser/Consignee or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per the Arbitration and Conciliation Act, 1996 of India. Such dispute or difference shall be referred to the sole arbitrator appointed by the Chairman & Managing Director of HLL Life care Limited. The award of the arbitrator shall be final and binding on the parties to the contract subject to the provision that the Arbitrator shall give reasoned award in case the value of claim in reference exceeds Rupees One Lac (Rs. 1,00,000/-).

30.3 Venue: The venue of arbitration shall be Delhi/New Delhi (India)/NCR.

31. Applicable Law

The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.

32. Withholding and Lien in respect of sums claimed

Whenever any claim for payment arises under the contract against the supplier the purchaser shallbe entitled to withhold and also have a lien to retain such sum from the security deposit or sum of money arising out of under any other contract made by the supplier with the purchaser, pending finalization or adjudication of any such claim.

It is an agreed term of the contract that the sum of money so withheld or retained under the lien referred to above, by the purchaser, will be kept withheld or retained till the claim arising about of or under the contract is determined by the Arbitrator or by the competent court as the case may be, and the supplier will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention.

33. Submission of Quarterly Drawal Report:

33.1 The offer of the firms of the next R/C will be considered only if their performance against the current and preceding R/Cs, if held by them, is satisfactory and they are otherwise eligible. For this purpose, the purchaser expects that a firm should have supplied minimum 85%/95%/100% of the stores due for supply against the current RC and preceding two years R/C respectively on or before the cut-off date as indicated in the tender enquiry.

33.2 R/C holder not obtaining any Supply Order against the current R/C prior to the period indicated above and also against immediate previous Rate Contract will be considered to have a NIL performance and will not be eligible for award of next R/C.

34. **Limitation of Liability:**

34.1 Except in cases of criminal negligence or wilful misconduct,

(a) The Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and

(b) The aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.

35. Corrupt Practices

35.1 It is required by all concerned namely the Consignee/Bidders/Suppliers etc to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Purchaser: -

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and

(ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition;

(b) will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by the purchaser if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing the contract.

36. Fall Clause

36.1 The prices charged for the stores supplied under the Contract by the Contractor shall in no event exceed the lowest price at which the Contractor sells the Stores or offer to sell stores of identical description to any person(s)/organisation(s) including the Purchaser or any Department of Central Government or any Department of a State Government or any statutory undertaking of the Central or a State Government, as the case may be, during the period till performance of all Supply Orders placed during the currency of Rate Contract is completed.

36.2 It at any time during the said period, the Contractor reduces the Sale price, sells or offers to sell such stores to any person(s)/organisation(s) including the Purchaser or any Statutory Undertaking of the Central or a State Government, as the case may be, at a price lower than the price chargeable under this Contract, he shall forthwith notify such reduction or Sale or offer of Sale to the office from where this Rate Contract is issued and the price payable under the Contract for the stores supplied after the date of coming into force of such reduction or sale or offer of sale stand correspondingly reduced. The above stipulation will, however, not apply to:

(a) Export/deemed Export by the Contractor

(b) Sale of Goods as Original Equipment prices lower than the price charged for normal replacement.
(c) Sale of goods, such as drugs, which have expiry date.
(d) Sale of goods at lower price on or after the date of completion of sale/placement of order of goods by the authority concerned, under the existing or previous Rate Contracts as also under any previous contracts entered into with the Central or the State Government Departments including new undertaking (excluding joint sector companies and or private parties) and bodies.

36.3 The Contractor shall furnish the following certificate to the Paying Authority along with each bill for payment for supplies made against the Rate Contract.

"I/We certify that there has been no reduction in sale price of the Stores of Description identical to the Stores supplied to the Government under the contract herein and such Stores have not been offered/sold by me/us to any persons(s) organisation(s) including the purchaser or any Department of Central Government or any Department of a State Government or any statutory Undertaking of the Central or State Government as the case may be upto the date of the bill/ the date of completion of supplies against all supply order placed during the currency of the R/C at a price lower than the price charged to Government under the Contract except for quantity of Stores categorised under sub-clause (a), (b) and (c) of Para 36.2 above.

NOTE: The Contract will also inform the Purchaser as soon as supplies against all the Supply Orders placed against the Rate Contract are completed.

37. General/ Miscellaneous Clauses

37.1 Nothing contained in this Contract shall be constructed as establishing or creating between the parties, i.e. the Supplier/its Indian Agent/CMC Provider on the one side and the Purchaser on the other side, a relationship of master and servant or principal and agent.
37.2 Any failure on the part of any Party to exercise right or power under this Contract shall not operate as waiver thereof.
37.3 The Supplier shall notify the Purchaser/Consignee /the Government of India of any material change would impact on performance of its obligations under this Contract.
37.4 Each member/constituent of the Supplier/its Indian Agent/CMC Provider, in case of consortium shall be jointly and severally liable to and responsible for all obligations towards the Purchaser/Consignee/Government for performance of contract/services including that of its Associates/Sub Contractors under the Contract.
37.5 The Supplier/its Indian Agent/CMC Provider shall at all times, indemnify and keep indemnified the Purchaser/Government of India against all claims/damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing its services under CMC or the Contract.
37.6 The Supplier/its Agent/CMC Provider shall, at all times, indemnify and keep indemnified the Purchaser/Consignee/Government of India against any claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by its employees or agents or by any other third party resulting from or by any action, omission or operation conducted by or on behalf of the supplier/its associate/affiliate etc.
37.7 All claims regarding indemnity shall survive the termination or expiry of the contract.
37.8 If any provisions of this tender enquiry or a contact formed on the basis of this tender enquiry are invalid or void under any of the existing provisions of Indian law, then such provisions will not affect other provisions of this tender enquiry/ contract.

SECTION – V

SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) will apply for this purchase. The corresponding clauses of General Conditions of Contract (GCC) relating to the SCC stipulations have also been incorporated below.

These Special Conditions will modify/substitute/supplement the corresponding (GCC) clauses. Whenever there is any conflict between the provision in the GCC and that in the SCC, the provision contained in the SCC shall prevail.

The Rate Contract finalised under this tender enquiry can be operated only by HITES. Any supplier supplying against the said Rate contract to any other user, Government/Private without knowledge and permission of HITES will be considered breach of contract and HITES may initiate action as deemed appropriate including but not limited to forfeiture of their security towards performance and operation of Rate Contract, debarring, blacklisting, etc.

SECTION - VI
LIST OF REQUIREMENTS

1. Details of Requirement:

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
1	3000004117	Downdraft ventilated Autopsy Table with Integral Sink	Forensic Medicine &Toxicology	14	2 years	5 Years
2	3000004118	Downdraft ventilated, Stainless steel, Dissecting Bench	Forensic Medicine &Toxicology	14	2 years	5 Years
3	3000004119	Air purifier	Forensic Medicine &Toxicology	14	2 years	5 Years
4	3000004120	Cadaver lift Conveyor style	Forensic Medicine &Toxicology	14	2 years	5 Years
5	3000004121	Weighing Machine for dead bodies	Forensic Medicine &Toxicology	14	2 years	5 Years
6	3000004122	Weighing Machine for organs/fetus (L P)	Forensic Medicine &Toxicology	21	2 years	Not Required
7	3000004123	Oscillating Electric Autopsy Saw	Forensic Medicine &Toxicology	14	2 years	5 Years
8	3000004124	Dissecting Instruments (as per list attached)	Forensic Medicine &Toxicology	14	2 years	5 Years
9	3000004125	Cadaver/ Autopsy carrier (L P)	Forensic Medicine &Toxicology	21	2 years	Not Required
10	3000004126	Mobile X- Ray system	Forensic Medicine &Toxicology	7	2 years	5 Years
11	3000004127	Student upright Binocular Microscopes	Forensic Medicine &Toxicology	140	2 years	5 Years
12	3000004128	Binocular research Microscope with camera attachment	Forensic Medicine &Toxicology	7	2 years	5 Years
13	3000004129	Analytical Digital Balance single pan	Forensic Medicine &Toxicology	7	2 years	5 Years
14	3000004131	Centrifuge Machine	Forensic Medicine &Toxicology	14	2 years	5 Years
15	3000004133	Dissecting Lights (Double Ceiling Mounts)	Forensic Medicine &Toxicology	14	2 years	5 Years
16	3000004134	Deep Freezer 200 L (-40 Deg C)	Forensic Medicine &Toxicology	7	2 years	5 Years
17	3000004135	Mortury Cooler (four Bodies)	Forensic Medicine &Toxicology	14	2 years	5 Years
18	3000004136	Ultraviolet/White light transilluminator	Microbiology	7	2 years	5 Years
19	3000004137	Analytical Weighing Scale – electronics	Microbiology	14	2 years	5 Years
20	3000004138	Laboratory Autocalve-Microprocessor controlled Stainless steel horizontal	Microbiology	7	2 years	5 Years
21	3000004139	Bio safety cabinet Class II A2	Microbiology	14	2 years	5 Years
22	3000004140	Bio safety cabinet Class II B2	Microbiology	7	2 years	5 Years
23	3000004141	CO2 Incubator	Microbiology	7	2 years	5 Years

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
24	3000004142	Micro pipette adjustable, 20ul,50ul,100ul,1000ul capacity	Microbiology	14	2 years	5 Years
25	3000004143	Deep freezers -80^{0}C-Vertical	Microbiology	7	2 years	5 Years
26	3000004144	Electronic pipettes digitally adjustable	Microbiology	28	2 years	Not Required
27	3000004145	Pharmaceutical refrigerators	Microbiology	28	2 years	5 Years
28	3000004146	Laminar Airflow work station with HEPA filter complete	Microbiology	14	2 years	5 Years
29	3000004147	Automated tissue grinder (Homozenizer)	Microbiology	7	2 years	Not Required
30	3000004148	Automated continuous monitoring stand alone blood culture system	Microbiology	7	2 years	5 Years
31	3000004149	Table top refrigerated centrifuged with accessories with adjustable rotor to hold different size tubes	Microbiology	7	2 years	5 Years
32	3000004150	Walk-in-cooler 4^{o}C (9x8x7 ft)	Microbiology	7	2 years	5 Years
33	3000004151	Multi channel pipette 10-50ul, 20-200 ul	Microbiology	14	2 years	5 Years
34	3000004152	Laboratory centrifuge	Microbiology	14	2 years	5 Years
35	3000004153	Desiccator cabinet	Microbiology	7	2 years	5 Years
36	3000004154	Hot air oven microprocessor control	Microbiology	14	2 years	5 Years
37	3000004155	Digital Standard Lab Bacteriological Incubator	Microbiology	28	2 years	5 Years
38	3000004156	Vertical autoclave	Microbiology	21	2 years	5 Years
39	3000004157	High Air Flow sampler with media plate for collection of air sample for bacteriological monitoring of O.T, I.C.U etc.	Microbiology	7	2 years	5 Years
40	3000004159	Polycarbonate Anaerobic Jar with charges complete (Gas pack)to hold 5-9 plates	Microbiology	21	2 years	Not Required
41	3000004160	Membrane filter holder with hand held vacuum pump	Microbiology	7	2 years	5 Years
42	3000004162	Water purification system for ultrapure nuclease free water	Microbiology	7	2 years	5 Years
43	3000004163	Fully automated Gel Documentation system with UPS back up	Microbiology	7	2 years	5 Years
44	3000004164	UV/Visual spectrophotomètre	Microbiology	7	2 years	5 Years

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
45	3000004165	Gradient Thermal Cycler with stand alone UPS	Microbiology	7	2 years	5 Years
46	3000004166	Dry Heating block for PCR	Microbiology	7	2 years	Not Required
47	3000004167	Gel electrophoresis horizontal with compatible power pack and accessories	Microbiology	7	2 years	5 Years
48	3000004168	Semi automated ELISA system with washers	Microbiology	14	2 years	5 Years
49	3000004169	Water bath microprocessor controlled	Microbiology	14	2 years	5 Years
50	3000004170	Liquid nitrogen cylinder	Microbiology	7	2 years	5 Years
51	3000004171	Positive pressure pump for tissue culture media prep.	Microbiology	7	2 years	5 Years
52	3000004172	Binocular Microscopes research complete for faculty and with digital imaging and morphometry soft ware with photographic attachment for each section with phase contrast and dark ground with flouroscent attachment	Microbiology	7	2 years	5 Years
53	3000004173	Binocular Microscope - Student for UG	Microbiology	700	2 years	5 Years
54	3000004174	Inspissator (Automated microprocessor controlled)	Microbiology	7	2 years	5 Years
55	3000004175	Incubator BOD	Microbiology	14	2 years	5 Years
56	3000004176	Automated rapid T.B culture and drug sensitivity detection system for 960 samples	Microbiology	7	2 years	5 Years
57	3000004177	Lyophilizer	Microbiology	7	2 years	5 Years
58	3000004178	Automatic Ice Flaking Machine	Microbiology	7	2 years	5 Years
59	3000004179	Orbital shaker	Microbiology	7	2 years	5 Years
60	3000004180	Table top dispenser	Microbiology	7	2 years	5 Years
61	3000004181	Anaerobic work station with gas cylinder complete	Microbiology	7	2 years	5 Years
62	3000004183	Real Time PCR machine with stand alone UPS unit	Microbiology	7	2 years	5 Years
63	3000004184	Forced Air incubators microprocessor controlled 5-60^{0}C	Microbiology	7	2 years	5 Years
64	3000004185	Sonicator	Microbiology	7	2 years	5 Years
65	3000004186	Hybridization chamber system	Microbiology	7	2 years	5 Years

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
66	3000004188	Automated bacterial identification system	Microbiology	7	2 years	5 Years
67	3000004189	Refrigerated shaker	Microbiology	7	2 years	5 Years
68	3000004190	Inverted microscope with phase contrast and epi-fluoroscent attachment	Microbiology	14	2 years	5 Years
69	3000004191	Refrigerated Incubator	Microbiology	7	2 years	5 Years
70	3000004192	Analgesiometer - Tail Flick (Digital)	Pharmacology	7	2 years	5 Years
71	3000004193	Analgesiometer - Eddy's Hot Plate	Pharmacology	7	2 years	5 Years
72	3000004194	Polygraph (Sixteen channel research)	Pharmacology	7	2 years	5 Years
73	3000004195	Electro convulsiometer (with ear and corneal electrodes)	Pharmacology	7	2 years	5 Years
74	3000004196	Cook's Pole Climbing Apparatus	Pharmacology	7	2 years	Not Required
75	3000004197	Rotarod (6 compartments)-	Pharmacology	7	2 years	5 Years
76	3000004198	Photoactometer	Pharmacology	7	2 years	5 Years
77	3000004199	Elevated Plus Maze	Pharmacology	7	2 years	Not Required
78	3000004200	Portable Autoclave (25L)	Pharmacology	7	2 years	Not Required
79	3000004201	Incubator (20 - 100 degC)	Pharmacology	7	2 years	5 Years
80	3000004202	Digital Spirometer	Pharmacology	7	2 years	5 Years
81	3000004203	Bicycle ergometer with digital display	Pharmacology	7	2 years	5 Years
82	3000004204	Double beam UV spectrophotometer (UV-Vis, variable wavelength, glass and quartz cuvettes with data analysis software and computer interface and power back-up)	Pharmacology	7	2 years	5 Years
83	3000004205	Refrigerator -20 deg C (With boxes to store samples)	Pharmacology	7	2 years	5 Years
84	3000004206	Treadmill (motorized) for humans with cardiac moniter	Pharmacology	7	2 years	5 Years
85	3000004207	Multiple Choice Apparatus (with digital display)	Pharmacology	7	2 years	Not Required
86	3000004208	Critical flicker fusion apparatus	Pharmacology	7	2 years	5 Years
87	3000004209	Human Learning Maze	Pharmacology	7	2 years	5 Years
88	3000004210	Hand Steadiness Tester (Linear type)	Pharmacology	7	2 years	5 Years

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
89	3000004211	Hand Steadiness Tester (Hole Type)	Pharmacology	7	2 years	5 Years
90	3000004212	Digital Memory Drum	Pharmacology	7	2 years	5 Years
91	3000004213	Quartenary FHPLC (Fast High Pressure Liquid Chromatography) with Fluorescence + visible and PDA detectors with columns and autosampler (Inclusive Software programme + computer + printer+ Online UPS with at least 1 hr backup)	Pharmacology	7	2 years	5 Years
92	3000004214	Water purification system for HPLC	Pharmacology	7	2 years	5 Years
93	3000004215	Electrolyte Analyzer	Pharmacology	7	2 years	5 Years
94	3000004216	Student Electric Kymograph with drum	Pharmacology	28	2 years	5 Years
95	3000004217	Isolated Organ bath	Pharmacology	28	2 years	5 Years
96	3000004218	Lab. Centrifuge Machine (Digital)	Pharmacology	14	2 years	5 Years
97	3000004219	Electronic Balance	Pharmacology	7	2 years	5 Years
98	3000004220	Cardiac Monitor	Pharmacology	7	2 years	5 Years
99	3000004221	Multi Channel Pipette (Manual)	Pharmacology	7	2 years	Not Required
100	3000004222	Animal Simulator Software for Pharmacology) (Proprietary: Elsevier with 3 years licence with offline and online both mode)	Pharmacology	7	2 years	5 Years
101	3000004223	Digital PH Meter(Spec Same as per Biochem/Micro Deptt)	Pharmacology	7	2 years	Not Required
102	3000004224	Double Distillation Apparatus	Pharmacology	7	2 years	5 Years
103	3000004225	Bioelectrical Impedance Analyzer for bodycomposition	Pharmacology	7	2 years	5 Years
104	3000004226	Agarose gel electrophoresis system	Biochemistry	100	2 years	5 Years
105	3000004326	BMI Analyser	Communicty Medicine	30	2 years	Not Required
106	3000004327	Digital Colorimeters	Biochemistry	130	2 years	Not Required
107	3000004328	Fat Extraction	Communicty Medicine	30	2 years	5 Years
108	3000004329	Hemoglobinometer	Communicty Medicine	50	2 years	5 Years

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
109	3000004330	Opthalmoscope	Communicty Medicine	100	2 years	Not Required
110	3000004331	PA system	Communicty Medicine	30	2 years	Not Required
111	3000004332	Plastination Equipment	Anatomy	30	2 years	5 Years
112	3000004333	Sound Level Meter	Communicty Medicine	30	2 years	Not Required
113	3000004334	Von Frey Aesthesiometer	Physiology	50	2 years	5 Years
114	3000004335	Vortex Mixers	Biochemistry	50	2 years	Not Required
115	3000004227	Anthropometric set – Digital	Physiology	50	2 years	5 Years
116	3000004336	Electronic muscle stimulator	Physiology	80	2 years	Not Required
117	3000004337	Mosso's Ergograph	Physiology	50	2 years	Not Required
118	3000004338	Priestly Smith Perimeter	Physiology	500	2 years	Not Required
119	3000004228	Apparatus for passive movement	Physiology	30	2 years	5 Years
120	3000004229	Chemiluminescence & Gel imaging & analysis system	Biochemistry	30	2 years	5 Years
121	3000004230	Densitometer with computer	Biochemistry	50	2 years	5 Years
122	3000004231	Fluorescent microscope	Biochemistry	50	2 years	5 Years
123	3000004232	Inverted microscope with PC	Anatomy/ Biochemistry	100	2 years	5 Years
124	3000004233	Physiograph – three channel	Biochemistry	300	2 years	5 Years
125	3000004234	Single channel physiological recorder	Physiology	500	2 years	5 Years
126	3000004235	Transilluminator with UV stand and UV torch	Physiology	30	2 years	5 Years
127	3000004236	Ultra Sonicator	Biochemistry	50	2 years	5 Years
128	3000004237	Vertical gel electrophoresis	Biochemistry	100	2 years	5 Years
129	3000004238	Western Blot Apparatus with Compatible Power Pack	Biochemistry	50	2 years	5 Years
130	3000004239	Grossing Station	Biochemistry	7	2 years	5 Years
131	3000004240	ESR Analyser	Lab Medicine & Pathology	7	2 years	5 Years
132	3000004241	Flocytometer	Lab Medicine & Pathology	7	2 years	5 Years
133	3000004242	Water Bath	Lab Medicine & Pathology	7	2 years	Not Required
134	3000004243	Weighing Balance	Lab Medicine & Pathology	7	2 years	Not Required
135	3000004244	Liquid Based Cytology System	Lab Medicine & Pathology	7	2 years	5 Years
136	3000004245	Elisa Reader with washer	Lab Medicine & Pathology	7	2 years	5 Years
137	3000004246	High Speed Autoclave	Lab Medicine & Pathology	7	2 years	Not Required
138	3000004247	Thermal Cycler	Lab Medicine &	7	2 years	Not Required

S.No.	Event No.	Name of the item	Name of the Deptt.	Estimated drawls	Warranty period	CMC period
			Pathology			
139	3000004248	Horizontal Gel Electrohoresis system	Lab Medicine & Pathology	7	2 years	5 Years
140	3000004249	Vertical electrophoresis system	Lab Medicine & Pathology	7	2 years	5 Years
141	3000004270	Complete Chromatographic Unit for paper & TLC	Biochemistry	14	2 years	5 Years
142	3000004272	Double demonstration Eye Pieces	Biochemistry	28	2 years	Not Required
143	3000004275	Stethograph (computerized)	Physiology	14	2 years	5 Years
144	3000004269	Fume hood	Anatomy	14	2 years	5 Years
145	3000004274	Chemical balance	Community Medicine	7	2 years	5 Years
146	3000004345	Chemiluminiscence & Gel imaging & analysis system	Biochemistry	30	2 years	5 Years
147	3000004346	Ophthalmoscope	Community Medicine	70	2 years	Not Required
148	3000004268	Flow cytometer	Biochemistry	7	2 years	5 Years
149	3000004271	HPLC system	Biochemistry	7	2 years	5 Years
150	3000004273	Perimeter	Physiology	175	2 years	5 Years

Note: Bidders are advised to offer their best competitive prices against this Rate Contract tender. The drawals against the Rate Contract will depend on the competitiveness of the prices, quality of equipment and timely delivery of previous supply orders as essential requirements.

2. Destination/Consignee details

Stores are to be supplied all over India as indicated in the Supply Orders placed against the Rate Contract.

3. Delivery Period:

The delivery period will 60 days from the date of placement of supply order or 30 days from the date of site readiness whichever is later.

Bidder should however mention quote guaranteed monthly rate of supply and lead time required for commencement of supply after placement of supply order in Section VIII- Quality Control Requirements..

4. Terms of Delivery:

Free Delivery at Consignee Site

Insurance (local transportation and storage) would be borne by the Supplier from ware house to the consignee site for a period, including 3 months beyond date of delivery.

5. Scope of Incidental Services:

Installation & Commissioning, Supervision, Demonstration, Trial run and Training etc. as specified in GCC Clause 13

Installation & commissioning shall be completed within 15 days, of handing over the site complete in all respect by the consignee. The date of handing over the site has to be intimated to the supplier by the consignee. The delay on the part of the supplier to install & commission of Equipment will also attract the provisions as contained in the liquidated damage clause.

6. Warranty:

Terms of warranty shall be as per details given in general technical specification/technical specification of the Equipment and for a period specified in the Table under 'List of Requirement' above.

Warranty period will be effective from the date of installation, commissioning and acceptance.

Comprehensive Maintenance Contract (CMC) as per details in Technical Specification as specified in part I above.

SECTION-VII

TECHNICAL SPECIFICATIONS
Item Sl. No. 1

Down Draft Ventilated Autopsy Table with Integral Sink
I. Technical Specifications:
1. Table top
Stainless steel, Type 304, Satin Finish
Should have dissecting area and sink
2. Dissecting Area
Should have Grid Plates
3. Sink
Plumbing should be factory finished
Should have Hydro-aspirator with reverse flow features and
Should have hot / cold water fixtures with wrist blade handles and gooseneck
4. Vacuum Breaker
5. Faucets
Should have sink rinse with hose fittings and hose hanger
6. Table Pedestal
Stainless steel, Type 304, satin finish
Pedestal type
7. Ventilation
Down draft ventilation system
8. Electrical receptacles
GFCI Type 220 – 240 volts AC 50 Hz
9. Disposer Unit
Should have Solenoid valve, vacuum breaker with off / on switch control and internal overload protector
½ to ¾ HP motor
10. Dimensions:
Length : 250 – 260 cm
Width : 75 – 80 cm
Height : 80 – 100 cm
11. Polyurethane Head Rest: Must be able to support neck while dissection
12. Stainless steel Centimetre Scale: Must be engraved type.
13. Scale Support Socket: Must be able to hold the scale support bar steadily.
14. Scale support Bar: Must be able to hold the dial type weighing scale.
15.Weighing Scale: Dial Type: Must measure upto 5 kg.
16. Polyurethane Dissecting Board: 2 feet x 1 ½ feet x ¾ inch, grained surface, white.
II. System configuration accessories, Spares and Consumables:
None
III. Environmental factors:
Shall meet IEC-60601-1-2:2001 (Or Equivalent BIS) General Requirements of safety for Electromagnetic Compatibility or should comply with 89/366/ECC; EMC-Directive.
The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15- 90 %

The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15 – 90 %
IV. Power Supply:
Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.
V. Standards, Safety and Training:
Should be European CE or US FDA approved product.
Manufacturer should have ISO certification for quality standards
VI. Documentation:
User / Technical / Maintenance manuals to be supplied in English.
List of important spare parts and accessories with their part number and costing
Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

Item Sl. No. 2

Downdraft ventilated, Stainless Steel, Dissecting Bench
1. Description of function:
a. Grossing Station comprises of complete set up of working area with facility to carry out autopsy.
b. Wall mounted autopsy sink provides all the features normally found in a typical pedestal style autopsy table without the space requirement.
2. Operational Requirements:
The wall mounted style should eliminate the physical strain of moving the body by enabling autopsy directly performed on the autopsy cart and an elevated design should allow for easy floor cleaning.
I. Technical Specifications:
a. Work Station:
Should have right and left work stations
Grid plates should be provided
Working area should have drainage
b. Central sink:
Should have hydro-aspirator with reverse flow
Should have hot / cold water fixtures.
Fixtures should have wrist blade handles
Fixtures should have gooseneck faucet
Sink rinse with hose fittings and hose hanger should be provided
Vacuum breaker should be provided
c. Instrument Drawer:
Under both work stations
d. Fluorescent light:
Over both work stations
e. Electrical receptacles:
GFCI type 220 / 240 Volts AC 50 Hz.
f. Disposer Unit:
Should have Solenoid valve, Vacuum breaker, Water tight on / off switch, Internal Overload protector, Motor ½ to ¾ HP.
g. Fabrication:

Stainless Steel Type 304 with satin finish
h. Dimensions:
Length: 280 – 290 cm.
Width: 65 – 75 cm.
Height: 180 – 190 cm.
II. System configuration accessories, Spares and Consumables:
None
III. Environmental factors:
a. Shall meet IEC-60601-1-2:2001 (Or Equivalent BIS) General Requirements of safety for Electromagnetic Compatibility or should comply with 89/366/ECC; EMC-Directive.
b. The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15- 90 %
c. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15 – 90 %
IV. Power Supply: Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.
V. Standards, Safety and Training:
Should be European CE or BIS approved product
b. Manufacturer should have ISO certification for quality standards.
VI. Documentation:
a. User / Technical / Maintenance manuals to be supplied in English.
b. List of important spare parts and accessories with their part number and costing.
c. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

Item Sl. No. 3

Air Purifier /Odour Control System
I. Technical specifications:
a. Should be noiseless while running.
b. Spraying solution should be environment friendly, non toxic, ozone safe and biodegradable.
c. Spraying solution should be able to breakdown and neutralize odour causing bacteria and molecules.
d. System should have at least four spraying units.
e. Spraying solution should be readily available on a recurring basis.
II. System configuration accessories, Spares and Consumables:
None
III. Environmental factors:
a. Shall meet IEC-60601-1-2:2001 (Or Equivalent BIS) General Requirements of safety for Electromagnetic Compatibility or should comply with 89/366/ECC; EMC-Directive.
b. The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15- 90 %
c. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15 – 90 %
IV. Power supply:
a. Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.

b. UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries for 60 minutes back up.
V. Standards, Safety and Training:
a. Should be European CE or BIS approved product.
b. Manufacturer should have ISO certification for quality standards.
VI. Documentation:
a. User / Technical / Maintenance manuals to be supplied in English

Item Sl. No. 4

Cadaver lift Conveyor style
1. Description of function:
a. Eliminates the strain of manual lifting of the bodies to body racks in cold room
2. Operational Requirements:
a. Eliminates physical strain of lifting the body to the body racks and getting it down from the body racks.
3. Technical specifications:
a. Should be able to transport dead bodies from cold storage to autopsy table and then to the relative waiting area. Should be able to lift bodies and place them on the body racks in the cold room and also bring them down from body racks.
b. Stainless Steel Type 304 with satin finish, rugged frame structure, gray powder coated.
c. Should be able to bear the weight of dead body. Lifting capacity: 250 kg.
d. Dimensions: Length: (85 – 95) inches. Width: 30 – 35 inches. Height adjustable. When fully elevated: 75 – 85 inches; lowermost: 9 inches.
e. Integrated 12 V Hydraulic Unit for vertical adjustment.
f. Battery operated electro-mechanical lifting system.
g. Casters should be rubber edged with total lock wheel locking in-built system. Navigation should be possible in all directions.
h. Can be easily cleaned with ordinary detergent after each transportation and should be resistant to fumigation chemicals and cold temperature.
i. Should be durable and have bumpers to protect the carrier from accidental bumping on the walls of autopsy hall and body storage racks.
j. Push handle for movement.
4. System configuration accessories, spares and consumables:
a. None
5. Standards, safety and Training:
a.Should be CE or BIS approved product
b. Manufacturer should have ISO certification for quality standards.
c. Comprehensive training for lab staff and support services till familiarity with the system.
6. Documentation:
a. User / Technical / Maintenance manuals to be supplied in English.
b. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered

Item Sl. No. 5

Weighing Machine for dead bodies
1. Technical specifications:
a. Length of floor scale should be 4 feet to 6 feet.
b. Platform for keeping the body – should be sturdy, made of stainless steel, 14 gauge – size 6 feet x 2 ½ feet x 4 inch.
c. Should have a digital meter (dial) to display the weight rapidly and measurements can be calibrated to adjust the weight of the platform.
d. The digital meter (dial) should be enclosed dust proof and water tight stainless steel enclosure mounted on a wall. AC or DC operated.
e. Should be able to perform under the most rigorous conditions of a mortuary conducting 15 post-mortem examinations per day measuring dead body weight ranging from 0 kg to 200 kg. Accuracy upto 25 grams.
f. Rechargeable battery back-up pack provided for usage in power failure.
2. System configuration accessories, spares and consumables:
None
3. Environmental factors:
None.
4. Standards, safety and Training:
a. Should be CE or BIS approved product.
b. Manufacturer should have ISO certification for quality standards.
5. Documentation:
a. User / Technical / Maintenance manuals to be supplied in English.
b. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
c. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.
d. Certificate of calibration and inspection.

Item Sl. No. 6

Digital Weighing Machine for organs/foetus
Specifications:
1. Description of function:
To measure weight of organs during Autopsy and for weighing the foetus
2. Operational Requirements:
a. Organ weights of each organ documented during autopsy
3. Technical specifications:
a. Stainless steel 304 grade construction
b. Platform minimum 350 mm x 350 mm (14" x 14"), easy to clean and anti-staining
c. Maximum of 15 kg can be measured with accuracy of about 2 gm.
d. Digital display
e. Rechargeable battery back-up pack provided for usage in power failure.
4. Environmental factors:
a. The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C and relative humidity of 15 – 90%.
b. The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.

5. Standards, safety and Training:
a. Should be CE or BIS approved product
b. Manufacturer should have ISO certification for quality standards
6. Documentation:
a. User / Technical / Maintenance manuals to be supplied in English.

Item Sl. No. 7

Oscillating Electric Autopsy Saw (Bone cutting, with blades and dust collector)
1. Technical specifications:
a.Strong Motor with at least 18,000 rpm
b. 15,000 – 16,000 Oscillations / out of blade.
c. Motor and hand piece should be seperate and connected by a long cord not less than 8 feet long so that motor is not required to be lifted every time.
d. Motor is to be provided with long service cord with plug.
e. Hand piece with safety flange permitting firm grip and should stay cool during operation
f. Easily detachable hand piece – autoclavable.
g. Both hand and foot switch for on and off operation.
h. Suitable wrench to remove blades
Accessories .Large section blade 6.3 cm width with a stem of 1.1 cm:1Nos. . Small section blade 4 cm width
i. Should have provision for vacuum bone dust collector.
2. System configuration accessories, spares and consumables:
None
3. Environmental factors:
a. Shall meet IEC – 60601 – 1 – 2:2001 (Or Equivalent BIS) General requirements of safety for Electromagnetic Compatibility or should comply with 89 / 366 / EEC; EMC – directive.
b. The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C and relative humidity of 15 – 90%.
c. The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.
4. Power supply:
a. Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.
5. Standards, safety and Training:
a. Should be US FDA/ European CE/ BIS approved product.
b. Manufacturer should have ISO certification for quality standards.
c. Comprehensive training for lab staff and support services till familiarity with the system.
6. Documentation:
a. User / Technical / Maintenance manuals to be supplied in English.
b. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

Item Sl. No. 8

Dissecting Instruments
a. Rib Shears:
Number required: 4
Required for cutting ribs during Autopsy
Should confirm to ISO standard
Length: 22 – 25 cm.
With spring mechanism; curved
b. Cartilage knife 4”: 6 nos
c. Organ knife stainless steel 10”: 6 nos
d. Organ knife stainless steel 6”: 6 nos
e. Brain knife stainless steel 10”: 6 nos
Premium grade hardened stainless steel with protective coating for extra durability and protection against rust and corrosion
Satin matt finish to reduce the glare
Both sided edged knife for cutting the brain with precision
f. Scissors straight blunt 8”: 6 nos
g. Scissors straight sharp 8”: 6 nos
h. Scissors straight sharp 6”: 6 nos
i. Scissors straight blunt 6”: 6 nos
j. Scissors Mayo curved 7.5”: 6 nos
k. Dissecting scissors 6”: 6 nos
l. Mayo scissors curved 6”: 6 nos
Medium reach, tapered tips. Available as straight or curved in 3 different lengths.
m. Barnard‟s blunt scissors 8”: 6 nos
n. Barnard‟s sharp scissors 7”: 6 nos
o. Bowle Barnard‟s guarded points 5.5”: 6 nos
p. Metzenbaum‟s straight scissors 6.5”: 6 nos
Designed with extra long reach and smaller, intricate blade length.
Promotes precision cutting, in difficult to reach areas.
q. Metzenbaum‟s curved scissors 5.5”: 6 nos
r. Forceps bone cutting angled 12”: 4 nos
s. Forceps bone cutting straight 10”: 4 nos
t. Micro forceps straight 11.5 cm: 4 nos
u. Micro forceps curved 11.5 cm: 4 nos
v. Dura strip forceps angled serrated jaws 8.5”: 4 nos
To remove dura mater of the cranial vault during Autopsy
Stainless steel forceps with angled head, serrated jaws.
w. Virchow skull breaker: 2 nos
x. Viscerotome: 2 nos
y. Hack saw: 4 nos

Item Sl. No. 9

	Cadaver / Autopsy Carrier (Non-elevating)
	Specifications:
1	**Technical specifications:**
	Should be able to transport dead bodies from cold storage to autopsy table and then to the relative waiting area.
	Dimensions:
	Length: 75 inches to 85 inches
	Width: 25 – 35 inches
	Height: 30 – 35 inches
	Chassis should be made Heavy duty, high impact PVC, totally covering the dead body with non-transparent doors opening on the top side.
	Casters should be rubber edged with total lock wheel locking in-built system. Navigation should be possible in all directions
	Should be able to bear the weight of the dead body (up to 200 kg).
	Can be easily cleaned with ordinary detergent after each transportation and should be resistant to fumigation chemicals and cold temperature.
	Should be durable and have bumpers to protect the carrier from accidental bumping on the walls of autopsy hall and body storage racks.
2	**Standards, safety and Training:**
	Manufacturer should have ISO certification for quality standards

Item Sl. No. 10

	Mobile X-ray system
1	**Operational requirements**
a	Compact, lightweight, easily transportable mobile radiographic unit suitable for bedside x-rays.
b	The unit must have an effective braking system for parking and transport.
c	The tube stand must be fully counterbalanced with rotation in all directions
d	Exposures with remote control should be available.
e	The unit must have cassette storage facility for all size of cassettes
2	**Technical Specifications The Generator:**
	- Microprocessor controlled high frequency, output 20 KW or above.
	-It should have a digital display of mAs and kV.
	-KV range: 40kV to 120kV
	-mA range: 200 mA or more
	X-Ray Tube: -Rotating anode with at least 2500 rpm and focal spot size should be 1.5mm or less. -Light beam Collimator of multi leaf type with auto cut off switch. -The exposure release switch should be detachable/strechable with a cord of sufficient length as per ICRP recommendation. Mention the switch is detachable or stretchable.
3	**System Configuration Accessories, spares and consumables**
	Grid(Ratio 12:1) of following sizes should be provided- 01 each
	-12”x15”
	-10”x12”"
4	**Standards and safety**
	Should have AERB Type approval
	Should comply with ICRP Guidelines for radiation leakage and X-Ray equipments
	Should be European CE or US FDA approved
5	**Accessories**
	Wrap around light weight Lead free Aprons with 0.5 mm lead equivalence certified by BARC or AERB or ISO : 2 Nos

Item Sl. No. 11

	Student upright Binocular Microscopes (with inbuilt light source & imported achromatic optics)
	Technical specifications:
1	Binocular microscope with universal infinity corrected optical system
2	Halogen / LED light source illumination
3	Rigid frame with ergonomics design
4	Binocular Observation tube - should be Seidentopf type with inclination of 45/30 degrees
5	Built in torque adjustable focusing knob
6	Mechanical stage with rigid hand coaxial control
7	Abbe condenser, Iris diaphragm
8	Revolving Quadruple nose piece (for objectives).
9	Plan achromatic objectives 4X, 10X, 40X, 100X (Oil)
10	40X, 100X objective should be spring loaded
11	Eye piece 10X (FOV 20)
12	Antifungal treatment should be applied to the observation tube, eyepiece and objective
13	Accessories, dust cover and power cord
14	Eye pieces with pointers – 10 nos.
15	Power requirement 220 V/50 Hz
16	Should be European CE / FDA /BIS approved product.

Item Sl. No. 12

	Binocular Research Microscope with camera attachment
	Technical Specifications:
1	Optical System – Universal Infinity Corrected Optical System
2	Observation Tube - Siedentopf Trinocular, 30 deg inclined 360 deg rotatable. IPD range 52-75mm
3	Eyepiece - Focusable WF 10x (18mm/ 20mm).
4	Revolving Quadruple nose piece
5	Objectives - Infinity Corrected Plan Achromatic 4X, 10X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)
6	Illumination - 6V 20 WHalogen Lamp with 5 spare lamps with filters/equivalent LED illumination.
7	Abbe condenser, Iris diaphragm
8	Phase contrast attachment should be available
9	Image Device - 2/3” CCD Camera - Resolution 1.4MP or better with suitable mount
10	Light Sensitivity for camera - 1 Lux
11	Interface – USB
12	Software - Image Analysis Software
13	System Requirements – Suitable PC having 19” Colour LCD/TFT Monitor, CPU: RAM: 4 GB or more, Hard Disk Space: 500 GB or more, CD/DVD-ROM drive and USB port 3.0. Power adapters/ cables etc for projection and LAN transmission.
14	Should be supplied with compatible laser colour printer.
15	Manufactures/Supplier should have ISO certificate to Quality Standard.
16	Should be US FDA/ European CE/ BIS approved product.
17	Equipment should be installed and demonstrated.
18	Training should be given to atleast two faculty members.

Item Sl. No. 13

	Analytical Digital Balance single pan
1	**Description of Function:** Required for precision weighing of Lab samples
2	**Operational Requirements**
a	Microprocessor based single pan Analytical Balance with High accuracy & precision is required.
b	Reading of the weight by digital display.
c	Electronic top loading balance with transparent case
d	The balance should have functions of piece counting, percent weighing, formulation, dynamic weighing with automatic and manual start and provision for data interface
3	**Technical Specifications**
a	Weigh accurately up to 3rd decimal place
b	Fully automatic time and temperature controlled internal calibration and balance should be capable to adjust itself
c	Auto zero Setting
d	Weighing capacity up to 200g
e	Readability 0.001g
f	Repeatability 1mg or less
g	Setting time 1.5 second
h	Suitable for internal and external adjustment weights
i	PC connectivity through RS 232 or Ethernet or Bluetooth or PS/2 for efficient data capture and easy network integration.
j	Liquid Crystal Display (LCD) for display
k	Stainless steel square weighing pan
l	IR sensors for hands free operation
m	Warning if balance is not correctly levelled
n	Automatic and detachable draft shield
o	Detachable and adjustable terminal
p	Facility for user administration and password protection.
q	Integrated automatic safety function for external routine operations
r	Alphanumeric data entry of 4 ID‟s
4	**System Configuration Accessories, spares and consumables -** As specified
5	**Environmental factors**
a	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
b	The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.
6	**Power Supply**
a	Power input to be 220-240VAC, 50Hz
b	Suitable Auto voltage corrector with spike protector should be available.
c	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
d	Resettable overcurrent breaker shall be fitted for protection
7	**Standards and Safety**
a	Should be US FDA/European CE/BIS approved product
b	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

Item Sl. No. 14

	Centrifuge Machine
	Specifications:
1	**Description of function:**
	Centrifuges are required to separate various components of blood and any other liquid sample for analysis.
2	**Operational Requirements:**
a	Aerodynamic compact construction for vibration free performance.
b	Table top version.
3	**Technical specifications:**
a	Tube capacity: No. 24 – 36; Size 5 – 15 ml.
b	Should have a digital timer
c	Body should be made of strong fabricated and corrosion resistant steel.
d	Control panel: for start / stop switch, dynamic brakes, step less speed regulator with zero start switch and speed indicator with timer and protective fuses.
e	Door interlock.
f	Maintenance free brushless drive motor with exact speed pre-selection and display. Speed range 100 to 6,000 rpm and above, accuracy 1 rpm.
g	RPM: Upto 6500-7,000
4	**System configuration accessories, spares and consumables:**
a	Centrifuge complete with Swig and basic rotors and four buckets – 01 set.
b	Tube holders as appropriate
5	**Environmental factors:**
a	Shall meet IEC – 60601 – 1 – 2 :2001 (Or Equivalent BIS) General requirements of safety for Electromagnetic Compatibility or should comply with 89 / 366 / EEC; EMC – directive.
b	The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C and relative humidity of 15 – 90%.
c	The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.
6	**Power supply:**
a	Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.
b	Voltage corrector / stabilizer of appropriate ratings meeting ISI Specifications. (Input 160 – 260 V and output 220 – 240 V and 50 Hz)
7	**Standards, safety and Training:**
a	The supplier should be ISO certified for quality standards.
b	Should be CE/UL / BIS approved product
8	**Documentation:**
	User manual in English

Item Sl. No. 15

	Dissecting Lights (Double Ceiling Mounts)
	Specifications:
1	**Description of function:**
	Autopsy light is required to conduct autopsy.
2	**Operational Requirements:**
a	Should be a Surgical Light unit incorporating the latest LED technology shadowless operating light field
b	Should comply with forensic stipulations, i.e. should be able to illuminate the whole body of 6 feet length simultaneously with the same brightness all over.
c	Should be of suspension type suspended from the ceiling
3	**Technical specifications:**
i	Should have Single Colour high performance LEDs with life time more than 40,000 hours
ii	Should be a dual dome and the main light and satellite should have the following specifications
a	LUX intensity 1,40,000 Lux & Satellite 1,40,000 Lux or above
b	Colour temperature should be between 4000 to 4500 degree K
c	Colour rendering index should not be less than 95
d	Depth of illumination should not be less than 100 cm.
e	Illumination adjustment 30% to 100%
f	The light dome shall be compatible for laminar air flow.
iii	Should have stable illumination throughout the life period of the light. If the intensity reduces during the warranty or CMC period the LEDs has to be replaced free of cost if required
iv	The LED‟s must be of a single color suitable for long term maintenance and ease of replacement
v	Temperature rise at the pathologist‟s head level should be less than 2 degree C.
vi	Should have control panel for light focusing adjustment fixed on the dome or arms.
4	**System configuration accessories, spares and consumables:**
	Should supply autoclavable handle 3 Nos. for each dome
5	**Environmental factors:**
a	Shall meet IEC – 60601 – 1 – 2 :2001 (Or Equivalent BIS) General requirements of safety for Electromagnetic Compatibility or should comply with 89 / 366 / EEC; EMC – directive.
b	The unit shall be capable of operating continuously in ambient temperature of 20 – 30 deg C and relative humidity of 15 – 90%.
c	The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.
6	**Power supply:**
	Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug
7	**Standards, safety and Training:**
a	Should be US FDA/ European CE/ BIS approved product.
b	Manufacturer should have ISO certification for quality standards
8	**Documentation:**
a	User / Technical / Maintenance manuals to be supplied in English.
b	Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.
c	Certificate of inspection and quality control indicating the S / N for all non consumable items with date

Item Sl. No. 16

	Mortuary Deep Freezer
1	**Specifications:**
	Internal Volume (Litres) - 200
	Number of trays – 4-6
	Minimum Temperature: -40°C (AC room)
	Insulation (CFC & HCFC free polyurethane foam): 80 mm minimum for Body & 80 mm for Door
	Temperature control : Microprocessor
	Display: 1" - 7 Segment, Big Size LED
	Power Failure Alarm: Audio Visual Alarm
	Door Open Alarm: Audio Alarm in case door open for over one minute
	Internal Body Material: Stainless Steel - 316 grade
	External Body Material: Stainless Steel - 304 grade
	Inbuilt hermetically sealed compressor
	Noise Level: Less Than 65 db(A)
	Voltage Stabilizer: of appropriate specification to be included
2	**Environmental factors:**
a	Shall meet IEC – 60601 – 1 – 2 :2001 (Or Equivalent BIS) General requirements of safety for Electromagnetic Compatibility or should comply with 89 / 366 / EEC; EMC – directive.
b	The unit shall be capable of operating continuously in ambient temperature of 20 – 30o C and relative humidity of 15 – 90%.
c	The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15 – 90 %.
3	**Power supply:**
a	Power input to be 220 – 240 VAC, 50 Hz fitted with Indian plug.
b	UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries for 60 minutes back up.
4	**Standards, safety and Training:**
a	Should be US FDA/European CE approved product.
b	Manufacturer should have ISO certification for quality standards.
c	Comprehensive training for lab staff and support services till familiarity with the system
5	**Documentation:**
a	User / Technical / Maintenance manuals to be supplied in English.
b	Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered

Item Sl. No. 17

	Mortuary Cooler (4 body capacity)
	Technical Specification:
1	**General**
a	Designed for long storage of cadavers.
b	Proper design ensuring best hygiene.
c	Energy Efficient.
d	Sturdy Construction
e	Light Weight
f	Low Maintenance.
2	**Body of the Mortuary Chamber**
a	Mobile with brakes for castor wheels.
b	Corrosion free exterior and interior.
c	Double walled cooling units.
d	Outer shell constructed of thick steel sheets of type 304- SS grade
e	The inner chamber to be of heavy gauge stainless steel sheet of 55-304 grade.
f	The 100 mm gap between the walls to be filled with high grade polyurethane insulation, ensuring maximum thermal efficiency. Puff density should be 40kg/cu m.
g	The doors to be made of stainless steel for extra protection and long life.
h	The doors should be connected by sturdy heavy duty chrome plate hinges and fitted with hard chrome plated lubricated latches for opening the door. Individual standard key lock for each chamber.
i	All the doors to be fitted with high quality triple point neoprene rubber gaskets for air tight fittings and magnetic closure fittings and lock.
j	Washable interiors with channel for water outlet that can be plugged with rodent resistant material.
k	Vapour proof lamp inside
3	**Body Trays**
	Sturdy, proper loading body trays, with telescopic sturdy castors and castor locks to prevent rolling out of the tray.
4	**Dimensions (Approx)**
	Width -1194 mm + 10 mm.
	Depth - 2362 mm + 10 mm.
	Height — 1745 mm + 10 mm.
	Height with cooling unit — 2215 mm + 20 mm.
5	**Temperature & Controls:**
a	Microprocessor based temperature control.

b	Temp range +2 to +8°C
c	Digital LED display. Touchpad data entry for adjustable temperature and alarm settings.
d	Audio visual alarm for high and low temperature
e	PUF insulation
f	ISI certified high end ultra mute CFC-free hermetically sealed compressors, conforming to latest international standards and guidelines.
g	Efficient condenser with automatic evaporating system (condensate).
h	Forced air circulation system
i	Automatic defrosting system.
	5. Noise levels- less than 60 Db
II.	**Environmental factors:**
	• Shall meet IEC-60601-1-2:2001 (Or Equivalent BIS) General Requirements of safety for Electromagnetic Compatibility or should comply with 89/366/ECC; EMC-Directive.
	• The unit shall be capable of operating continuously in ambient temperature of 30-40 deg C and relative humidity of 15-90 %
	• The unit shall be capable of being stored continuously in ambient temperature of 10-50 deg C and relative humidity of 15 - 90 %
III.	**Power Supply:**
	• Power input to be 220 - 240 VAC, 50 Hz and suitable stabilizer (4kVA or higher).
	• Battery back-up on display for 0 to 4 hrs. in case of power failure.
	• Fitted with Indian plug.
	• Should be FDA/CE/UL/BIS approved product.
IV.	**Standards, Safety and Training:**
	• Should be FDA/CE/UL/BIS approved product.
	• Manufacturer should have ISO certification for quality standards.
	• Comprehensive training for lab staff and support services till familiarity with the system.
	• Electrical safety conforms to standards for electrical safety IEC 60601-1 (Or equivalent International / National standard) general requirement for Electrical safety of Medical equipment.

Item Sl. No.18

Ultraviolet/White light transilluminator	
	Specifications:
1	Stainless Steel Filter Frames
2	Long life filters quality, stainless steel filter frame resistant to chemicals and scratching.
3	The epoxy painted body should be chemical resistant
4	High / Low intensity
5	Filter Size and viewing area for UV: 20 x 20cm

6	Viewing area for white light: 20 x 20cm
7	UV Tube: 6 x 15 W
8	Wave Length: 254nm / 312nm / 365nm / 302 nm
9	Hinged UV safety screen. It should be clear transparent lid.
10	UV-protective goggles (1 set) to be provided
11	High contrast filter to eliminate leakage from fluorescent lamp which often appears in the background while capturing image.
12	Should have no or minimum photo - nicking, dimerization & photo - bleaching to gels.
13	Housing should be anti-corrosion treated with powder coated mild steel.
14	The UV safety shield should have unique protective glass which can be adjusted to the operator's visual angle and fixed providing better UV protection.
15	Input voltage 2.5 Amp or any other suitable.

Item Sl. No.19

Analytical Balance	
1	**Description of Function**
	Electronic Balance is required for precision weighing of Lab samples.
2	**Operational Requirements**
	Microprocessor based single pan Analytical Balance with High accuracy & precision is required.
	Reading of the weight by digital display.
	Pan size = 80 - 100 mm
	Electronic top loading balance with transparent case
	The balance should have functions of piece counting, percent weighing, formulation, dynamic weighing with automatic and manual start and provision for data interface.
3	**Technical Specifications**
	Weigh accurately up to 3rd decimal place
	Fully automatic time and temperature controlled internal calibration and balance should be capable to adjust itself
	Auto zero Setting
	Weighing capacity up to 200g
	Readability 0.001g
	Repeatability 1mg or less
	Setting time 1.5 second
	Verification interval 0.001gm.
	Suitable for internal and external adjustment weights
	Balance should have: Facility for user administration and password protection.

	Balance should have
	Liquid Crystal Display (LCD) for display
	Stainless steel square weighing pan
	IR sensors for hands free operation
	warns if balance is not correctly leveled
	automatic and detachable draft shield
	Detachable and adjustable terminal
	including user administration and password protection
	Integrated automatic safety function for external routine operations
	Alphanumeric data entry of 4 ID‟s
4	**System Configuration Accessories, spares and consumables**
	As specified
5	**Environmental factors**
	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.
6	**Power Supply**
	Power input to be 220-240VAC, 50Hz.
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
	Resettable over current breaker shall be fitted for protection
7	**Standards and Safety**
	System should be US FDA or European CE approved.
	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

Item Sl. No.20

Autoclave (Horizontal)	
	Specifications:
1	Single door, horizontal Rectangular High Pressure Microprocessor Controlled Microbiological Sterilizer.
2	Fully automatic, Steam jacketed suitable for operation on electricity.
3	Should have pre-selected programs and at least five variable program slot which should be adjustable as per our requirements
4	The unit should have third party certification for all the below given standards
a)	European CE or USFDA

5	Chamber Capacity: 300 - 400 liters
6	The working temperature range of 110 ºC - 134ºC and user should be able to set the desired sterilization temperature and sterilization time (10 minutes onwards) in the increment of one unit. This required particularly sterilization of culture media special at 110ºC for 10 minutes and 121ºC for 20 minutes.
7	The chamber, jacket, door and pipes should be made of stainless steel AISI 316 or higher quality.
8	The door should have two locks, one automatic and one manual.
9	Front and side panels should be made up of AISI 304.
10	The chamber should be supplied with two rails made up of AISI 316 for easy loading and unloading. A long steel handle should also be supplied to pull out hot sterilization carriage.
a)	Pull out trays/ Tanks (2 pieces), floor loading carts and transfer carriages should be made up of AISI 316. Pull out tray/Tank in the chamber should have raised edges to protect against solution spillage during sterilization
b)	The provision of locking the trolley as well as the carriage should be present.
c)	Loading cart should have a coupling system for connecting and disconnecting with the loading and unloading system of sterilizer.
11	The digital display at front panel will show the following parameters:
i)	Chamber temperature
ii)	Cycle no.
iii)	Batch no.
iv)	Time & Date
v)	Alarm indicator
vi)	Error code
vii)	Low water indicator
12	Inbuilt boiler made of AISI 316 or higher quality with low water protection system and automatic salt removal system.
13	Inbuilt or External Printer to record dates, time, load, identification no. and operating parameters i.e. temperature and holding time etc.
14	Compatible Water softener / RO based water purification system to feed autoclave.
15	The system should be able to work at 3 phase
16	Installation should be on turnkey basis. Following will be the terms and conditions:
a)	Water, electrical connection cable and drain outlet will be made available by the department. The supplier shall be responsible for arranging rest of the things for installation and smooth functioning of the equipment.
b)	Any civil work including flooring, tilling, plaster paint work or wood work, required for installation of autoclave shall be the responsibility of the supplier.
c)	Following shall be provided by the supplier along with machine
i)	Two sets of operating manual.
ii)	Two sets of circuit diagram.
iii)	Service manual.

Item Sl. No.21

Biosafety cabinet CLASS II A2	
1	The system should be microprocessor based. The microprocessor must display the inflow and down flow air velocities in real time on an LED display to ensure the user knows whether or not the cabinet is working under safe operating conditions.
2	Motor must automatically adjust the air flow speed to ensure continuous safe working condition. Air flow shall be as per requirements of Biosafety regulations in respect of at least BSC II A level cabinet
3	The cabinet noise level must be less than 65 decibel
4	Dimensions (Cabinet Size): 4 to 6 feet. The interior of the cabinet shall be of 304 stainless steel or equivalent material and must be smooth to ensure no risk of cuts to the users. Epoxy coated steel exterior.
5	Efficiency of HEPA filter should be almost 99%. Class 100 supply & exhaust through HEPA filter.
6	In order to ensure consistent and reliable down flow velocity across the supply HEPA filter over the life of the cabinet, the cabinet must use a pressure sensor (rather than anemometer) to detect pressure drop across the supply filter, rather than in just one point across the down flow. The pressure sensor must be encased in order to protect the sensor from temperature, humidity and other environmental phenomena that can impact the sensor's performance.
7	Fluorescent lamps for lighting of the interior of the cabinet. Front of the cabinet preferably be angled to help minimize glare. Sufficient illumination at work space.
8	A provision for UV light to disinfect the interior of the cabinet. UV light must be programmable to allow for specific exposure time from 0 to 24 hrs. Automatic UV switch OFF on opening of front window. The front window should be made of laminated safety glass to protect against leakage of UV rays and to ensure containment of potential hazardous material.
9	Safety alarm / safety display for :
	Low air velocity
	Faulty exhaust fan etc.
10	Power input to be 220-240 V AC, 50 Hz fitted with Indian plug.
11	Should meet NSF standards. Should be US FDA or European CE approved.
12	Movable stands
13	Warranty should cover UPS and batteries.
14	Calibration certificate shall be provided at the time of installation in respect of all the parameters that require calibration. Operational & maintenance training to be provided at the time of installation.
15	Audio visual indicator to understand HEPA filter loading to be provided.
16	Drain pan should be made of stainless steel.
17	Circulation - Class 100, supply & exhaust through HEPA filters.
18	Inflow velocity - 105 fpm (0.5 m/sec)
19	Downflow velocity - 55 fpm (0.3 m/sec)
20	70% air recirculation.
21	Design: 304 SS interior; epoxy coated steel exterior. Removable, seamless, dished work surface with lift out knobs. Door-fully closing, clear 1/4" tempered safety glass sach. Counter balance with base stand.

Item Sl. No.22

Biosafety Cabinet CLASS II B2	
1	The system should be microprocessor based. The microprocessor must display the inflow and down flow air velocities in real time on an LED / LCD display to ensure the user knows whether or not the cabinet is working under safe operating conditions.
2	Motor must automatically adjust the air flow speed to ensure continuous safe working condition. Air flow shall be as per requirements of Biosafety regulations in respect of at least BSC II B level cabinet.
3	Cabinet of bio safety Class II Type B2 specification
	Main Body - 1.2 mm 18 gauge electrogalvanized steel with epoxy antimicrobial coated finish.
	Work Zone: 1.5 mm 16 gauge SS, type 304 with 4B finish with large radius corners for easy cleaning.
4	Minimum internal dimensions (W x D x H) should be 900-1250X 500-650X 600-700 mm
5	Base stand of minimum 75 cms in height
6	Well illuminated preferably stainless work surfaces. Fluorescent light intensity at zero ambient > 1190 Lux.
7	Sliding window that can be opened to insert & remove larger equipment.
8	Microprocessor based controlled system to supervise operation of all cabinet functions
9	Alarm/check system to trigger in case of safety failure
10	Fluorescent lamps for lighting of the interior of the cabinet. Front of the cabinet preferably be angled to help minimize glare.
11	A provision for UV light to disinfect the interior of the cabinet. UV light must be programmable to allow for specific exposure time from 0 to 24 hrs. Automatic UV switch „OFF" on opening of front window. The front window should be made of laminated safety glass to protect against leakage of UV rays and to ensure containment of potential hazardous material.
12	Safety alarm / safety display for: Safety alarm / safety display for: Low air velocity,Faulty exhaust fan etc.
13	Electrical requirement 220-240V AC, 50Hz with Indian type plug
14	Down flow ULPA filter efficiency >99.999% at 0.1 to 0.3 microns
15	Exhaust ULPA filter efficiency >99.99% at 0.1 to 0.3 microns. Should offer ISO class 3 air cleanliness.
16	Exhaust to the outside environment via dedicated ducting
17	Provision for gas burner fitting
18	Adjustable ergonomic lab chair supplied with the system
19	Comprehensive user's manual with a report documenting all test procedures
20	Onsite installation and training for operating the equipment
	Onsite validation
	Calibration certificate
	Manuals
	Training for maintenance
21	Should meet NSF 49 standards. Should be US FDA or European CE approved / EN12649.
22	Average Air flow velocity:
	Inflow: 0.45m/s (90 fpm) at initial set point. Alarm at 0.40 m/s (80 fpm)
	Downflow: 0.30 m/s (60 fpm) at initial set point.
23	Noise level <62dBA according to EN 12469
24	Work zone should not have welded joints.
25	An administration controlled PIN (Personal Identification No.) which can be set to restrict access to main menu.
26	Blower should be Electronically Commuted Motor (ECM).

Item Sl. No.23

CO2 Incubator	
1	**Specification:**
	Air heated/Direct Heat with internal capacity 160 L to 200 L
	Minimum 4 adjustable shelves (or as per user requirement) with factory fitted separate air tight doors should be available. Water jacketed unit. Inner glass door.
	Interior chamber: Stainless steel for easy cleaning and decontamination
	Stable temperature control, excellent uniformity, and rapid recovery with no overshoot. Convection circulation to provide chamber homogeneity, eliminate vibration & reduce sample evaporation.
	HEPA Filters (99.98% efficient) at the inlet, outlets & sample port to minimize contamination.
	Temperature range : Ambient +5 ° C to 50 ° C or above
	Temp Accuracy +/-0.2°C of required temp at 37°C, with inbuilt Temperature Sensor.
	Audiovisual alarm for temperature adjusted CO2 & relative humidity levels.
	There should be a Membrane Keypad with LCD/LED to set and should be display of operating parameters such as temperature , clock time current status etc.
	Internal glass door for the observation
	CO2 Range- 0-20%; CO2 Accuracy: 1- 0.5%; CO2 Inlet pressure 1.5 bars (app) and fast recovery after opening door. There should be a provision for CO2 sensor. Thermal conductivity sensor for CO2 regulation.
	Compensation: Temperature compensation @ 0.5 ° C min and CO2 Compensation up to 5 % +/-0.5% in 5 minutes.
	High Humidity Chamber to achieve RH: 93-95% at 37°C, minimizing sample evaporation. Independent door heater to eliminate condensation on inner glass surfaces should be available.
	Digital microprocessor controlled. 72-Hour Data Storage or External data logger for continuous data monitoring for CO2 concentration, temperature alarms and door openings should be automatically recorded for on-screen display.
	Data output for data acquisition and printing.
	PC Connectivity through RS232C
	Insulated door fitted with heavy hinges handles locking mechanical door.
	Low water alarm indication
	On castors for easy movements
2	**System Configuration Accessories, spares and consumables:**
	System as specified-
	CO2 cylinders 2 nos. (capacity at least 30 kg) with regular (at least one) compatible to machine part. Huidity pan (3-3.5l), 2 stage CO2 gas regulator with pressure gauges, tubing & roller based stand.
3	**Environmental factors:**
i	The unit shall be capable of operating continuously in ambient temperature of 10 -45°C and relative humidity of 15-90%.
4	**Power Supply:-**
	Power input to be 220-240VAC; 50Hz fitted with plug, compatible with local electrical socket

	Resettable over current breaker shall be fitted for protection
	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
5	**Standards and Safety:-**
i	Should be compliant to ISO 13485/1S0 9001 quality systems or equivalent
ii	Should be compliant with IEC 61010- I: covering safety requirements for electrical equipment for measurement control and laboratory use.
iii	Should be US FDA or European CE approved product
iv	Attach original manufacturer's product catalogue and specification sheet Photocopy / computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.
v	Comprehensive onsite training for lab staff and support services till familiarity with the system.
6	**Documentation:**
	Certificate of calibration and inspection from factory.
	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
	List of important spare parts and accessories with their part number and costing
	User / technical / maintenance manuals to be supplied;
	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist.The job description of the hospital technician and company service engineer should be clearly spelt out.
	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue.
	Fan assisted air convection should be provided

Item Sl. No.24

Micro pipette adjustable 1 – 2.5 µl, 0.5 – 10 µl, 2-20ul, 10-100ul, 20 – 200 µl, 100-1000ul capacity (Manual)	
	Specifications:
1	Fully autoclavable
2	Accuracy in measurement
3	Ejector should ensure safe eject contaminated tips, positioned for perfect ergonomics
4	Precision in control, spring loaded tip cone
5	One-button operation for aspiration, dispensing and tip ejection
6	Volume setting automatically locks
7	Chemically resistant
8	4-digit display
9	Accuracy: +/- 1% for all
10	Calibration certificate should be provided with the supply.
11	Disposable tips 5000 each volume.
12	Should be supplied with tips holder rack & pipettes stand
13	Should be US FDA/ European CE approved.
14	Perfect piston system made of Fortron.
15	Spring loaded tip cone for connecting tips very tightly.

Item Sl. No.25

Deep Freezer (-80°C)	
A	**Specifications:**
	Ultra Low Temperature Freezer – with operating temperature of (-80) Deg C at 32° C ambient temp. having internal volume 650 - 750 Litres, External casing should be powder coated galvanized sheet metal, non corrosive.
B	**Main Features:**
	Stainless steel or steel with 4 lockable castors
	Outer door designed to enable easy door opening, lockable doors.
	Five Drawers or compartments each with separate inner doors for better sample protection through minimum sample warming
	Adjustable shelves.
	Polyurethane Insulation minimum of 70mm for better thermal insulation and sample safety in case or power failure.
C	**Refrigeration:** Should have pull down time to -40°C max. upto 60-65 min.
i	Refrigeration – CFC and HCFC free. Non - inflammable
ii	Cooling system : Hermetic design with single/cascade compressor.
iii	Should have vapor compression system with automatic defrost or any better technology.
iv	Non-invasive defrost with time & temperature guided cycle.
v	Should have condenser enhanced finned tube & forced air-cooled.
vi	Compressor should be 1/2 HP reciprocating.
D	**Control Unit:**
	Microprocessor controlled.
	Temperature deviation of maximum +/-3°C
	Ambient temperature: 16 to +32°C.
	Actual temperature display should be of better visibility.
	Key board should have battery power back up
	Optical and acoustical alarm system for high and low temperature.
	Voltage stabilizer.
E	Should be US FDA or European CE approved product
	External door should be lockable.
F	**Electrical:**
	Power - 115 V 60 Hz AC; 1 Phase
	Energy consumption max. 10-13 KW/hr
	Instrument rated current - 8.0 FLA
	Building supply rating - breaker 15 Amps/115 V +/- 10V
	Power plug / power cord length 5-15 P/10 feet of Indian Standard.

Item Sl. No.26

Electronic pipettes digitally adjustable	
	Specifications:
1	Routine pipetting; Optimal ergonomics, light weight
2	It should be precision and reproducibility, which means no more delays due to complicated programming or inflexible processes, maximum reproducible results.
3	It should be able to work on 220-240 volt, power supply
4	Fatigue-free work and consistent, full control over the pipetting processes
5	Multi-function rocker
6	Function control softkeys; Selection dial
7	It should have Separate power socket; Practical charging contacts
8	Should have standard display with simple menu navigation
9	Rechargeable battery
10	Ergonomic display angle
11	After tip ejection, the piston automatically returns to zero position
12	Volume range : 0.5- 10 ul, 10-50 ul, 10-100ul, 100-1000ul.
13	All functions at a glance and easily selectable and Optimal readability in every position
14	Accuracy: +/- 1%
15	Should be supplied with 5000 tips, holder rack & pipettes stand.
16	Calibration certificate should be provided with the supply
17	Should be US FDA/European CE approved.

Item Sl. No.27

Pharmaceutical Refrigerator	
1	Capacity: 325- 400 litres
2	Temperature 2-8 C.
3	Preferably roller or caster mounted.
4	Adjustable shelves.
5	Battery backup for display and alarms
6	Durable rust free exterior.
7	Durable interior.
8	Control panel with temperature alarm, on/off switch and digital thermometer.
9	Interior lighting, auto or manual defrosting arrangement
10	Adequate circulation of air to ensure even cooling

11	Door with lock.
12	Control panel with temperature alarm, ON /OFF switch with power on indicator, digital thermometer, temperature display.
13	Electronic automatic temperature control,
14	Operable at 220 V, 50 Hz, single phase AC supply.
15	Compressor unit to be hermetically sealed with guarantee for at least five years.
16	Should have all the accessories required for the functioning of the equipment.
17	All electrical peripherals required for smoothes functioning e.g. voltage stabilizer provided with the equipment.
18	System should be US FDA or European CE approved.

Item Sl. No.28

Vertical Laminar Air Flow Cabinet	
	Size : 4 Feet
	Laminar Air Flow Cabinet should be tested for cross-contamination and product protection using microbiological test methods specified in EN12469.
	Sentinel Microprocessor-Based Control & Alarm System.
	ISO Class 4 Air Cleanliness.
	Front Sliding sash.
	Cabinet Constructuion
	- Main Body : 1.2 mm / 0.05"/ 18 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish.
	- Work Zone : 1.2 mm (0.05") 18 gauge Stainless Steel, grade 304, 4B finish. Single piece stainless steel work surface with a curved front edge for maximum operator comfort.
	- Side walls : Colourless and Transparent UV absorbing tempered glass to enhance visibility inside the work area.
	Raised front edge.
	Temperature compensated Air velocity sensor.
	HEPA Filter Typical efficiency - 99.99 % for particles size at 0.3 microns.
	Additional disposable pre-filter with 80% arrestance to trap large particles in the inflow air prior to reaching the main filter, protecting against damage and prolonging filter life.
	External surfaces should be powder coated with Isocide Anti-microbial coating to eliminate 99.9% of surface bacteria within 24 hours of exposure.
	Permanently lubricated, high performance, energy efficient, centrifugal motor/fans. Backward curved wheel with external rotor design for less electrical energy consumption. Completely integrated assembly to optimize motor cooling. All rotating parts should be balanced for smooth, quiet and vibration-free operation.
	Sound emission : <61 dBA as per IEST-RP-CC002.2
	Electrica; 220-240V, AC, 50Hz, 1ø
	Warranty 1 year.

Item Sl. No.29

Automated tissue grinder (Homogenizer)	
	Specifications:
1	Should be useful for disrupting a broad range of tissue.
2	It should be used for homogenizing the volumes of 250ul to 10 ml (H2O) and speed upto 24000 rpm
3	Should provide gentle disruption of tissues without damaging the subcellular structures.
	The stirrer motor should have electronic speed controller
4	The pestles and tubes should be chemically inert, resilient and autoclavable.
	They should have smooth and non-wettable surface
5	It should have pulse mode to process heat-sensitive samples; accelerate chemical and enzymatic reactions 0 to 15-minute timer
6	Power 220V AC/ 50Hz
7	Should include all accessories including support stand, replacement interface washers, and tip wrenches: Should include sets of different pestles and tubes.
8	Electronic speed control.
9	Should come with accessories like battery, charger, probe, stand & tool kit.
10	Certification - CE & ISO certification.
11	Inbuilt overload protection.

Item Sl. No. 30

Automated Blood Culture System	
1	**Description of System :**
	Micro organism culture is required to be done on blood and body fluid. A sample is inoculated into liquid media and is incubated in a controlled environment for one to seven days.
2	**Operational Requirements:**
	Fully Automated System capable to culture micro organisms
3	**Technical Specifications**
i	Should work on non radiometric technology
ii	System should have in built calibration check, touch screen monitor. Should have LIS compatibility
iii	Should have modular design which is upgradeable and should be FDA approved
iv	Should be able to monitor the growth of organisms continuously in each cell. The media bottles should have the capacity to neutralize antibiotics
v	System should be capable of exporting data to the data management system for long term storage and should have the facility to analyse delayed soecimens with the routine bottles
vi	Should be able to grow aerobes, anaerobes and fungi.
vii	Capacity: 400 bottles
viii	Should include Data management system and software to analyse and store the data

ix	Should have the capability for continous monitoring of the samples for growth of organisms in each cell and have the capacity to generate hard copy of each growth kinetics.
x	Easy to use software for patient information, entry and storage. Long term data storage facility, tracing patient by name, id hospital registration number.
xi	Should have in built incubator with facility for decontamination.
4	**System configuration, Accessories, Spares and Consumables:**
1	System as specified
2	All consumables required for installation and standardization of system to be given free of cost.
5	**Environmental Factors**
1	The units shall be capable of being stored continuously in ambient temperature of 0 - 50C and relative humidity of 15-90%.
2	The units shall be capable of being operating continuously in ambient temperature of 10 - 40C and relative humidity of 15-90%.
6	**Power Supply**
	Power input to be 220 to 240VAC, 50 Hz fitted with Indian Plug.
	Resettable over current breaker shall be fitted for protection
	Suitable UPS with maintenance free batteries for minimum one hour backup should be supplied with the system.
7	**Standards and Safety**
1	Should be compliant to ISO-13485 Quality Systems medical devices particular requirements for the application of ISO-9001 applicable to manufacturers and service providers that perform their own design activities.
2	Comprehensive training for Lab Staffs and support service till familiarity with the System.
3	Electrical Safety conforms to standards for electrical safety IEC-60601/IS 13450
4	Should be FDA/ CE/ ISI approved product.
5	Five years warranty, five years comprehensive AMC should be available with service centres in close proximity.
8	**Documentation**
1	Certificate of Calibration and inspection from Factory.
2	Compliance report to be submitted in a tabulated and pointwise manner clearly mentioning the page or para number of original catalogue
3	List of equipments available for providing calibration and routine maintenance support as per manufacturer documentation in technical/ service manual
4	Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The Job description of the Hospital Technician and Company service engineer should be clearly spelt out.
5	List of important spare parts and accessories with their part number and costing.

Item Sl. No. 31

Refrigerated Centrifuge	
1	High Speed Refrigerated table top centrifuge, microprocessor controlled, freely programmable, spin control comfort with LC graphic display screen (for centrifugation in angle rotors, swing-out rotors and microtiter plate rotors)
2	Max speed: Atleast 12,000 rpm or above
3	Temperature: -10 to +40ºC, CFC free refrigeration
4	Single knob operation (simple keypads)
5	Maintenance free, noiseless, brushless induction motor drive.
6	Pre-selection of run parameters in terms of rpm and rcf
7	Pre-selection of from 1 min to 99min or continues
8	Acceleration and deceleration curves – 9 each
9	Storing of at least 5-10 run protocols
10	Free programming of all parameters
11	Self diagnostic error messages and alarms
12	Electronic automatic rotor identification & imbalance sensor.
13	Motorized lid lock and inter lock
14	Operates on 230V/50 Hz
15	Angle rotor 10 x 10 ml
16	Angle rotor 24 x 2.0/1.5ml
17	Angle rotor 6 x 50ml. (Falcon)
18	Adapter for 1 x 15 ml culture tubes (set of 2) & adapter. 0.2/0.5/0.8 ml eppendorf tubes
19	Swing out rotor 4 plates with MTP.
20	Should be US FDA or European CE approved product.

Item Sl. No. 32

Walk in Cooler	
1	**Description of Function**
1.1	Walk in Cooler is required to store Biological product at a temperature between 2 deg to 8 deg C.
2	**Operational Requirements**
2.1	To be constructed of prefabricated, modular complete with floor and ceiling panels, mounted on a flat, solid concrete base. The vaccine cold store must provide total, 24-hour, all-season reliability

	under all conditions for the stored materials
2.2	All refrigeration machinery must be provided with 100% standby capacity, with duplicate, independent controls, pipe work, instrumentation and machinery, to provide against failure of the primary system. Automatic changeover and starting of the secondary system is to be provided, activated by thermostatic or electrical control.
2.3	Recommended spare parts kits to provide normal operation, provision of a service contract covering routine and emergency maintenance requirements, and details of installation-commissioning and guarantee-period charges are each to be stated as separate items in the tender price quoted.
3	**Technical Specifications**
3.1	Internal Temperature : +2 deg to +8 deg C adjustable (i)during 43 deg C continuous ambient(ii) 32 deg continuous ambient (iii) 45/05 deg C day/night cycling temperatures
3.2	Fabrication: Outer and inner: PVC sheet coated (minimum thickness 70 micron), made of galvanized steel panels double wall having minimum thickness 0.6 mm each. Panel shall have minimum 100 mm insulation material as specified sandwiched between two walls. Dimensions- Internal Height of 2.4 m. Cooler Dimensions 9feetX8feet Flooring: 1st layer: 75 mm cement concrete (dimensions suitable to the size of cold room); 2nd layer: of specified insulation of suitable thickness to meet the requirement of specified performance parameter of minimum 8 hrs hold over time; and 3rd layer of 6mm (minimum) Aluminum checker plate. The floor should be capable to support load of 250 kg/m2.
3.3	Insulation: CFC-Free Urethane foam or extruded polystyrene foam core bonded sandwiched between two galvanized steel sheet having minimum thickness 100 mm for WIC larger than 40 cum capacity and 80 mm for less than 40 cum capacity, density of not less than 40 kg/m3 and having a thermal conductivity of 0.17 W/m2k or better for hot zone climate. The insulation should be suitable for maintaining 8 hrs hold over time at 43oC ambient temperature.
3.4	Door with frame heating heavy duty lock with internal safety release, shelving system and plastic curtains on the door way. Door to cold rooms to be lockable with 100% fail-safe provision for opening from inside. Entrance door shall have an incandescent vapor-proof light mounted on the interior of the door section. The door dimensions will be 34" to 40"(W)x72" to 80"(H). Internal ceiling-mounted tungsten filament lighting with an external switch and pilot light should be provided. The external light and light switch must be fixed to the wall of the cold room enclosure near to the entrance door. The minimum illumination level on the vertical face of the lowest shelves must be 150 lux. The lighting should be evenly distributed inside the cold room.
3.5	Dual Refrigeration system (100% standby) air cooled refrigeration units, split type, automating defrosting (electric or hot gas) CFC free refrigerant. Tropicalized units suitable for ambient temperature up to 45 deg C.
3.6	Wall mounted seven days digital thermometer of 4 digits LCD/LED Display with data logging capability of 7 days with suitable printer for report generation with remote sensor.
3.7	High and Low temperature alarm unit.
3.8	Condensing unit(s) to comprise compressor, forced air condenser, oil separator, liquid receiver to carry full charge, filter/dryer with flare connections, service and isolating stop valves, high and low pressure dial gauges and oil level sight glass.
3.9	Storage conditions to be maintained at + 6 deg C ±2 deg C continuously, control by thermostat on each cold room, condensing unit(s) fitted with high and low pressure cutouts, time-operated electric defrost control and compressor motor overloads.
3.10	Cold room(s) to be fitted with locally made/manufactured, running adjustable (slatted shelves will be preferred) shelves 600 mm wide at 600 mm spacing; four shelves above the ground all around the wall and intermediate shelves should be placed suitably. The total area covered by shelves should be at least 42% of the ground area. There should be a minimum 900 mm distance in between two intermediate racks, to facilitate the movement of men and material. The final drawing of the room with shelves will have to be got approved from the authorities after placement of NOA. The material of the shelves should be non corrosive medical grade stainless steel to take load of at least 20 kg/sq.foot. The top face of the lowest shelf must be mounted 200 mm above the floor. Shelving must be washable.

3.1	3.11 Evaporators to be forced-draught, electric-defrost, ceiling-mounted units with fitted condensate drip tray and drain connection.
3.1	The room should be fitted with a pressure release vent which should open and allows enough outside air to enter and rebalance any pressure difference.
3.1	Voltage stabilizer broad specifications: KVA Rating : As suitable. For single phase Input Voltage 160-260 V AC 50 Hz and output 220-240 V AC 50 Hz For three phase : Input Voltage 275-440 V 50 Hz ;Output : 400 V+/- 1%, 50 Hz. Three phase f our wires (for more than 16.5 cum capacity cold room) Common Specs: 3-4 sec cut off and 2 minutes restart delay. Facilities for manual control of output. Arrangements for direct supply bypassing the stabilizer in case of failures, voltmeter and indicators on front panel, suitable safety and protection devices. Quick start arrangement for bypassing restart delay The voltage stabilizers would be one but should be able to run both the working and stand by units simultaneously.
4	**System Configuration Accessories, spares and consumables**
4.1	System as specified-
4.2	Recommended Spare parts kit for operations should be quoted. The quote should include the following components in one kit: evaporator/condenser fan motor; Compressor: capacitor; contactor; auxiliary relay; defrost timer; dual pressure switch; thermostat; drier; control switch; fuse, automatic,transformer, high pressure switch and any other recommended item.
4.3	Special l service tools for cold/freezer rooms should be quoted for refrigeration unit for non CFC refrigerant used. The quote should include: leak detector; serviceman‟s kit in special case (R-134a or R404 or other non CFC refrigerant), including valves, hoses and manometers; refrigerants cylinder (R-134a or R404 or other non CFC refrigerant)),12 kg; compressor oil to be used with (R-134a or R404 or other non CFC refrigerant)
5	**Environmental factors**
5.1	The unit shall be capable of operating continuously in ambient temperature of 5 to 45 deg C and relative humidity of 15-90%
5.2	Complete installation to be done by the supplier inclusive of installation of stabilizer, drainage system and assembly of the panels and installation of refrigerator units, data logger, and complete earthing and smoke evacuation system, including all civil, electrical and all other related work required for installation.
6	**Power Supply**
6.1	Power input: 220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.
7	**Standards, Safety and Training**
7.1	Electrical and refrigeration components and the panels should have national or international approvals like UL, NSF or BIS.
7.2	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
7.3	All operational and maintenance training to the end users after successful installation and commissioning.

Item Sl. No. 33

Multi Channel Pipettes	
1	Light weight electronic Pipette for high Professional Standards that provide optimal support in work
2	Only one multi function rocker for liquid aspiration & dispensing.

3	Piston should automatically return Zero position when tip is ejected.
4	Spring loaded tip cone that provide maximum tightness with minimal attachment force.
5	Pipette should have Li-Polymer battery that provides long service life without charging (maximum of 8 hours without charging)
6	Pipette should work continuously while charging.
7	Parameters should be in the same position regardless of the mode
8	Provision to autoclave the lower parts
9	Should have provision for removing individual channels (in Multichannel Pipette) to adjust the distance between channels.
10	Should have adjustable volume range from 10 – 100 uL & 30 ul – 300uL – 2 each Should be supplied with 1000 disposal tips for all.
11	Should have Documentation Certificate of calibration and inspection from factory.
12	US FDA/ European CE approved.
13	Spring loaded tip cone for connecting tips.
14	Volume display : 4 digit with magnifier.
15	Perfect piston system made out of Fortron.

Item Sl. No. 34

Laboratory Centrifuge	
1	Speed range : 4000-6000 rpm
2	Automatic rotor identification.
3	Heavy duty brushless induction motor for low vibration and noise < 65 dB
4	Presetting of speed and time and 0-99 minutes digital timer
5	Safety lid interlock
6	Digital speed indication
7	Digital indicator cum controller
8	Dynamic break and imbalance detector with cutoff
9	Rotor for 8 x (5-15 ml tubes) with appropriate tube adapters
10	Rust proof stainless steel inner chamber
11	To work on 220 volts AC, 50 cycles
12	To be supplied with suitable servo controlled stabilizer
13	Should be US FDA or European CE approved product

Item Sl. No. 35

Dessicator Cabinets	
	Specifications: -
1	Made of clean strong 3mm thick polymethyl methacrylate resin

2	Rubber door gasket ensures airtight seal
3	Removable shelves on brackets
4	Tall cabinet height of 50 cm and depth 30cm
5	Clean tray with vent holes

Item Sl. No. 36

Hot Air Oven	
1	**Description of Function .**
1.1	Hot Air Oven is required for heating a sample under controlled conditions.
2	**Operational Requirements**
2.1	Microprocessor based system with PID-temperature controller with integrated auto diagnostic system with fault indicator.
2.2	Thermostatically controlled system
3	**Technical Specifications**
3.1	External: Stainless Steel Casing :Insulated stainless steel door with locking and rear zinc-plated steel
3.2	Interior - Internal Volume at least 55 liters easy-to-clean interior, made of stainless steel, with supports on the three sides for three adjustable perforated stainless steel shelves.
3.3	Forced air circulation by quiet air turbine/Fan to ensure uniform temperature
3.4	Fitted with load indicator and safety thermostat take over indicator lamp. LCD/LED Indicator
3.5	Temperature Variation +/- 1 deg C.
3.6	Temperature Range- +50 to 250 deg C.
3.7	Output available for data acquisition.
4	**System Configuration Accessories, spares and consumables**
4.1	System as specified-
5	**Environmental factors**
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 0 -40deg C and relative humidity of 15-90%
6	**Power Supply**
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)
7	**Standards, Safety and Training**
7.1	System should confirm to IS:6365-1971(Reaffirmed 1995) with latest amendments in ISI s pecifications for Laboratory Electric Ovens. Alternatively System should be FDA Approved or CE Certified.
7.2	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-3450
7.3	Should be compliant to ISO 13485: Quality systems - Medical devices - particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

Item Sl. No. 37

Incubator	
A	**Technical specifications :**
1	Capacity: 100-150L

2	Interior chamber: Stainless steel for easy cleaning and decontamination
3	Timer: 1 min. to 100 hours and hold position
4	Minimum turbulence and no cross contamination
5	Adjustable safety thermostat for temp setting at 1 deg C increment
6	Temp Accuracy +/-1% of required temp, with inbuilt Temperature Sensor
7	Internal glass door for the observation
8	With minimum two adjustable shelves
9	Audiovisual Alarm to Indicate when temperature deviates more than 1°C from set point, and when program or time has finished. Alarm may be muted.
10	Peltier or Jacket or Blanket heating with continuous air circulation and Heating by natural/forced convection for homogenous temperature distribution
11	Temperature range Ambient +5° C to 80°C
12	There should be a Membrane Keypad with LCD/LED to set and display operating parameters, current status, running time and alarm conditions for time and temperature.
13	Interior lighting facilities, insulated door fitted with heavy hinges handle locking, mechanical door lock.
B	**Power Supply:**
1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
2	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
C	**Standards:**
1	Should be European CE or US FDA approved product.

Item Sl. No. 38

Laboratory Autoclave (Vertical)	
1	Should be suitable for hospital dressings, linen, surgical instruments, glasswares, culture media and laboratory ware etc.
2	Capacity should be 100 - 150 litre
3	Should be single door high pressure steam sterilizer with double/triple walled steam jacket and separate boiler.
4	Material of construction: Sterilizer chamber SS 304; Door SS 304; Jacket MS; Loading carriage SS 316; Transfer trolley: MS, painted; Door Gasket: Silicon or better; Insulation: fibre glass resin bonded wool or better; Insulation cover: SS sheets. Lid made of heavy gauge lid with foot lifting arrangement to open lid
5	Lid should be made of heavy gauge lid with foot lifting arrangement to open the lid.
6	Operating temperature should be 105°C to 137°C and pressure 1.1 to 2.2 kg/cm^2 of steam pressure.
7	Sterilizer should be provided with steam generator with built-in Steam Generator Safety
8	Should be equipped with spring loaded safety valves and automatic vacuum breaker for jacket.
9	Removable plug screen should be present for chamber drain.
10	Should have SS baffle for even steam distribution in the chamber.
11	Should have saftey valve protection against poor pressure.
12	Safety lock fro door: pressure lock safety device.
13	Low water level alarm and cut off / Sensor open alarm should be present
14	multi-color display for easier reading
15	Should be programmable
16	Accessories: Perforated carriers made up of SS 316 (3-4 Nos.) should be provided along with the instrument.
17	Environmental factors: Shall meet IEC 601010-2-040 (Or equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
18	Power supply: Power input to be 220-240VAC, 50Hz/440 V 3 Phase as appropriate and fitted with plug compatible with local sockets.
19	Company should have ISO certifiation for this instrument.
20	Should provide 1 year warranty.

Item Sl. No. 39

High Air Flow Sampler	
	Specifications:
1	Must comply with latest International Standards
2	Ensures positive and consistent results
3	Fully Stainless Steel construction
4	Electronically controlled
5	Air Flow Rate: 100 lit/min
6	Air Velocity is 0.45 m/sec
7	Horizontal aspiration (laminar), the air impact speed to the culture medium is 20m/sec.
8	Table speed: 1rpm
9	Blower motor: ¼ HP
10	Supply: 230V,mains A/c
11	Time (Selection): 0 to 999 sec.
12	Autoclavable metal top
13	Collection method: Sieve impaction
14	Plate size: standard plate (100 mm)
15	Exchangeable battery pack remote operation: 7 Hours
16	Mains charger: 240 Volts AC
17	Anodized aluminum housing
18	Norm threaded hole for camera tripod
19	Autoclavable perforated lid
20	Programmable start-delay function (1 to 60 minutes)
21	Preprogrammed collection volumes; 10,20,50,100,200,250,500,750 and 1000 liters
22	1 volume of choice programmable
23	Adjustable sampling head (any angle between horizontal and vertical)
24	Factory calibrated (with certificate) with in house Calibration Facility
25	Should be USFDA or CE or BIS certified

Item Sl. No. 40

Polycarbonate Anaerobic Jar	
	Specifications: -
1	Transparent, unbreakable polycarbonate jar
2	Capacity:3-4lits
3	Sturdy, aluminum lid with clamp and sealing ring with built in safety features
4	Pressure valve with safety valve and two way pressure gauge
5	Vendor should supply the chemical charges for the jar for 50 tests

Item Sl. No. 41

Membrane Filter Holder With Hand Held Vacuum Pump	
	Specification
1	Double hand operated vacuum pump with gauge monitor.
2	Trigger release disassemble for repair.
3	Sealed unit with self lubricating
4	Pump pressure 1lb
5	It should include PVC tubing
6	The reusable filter holders should be of autoclavable and transparent material, with membranes in place.
7	Holder should have upper chamber for vaccum/pressure filtration.
8	Independent locking rings to seal upper chamber to receiver funnel without damaging the membrane
9	Chamber should be able to accommodate 47mm size membrane and should have three ports for adding samples
10	It should accept syringe filter
11	Two year warranty on motor.

Item Sl. No. 42

Ultra pure (Nuclease free) Water Purifications System	
A	Ultra pure Water System: - Water quality required for Molecular biology, Tissue culture/HPLC applications. The system should contain pre filtration unit, Type 2 RO filtration equipment, Reservoir 50L and Type 1 filtration equipment.
B.	Pre filter Unit:
1	Regenerable pretreatment unit for removing hardness, iron, manganese, organics and coarse particles.
2	Motor and booster pump for feed pressure.
3	R O grade water system
4	Prefilter with anti scaling and activated carbon reverse osmosis
5	Conductivity cell after RO membrane to check health of RO membrane
6	Feed water handling of conductivity up to 2000microns/cm.
C	TYPE 2 RO Stage Water Quality:

1	Flow rate: 15-20L/hr
2	Organic ion removal up to 99%
3	Resistivity: 5-15 cm.,
4	TOC < 30 ppb,
5	Colloidal index SDI < 3
6	Feed water pressure bar: 0 -5
7	Reservoir of 40- 50 L capacity.
8	Electrical feed voltage 90 – 230V ± 10%
9	One pair of extra cartridge.
D	Ultra pure water machine producing water of the following quality:
1	Output/flow rate up to: 1.5 to 2 litre/min.
2	Conductivity of 0.055 microns/cm
3	Resistivity of 18.2 mega ohm. Cm
4	Bacteria cfu/ml < 1
5	Particles : <1/ml
6	TOC: < 5 ppb
7	Endo toxin: < 0.001EU/ml
E	Unit should be US FDA/European CE approved.

Item Sl. No. 43

FULLY AUTOMATED GEL DOCUMENTATION SYSTEM	
1	Sensitive, multimode image capture and analysis via an intuitive touchscreen interface and advanced software for analyzing chemiluminescent western blot, stained nucleic acid gels, stained protein gels and Chemiluminescent Nucleic Acid Blots.
2	System should automatically take a corresponding visible white image with every chemiluminescent image exposure and should allow overlay alignment with pre-stained MW markers.
3	The complete capability to replace a Dark Room.
4	The Exposure time should be from 10 milliseconds to 99 minutes.
5	Should have high resolution camera with 4 mega pixel or more/greater resolution, 16-bit CCD Camera, motorized fixed lense 50mm, f/0.95
6	At least 4 position motorized filter wheel; 1 blank for chemiluminescence and 3 for filters.
7	Illumination source should be 306 nm trans UV and LED epiwhite. Should have large 10.4 inch touchscreen display with and intergrated computer with >200GB hard drive. To operate the touchscreen interface, a stylus should be provided along with the system.
8	Atleast 5 user licences included with the instrument.

9	The system should create Dark and Biased Master files to compensate for the noise coming from the CCD Camera during Image Acquisition.
10	The Capability to automatically capture a series of images using preset or user defined exposure times
11	Innovative molecular weight overlay feature where colorimetric molecular weight marker can be overlaid onto a chemiluminescent image for molecular weight determination without compromising the underlying chemiluminescent densitometry data.
12	The software should be able to calculate sample purity automatically based on band and lane intensity and should be able to calculate the Relative and absolute quantity of the unknown proteins samples.
13	Should be an open platform to accept standard image file types (i.e., TIFF, JPEG, PNG, GIF, BMP files).
14	The software should be able to edit the images and Text Annotation option should also be there.
15	The software should perform lane profile densitometry (Lane and Band Identification) and it should also analyze Molecular Weight; determine the Rf and Molecular Weight of protein or Nucleic Acid Bands using Installed or Custom MW Markers
16	At least 3 USB & 1 Network Port should be included in the System and the system should get directly connected to the printer.
17	System should be upgradable and there should be flexibility to add filters.
18	Electrical Specification: 220 Volts, 50Hz. Single phase A.C.
19	Should be supplied with warranty of two years.

Item Sl. No. 44

U.V/Visual Spectrophotometer	
1	Minimum Sample Size: 0.5 microlitre
2	Path Length 1 mm
3	Light Source(s) Xenon
4	Detector Type CCD/PDA
5	Wavelength Range 230-1000 nm
6	Wavelength Accuracy 1 nm
7	Spectral Resolution of 2-3 nm
8	Absorbance Precision of 0.002 – 0.003 0.003
9	Absorbance Range: 0.0 – 2.0 A 0.002 – 1.5
10	Sample detection limit: 0.5-1.0 ng/microlitre of dsDNA
11	Sample detection for RNA and Protein
12	Maximum sample concentration: 750-1000 ng/microlitre of dsDNA
13	Measurement Time < 5 seconds
14	PC with software Windows XP/2007 or inbuilt LCD Screen
15	System should be US FDA or European CE approved.

Item Sl. No. 45

Gradient PCR Machine	
1	96-well 0.2ml tube block format
2	Heated lid (at least 1050 C)
3	Temperature range 4-990 C
4	Temperature accuracy better than 0.1 - 0.30 C
5	Temperature uniformity across the block better than 0.2 - 0.50 C
6	Sample temperature ramp rate (cooling/heating) better than 1 – 4° C
7	Capable of incrementing/decrementing temperature and time at each cycle
8	Gradient temperature range at least 40-75° C
9	Inbuilt LCD color display or attached computer to display and set parameters
10	At least 200 protocol memory on board, storage extendibility by USB memory stick.
11	Should be US FDA or European CE approved product.

Item Sl. No. 46

Dry Heating Block For PCR	
	Specifications:
1	Safe dry heat mode blocks with modular design
2	Removable heating blocks
3	Uniform heat distribution
4	Chemical resistant powder coated steel body
5	Precise temperature control [Precision of 0.1 deg C]
6	Temperature control –ambient to 130 deg C
7	The temperature control accuracy ±0.5°C
8	Digital heater unit Interchangeable heating block modules to accommodate of variety of sample tube size requirements
9	Blocks with multiple tube size 1.5ml and 2 ml.
10	Microprocessor controlled.
11	Advanced internal temperature sensing probe for outstanding temperature accuracy and control.
12	Heating block modules should be of SS which should have ≥20 places for holding both 1.5ml & 2 ml microcentrifuge tubes.
13	Should have timer.
14	More than 4" touch screen display.
15	Operating voltage 200-240V / frequency 50 Hz
16	Time setting range 1-99 hr 59 min.
17	In-built over temperature protection.
18	Protection class according to DIN EN 60529
19	CE / ISO certified.
20	With one year warranty

Item Sl. No. 47

AGAROSE GEL ELECTROPHORESIS	
1	Gel electrophoresis system (Horizontal) with power pack
2	Horizontal agarose gel electrophoresis apparatus
3	Buffer tank with platinum electrodes - 2 set of electrodes.
4	Capacity to run gel with at least 10 samples
5	Gel trays should be UV transparent - At least two casting trays.
6	Power pack – max, voltage (300 V), max current (500 mA), Constant current (available) and constant voltage 80 watts (available) and at least two outputs (Time)
7	Accessories
8	Gel trays, Combs etc
9	Should be FDA or CE or BIS approved product
10	The approximate size of the casting tray: minimum 7x7 cms & 7x10 cms each.
11	Comb set of 8 & 15 wells.
12	Time can be set in 1 minute increment or continuous mode.

Item Sl. No. 48

Semi Automated ELISA Reader And Washer	
1	**ELISA Reader**
i	Should be able to support all plate formats U bottom, V bottom and flat bottom 96-well microplates
ii	PC based system
iii	Optical systems: LED lamp/ UV Xenon flash lamp
iv	Detection: Absorbance based
v	Reading Time: <15 Seconds for 96-wells. Manifold - 12 channels
vi	Wavelength range: 340nm to 750nm or more
vii	Wave length selection should be double monochromator with 1nm increment
viii	System should have capability to do qualitative, quantitative, kinetics with any formulae including validation, transformation, factors and floating cutoff
ix	Absorbance Range: 0- 4 OD
x	Resolution: 0.001 Abs.
xi	Accuracy: 1% +/- upto 0.001 OD
xii	Repeatability: 0.5% +/ -0.005 OD
xiii	System should perform self-check before every measurement
xiv	Power requirements: 220V-50/60Hz
xv	PC Requirements (All in one PC) : Intel core i7 processor, 4 GB RAM, 2 GB graphic, 1 TB hard disc, Full HD LED monitor 17", DVD writer, Wi-Fi, Wireless key board and mouse, 64 bit and latest version of Microsoft Window, with MS office licensed, Laser Printer (>20pages/min.) >5000pages/refilling of cartridge
xvi	PC Software packages (windows ® compatible) for on board data analysis

2	**Washer**
1	Should have un-pressurized liquid system independent from bottle size and type with any type of bottle to be used
2	Dispensing and aspirating needles should be separate
3	Washer should have 8 or 12 channel wash head
4	Should have 2-4 independent liquid channels
5	Wash volume per well should be programmable
6	Should have residual volume of <2ml
7	Should have strip selection option which allows to wash selected strips only
8	The supplier should provide comprehensive training to users on operation of the instrument and application support onsite as per specifications
9	Branded compatible online UPS with at least 30 minutes backup
10	Safety devices : Aerosol cover, removable plate carrier, spill over protection and overflow protection safety system.
11	Capability: 24, 48 & 96 well microplates
12	Accessories: Spare lamps (2 Nos.)

Item Sl. No. 49

Water Bath Serological	
1	Useful for dual purpose. It is a combination of serological and routine rectangular water bath with holes and concentric rings.
2	Standard double wall construction. SS insulated
3	Inner chamber made out of highly polished stainless steel sheet and exterior made out of thick mild steel duly finished power coated paint.
4	Immersion heaters are provided for heating to attain temperature range from 5° C above ambient to 95° C ± 1 °C.
5	Digital temp. Indicator-cum-Controller. The equipment to work on 220v AC 50 Hz single phase.
6	Chamber size in mm & inches L x W x H 300 x 225 x 175 mm Approx Capacity appox 15 ltrs. Approx.
7	Should be CE or FDA or BIS approved product. IEC-1010 approved.
8	With brass drain cock
9	Microprocessor control with digital display to set temperature.
10	Prevent thermal runaway.

Item Sl. No. 50

Liquid Nitrogen Drum / Liquid Nitrogen storage container	
1	The vessel should be lightweight, ideal for laboratory and medical applications. 2. Standard dimensions & shape for ease of handling pouring and use within laboratory. 3. Should be compatible with transport/pouring trolley, tipping stand & roller base 4. Technical specifications:
i	Should have a capacity of 35-55 Litres
ii	Static Hold Time should be at least 120 days
iii	Evaporation Rate should be 0.20 or Approximate Neck tube diameter should be 50mm
iv	Liquid withdrawal device should be provided
5	Accessories, spares and consumables as required for running the system
6	Tanks should be as per ASME specification complying safety norms.
7	Certifications: ISI / CE / equivalent.
8	Should be double-walled vacuum insulated aluminium vessel, polyurethane coated, with a narrow mouth neck that minimizes liquid nitrogen losses.
9	Secure locking arrangements to be provided.
10	Accessories: Suitable racks & boxes for storage of 1.8 - 2 ml cryoveals
11	Optional: Cryogloves & gum boots.

Item Sl. No. 51

Positive Pressure Pump For Tissue Culture	
	Specification:
1	Positive pressure filtration pump for membrane filter of 90-100mm diameter
2	Made of S.S with stand.
3	Filter holder made of S.S with stand and able to membrane size of 90-100mm diameter
4	Should have maximum pressure 19 bar
5	Maximum differential pressure 5bar
6	Dimension: height- 16-17.5 cm, diameter 11-12.5 cm
7	Fitting inlets/outlets- 1.4 in mptf with connection supplied for 9.5mm
8	Vent/relief valve 1/8mptf
9	Should work on 220-230V AC

Item Sl. No. 52

Binocular Microscope For Faculty	
1	Microscope stand with Coaxial focusing control knobs, coarse motion torque adjustable, Upper stage drive stop incorporated.
2	Color Corrected Infinity Optical System, Anti fungus
3	Choice of different powers of objectives (long barrel 4X, 10X, 40X spring, 100X oil, spring). Objectives should be flat apochromatic.
4	Eyepieces with pointer (paired and compensating) 10X (FOV 20 or more)
5	Mechanical stage of standard dimensions
6	Swing out Type Plan Achromatic Condenser, N.A. 0.90.
7	Light Source: LED
8	Lamp should not produce undesirable heat.
9	Cover and Casing for storage of objectives, eyepieces, whole assembly
10	Power Supply 220-240 V AC,
11	C Mount Adapter
12	High resolution Digital CCD Camera with resolution: 12.0 mega pixels
13	USB to PC connection
14	16mm lens
15	Macro viewing tube
16	Calibration slide
17	Imaging Software
18	Instant Image Capturing, Real time full screen image
19	Programmed Interval Captures, Video Capture by Time Settings
20	Easy Measurement Calibration, Measurement in microns, inches, millimetres
21	Length Measurements, Ellipse, Rectangle, Irregular Shape Measurements
22	Perimeter, Radius, Circumference Measurements, Angle Measurements
23	Automatic Image amalgamation
24	Image Adjustment Effects,
25	Microscope, Digital imaging system and software should be of the same brand and same manufacturer to ensure complete compatibility and optimum performance.
26	System should supply with suitable PC and 21” Monitor
27	Should be CE or FDA approved
28	Microscope should have trinocular tube for attaching the camera.

Item Sl. No. 53

Binocular Microscope (For students)	
1	Student upright Binocular Microscopes (with inbuilt light source & good quality plan achromatic optics)
2	Binocular microscope with universal infinity corrected optical system. Single mould sturdy stand with anti-rust material.
3	Halogen / LED light source illumination. 6V - 20V / in-built rechargeable battery respectively.
4	Rigid frame with ergonomics design
5	Binocular observation tube with inclination of 45/30 degrees
6	Built in torque adjustable focusing knob. Interpupillary distance: 48-75mm
7	Mechanical stage with rigid hand coaxial control
8	Abbe condenser, Iris diaphragm. NA 1.25 with aspheric lens.
9	Revolving Quadruple nose piece (for objectives) - ball bearing type with click stops and rubber grip.
10	Plan achromat objectives 4X, 10X, 40X, 100X (Oil)
11	40X, 100X objective should be spring loaded
12	Eye piece 10X (FOV 20)
13	Antifungal treatment should be applied to the observation tube, eyepiece and objectives
14	Accessories, dust cover and power cord
15	Eye pieces with pointers – 1 no. extra
16	Power requirement 220 V/50 Hz
17	Should be CE certified or FDA or BIS approved product.
18	Stage size: 200 x 160 mm, X/Y travel range 78 x 54 mm.
19	Low drive right hand movement controls.
20	Focussing - Coaxial coarse & fine focussing on ball drive system for smooth operation.
21	Halogen lamp life: upto 2000 hours or LED lamp life: 100,000 hours.

Item Sl. No. 54

Serum Inspissator	
1	A shallow polished stainless steel tray should be rested inside a tank containing water.
2	The whole under surface of the tray must be in contact with water at a constant temperature which ensures that the temperature of the McCartney bottles with media is also constant.
3	The surface of the tray should be a series of sloping steps (at 9 degree angle above the horizontal) and should hold 162 universal containers.
4	The temperature of the water under the tray must be controlled by a digital immersion thermostat.
5	The temperature controller should be microprocessor based with LED/LCD display which can display actual and set temperature, along with time.
6	Should be provided with the timer which is user set-able from 0-24 hours and should have an audio alarm to indicate when time is up.
7	Accuracy and reproducibility of set temperature should be ensured with the digital display of actual and set temperature.
8	The control unit should be mounted on a bridge plate over one end of the bath, from which heater; stirrer and temperature sensors project down into the bath.
9	All moving parts should be incorporated in the control unit which is removable for servicing.
10	The tray and tank should be made of stainless steel and should be rust free.
11	A constant level device should be fitted to maintain the water level despite evaporation losses.
12	Std temperature must be 85°c;
13	Operating temp. range should be: ambient +5 to 90°C.;
14	Temperature stability should be +1- 0.2°C
15	Heat up time to standard tempreture should not be >3.5 hours.
16	It should have LCD/LED temperature display and Display resolution: 0.1° c;
17	Voltage regulators of appropriate rating should be included for each item to cope with 160-260 V.
18	Uniformity: Tray surface +/-0.7 deg C.
19	Heater Power should be (approx) 1.4 Kw,230 V
20	Tank Capacity (Nominal) Should be (Approx) 45 Ltr.
21	Working area should be approx 820/594 mm (length/width)
22	Overall dimension should be approx 1040/600/380mm (l/w/h)
23	Over temperature protection should be provided with fixed cut out.
24	Electrical power 220-240 V 50/60 Hz,1.5kW (approx)
25	Provision for spare heater, optional
26	Should confirm with electrical safety standard -IEC-60601-1 EN 61010-1
27	Should be CE Certified.
28	Should have ISO Certification.
29	The manufacturer must have supplied similar unit to WHO/RNTCP approved laboratories for TB related research and studies in the past 3-5 years.
30	Should come with warranty of minimum 1 year

Item Sl. No. 55

BOD Incubator	
1	The equipment should have Microprocessor controlled temperature.
2	The system should have a temperature control range from +5C to 60C accuracy +/- 1 Deg C.
3	Hermitically sealed compressor with CFC free refrigerant.
4	The heat transfer to environment at 37C should be 40 W/h.
5	The equipment should have inner chamber volume of 300-350 Litres.
6	Should have lockable castor wheels for movement.
7	The system should have a temperature deviation of+ 0.2C at 37C
8	The system should have heating up time of less than 45 min to achieve 37C.
9	The equipment should have temperature recovery time of 10 min at 37C.
10	The equipment should have rounded edges and corners for easy cleaning.
11	Equipment should have interface for the documentation of temperature during incubation.
12	Should work on 220 volts, 50 Hz.
13	Should be USFDA or European CE approved product

Item Sl. No. 56

AUTOMATED RAPID TB CULTURE & DRUG SENSITIVITY SYSTEM	
	Specifications:
1	System should be capable to perform rapid culture, differentiation and sensitivity testing for Mycobacteria
2	System should be based on true Non-invasive technology; ensuring no bottle puncturing during sample analysis.
3	System-working principle should be based on non-radiometric technology.
4	System should be able to process minimum 15 fresh samples per day with standard international protocol.
5	System should have more than 900 sample positions with compact space-saving System should be able monitor growth of organisms in each sample positions continuously.
6	System should be capable to perform tests to differentiate typical and atypical mycobacteria within 3-4 days time
7	System should be able to process both respiratory & non-respiratory samples
8	System should have the additive reagents- to make isolation media selective and enriched for better isolation.
9	System should be able to perform second drug sensitivity with standard protocol.

10	System should be supplied along with ready to use lyophilized drug vial for entire range of 1st Line Drug Sensitivity testing- S, I, R, E, P with certificate of analysis from manufacturing units
11	System should be supplemented with ready to use Pyrazinamide Test -media to avoid any false results in sensitivity testing.
12	First Line Drug kit should be USFDA approved.
13	System should be able to generate the interpretation of 1st Line Drug Susceptibility testing, automatically; no need of manual interpretation.
14	Company should have its own ready to use digestion and decontamination kit for better sample procession and reduced contamination rate.
15	System should have space saving compact design.
16	System should be supplied along with additional computer for data storage.
17	Suitable On line UPS with maintenance free batteries with 30 minutes back up to be supplied along with the system.
18	System should be approved by Central TB Division, GoI for Liquid Culture Facility.
19	Consumable for at least 200 samples each should be provided
20	Latest Work-station/in built work station with relevant software should be provided with computer system having 3rd generation i5 processor, 4 GB RAM, 500 GB hard disk, keyboard, mouse, 21" TFT monitor of reputed make and suitable UPS with atleast ½ hours back up.
21	The supplier should provide comprehensive training to users on operation of the instrument, software and application support onsite as per specifications.
22	The system should be USFDA approved.

Item Sl. No. 57

Lyophilizer	
1	System should be compact, bench-top.
2	The system should have Microprocessor Controlled LCD system.
3	The Programmable controlled temperature.
4	Automatic defrosting system for ice condenser when necessary.
5	The system should have Vacuum Control / Break Valve.
6	The system should have Hot Gas defrosts and switch.
7	The refrigerant type should be CFC free.
8	The condenser capacity should be minimum 3.5 litres. Capacity – 150-175 lts.
9	Stoppering should be top down pneumatic.
10	Preferably double compressor.
11	Should be CE or BIS approved product
12	It should have 12 ports for tubes/ampoules/vial
	Accessories:
1	Adopter for ampoule & vial, flask – 1 pack each
2	Sealing crimper for vial.
3	Sealing torch for ampoule.
	Complete system should be US FDA or European CE approved.

Item Sl. No. 58

ICE flaking machine	
1	For Production & Storage of Flaked Ice directly from Tap water
2	Should have antimicrobial protection against mold, mildew and fungus
3	Stainless Steel Exterior
4	Automatic Cut off when storage Bin is full
5	Air cooled or water cooled compressor
6	Attached legs to raise ice maker and for levelling on uneven floor
7	Ice making capacity : Minimum 90 kg per 24 hours
8	Ice storage bin capacity : 45 kg

Item Sl. No. 59

Orbital Shaking Incubator	
	Specifications:
1	Double walled inner chamber.
2	PUF insulation between two walls
3	Heavy angle frame structure from all sides
4	Corrosion resistant stainless steel chambers
5	Front loading glass door
6	Shaking assembly electric pulley mechanism/ triple eccentric drive system
7	Universal tray to hold various spring clamps.
8	Clamps to be provided for 2L, 1L, 500 ml, 250 ml and 100 ml flasks – 2 nos of each size
9	RPM 50 to 400 RPM controlled by regulator
10	RPM Indicator in digital display
11	Stroke 25 to 30 mm stroke displacement
12	Temperature range : Ambient +5˚C to 60˚C or more
13	Stability : ±0.1˚C or less
14	Increment : ±1˚C or less
15	Uniform temperature maintenance
16	Should have over temperature safety feature
17	Illumination light to view.
18	Digital timer with audio visual alarm
19	To be provided with UV lamp.
20	Should be able to retain parameters during power failure and restarts unit automatically
21	Operable at 220 volts
22	Should be European CE or USFDA approved product

Item Sl. No. 60

Table Top Dispenser	
	Specifications:
1	Routine use of fixed quantity
2	Extensive volume range and highly resistant to chemicals
3	Dispensing range from 0.1 mL to 999.9 mL
4	Should have PFA-sealing of the slide piston prevents jamming
5	It should have wiping piston design to prevents crystallization of liquid
6	Rapid volume setting using precise graduation scale
7	Easy disassembling and cleaning
8	Telescopic filling tube for use with most bottles

Item Sl. No. 61

Anaerobic Work Station With Gas Cylinder Complete	
	Specifications: -
1	Fully automatic, microprocessor controlled, table top work station for anaerobic bacterial culture (Clinical/diagnostic work)
2	Fitted with one additional connection for attaching gas jar, so that jars can be attached, side by side simultaneously.
3	Touch screen operating panel and in-built vacuum pump.
4	Able to generate any mixed gas atmosphere (other than hazardous and inflammable) in transparent jars, by programming of required O2 (atmospheric) and CO2 & H2 (from cylinders of mix gases & pure gases) percentage
5	All controlled conditions like Capnophilic, anaerobic & Micro-aerophilic be created within 60 seconds, should be reproducible and stay within 0.5% of the desired value.
6	Minimum 30 programs to be customized as per user requirements.
7	System to identity defective jars, catalysts and non-availability of gases, before incubation.
8	Intake air filters facility to prevent air microbial contamination.
9	It should keep its jar atmosphere with appropriate humidity to prevent drying and cross contaminations
10	It should be able to work with standard transparent anaerobic jars of any make
11	The equipment should be supplied with two sets of all necessary accessories including gas cylinders and pressure regulators (One set to be in-use and one set to be kept reserve) and catalyst to be provided.
12	Supplier should provide both sets of required gas cylinders filled with gases at the time of installation.
13	Four spare jars of twelve plates capacity to be supplied along with machine

14	Accurate temperature control: +5 – 45 deg C with automatic humidity control without dry spot.
15	The system should be either FDA/CE/equivalent Indian standard certified.

Item Sl. No. 62

Real Time PCR	
1	Open system capable of performing both real time PCR and end point analysis.
2	Peltier-based system.
3	96-well block (both for Fast and standard Emulation Mode)
4	Supported volume range: 1Oµ1 to 50 [IL.
5	Filters (wide band) - Five-excitation filters, five-emission filters.
6	Excitation source- LED/Xenone.
7	Detection: CCD/PMT
8	Any periodic calibration pertaining to the optics should be taken care by the vendor at least for next 5 years.
9	Block ramp rate (at peak): C
10	Temperature Range: 4°C-99° C
11	Should be factory calibrated for handling various commonly used fluorescent dyes such as SYBR Green, FAM, VIC, JOE, HEX, TET, NED, TAM RA, ROX, Texas Red, Cy3, Cy5, Quasar 670, 705 and calibration for any other dye in the wavelength of 300- 700nm should be possible without any additional filter sets.
12	Reaction should be run in the form of plate, individual tube and tube strips with optical flat caps.
13	Should have feature of performing relative and absolute quantitation, Melting curve analysis (at high resolution), gradient/primer optimization and multiplex-PCR, SNP analysis, dissociation curve analysis, pathogen detection and plus/minus assays etc.
14	Data collection: Standard- Collect data for all 5 filters for all wells regardless of plate setup. Plate setup may be altered after run completes. Expert: Collect data for selected individual filter or group of filters for all wells regardless of plate. Plate setup may be altered after run completes.
15	Details of data acquisition during run for all dyes should be provided and ensured Temperature accuracy: Maximum (+/- 0.25°C of set point/display temperature, measured at 3 minutes after clock start).
16	Run time: —40 min (fast mode-expert), <2 hrs (standard & emulation mode) for 40 cycles.
17	The software should be inclusive of Multi-componenting Algorithm designed to provide precise deconvolution of multiple dye signals in each well to ensure minimal crosstalk when using multiple fluorophores for multiplex assays.

18	Dedicated licensed full version software for primer and probe design with comprehensive assay design and development guidelines for quantitative and qualitative real-time assays should be provided to enable designing of custom oligo assays.
19	Software for analysis of comparative Ct, standard curve,relative standard curve, allelic descrimination/SNP genotyping.
20	Must be supplied with laptop having i3 processor 1 TB Hard disk with 4 GB RAM window 10.
21	MUS be supplied with UPS (3KVA Online UPS with 1 hour back up.
22	The IQ, OQ and PQ of the instrument should be performed at the time of installation.
23	European CE-IVD/FDA certificate may be enclosed.
24	There should be 21CFR complient software to get features like security access,auditing and e signature.
25	Electrical specification: 220 Volt,50 Hz, Single phase A.C
26	It should be supplied with a warranty of 3 year and CMC of 5 year after the expiry of warranty period.
27	Video demonstration/ submission of valid documents are required for confirmation of each of the above mention specification. A user list is to be enclosed.

Item Sl. No. 63

Forced Air Incubator Microprocessor Controlled	
	Specifications: -
1	Temp range 200C to 750C
2	Temp. uniformity ±0.30C
3	Capacity 100-120 ltrs
4	Temp setting- 0.10C increments
5	Alarm – audio & visual if temp fluctuation more than 10C
6	Tampered glass inner door
7	Temp recovery within two minutes
8	Adjustable shelf
9	Air change 3-5 cycles/ hour
10	Should be CE or FDA or BIS approved product

Item Sl. No. 64

Ultra Sonicator	
1	Ultra sonicator should work on an operating frequency of 20-25 KHz
2	Should have an digital LCD display to display to show measured parameters
3	Maximum power output of the equipment should be 100 watts (Maximum)
4	Power supply 220 – 240V, 50 Hz
5	Dimensions of the equipment should be compact (Approx 8”X13”)

6	Probes and accessories -
i	Processing volume - 0.2-5 ml , 0.5-15 ml and 2-25 ml
ii	Tip diameter - 1.6 mm, 3.2 mm, and 4.8 mm
iii	Intensity - High
iv	Amplitude (microns) - 320 μm, 240 μm , and 150 μm
v	Power supply - 1 KV
vi	Accessory: Cover for the equipment
7	Unit should be US FDA or European CE approved product.

Item Sl. No. 65

	Hybridization Chamber
	Specifications :
	Hybridization oven with one chamber
	Vacuum glass door.
	Should have a temp. range from 10°C to 85°C
	Rotor speed 1-10 RPM
	Should have platinum temperature sensor
	Control accuracy 0.5°C.
	Equipment should also have a shaker platform with approximate dimensions 20 x 25cm (W x D)
	Shaking speed 6-60 RPM
	Accessories should include –
	Holders
	6 Large hybridization bottle
	12 medium hybridization bottle
	12 small hybridization bottle
	Should be provided with 5 packs of Nylon meshes and all other manual accessories.
	Certificate of inspection and calibration
	Should be CE or FDA or BIS approved product

Item Sl. No. 66

	Automated Bacterial identification and sensitivity system
1	System must work on colorimetric/fluorometric technology for identification and susceptibility testing.
2	The system must have the capacity to accommodate a minimum of 60 tests (either ID or AST tests), at any point of time.
3	The system must have a bar code scanning device for test pannel identification and specimen number entry.
4	The system must have Identification as well as AST pannels for Gram negative cocci and bacilli, Gram positive cocci and bacilli and Yeasts and a list of organisms is to be provided

5	The system must have separate pannels for Identification and Susceptibility testing
6	Certifications required: US-FDA, European CE, IVD
7	Panels and software should have a provision for change according to recent CLSI guidelines.
8	Data generated should be transferable to LIS used
9	Data storage capacity should be at least 10,000 tests
10	All test protocols should be approved by FDA
11	Current user list of govt. hospitals should be supplied
12	Original brochure should be supplied
13	All technical specification will be evaluated with onsite video demonstration of the equipment for verifying compliance to mentioned specifications.
14	The system should have database of at least 2000 reference phenotypes.
15	The system should provide highest discrimination between species.
16	The system must have the ability to check the quality of test results and stop for validation by Microbiologists.
17	The system software must have the ability to alert to any unusual resistance mechanisms.
18	The system must have no additional reagent costs. If additional reagent costs are required please supply details including cost and preparation time.
19	The supplier must state performance of identification cards.
20	The supplier must state the mean time to result for identification for gram negative bacteria, Gram positive bacteria and Yeast.
21	Electrical specifications: 230 ±10 VAC, 50Hz
22	Warranty for two years
23	Software must have the following capabilities.
	.Work flow management
	.Data storage
	.Test quality control management
	.Test result validation capability and ability to detect antibiotic resistant bacteria

Item Sl. No. 67

Refrigerated Shaker	
	Specifications:
1	Microprocessor controlled with LED/LCD display; digital PID control
2	Should have overheating protection, buzzer alarm for temperature
3	Should have perforated shelves
4	Unit should stop automatically when opened the lid/door
5	Temperature range: 5°C- 60°C; with accuracy +0.5°C at 37°C
6	Shaking speed : 30-300 per minute;
7	Timer: continuous or upto 48h
8	Platform size approx. 450x450mm (2 nos each for 2L, 1L, 500mL, 100mL flasks)

9	The unit should be USFDA or European CE approved.

Item Sl. No. 68

Inverted Research Microscope for Bright field, Phase Contrast, fluorescence, along with High Resolution Digital Image Analysis System	
A	**Microscope Body :**
	Microscope body with Infinity optical corrected optical system, Extendable optical free space up to 80 mm for attaching other attachment in future, facility for 3 way (100:0, 50:50, 0:100 left port) or more light distribution of light, up/down focusing, side port for attaching digital camera upgradable to one additional port for another camera, binocular tube with built-in to one additional port for another camera, binocular tube with built-in Bertrand lens & dark slide shutter along with dioptre adjustment facility suitable for tissue culture.
B	**Condenser:**
	Universal turret condenser (suitable for all microscopy techniques) with 5 positions. ELWD condenser. N.A. 0.3 (OD 75 mm)
C	**Illumination:**
	Illumination: LED
D	**Eyepiece:** Trinocular tube
	10X with F.O.V 22 or better and dioptre adjustment facility on both eyes, anti fungus type, Interpupillary distance: 50-75 mm, Inclination: 45° from horizontal.
E	**Nosepiece :**
	Sextuple revolving nosepiece to accommodate six objectives at a time. Backward facing type.
F	**Stage:**
	Rectangular mechanical stage
G	**Objectives:**
	Plan achromatic Objectives suitable for Bright field/Phase Contrast/fluorescence/ DIC Observation with facility of cover glass correction.
	4X (N.A.0.10, W.D.30mm), 10X (N.A0.25, W.D.6.2mm), 20X (N.A.0.45, W.D.8.2-6.9mm), 40X (N.A.0.6, W.D.3.6-2.8mm) & 100 x oil immersion
H	**Fluorescent attachment:** with field diaphragm. Fluorescence filter block holder.
	With six position turret filter block, Noise Terminator mechanism incorporated for high signal ratio images with Pre centered Mercury Fibre Illuminator of 120/130W, lamp should have life time of 2000 hrs or more. Should also have heat absorbing filter.
	Bandpass Fluorescent filters for FITC/GFP, TRITC/Rhoda mine, DAPI/Hoechst applications so that no cross talk is available. Optional mercury fibre optic illumination along with green red filter.
I	**Digital Camera:**

	Digital Colour Camera capable of Handling Very Low Light, Fluorescence, Darkfield or Dic Images with 2/3" High Density CCD Chip, Approx. 12.0 Million pixel resolution (2200 TV Lines), 15 f/p/s with full screen Size, Cooling 10ºC below Ambient, 12-Bit Digitization, Exposure Time 1/16,000 to 60 sec., Dynamic Range 2000:1, USB port for attaching camera onto Desktop/Laptop through single wire. Firewire interface; facility to work in color as well as monochrome mode which can be controlled through control unit. Image acquisition software should be available in the attached computer.
J	**Software should be with following features:**
	Acquisition and device control through four –dimensional acquisition, Image Acquisition, Time Lapse imaging, Z-stack, Multi-channel Fluorescence, Annotation, 2D/3D View, ND viewer, Filter, Morphology, Large Image, Macro, Segmentation, Auto-measurement, Report Generator facility, Data Base, Vector layer and Multi-Dimensional File Format (ND Format), Microscope Camera and Software should be from one source for better compatibility. Data collection and processing unit: Branded, 4 GB RAM, DVD writer, 500 GB or higher HDD, 17" TFT Monitor, along with Colour Inkjet Printer
K	**Consumables :**
	Mercury Lamp 1 No. and Halogen Lamp 6 Nos. All the products have to be from same manufacturer for better compatibility.
L	Should be FDA or CE or BIS approved product
M	Spares: 2 Lamps

Item Sl. No. 69

	Refrigerated Incubator
1	Microprocessor/Microcontroller/Microcomputer controlled system.
2	Capacity: 100-150 L
3	Interior chamber : Stainless steel for easy cleaning and decontamination
4	Timer: 1 min. to 100 hours and hold position
5	Minimum turbulence and no cross contamination
6	Adjustable safety thermostat for temp setting at 1 deg C increment
7	Temp Accuracy +/-1% of required temp, with inbuilt Temperature Sensor
8	Internal Glass door for the observation
9	With minimum two adjustable shelves
10	Audiovisual Alarm to indicate when temperature deviates more than 1°c from set point, and when program or time has finished. Alarm may be muted.
11	Peltier or alternative heating with continuous air circulation and Heating by natural/forced convection for homogenous temperature distribution.
12	Temperature range: +5° C to 80° C
13	There should be a Membrane Keypad with LCD/LED to set and display operating parameters, current status, running time and alarm conditions for time and temperature.
14	Interior lighting facility, insulated door fitted with heavy hinges handle locking, mechanical door lock.

15	Shall meet IEC-60601-1-2: 2001 (Or Equivalent BIS) General Requirements of safety for Electromagnetic compatibility
16	The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90 %.
17	The unit shall be capable of operating in ambient temperature of 20-45deg C and relative humidity of less than 70%.
18	Power input to be 220-240 VAC
19	Suitable UPS with maintenance free batteries for minimum one-Hour backup should be supplied with the system.
20	Standards, Safety and Training
21	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
22	Should be compliant to ISO 13485: Quality systems Medical devices — particular requirements for the application of ISO 9001 Applicable to manufactures and service providers that perform their own design activity
23	Should be FDA or CE or BIS approved product

Item Sl. No. 70

Analgesiometer - Tail Flick (Digital)	
1	**Description of Function**
	This Tail Flick Unit is required to perform rapid precise screening of analgesic drugs on the rat and mice tail.
2	**Operational Requirements**
	Microprocessor based system required with PC connectivity
3	**Technical Specifications**
	Should consist of an I.R. source, whose radiant energy of adjustable intensity is focused on the rat tail.
	Restrainers should be available to be used with rat and mice.
	The instrument should automatically detect the withdrawal latency to the nearest 0.1 s.
	The Experimental data can be directly exported to the PC USB or serial ports.
	Dedicated Data Acquisition Software Package.
4	**Standards, Safety and Training**
	Should be CE / BIS approved product
	Calibration/Acceptance test certificate from the factory required.
	Manufacturer/Supplier should have ISO certification for quality standards.
	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
5	**Documentation**
	User/Service Manual in English (Both soft and hard copy) 2 Nos must be provided

Item Sl. No. 71

Hot Plate Analgesia Meter
1. Should be digitally controlled and consist of a clear acrylic chamber/s and aluminium plate providing good temperature stability and even surface distribution
2. Operating temperature upto 75 degree Celsius
3. Digital display of temperature should be in 0.1 deg C increments
4. Foot switch to allow control of start and stop and permit hands free operation
5. Should be suitable for both rats as well as mice
6. Digital display of reaction time in 0.1 sec increments.
7. Data can be transferred to PC using USB/ serial port.

Item Sl. No. 72

Polygraph (Sixteen channel research)	
1	**Technical Specification**
1.1	No of Channels : 16. It should be able to use both for animals and humans.
1.2	**Ethernet/High Speed USB Data Acquisition and analysis Software.**
1.3	Apparatus for recording and calculating HRV and blood pressure Variability, temperature
1.4	Transducers and softwares for recording and analyzing plethysmography, GSR, Skin temperature,Continuous real-time beat-to-beat blood pressure, Non Invasive Cardiac Out Put, respiration, phonocardiogram and pulse tonometer for carotid pulse, baroreflex sensitivity and total peripheral resistance recording.
1.5	21 inch TFT monitor
1.6	160 GB storage facility and 1GB RAM for the computer
1.7	Colour laser printer
1.8	Wireless (transmitter / recorder) device with transmit range up to 100m, memory capacity 480 hours, 250 Hz sampling rate, radio band frequency
2	**Accessories, Spares and Consumables**
2.1	Necessary cables and batteries
2.2	Computer (latest configurations) with laser printer to be attached to the equipment
3	**Standards, Safety and Training**
3.1	Should be CE / BIS approved product
3.2	Calibration/Acceptance test certificate from the factory required.
3.3	Manufacturer/Supplier should have ISO certification for quality standards.

3.4	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
4	**Documentation**
4.1	User/Service Manual in English
4.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.
5	Multi channel universal bio-amplifier for ECG, EMG, EEG, EOG (at least 8 channels) along with cardio axis analysis.

Item Sl. No. 73

Electro Convulsiometer	
1	**Description of Function**
1.1	To the study of Anti-Convulsion and Anti-Epileptic drugs, whether for education, screening or manufacturing of drugs
2	**Technical Specifications**
2.1	Should provide 50Hz Stimulus Current variable from 0.25mA to 330 mA through touch panel controls for producing minimal and Supra-maximal seizure in small animals
2.2	The duration of Stimulus current is variable from 0.1 second to 9.9 second in steps of 0.1 second
	LED indicator for duration of stimulus.
2.3	Power Supply 230V 50Hz
2.4	Should be supplied with corneal electrode pair (different cup size) and ear clip 2 pairs
	Should have digital display of parameters like time and current.
3	**Standards, Safety and Training**
3.1	Manufacturer should have ISO certification
3.2	Product should be CE/BIS approved
4	**Documentation**
4.1	User/Technical manual should be supplied
5	Experiment data exported to PC or dedicated data acquisition software package.

Item Sl. No. 74

Cooks pole climbing apparatus	
1	**Description of Function**
1.1	For studying cognitive function, mainly response to conditioned stimulus during learning & its retention
2	**Technical Specifications**

2.1	Digital Voltmeter: 16 - 200 V DC.
2.2	Digital Timer: 0.1 - 999 sec.
2.3	Digital Delay Timer: 0.1 - 999 sec (cyclic).
2.4	Complete Chamber and Tray made of thick imported Acrylic Sheets.
2.5	Climbing Pole of Bakelite.
2.6	The experimental chamber has a grid floor sliding door with a clear perplex front. Electric buzzer and chamber light. Stimulator with built in timer to provide shock of 440 v 0.2 mA at a frequency of 5 per second. The duration also controlled manually.
2.7	It should be a compact model
3	**Standards, Safety and Training**
3.1	Should be CE / BIS approved product
3.2	Calibration/Acceptance test certificate from the factory required.
3.3	Manufacturer/Supplier should have ISO certification for quality standards.
4	**Documentation**
4.1	User/Service Manual in English
4.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 75

Rota rod apparatus for rat & mouse
1. Single system for mice and rats with separate rotor for each species, Rat rotor diameter-60 mm & mice rotor 30 mm diameter
2. For testing atleast 4 animals at a time
3. Drum must be electronically controlled – not belt driven
4. Sensors must not require any adjustment and must use magnetic sensing switches
5. Test length should be adjustable between 1 to 999 secs
6. It should be possible to conduct the test in both forward and reverse modes
7. Start, stop and reset buttons should be available. A digital display must allow the user to view all parameters and test results for all individual animals
8. The distance covered, rod speed when the animal fell and length of test must be recorded
9. Start speed should be variable from 0 – 40 rpm
10. Front panels should prevent escape of animals
11. Instrument must have printer interface and software for data recording must be available

Item Sl. No. 76

Digital Photoactometer

1	**Technical Specifications**
1.1	Solid State instrument for monitoring spontaneous & induced Ambulatory (horizontal and vertical) activity of laboratory animals.
1.1	12(6 pairs) photoelectric activity sensors which form mesh of beams in shape of square.
1.1	30cmX30cmX30cm animal cage with top cover and sliding tray at the buttom
2	**Standards, Safety and Training**
2.1	Manufacturer should have ISO certification
2.2	Product should be CE/BIS approved
3	**Documentation**
3.1	User/Technical/Service manual should be provided
4	Software must indicate fast and slow movements, fast and slow stereotypy and reaming.

Item Sl. No. 77

Elevated Plus Maze	
1	**Description of Function**
1.1	This Elevated Plus-Maze a sturdy apparatus frequently used to measure anxiety levels in rodents and to screen potential anxiolytic drugs
2	**Technical Specifications**
2.1	Should have an elevated 4 arm maze in which 2 arms are open and 2 are closed with glass opening on top. (H×L×W : 40-45 cm×50-60 cm×10-12 cm)
2.2	Should have closed arm walls are held solidly in slotted base
2.3	Grey non reflective base plate
2.4	Grey Walls Height: 500 mm
2.5	Transparent Walls Height: 100 mm
2.6	Made by: Wood / stainless steel
2.7	Should Tracks time spent and distance travelled, speed and resting time in each zone
3	**Standards, Safety and Training**
3.1	Should be CE / BIS approved product
3.2	Calibration/Acceptance test certificate from the factory required.
3.3	Manufacturer/Supplier should have ISO certification for quality standards.
4	**Documentation**
4.1	User/Service Manual in English
4.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 78

Portable Autoclave (25L)	
1	Suitable of general laboratory use as well as for field sterilization of instruments and dressings etc.
2	It should be portable with capacity 20-25 L
3	The sterilizer should be made up of S.S. Sheet deep drawn to cylindrical shape.
4	Dome shaped S.S. lid is to be provided which will seal the autoclave with neoprene joint less gasket.
5	The lid should be tightened to the body when closed.
6	The working pressure is 1.1 to 1.2 Kg./cm2 (15-18PSI).
7	It should have seamless construction which will not allow bacterial residue and contamination.
8	It is equipped with dial pressure gauge 0-60 PSI, spring loaded safety valve, dead weight type safety valve and steam release valve.
9	The load is held in dressing drums (optional), which is supported on a stand (tripod) the autoclave is hydraulically tested at twice the working pressure as per ISI requirement.
10	Should be with plug & cord.
11	Suitable to work on 220/230 Volt, single phase, 50 Hz, AC supply.
12	Size : 350 × 300-325 mm
13	Accessories : Dressing Drum
14	Should be ISI marked

Item Sl. No. 79

Incubator (20 - 100 degC)	
1	**Description of Function**
1.1	Used to grow and maintain microbiological cultures or cell cultures. The incubator maintains optimal temperature, humidity and other conditions such as the carbon dioxide (CO2) and oxygen content of the atmosphere inside.
2	**Operational Requirements**
2.1	Microprocessor based Incubator for laboratory application having temperature ranging from ambient to 100ºC
3	**Technical Specifications**
3.1	Should be double walled with stainless steel inner chamber having a minimum of two inner stainless steel shelves with holes and powder coated outer surface.
3.2	Inner chamber should be fabricated with ribs for adjusting shelves to convenient height.
3.3	Should have a minimum of chamber size of (L*B*H) of 450*450*450mm.
3.4	Should be provided with three side heating elements.
3.5	Should have air circulating fan (Which can be turn ON/OFF on demand) for uniform temperature on all shelves.
3.6	Should have double door with inner glass door.

3.7	Should provide with a microprocessor based digital temperature controller with digital display.
3.8	Should have synthetic rubber gasket/asbestos at the door.
3.9	Should have temperature alarm.
3.1	Air ventilators should be provided on both sides on the top.
4	**Standards, Safety and Training**
4.1	Should be CE / BIS approved product
4.2	Calibration/Acceptance test certificate from the factory required.
4.3	Manufacturer/Supplier should have ISO certification for quality standards.
5	**Documentation**
5.1	User/Service Manual in English
5.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 80

Digital Spirometer	
1	**Description of Function**
1.1	Used for measuring lung function.
2	**Operational Requirements**
2.1	Complete with all hardware and software is required
3	**Technical Specifications**
3.1	The system should be able to measure spirometry and flow volume parameters and sub divisions, Maximum Ventilation Volume (MVV), Lung Volume including TLC, RV& FRC by multi-breath closed circuit Helium Dilution/ Nitrogen wash out.
3.2	Should be able to perform diffusion studies.
3.3	Broncho Provocation/ Histamine Challenge Test Software
3.4	System should incorporate Precision Dry Rolling Seal Spirometer (11-13 Litres)/ heated Pneumotech for highest accuracy and reproducibility and Flow Volume Differentiator (Resistance less than 1 cm of H2O / Litre/Sec
3.5	Volume resolution < 8ml
3.6	Accuracy < 0.5%
3.7	Flow Range+/- 15 Litre / Sec.
3.8	Should have linear analyzers for
3.9	Helium/Methane analyser: Range 0-15% Helium accuracy +/- 0.1 % or Methane analyzer- Range 0-0.35% CH4, accuracy +/- 0.1%
3.10	Carbon Monoxide Analyzer: Range0- 0.350%CO, Accuravy+/- 0.1%
3.11	Oxygen Analyzer: Range: Range 0-100% Accuracy +/- 0.1%

3.12	Gas Control Module with Automatic Filling circuit.
3.13	System should have automated O2 compensation during FRC test.
3.14	System should also have fully automated Calibration/Test procedure with computer.
3.15	Computer specification :CPU corei5 2GB RAM;150 GB Hard Disk Drive;High Speed DVD/CD Rom , Serial and parallel ports ;Keyboard, Mouse and Mouse Pad, Monitor size 15" and printer
4	**Accessories, Spares and Consumables**
4.1	System as specified
4.2	Helium/oxygen cylinder -01
	Helium Cylinder-01 b) Cylinders Diffusion Mixtures-02
5	**Standards, Safety and Training**
5.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
5.2	The quoted model should have US FDA/ European CE/BIS certificate and copy of the same should be enclosed along with the technical bid.
5.3	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual
6	**Documentation**
6.1	Two numbers of Complete User/Technical/Maintenance manuals to be supplied in English.
6.2	Certificate of calibration and inspection from factory.
6.3	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 81

Bicycle ergometer
Bicycle ergometer
Work Load Range: 10 – 600Watt
Independent Rpm: 20 – 130rpm
Work Load range
Dependent RPM
Lap Time: 9h 59min 59sec
Load Steps : 1 – 99 Watt
Time Steps : 1 – 99 Min
Load Programs: Manual
1 Load/Step
PWC 170, 150, 130

HR Steady State
Safety Protection
Automatic Load: Heart rate
Reduction: Blood pressure
Blood Pressure D
Acoustic signal: ECG Alarm Signal
Manual : By Stop Button
Check: Calibration
Dynamic
Static
Adjustments (Height): 83cm – 110cm
Saddle: 68cm – 108mm
Handle bars: free rotation
Accuracy of load: 2% or 3 Watt
Input/output
External Control: RS – 232
Inputs: Analogue control
Start signal
Heart rate
Blood pressure s
Blood pressure D
ECG Alarm
Outputs: work load
Pedaling Speed
Step Marker
Power supply: 110 – 240V, 50 – 60Hz
Power consumption: 100VA
Safety Standard: class 1, CE
Dimensions (cm): Base plate 79X48
Weight: approx 46Kg

Item Sl. No. 82

Double Beam Spectrophotometer UV-VIS	
	UV/Vis spectrometer with PC control
	Solid Aluminum chassis for thermal and vibration stability .
	Optics:
	Double beam sealed, quartz coated, with monochromator Grating
	Concave holographic grating with 1000 lines/mm or better.
	Detector: silicone photodiode or PMT photomultiplier
	Sources: Pre-aligned deuterium and tungsten-halogen lamps with automatic switch over
	Wavelength Range: 200-1100 nm or better
	Stray Radiation/Light: <0.007%T at 220nm (Nal) or better
	Wavelength Accuracy: Minimum +/- 0.2 nm at D2 peak, 656.1 nm of better.
	Band-pass/Band width: Variable bandwidth setting
	Scan speed: 2000nm/min
	Photometric Accuracy: +/-0.005 A at 1A or better
	Photometric Reproducibility (at 1A): 0.001 A (MAXIMUM DEVIATION OF 10 MEASUREMENTS) or better
	Photometric Stability (at 1A): 0.00015A/h (at 500nm for 1.0 sec) or better
	Baseline Flatness (1nm slit): ±0.001A or better
	Photometric Noise Level at 500nm (1nm Slit): 0.0001 A RMS or better
	Cuvette chambers to hold 4 cuvettes, 1 for blank, 3 samples for samples with matching cuvettes
	Standard Accessories: 1. Quartz cuvette of 10mm path length.
	Local Accessories: Suitable PC, Printer and Online UPS are to be offered with the system.
	Standard, Safety and Training
1	Should be FDA/UL/CE/BIS approved product.
2	Manufacture should have ISO 9001 certificate for quality standards.
4	On site comprehensive training for lab staff and support services till customer satisfaction with the system.
5	Installation testing: Supplier of the instrument must provide free installation, commissioning and testing
6	User/Technical/Maintenance manuals to be supplied in English.
8	Certificate of Calibration and Inspection.
9	List of Equipment available for providing calibration and routine Preventive maintenance support as per manufacturer service/maintenance manual.
10	Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual will not be considered.
11	Current user/performance list to be provided and demonstration covering all aspects has to be provided
12	Validation document should supply by vendor etc IQ.QQ, PQ. 13. Surge Protector is to be quoted and supplied with the instruments.
13	Surge Protector is to be quoted and supplied with the instruments.

Item Sl. No. 83

Refrigerator -20 deg C	
1	**Description of Function**
1.1	Deep Freezers are required to preserve blood and blood products, vaccinations etc at specified temperature.
2	**Operational Requirements**
2.1	Vertical Freezer, single door with adjustable 6 to 8 shelves or drawers (frost free).
2.2	Separate Chamber racks or drawers to be pulled out for easy handling
2.3	Non-CFC refrigerant
3	**Technical Specifications**
3.1	**Capacity: 325L or more**
3.2	Digital display of set and actual temperature, with audiovisual alarm
3.3	No condensation on storing material with automatic defrost.
3.4	Construction: Solid rust free cabinet to prevent corrosion and lockable castor wheels.
3.5	Refrigeration System:Heavy Duty refrigeration system, with low maintenance, below -20 deg C (+10 deg C) with hermetically sealed refrigeration compressor and reliable refrigeration to minimize noise and vibration, air cooled with special design or arrangement to prevent unintentional switch off shall be supplied. It should have maximum cooling time hours at maximum ambient temperature of 33 deg C. The equipment should be of continuous duty and frost free.
3.6	Alarm: It should also have audio visual Electronic Alarm System independent of power supply.
3.7	Insulation : High density polyurethane or equivalent Gaskets - Double seal silicon.
4	**System Configuration Accessories, spares and consumables**
4.1	As specified
5	**Environmental factors**
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
6	**Power Supply**
6.1	Power input to be 220-240VAC, 50Hz.
6.2	Resettable over current breaker shall be fitted for protection.
7	**Standards**
7.1	Should have IEC 60601-1 test certificate from any NABL accrediated lab.
7.2	Should be European CE with 4 digit notified body number or USFDA or BIS approved product

Item Sl. No. 84

Treadmill (motorized)	
A	**PHYSIOLOGY TEST SYSTEM**
1	Exercise stress testing systems offer a wide array of unique diagnostic software options to evaluate myocardial function. Automatic arrhythmia detection, ST-segment analysis, and T-wave alternans are a few examples. In conjunction with a treadmill or ergometer, these systems provide a controlled environment for the observation of the effects of increases in myocardial oxygen demand: exercise-induced systolic hypotension, exercise-induced angina, and/or the appearance of a heart murmur during exercise.
2	**complete system with latest PC , Storage,& Software, TMT and necessary cables required with digital Wired/wireless ECG transmission module**
3	The system should be interfaced to computer(latest configuration) with 17" Colour LCD/TFT monitor , printer
11	It should be interfaced with a treadmill system (Specifications of treadmill enclosed).
12	A suitable interpretation program to evaluate the test results should be available.
13	The system should have the following:
B	**SPECIFICATION OF TREADMILL**
15	The new generation of treadmills especially designed in accordance with high safety and quality requirements in Pneumology, Cardiology, Stress Testing, Endurance Training, Rehabilitation, Sports Medicine as well as in Medical Fitness Training.
16	The digital interface (RS 232) should allow the treadmill and all its functions being controlled via an Ergo spirometry measuring station or a PC (SW program for control via virtual User Terminal to be included). Current values such as speed, gradient, time, index no., distance as well as pulse rate can be transferred to the Ergo spirometry measuring station.
17	For safety purposes the unit should be equipped with an emergency switch which stops the treadmill at any stage of operation, and which switches the WHOLE system powerless.
18	**Technical Specifications (Treadmill)**
I	Speed: adjustable from 0 - 22 km/h optional: 0 - 30 km/h
II	Resolution:0.1 km/h; 0.5 %
III	Gradient: 0 - 24 %: electrical engine brake prevents acceleration caused by body weight at gradient; optional: reverse operation 0 to -24% for downhill running (up to 5 km/h)
IV	Resolution: 0.5 %
V	Acceleration:7 intensities (3 ... 131 sec from 0 to max.) manual or also selectable via program step
VI	Slow down:7 intensities (3 ... 131 sec from max. to 0) manual or also selectable via program step
VII	Motor power: 2.2 kW
VIII	Motor: maintenance-free and efficient rotary current asynchronic motor (CE mark) with V-belt, low noise and smooth running
IX	Heart rate measurement: POLAR wireless, 1-channel receiver, beat-to-beat ECG precise measurement automatic load control according to preprogrammed heart rate (target pulse)
X	Interface: RS232 (V 24) incl. PC-, CosRec-, CosCom- ECG, Oxycon and serial printer protocol
XI	Programs: fixed memory locations incl. test programs Conconi, Ellestad,Duke, Cornell, Naughton, etc. in combination with User Terminal Platform: wear-resistant and shock-absorbing Handrails: metallic railing in front and at both sides
19	User terminal with HR Measurement
20	Integrated User Terminal with high contrast LC display. Complete with POLAR Heart Rate Measurement system and heart rate dependent load control. Current values such as speed, gradient, time, index no., distance as well as pulse rate should be legibly presented on the LCD. Programs should be available with fixed memory locations incl. test programs Conconi, Ellestad, Naughton, etc.
21	Following should be available
i	Para graphic Software:- The PC-software package Para Graphics should provide on-line recording of the load parameters and the heart rate in the form of graphs on the colour screen. The data should be exported to other programs (e.g. POLAR, Cyclo Vantage, HRCT, etc.) and should thus be evaluated.

ii	Apart from on-line recording the software package Para Graphics HRC should provide a heart-rate controlled training. It should work automatically to control the speed of the treadmill according to the desired range of the heart rate that should be programmed.
22	The following data should be recorded on-line:
i	Time [s]
ii	Speed [km/h]
iii	Heart rate [bpm]
iv	Elevation [%]
v	Distance [km]
23	Rehabilitation attachment:- comfortable joint adjustment in width and height ; with scale; the Rehab attachment should be fixed to the lateral railings of the Treadmill. The Rehab attachment should be folded together, and should not need to dismantle it after use
24	Full Resting ECG Evaluation 12 Leads with Computerized Reporting Analysis of Waveform Morphology & Rhythm.
25	Computerized Treadmill Exercise Testing with 12 Leads, 3 leads Screen Showing Advanced waveforms Analysis. Accurate ST Segment Measurement, Heart Rate, BP Measurement should include noninvasive BP measurement from time to time during treadmill evaluations.
26	Facility for programmability for all variety of protocols.
27	Trend Charts for Heart Rate BP & ST shifts in at least 3 leads available at the end of the test.
28	Minute to minute Evaluation of all leads available at the end of the test.
29	12 lead Printout to be available as & when necessary during the test.
30	Stable Reusable Electrode that gives clear good quality online ECG.
31	ST Analysis of all 12 leads at maximum ST Depression & at Maximum METs should be available at the end of the test.
32	Minute to minute evaluation of HR, BP, METs, Speed , Percentage of elevation of Treadmill Belt, ST Analysis in minimum 3 selected leads or maximum ST Depression out of all leads should be available at the end of the test.
33	Disc storage of at least 5 patients real time patients ECG / PFT analysis
34	Power input to be 220-240VAC, 50Hz
35	System Configuration Accessories, spares and consumables
36	12 lead ECG CABLE-1no.
37	Gel-5 bottles
C	**Standards, Safety and Training**
1	Should be US FDA/ European CE / BIS approved product
2	Calibration/Acceptance test certificate from the factory required.
3	Manufacturer/Supplier should have ISO certification for quality standards.
D	**Documentation**
1	User/Service Manual in English
2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 85

Multiple Choice Reaction Time Apparatus
Specification:
1. Apparatus to be micro computer based.
2.The apparatus should have two working sides
3. The Experimenter Side should consist of –
a. A switch to turn on any one of the four or more different stimuli two or more visual (different colours) and two or more audio (different tones) stimuli
OR
Four or more visual (different colours) stimuli
b. Four figure Electronic Digital Timer to display the time in seconds
c. Digital error counter
4. The Subject's Side should consist of a switch to turn on the response light/beep
5. The entire unit should be housed in a sturdy metal enclosure made of good quality rust and corrosion poof materials and duly painted
6. Should have high quality switches.
7. Foot switch if available to be provided.
9. Operating manual to be provided.
10. Operating Power: 220 v. ± 10 %, AC, 50 HZ, with plug compatible with local sockets.
11. The manufacturer should be ISO certified. The product should be ISI marked.

Item Sl. No. 86

Flicker Fusion Apparatus
Specification:
1. Instrument to be micro-computer or micro-processor based
2.The apparatus should have two working sides
3. The Experimenter Side should consist of –
a. Light colour and intensity selection switch.
b. A switch to select increasing or decreasing rate of flicker of a light of variable Intensity.
b. Flicker rate stimulus : 5 to 50 flashes per seconds
c. LCD display of frequency/flicker rate
4. The Subject's Side should consist of a switch to turn on the response light/beep.
5. Operating Manual should be provided
7. The Instrument should be ISO certified/or the product should be ISI marked.

Item Sl. No. 87

Human Maze Learning Electronics with Digital reset error counter and Timer
Specification:
1. Instrument should micro-computer or micro-processor based.
2. Stylus in maze should have enough length of cable so that subject can move stylus comfortably over maze
3. Should have Digital Timer for recording Time in seconds and its decimal parts.
4. Should have Digital Error Counter which could automatically records Errors in Digital Form.
5.Time and Error both should be recorded automatically.
6. It should have facility to modify the maze path as per the need of experimenter or atleast 5 – 6 different maze paths shall be provided.
7.Reset button should be in instrument to reset Digital Timer and Digital Error Counter
8. Should have separate display for Digital Timer and Digital Error Counter
9. The Instrument should be ISO certified. The product should be ISI marked.
10.Should have 3 year warranty.
11.Operating manual should be provided.

Item Sl. No. 88

Digital Hand Steadiness Tester (Linear Type)
Specification:
1. Should have a curvi-linear groove cut out on a metallic rust proof panel
2. A stylus to run through the groove, with a connecting wire
3. Signal indicator: A beep and light to indicate touching of stylus to the edge of the groove.
4. Should be able to measure distance of movement of stylus.
5. Digital Timer with start, reset and stop functions
6. Digital Error counter
7. The entire unit should be housed in a sturdy metal enclosure made of good quality rust and corrosion poof materials and duly painted
8. Operating Manual should be provided
9. Minimum 2 years warranty
10. Operating Power: 230 V ± 10% AC, 50 HZ, with plug compatible with local sockets.
11. The manufacturer should be ISO certified. The product should be ISI marked.

Item No. 89

Digital Hand Steadiness Tester-Hole Type
Specification:
1. The apparatus should consist of a metallic rust proof panel with a set of 9 or more Circular Holes arranged in decreasing order of diameter from approximately 20 to 2mm
2. A probe or stylus, having a tip of approximately 1.5 mm in diameter and a connecting wire
3. A four figure Electronic Digital Timer with start, reset and stop functions
4. Signal indicator: A beep and light to indicate touching of stylus to the side of a hole
5. Score counter should display both correct score and number of faults or number of holes successfully completed
6. Power ON - OFF Switch should be provided
7. The entire unit should be housed in a sturdy metal enclosure made of good quality rust and corrosion poof materials and duly painted.
8. Operating Manual should be provided
10. Operating Power: 220volt, ±10 %, 50 Hz., A.C, with plug compatible with local sockets. 11. The manufacturer should be ISO certified. The product should have ISI mark.

Item Sl. No. 90

Digital Memory Drum
Specification:
1. Should be micro-computer based and should memory storage of at least 200 words
2. Should have normal keyboard attached for easy operation.
3.Instrument should have arrangement to change or edit words
4. Should have button for changing display of word.
5. Instrument should be able to display score and error score.
6. Each stimulus can be exposed to the subject at the desired speed like 1, 2, 4, 8 with the Exposure Time 1, 2, 4, 8 Sec. respectively
7. **Minimum 3-year warranty after installation.**
8. Operating manual to be provided.
9. Instrument should be ISO certified. The product should be ISI marked.

Item Sl. No. 91

FHPLC (Fast High Pressure Liquid Chromatography)	
A.	**Quaternary Solvent Delivery system:**
1	No. of solvents : One to two in any combination
2	Dwell volume (total system) : < 400µL
3	Operating flow rate range : 0.010 – 2.000 ml/min in 0.001 ml increments
4	Maximum Operating pressure: Up to 15,000 psi
5	Solvent conditioning : Integrated vacuum degassing four chambers, one additional
B	**Sample Manager –Flow Through Needle purge solvent**
1	Gradient formation : Quaternary gradient low pressure
2	Flow accuracy : ± 1.0 %
3	Flow precision : 0.075% RSD
4	Composition accuracy : ± 0.5%
5	Composition precision : < 0.15% RSD
6	Compressibility compensation: Automatic and continuous
7	Pump seal wash : Equipped with wash system to flush the rear of high pressure seal and the plunger
C	**Sample manager:**
1	Injection volume range should be within 0.1 to 100 µl
2	Accuracy : ± 0.2 µl
3	No. of sample plates : 96
4	Sample compartment temperature range : 4.0 to 40.0ºC, settable in 0.1ºC increments
5	Injection needle wash : Integral, Active , programmable
6	Sample carryover : < 0.005%
7	Advance sample manager
8	capabilities : Auto dilution and transfer
9	Cycle time : < 30 S inject to inject
D	**Column compartment:**
1	Column compartment temperature range up to 90ºC
2	Column compartment can accommodate column up to 4.6 mm id & up to 300 mm length should be in option
3	Column compartment temperature accuracy: ± 0.5ºC
4	Column compartment temperature stability: ± 0.3 ºC
E	**Columns: Amide, C18, C8, Phenyl of 1.7/1.8 µm**
1	Wavelength range : 190 – 800 nm
2	Light source : Deuterium lamp
3	Wavelength accuracy : ± 1 nm
4	Linearity range: ≤ 5%
5	Optical resolution: 1.2 nm or better
6	Digital resolution: 1.2 nm/ pixel or better
7	Baseline nosie : 15x 10-6 AU at 230 nm
8	Drift : ≤ 1 x 10-3 /AU/hour/ºC
9	Cell volume: 500 nl - 10 µl.
10	Path length : 10 mm

11	Data acquisition : Up to 80 Hz
G	**Software**
1	Chromatography software with integrated database. database for easy tracking and trending: Instrument Method, Processing Method, report Method, etc.
2	Disaster data recovery, Custom field, Custom calculations. Apex track integration
3	Multi chromatograms in a single report, Pre-made templates, customizable data reports, online help and answer
4	Report publisher facility for customized reports.
5	Scale from a single workstation to an enterprise vide network.
6	Software should offer multiple levels of password, security to ensure the integrity of all raw data and results and extensive audit trail.
7	Security of data, custom reporting with view filters for easy retrieval.
8	Report publisher facility for customized reports.
9	Upgradable for automated method development
10	Should comply to 21 CFR
H	Above system should work as Fast LC as well as HPLC without changing the tubing, flow cell etc. Installation, training, Service, Application support should be provided locally.
	Fluorescence Detector:
i	Light Source: Xe lamp with standard wattage;
ii	Wave length Range : 200-900 nm;
iii	Wave length Accuracy: ±1 nm;
iv	Reproducibility: ± 0.2nm;
v	Excitation Wavelength: 200 nm to 700 nm;
vi	Emission Wavelength: 280 nm 900 nm;
vii	Wavelength Scanning: Scanning of Excitation and Emission wavelengths;
viii	Flow cell volume: standard Analytical cell;
ix	Pressure: 2Mpa;
x	Sensitivity: 500:1 (tangent method),700:1 (Baseline method)

Item Sl. No. 92

Water Purification System	
1	Water purification unit with the following specification:
2	Two stage System should have RO and UV/HPLC grade purification facility and Water quality of the minimum specification of:
3	Resistivity at 25 degC : 18.2 Mega-Ohm -cm
4	TOC : ≤ 5 ppb
5	Bacteria : 1CFU/ml
6	Bacterial Endotoxin : 0.001 EU / ml.
7	Particles as per ASTM is =< 1particle/ml
8	Feed water specification:
9	System should have pre filtration unit to remove the particulate matters, activated carbon to remove organic contaminants.
10	Capacity of reservoir / tank: 30 liters or more made up of HDPE

11	The system should be table top model with on line conductivity & LCD display facility, flow rate up to 1.5 L/min, Dual purification cartridges with organic absorbents, ion exchange resins and membrane processes to purify the water to 18.2 mega ohms, in order to satisfy ASTM TYPE 1, ISO 3696 and USP Specification, The system should have a pure water recirculation system to maintain consistent peak quality.
13	**DOCUMENTS AND TRAININGS:**
14	IQ - OQ and PQ documents
15	On site Calibration with traceable reference material, to be done by the supplier on installation and there after every six months during warranty and CMC period.
16	On Site Training at the time of installation.
	RO System:
1)	Resistivity: > 5 megaohms. Cm
2)	TOC = < 30 PPb
3)	Product recovery : upto (25-40 %)
4)	Flow rate = 15 - 20 lph or more
5)	Conductivity: < 0.2uS/cm

Item Sl. No. 93

Electrolyte analyzer	
1	The instrument should be able to measure the following ions: - Lithium, Potassium, Sodium, Calcium, Chloride with single aspiration/injection of sample directly from test tube, sample cup & vacuum tubes without changing / inter changing the electrode.
2	Can be used to following test biological samples: Serum/Plasma/Whole blood/ Urine/ CSF/Saliva
3	Test sample volumes not more than 150-200 microlitres
4	Should have auto-calibration, self- cleaning and diagnostic facility
5	Should work across a wide pH range
6	Should have facility to display the result and facility to print.
7	Analysis time should not exceed 1 minute
8	Internal memory should be more than 500 patients results.
9	Sensitivity should be at least 0.01 meq or mmol
10	Should be compatible with 32 bit Computer operating system
11	Should operate between 100-260 V and 50/60Hz
12	Should have function to store last 100 readings with patient/sample id
13	Provision for computer connectivity
14	Power back-up (UPS) for 60 min
15	Should have USFDA or European CE approval
16	Auto sampler upgradation facility should be available.

Item Sl. No. 94

Digital Kymograph
1. Microprocessor Controlled Speed Selections in mm/sec
2. Special Mode for Concentration Responses Curve.
3. In this mode we have to select contact time and number of doses.
4. 16X2 LCD display.
5. Maintenance Free.
6. Timer & Multiplier Select With Audio AND Visual Alarm Indicator
7. Easy Height Adjustment of Drum.
8. Sturdy & corrosion resistant body.
9. Should have Battery backup
10. Rod height 350mm
11. Drum Aluminum
12. Drum Size 150mm DiameterX170mm Height

Item Sl. No. 95

Isolated Organ Bath	
1	**Technical Specifications**
1.1	The isolated organ bath (Single chamber) should provide accurate recording of isometric or isotonic tissue contraction / release
1.2	The complete compartment should be transparent for easy visualization
1.3	It should have easy and quick attachment of tissues
1.4	Diffusion between chambers and temperature equilibrating coils should be prevented by syringe valves
1.5	System should have precision water temperature control
1.6	The tissue washing should be achieved by without exposing tissue to the air
1.7	The water jet bath stirring should be provided by a noiseless vibration free centrifugal pump
1.8	A precise thermostat should maintain the temperature with an accuracy of +/-0.1 deg
1.9	The system should be supplied with all essential accessories like one muscle chamber with stimulator, temperature equilibrating coil, holder, supporting rod, isometric (tension 0-50g) and isotonic (Range: 0.1 – 2cm) transducers.
1.10	Should be supplied with 4 channel data acquisition system Stimulator- constant voltage range- 0- 10V Dose response curve should be ploted automatically compatible computer, printer & printing paper
1.11	System should work with 230 V,50 Hz power supply.
2	**Standards, Safety and Training**
2.1	Should be CE / BIS approved product
2.2	Calibration/Acceptance test certificate from the factory required.
2.3	Manufacturer/Supplier should have ISO certification for quality standards.
3	**Documentation**
3.1	User/Technical/Service manual should be provided
3.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 96

Lab Centrifuge Machine	
1	**Description of Function**
1.1	Centrifuges are required in the Laboratory to separate various components of Blood and any other liquid sample for analysis
2	**Operational Requirements**
2.1	Aerodynamic compact construction for vibration free performance
2.2	Table top version
3	**Technical Specifications**
3.1	Tube Capacity :No. 24 – 36 :Size 5 – 15 ml
3.2	Should have a digital timer
3.3	Body should be made of strong fabricated & corrosion resistant steel
3.4	Control panel – for start/stop switch, dynamic brakes, step less speed regulator with zero start switch & speed indicator with timer and protective fuses.
3.5	Door interlock
3.6	Maintenance-free brushless drive motor with exact speed pre-selection and display. Speed range 100 to 6000 rpm and above, accuracy 1 rpm.
3.7	RPM: Maximum 15,000 ; RCF 25,800 x g
4	**System Configuration Accessories, spares and consumables**
4.1	Centrifuge complete with swing out basic rotors and four buckets – 01 set
4.2	Tube Holders as appropriate
5	**Environmental factors**
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 - 40degC and relative humidity of 15-90%
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%
6	**Power Supply**
6.1	Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160- 260 V and output 220-240 V and 50 Hz)
7	**Standards, Safety and Training**
7.1	The supplier should be ISO certified for quality standards.
7.2	Should be FDA , CE,UL or BIS approved product
7.3	Should comply with IEC/TR 61010-3-020 :Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 3-020: Conformity verification report for IEC 61010-2-020:1992 Particular requirements for laboratory centrifuges"
7.4	Comprehensive warranty for 2 years and 5 years AMC after warranty
8	**Documentation**
8.1	User manual in English
8.2	Service manual in English
8.3	Certificate of calibration and inspection.

8.4	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.5	List of important spare parts and accessories with their part number and costing.
8.6	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item Sl. No. 97

Electronic Balance	
1	Digitally operated
2	High contrast, large LCD display for easy viewing.
3	Automatic external calibration
4	Conforms GLP/GMP and ISO 9001/USFDA standard
5	Dye cast aluminium design for long term stability and accurate results.
6	Various weighing units like mg, gm etc should be provided.
7	User selectable stability.
8	Readability : 0.0001 gm
9	Linearity : 0.0002 gm
10	Pan size : > 80 mm diameter or as per user requirement.
11	Response time : 2-3 sec
12	Voltage range : 220v AC/50Hz

Item Sl. No. 98

Cardiac Monitor	
A	**Technical Specifications**
1	Minimum 15 inches multi colored LCD/TFT display.
2	Eight digital and waveforms/traces display
3	Combination of single or dual or multi parameter modules.
4	Multi-channel (up to 12 leads) ST segment analysis.
5	Facility to monitor and display - ECG, Respiration, NIBP, SpO2, CO2 with capnography, Temp,
6	Automatic arrhythmia detection & alarm for standard and lethal arrhythmia.
7	EtCO2 -Main stream or side stream or micro stream. Display both inspired and expired values, showing capnography.
8	100 nos. event recall/snapshot facility both manually and automatically triggered by alarm.
9	Automatic Zoom In Facility in the monitor display.
10	Portable and light weight preferably< 10 kg.
11	Trends up to 24 hours.
12	60 minutes or more battery backup.
13	Convenient handle for carrying the same.
B	**System Configuration Accessories, spares and consumables**

1	ECG/Resp : 5 Lead ECG Cable with clip- 2 sets per monitor and 10 Lead ECG Cable with clip- 1 set per monitor.
2	NIBP : Adult cuff- 2nos. per monitor and two sizes of pediatric cuffs- one per monitor (complete sets)35bv c
3	Reusable SPO2: Adult SPO2 sensor with cable- two nos. per monitor and Pediatric SPO2 sensors- one no. Per monitor.
4	Temperature : Rectal temperature probe- two per monitor and skin temperature probe - one per monitor.
5	EtCO2 module with all accessories. In case of side stream EtCO2-10 sets of sampling tubes for each module to be included.
6	Necessary cabling for networking the monitors on turnkey basis.
7	Necessary wall mounting solution to be provided
C	**Environmental factors**
1	The unit shall be capable of operating continuously in ambient temperature of 10 – 40 deg C and relative humidity of 15-90%
2	The unit shall be capable of being stored continuously in ambient temperature of 0 – 50 deg C and relative humidity of 15-90%
3	Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC directive.
D	**Power Supply**
1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
E	**Standards, Safety and Training to be provided by manufacturer.**
1	Should be US FDA or European CE approved product
2	Manufacturer/Supplier should have ISO certification for quality standards.
F	**Documentation**
1	User Manual in English

Item Sl. No. 99

Multi channel pipettes	
1	Light weight electronic Pipette for high Professional Standards that provide optimal support in work
2	Only one multi function rocker for liquid aspiration & dispensing.
3	To provide thermal, mechanical and chemical stability piston should manufactured with the combination of Fortron and PEEK material
4	Spring loaded tip cone that provide maximum tightness with minimal attachment force.
5	Provision to autoclave the lower parts
6	Should have provision for removing individual channels to adjust the distance between channels.
7	Should have adjustable volume range from 15 -300ul
8	Should have adjustable volume range from 0.5 - 10ul set
9	Should have Documentation Certificate of calibration and inspection from factory.
10	Five Channel pipette
11	Approved by USFDA or European CE Certificate

Item Sl. No. 100
Animal Simulator Software for Pharmacology) (Proprietary: Elsevier with 3 years licence with offline and online both mode)

Item Sl. No. 101

pH Meter
1. Microprocessor based for fast and accurate pH measurement with soft touch control panel (3 point)
2. pH range (0 – 14)
3. Auto-calibration with atleast 3 standard buffers.
4. Built-in-Auto buffer recognition
5. pH and Temperature display
6. Refillable Triode 3-in-1 epoxy body combination pH electrode
7. Power 220-240 V: 50/60 Hz, Automatic temperature
8. Compensation (0-100°C)
9. CE, ISO 9001, ISO 13485 Marked or equivalent marked.
10. Standard buffers 4,7,10 pH 250 ml each
11. . Electrode 1 set Extra
12. Original literature should be attached
13. Users list with satisfactory report should be attached
14. Firm will have to supply the stabilizer if required along with the equipment free of cost.
15. Original literature of equipment should be submitted.
16. Users list should be attached with satisfactory report for the last three years from three users with contact details.
17. Demonstration of performance of equipment is compulsory in nearby area failing to which will be disqualification.
18. Electrical: The equipment should be able to run on the existing electrical provision with neccesary adaptors.
19. 3.3 M KCl should be provided with appropiate container for keeping the electrode dipped in while not in use.

Item Sl. No. 102

Sl. No	All glass distillation apparatus
Technical specifications:	
1	The glassware should be made of high quality borosilicate glass to withstand high heat.
2	Apparatus capacity should be of 4 litres/Hr.
3	Should be double stage.
4	Should have metallic stand and other accessories.
5	Stand should be made of rust free material.
6	Standards heating elements of 2.5-3KW to be used.
7	An automatic cut off device should be attached.
8	Heather should be of quartz for immediate output of distilled water. Apparatus should consist of high quality Borosilicate Boiler with built in water leveller.
9	Output water should be pyrogen-free with conductivity less than 1 micro siemen, ph 6.9-7, distillate temp 65-75 deg C.
10	Metal stand.
11	Automatic cut off device or safety control module.
12	Power input to be 220-240 VAC, 50 Hz.
13	Manufacturer should have ISO & CE certification for quality standards

Item Sl. No. 103

Bioelectric Impedance Body Composition Analyzer	
1	**Description of Function**
1.1	Body composition readings including: Weight, Fat %, Fat Mass, Total Body Water, Muscle Mass, Basal Metabolic Rate, Bone Mass, a unique Visceral Fat indicator, Body Mass Index etc.
2	**Technical Specifications**
2.1	Should have LCD display
2.2	Should be based on bioelectric impedance principle
2.3	Should have direct printout of assessment result and data logging with computer interface facility. Branded Computer with latest configuration to be supplied with necessary software and Laser Printer.
2.4	Should have multiple operating frequency : 5KHz,50KHz,500KHz
2.5	Power supply 230V 50Hz AC
2.6	Should have battery back up
2.7	Should have indicator for low battery
2.8	Impedance range : 5-1100Ω
2.9	Should have data storage and data transfer facility
3	**Standards, Safety and Training**
3.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
3.2	The quoted model should have US FDA/European CE/BIS certificate and copy of the same should be enclosed along with the technical bid.
4	**Documentation**
4.1	Two numbers of Complete User/Technical/Maintenance manuals to be supplied in English (Soft copy & Hard copy).
4.2	Certificate of calibration and inspection from factory.
	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item Sl. No. 104

	Agarose gel electrophoresis system
1	Gel electrophoresis system (Horizontal) with power pack
2	Horizontal agarose gel electrophoresis apparatus
3	Buffer tank (Midi unit) with platinum electrodes
4	Capacity to fix gel with at least 10 samples
5	Gel Casting Tray: standard form; Combs sizes: 1.0 mm -10 wells, 12 wells, 16 wells,24 wells 2.0 mm - 10 wells, 12 wells, 16 wells & 24 wells
6	Gel trays should be UV transparent
7	Power pack – max, voltage (300 V), max current (500 mA), Constant current (available) and constant voltage (available) and at least two outputs
8	Should be FDA or CE or BIS approved product

Item Sl. No. 105

	BMI Analyser
	Capacity: up to 300 kg
	Power supply: Power adapter
	Weight: Light weight
	Measurement method: 8-point Bioelectrical Impedance Analysis
	Measurement segment: right arm, left arm, right leg, left leg, right half of body, left half of body, torso
	Measurement time: up to 30 seconds
	Functions and Properties: Overload protection, Date and time in print-out, TARE, Weighing range switch-over, Autom. Weighing range switch-over, Patient data input, Pre-TARE, HOLD, Auto-HOLD, Step-Off, BMI, Auto-BMI, Calibration, Wireless interface, SEND, RESET, Acoustic signals can be activated, Backlighting, User-defined zero setting
	Certifications: Should be US FDA or European CE or BIS approved product

Item Sl. No. 106

	Digital Colorimeters
	Fully Automated Digital Photo Diode based Colorimeter
	Colorimeter with 8 glass filters ranging from 400 to 700 nm
	Should consist of long lasting photo diode detector
	Should have minimum sample volume of 1 ml
	Should have range of absorbance 0 to 1.99 and % transmittance 0 to 100%
	Should have OD resolution of 0.01, 0.1 % T
	Should have LED light source
	Should have LED Display
	Should have provided with 5 additional cuvette and cuvette stand/ case.
	Should have cover with Cuvette holder.
	Should have dust protection cover for the instrument.
	Should have Input 160-260 V and output 220-240V and 50 Hz
	Should have provided battery backup
	Should have ISO & CE or BIS approved product

Item Sl. No. 107

	Fat Extraction Apparatus
1	Extraction Apparatus, fat, complete
2	Fat Extractor used to determine fat and oil content in samples.
3	Measurement based on AOAC methods.
4	Frame is constructed of anodized aluminium or better.
5	Power consumption 700 watt,

6	Spring-loaded heater elements operated by control knobs / Key pads with variable heat input from 20-100% capacity;
7	Red pilot light:
8	Metal condensers with Type 304 stainless steel heads with automatic pressure-release valves:
9	On/Off switch;
10	Control valve for connection to cold water supply;
11	Water outlet for connection to an open drain
12	**Accessories**
i	12 borosilicate glass 100 ml beakers.
ii	6 alundum extraction thimbles,
iii	6 heat covers,
iv	6 cork gaskets,
v	6 beaker rings.
vi	6 upper condenser gaskets,
vii	9 sample tubes,
viii	6 support stirrups and
ix	9 borosilicate glass reclaiming tubes.
x	Should be FDA or CE or BIS approved product
	Item Sl. No. 108 **Hemoglobinometer**
	Sample material: Capillary, venous or arterial whole blood.
	Measurement range: 0-20 g/dL
	Results: Within 2 minutes
	Power: AC Adapter or batteries.
	Operating temperature: 4 - 40 °C
	Interface: Printer and PC
	Quality control: Built-in “selftest”
	Item Sl. No. 109
	Opthalmoscope
1	Turret Type
2	Illumination: 3.5V, 2.8W Mini Halogen Bulb
3	Recharging unit: Input Voltage: 220V ± 10%V
4	Input Frequency should be 50 Hz ± 1Hz
5	Input Power should be around 8VA
6	Battery should be rechargeable
7	Viewing Lenses: 0, ±1, ±2, ±3, ±4, ±5, ±6, ±8, ±10, ±12, ±16, ±20, -25, -35
8	Apertures: Large Spot, Small Spot, Slit, Central Net, and Red-free
9	The product should be European CE or FDA or BIS Certified
	Item Sl. No. 110
	PA System
	Sound Output: Up to 25

	Works on UM-1 (large) Dry Cells & 12V Car Battery.
	Loud & Clear Sound even at long distance.
	Additional Speaker can be externally connected for louder, distributed sound.
	Should be Supplied with Microphone.
	Item Sl. No. 111
	PLASTINATION EQUIPMENT
1	Silicone plastination, impregnation, sheet plastination kit with high quality stainless steel sheet drums/basket/barrels with a capacity of 40ltrs-130ltrs
2	Plastination kettle of high quality glass cover capacity 40 ltrs-130ltrs, with vacuum tubing, vacuum pump and connecting high pressure pipe with manometer along with acetonometer; water bath tanks with customized acetone distillation unit.
3	Silicone infiltration machine with a pressure 390kg-450kg , vacuum pump with pressure 2m3/h-18m3/h.
4	Accessories like blinder clips, positioning wires, stainless steel clamps, grinding machine compatible with system.
5	Machines / equipment shall work at 220-240V.
6	Installation of equipment /training / trouble shooting/AMC/CMC and availability of 24 hrs helpline and spare with consumables to be ensured at site.
7	Each Institute will send 2 faculty members for training in Plastination technology /training /methodology. The cost to be inclusive.
8	Should be CE or FDA or BIS approved product
	Item Sl. No. 112
	Sound Level Meter
1	Multi-Function Environment Meter which has the functions of sound level meter, light meter, humidity meter and thermometer.
2	Sound level meter measuring range - 35 to 130dB, +/-3.5dB at 94db.
3	Light Meter measuring range - 20 to 20,000 lux, +/-5% reading.
4	Humidity Meter - 25% to 95% RH - +/-5%RH (at 25°C, 35% to 95% RH).
5	Thermometer - 20 to 750°C, +/-3% reading +/-2°C (-20 to 200°C), +/-3.5% reading +/-2°C (200 to 750°C).
6	Resolution: 0.01Lux, 0.1°C&°F, 0.1%RH, 0.1dB.
7	Measuring Rate: 1.5 times per second.
8	Should have an LCD display for parameter display.
9	Should work on battery power source with charger.
	Item Sl. No. 113
	Electronic Von freyAesthesiometer
	Electronic von Frey is used to assess mechanical allodynia with rigid tips (threshold) and the flexible von Frey hairs are used for sensory test on all test subjects.
	Should plug up to 3 probes into a single unit.
	The systems should be supplied with 90, 800 and 1000 gram probe.
	Should be supplied with limit indicator with all probes.

	Should measure, store and display your test readings in grams based upon the amount of pressure applied.
	Should be calibrated at the factory.
	Should have MRI Probe.
	Should have LCD Readout.
	The product should be CE or FDA or BIS Certified
	Item Sl. No. 114 **Vortex Mixer**
	Vortex Mixer, designed with a heavy cast aluminium body to provide optimum bench-top stability.
	The mixer has two modes of operation: Continuous operation when you need to mix a quantity of tubes in sequence; intermittent operation is activated by touching the cup attachment with a test tube.
	Equipped with a single tube mixing cup for single tube mixing and a soft foam pad and mixing platform for mixing 1-4 test tubes simultaneously.
	To be supplied with a fractional workable motor on 220V AC completed with indicator, plug & cord, speed 100-3000 rpm, dimensions (LxWxH) - 17.7x11.4x15.2 cms.
	Should be FDA or CE or BIS approved product.

Item Sl. No. 115

Sl No	Anthropometric set – Digital
1	Digital weight scale with weights for scale calibration, set of fifteen 10kg calibration weights.
2	Electronic stadiometer with calibration rods.
3	Electronic infantometer.
4	Skinfold caliper.
5	Step wedge standards.
6	Measurement box for upper leg length and calf circumference.
7	Portable weight scales (2 nos)
8	Steel measuring tape
9	Insertion tape
10	Computer terminal:
11	Computer Specifications: 19” Monitor, 4GB RAM, 500GB HD, latest windows operating system with printer.
12	Standards, Safety and Training
a	Should have ISO certification and copy of the same should be enclosed along with the technical bid.
b	The quoted model should be FDA/CE/BIS certificate and the copy of the same should be enclosed along with the technical bid.
13	Documentation
a	Two numbers of complete user/technical maintenance manuals to be supplied in English (Soft copy and hard copy).
	Accessories:
i	Cosmetic pencils (wax base)
ii	Baby oil

	Item Sl. No. 116
	Electronic muscle stimulator
1	Should do elicitation of muscle contraction using electric impulses
2	Should be solid state microprocessor controlled unit with digital timer and intensity display
3	Microprocessor controlled pulse duration 0.3,1,10,30,100,300ms
4	Pulse repetitive Frequency: 0.3,1,3 seconds
5	Intensity variation: 0 to 130volts
6	Output Voltage: 100 ACV to 260 ACV
7	Protection Class - I complies with IEC 601-1
8	Accessories - Electrode set
9	Power supply – 220 to 240 VAC, 50Hz
	Item Sl. No. 117
Sl No	**Mosso's Ergograph**
1	Should have wooden board fitted with two pair of clamp for fixing forearm on armrest and a pair of steel finger holder.
2	It should have sliding plate over the board.
3	The plate should be fitted with chart holder and a vertically fitted spring loaded writing device for recording.
4	Hook with weights (1 kg each - 10 nos)
5	**Standards, Safety and Training**
a	Should have ISO certification and copy of the same should be submitted along with the technical bid.
b	The quoted model should be FDA/CE/BIS certificate and the copy of the same should be submitted along with the technical bid.
6	**Documentation**
a	Two numbers of complete user/technical maintenance manuals to be supplied in English (Soft copy and hard copy).
	Item Sl. No. 118
Sl. No	**Priestly Smith Perimeter**
1	Should have a calibrated arc, revolving chart holder.
2	Should be able to rotate in any direction and fix at any position with a tightening screw. The arc should be graduated from 0° to 90° with a movable test object.
3	At the back of the arc arrangement should be provided for fixing of chart which has concentric circles corresponding to the degrees of arc.
4	Adjustable chin rest.
5	The above mentioned should be fitted over a sturdy base with receptacle for keeping charts.
6	**Accessories:**
a)	Different sized (2mm & 5mm), shaped (round & square) and coloured (five different) objects.
b)	Should be supplied with 20 packets of charts (100 charts/packet).

Item Sl. No. 119

	Apparatus for passive movement
1	CPM is used to treat joints of the lower limb after an injury, disease or following surgery.
2	Based on a concept originated by SALTER IN 1970, this device has varied applications namely treatment of intra articular fractures, septic arthritis, ligaments tendon healing and also following total joint replacement to ensure a sufficient range of motion.
3	To prevent stiffening , the jouint have to be moved continuously which results in the following.
4	Minimize swelling and pain after operation
5	Ensures faster recovery and shortened hospital stay
6	Prevents extra articular contractures and adhesions.
7	Ext/Flex Angle indicator at knee position
8	Compact and elegant construction
9	Electronic controls enable all adjustment of angle to be made on the front panel.
10	Smooth and silent movement
11	Digital timer with alarm
12	Patient safety switch for stopping and reversing the motion.
13	**Specifications**
14	Treatment time 0 – 99 minutes
15	Reset time 1 to 5 seconds
16	Angle Extension 0
17	Power 230V/AC/50Hz, 75VA

Item Sl. No. 120

Sl. No	CHEMILUMINESCENCE & GEL IMAGING & ANALYSIS SYSTEM
1	**5 megapixel or less, 16-bit Scientific-Grade CCD Camera for good resolution, cooled to ≤ -25deg C**
2	Optics should include f/1.4 lens or better with motorized optics
3	Should have UV trans-illuminator: 302 nm, Pull-out type; and Epi LED White light imaging
4	Must include at least 4-position motorized filter wheel with UV/IR Interference Filter
5	Should have Light-tight darkroom with UV safety switch
6	Should have integrated or external computer with LCD screen for operations of all system hardware, software & lenses
7	Should have storage at least 250 GB, 3 or more USB slots and at least 1 network port
8	Should provide selection of all instrument settings, capture, save and printing from one screen
9	Should have image acquisition, both Automatic as well as manual

10	Should download images over network via any web browser using a PC or Mac or internet enabled phones **/ real time with download facility**
11	Must have Stand-alone Software for enhancement, editing, annotation, archiving & analysis including features like 1-D multilane densitometry, 2-D spot densitometry **(2D software should include a dedicated application related to protein profiling like Spot matching between the gels, intensity difference across the complete range of proteins available on the gels with the help of normal staining and multiplexing with diferent dyes in the same gel)** , MW, Rfanalysis,Microtiter plate, Eli-spot, Array & Dot Blot Analysis, Colony, Cell & GFP Yeast Counting, Q-PCR, Zymogram gel analysis, Gel Scoring, Band matching, RFLP, RAPD, Fingerprinting, Dendrogram creation, options for Dice, Jacard, Pearson, Frequency, Similarity Coefficients & Cluster analysis with multiple methods including Neighbor joining, UPGMA, WPGMA, Simple linkage, complete linkage, ward, median, centroid etc., Multi-color fluorescence microscopy imaging & Movie Mode facility. Should include at least two stand-alone copies of the analysis software
12	Should have Chemiluminescence imaging tray, UV to white light conversion screen, Gel imaging sheet
13	Should be FDA or CE or BIS approved product

Item Sl. No. 121

Densitometer with computer(gel)
1. Computer controlled Chemiluminescence Western blot, Trans-UV for DNA, RNA gel and colorimetric protein gel imaging system with extensive analysis tool for molecular weight calculation, band distance, colony counting, etc.
2. System must allow for future upgrade for fluorescence based imaging and multiplexing application with the choice of UV, visible (Red, Green, Blue), near IR, IR and deep IR spectral excitation.
3. Scientific Grade CCD camera with sensor size of 1 inch and f0.84 aperture must for high sensitivity and extremely high level of resolution
4. Camera should give 6.3 megapixels native and 20 megapixels extended with image resolution of 2838 x 2224 densities
5. Camera must be a cooled CCD with -55˚C maximum differential cooling from the ambient with -30˚C absolute and regulated cooling by three stage peltier thermoelectric cooler.
6. Interface must be USB 3.0 for faster image transfer to help image before signal gets weaker.
7. Should be a lab proof compact design, require minimal bench space, robust and chemical resistant system made of Stainless steel, aluminum or steel
8. Superbright Technology to visualize faint bands thereby increased sensitivity with no visible light background while performing gel documentation
9. High sensitivity reading technology for isolation of the electronic components of the camera during the light capture in order to avoid noise
10. Should have smart auto exposure mode with optimum exposure time calculation by the software based on the signal output from the sample
11. Software should provide options for 1x1, 2x2, 3x3, 4x4 binning.
12. 4-position filter wheel allows for dye flexibility of different fluorescent stains.
13. Pre-calibrated focus for all defined sample height. Easy and convenient adjustment of lens settings

Item Sl. No. 122

Fluorescent microscope	
1	Microscope Body: Microscope with infinity optical corrected optical system with light path selector of 100:0, 0:100.
2	Eyepiece: 10x (Paired) with F O V 22mm and diopter adjustment facilities on both eyes, anti-fungus type.
3	Condenser: Extra long working condenser (suitable for phase contrast/BF/Fluorescence)
4	Illumination: Pre centred Mercury fibre Illuminator of 130W/**Metal halide Illuminator of 120/130W with facility for no heat Lifetime of 2000 hrs or more**
5	Nosepiece: Quintuple nosepiece to accommodate 5 objectives at a time.
6	Stage: Attachable mechanical stage with universal holder to accept all types of specimen holders.
7	Objectives: 4x (N.A.0,10, W.D 30.0mm or higher), 10x (N.A 0.25, W.D 5.2 mm), 20x (N.A, 0.45, W.D, 8.2-6.9mm), 40x(N.A.0.60, W.D, 3.6-2.8mm)
8	Epi-Fluorescence Attachment: Noise terminator mechanism incorporated for high signal ratio images with pre centred mercury fibre illuminator of 130w. Main body must hold **4-6** fluorescence filter block and one empty position for bright field. Epi-fluor filter block (Blue) consisting of excitation filter , Dichroic mirror and barrier filter Epi-fluor filter block (Green) consisting of excitation filter, Dichroic mirror and barrier filter, Epi-fluor filter block for UV Consisting of excitation filter Dichroic mirror and barrier filter.
9	Digital Camera: Camera attachment capable of handling bright field , fluorescence, DIC, dark field images with 2/3" high density CCD Chip, Approx 5.24 Million pixel resolution Built-in TFT LCD monitor (8.4-In) XGA 1024x768 Live Display Mode (5m Interlace Mode 5.9 Frames/Sec; 23 Frame per/Sec with roi& Binning); Binning Modes 2x2 , 4x4 Digital Zoom Upto 16x (8 Steps); Interval shooting 10 sec- 6 hr Intervals; White Balance adjustment, Image Adjustment (Gamma Correction, shading Adjustment, Black level adjustment, Hue Wheel variation, colour saturation adjustment)
10	Software: Image analysis software that include length, width and circle measurements, comparison of images **on PC if not inbuilt supplier has to supply the suitable PC, Printer & UPS**
11	Consumable : Halogen lamp 4 no
12	UPS compatible for this system
13	Should be FDA or CE or BIS approved product

Item Sl. No. 123

Sl. No — Inverted microscope with PC

A Microscope Body:

Microscope body with Infinity optical corrected optical system, Extendable optical free space up to 80 mm for attaching other attachment in future, facility for 2 way (100:0, 20/80 left port) or more light distribution of light, up/down focusing, side port for attaching digital camera upgradable to one additional port for another camera, binocular tube with built-in to one additional port for another camera, binocular tube with built-in Bertrand lens & dark slide shutter along with dioptre adjustment facility.

B Condenser:

Universal turret condenser (suitable for all microscopy techniques) with 5 positions

C Illumination:

12V 100W Pre-centred Halogen Illumination.

D Eyepiece:

10X with F.O.V 22 or better and dioptre adjustment facility on both eyes, anti fungus type,

E Nosepiece:

Sextuple revolving nosepiece to accommodate six objectives at a time.

F Stage:

Rectangular mechanical stage

G Objectives:

High performance Objectives suitable for Bright field/Phase Contrast/fluorescence/ DIC Observation with facility of cover glass correction.

4X (N.A.0.10, W.D.30m), 10X (N.A0.25, W.D.6.2mm), 20X (N.A.O.45, W.D.8.2-6.9mm), 40X (N.A.0.6, W.D.3.6-2.8mm)

H Fluorescent attachment:

With six position turret filter block, Noise Terminator mechanism incorporated for high signal ratio images with Pre centered Mercury Fiber Illuminator of 120/130W, lamp should have life time of 2000 hrs or more.

Bandpass Fluorescent filters for FITC/GFP, TRITC/Rhoda mine, DAPI/Hoechst applications so that no cross talk is available.

I Digital Camera:

Digital Colour Camera capable of Handling Very Low Light, Fluorescence, Darkfield or DicImages with 2/3' High Density CCD Chip, Approx. 12.7 Million pixel resolution (2200 TV Lines), 15 f/p/s with full screen Size, Cooling 10ºC below Ambient, 12-Bit Digitization, Exposure Time 1/16,000 to 60 sec., Dynamic Range 2000:1, USB port for attaching camera onto Desktop/Laptop through single wire.

J Software should be with following features:

Acquisition and device control through four –dimensional acquisition, Image Acquisition, Time Lapse imaging, Multi-channel Fluorescence, Annotation, 2D/3D View, Filter, Morphology, Large Image, Macro, Segmentation, Report Generator facility, Data Base and Multi-Dimensional File Format (ND Format), Microscope Camera and Software should be from one source.

Data collection and processing unit: Branded, 4 GB RAM, DVD writer, 500 GB or higher HDD, 17" TFT Monitor, along with Colour Inkjet Printer

K Consumables:

Mercury Lamp 1 No. and Halogen Lamp 6 Nos.

All the products have to be from same manufacturer for better compatibility.

L Should be FDA or CE or BIS approved product

Item Sl. No. 124

Physiograph – three channel
Console with time & Event channel and stimulator for human experiments
Couplers
Strain gauge - 1 No.
Isotonic - 1 No.
Pulse respiration - 1 No.
Temperature - 1 No.
EKG (Clinical) with electrode.1 No. ,5 pin junction and belly
Biopotential (with electrodes, 1 No.s, 3 pin junction box, pastes and electrodes for action potential)
Transducers:
Pressure – 1 No.s
Volume – 1 No.s
Muscle activity /Force – 1 No.s
Respiration belt – 1 No.s
Isotonic Fine movement – 1 No.s
Pulse – 1 No.s
Respiration (Thermister type) – 1 No.s
Temperature – 1 No.s
Accessories: Following accessories are supplied along with each console:
Chart paper Z folds 250 folds 10 no.s
Fuses 10 no.s
Instruction manual
Earthing codes 01. No.s
Extra pen with Cradles 01 no.s
Ink ½ Ltr
Machine cover 01 no.s
The product should be CE or FDA or BIS Certified

Item Sl. No. 125

Single channel physiological recorder
Should be able to record simple muscle and nerve responses to nerve stimulations
It should be made of light metal for compactness and lightness.
Student Physiograph should be single channel console with 9 speed (.5, 1, 2, 5, 10, 20, 25,30 & 50 mm/sec) chart drive, time & event markers and appropriate transducers and stimulator
Couplers: Strain Gauge and isotonic
Transducers: Pressure, volume, muscle activity/ force, Isotonic fine movement
Accessories, spares and consumables
Earth Lead
Ink bottle
EP to EP lead
Perpex pen
Steel wire
Motor Belt
Chart paper Z- fold
Fuse
Cover
Power Supply
Power input to be 220-240VAC, 50Hz

Item Sl. No. 126

	Transilluminator with UV stand and UV torch
1	For visualization of ethidium bromide stained nucleic acids.
2	High output UV tube with average life expectancy of 5000 hrs.
3	UV light facility with wavelength range 254-365 nm.
4	UV protective shield which can block 99.5% of UV radiation
5	Should be able to detect DNA less than 10 nanogarm.
6	Filter size approximately 20 x 20 cm.
7	Can be used in routine electrical point (220-230v)x 50Hz.
8	With spare bulbs.
9	UV face shield
10	UV Torch
11	Should be FDA or CE or BIS approved product

Item Sl. No. 127

	Ultra Sonicator
	Technical Specification
1	Ultra sonicator should work on an operating frequency of **20-35 KHz**
2	Should have a digital LCD display to display measured parameters
3	Maximum power output of the equipment should be **120 watts** (Maximum)
4	Power supply 220 – 240V, 50 Hz
5	Dimensions of the equipment should be compact (Approx 8”X13”)
6	Probes and accessories -
a	Processing volume -0.2-5 ml , 0.5-15 ml and 2-25 ml **Clarification:** Suitable probes should be supplied covering the processing volume mentioned in the specification.
b	Tip diameter - 1.6 mm, 3.2 mm, and 4.8 mm
c	Intensity - High
d	Amplitude (microns) -320 µm, 240 µm , and 150 µm
e	Power supply - 1 KV
f	Accessory: Cover for the equipment
7	Should be CE or BIS approved product.

Item Sl. No. 128

Vertical gel electrophoresis
Technical Specification
Twin-plate mini gel unit with tank cooling device, built-in cooling coil and quick-fit tubing, lid, 2 sets each of plain and notched glass plates, spacers, spacer aligners, dummy plate and combs
TECHNICAL SPECIFICATION
Deleted
Deleted
Spacer thickness should be approximately : 0.1cm
Running Conditions for Denaturing/Native PAGE Gel
Voltage : 100 - 150V
Current : 10 - 15mA
Power pack
Technical specifications:
Type of Output: Constant Voltage/ Constant Current
Output Voltage (V): 0 - 500 V
Output Current (mA): 0 - 500 mA
Maximum Power (W): At least 250 W
Number of Output: atleast 4
Voltage Setting Resolution: 1V
Current Setting Resolution: 1mA
Display for Voltage: at least 3 Digit
Display for Current: at least 3 Digit
Timer: 1min to 999 min
Input Supply: 230 V AC ± 10%
Max Operating Temperature: ambient to 45°C
Should be US FDA or European CE or BIS approved product

Item No. 129

	Western Blot Apparatus with Compatible Power Pack
SN	Technical Specification
A	**Gel transfer apparatus:** Compact system to transfer proteins efficiently in less time from polyacrylamide gels onto the nitrocellulose or PVDF membrane. Should provide with the gel transfer stacks, to place on top and bottom of the gel. Apparatus should be impervious to alcohol, alkali and acid. Should be provided with compatible power pack with leads
B	**Gel transfer apparatus Dimensions:** Should not be greater than 40cm (l)x 20cm (w) x 15 cm (h) Weight: ≤ 2.5 kg Features: Suitable for transfer of mini (8x8cm) as well as medi (8x13cm) gel Operating temperature: 4-40°C

C	**Membrane processing device for western blot:** The device should be fully automated and fast for processing of routine western immunodetection steps. The device should allow processing of at least two membranes in parallel with required reagent sets. The device should have digital program display.
D	**Instrument specifications:** Input power: 220-250V Operating temperature: 4-40°C Dimensions: Not greater than 20"(w) x25"(d)x15"(h) Features: Digital display, LED light Membrane size: Suitable for mini blot (8.5x8.5cm)
E	Should be FDA or CE or BIS approved product

Item Sl. No. 130

GROSSING STATION	
The equipment should be a floor mounted & should have hydraulic height adjustment facility from 2.5 feet to 3.5 feet approximately.	
"There should be facility for video, audio recording as well as photography attachment. The photography attachment should have facility for enlargement.	
Should be supplied with the following:	
(i) Camera mount facility for digital camera to securely hold camera, should have adjustable ball and socket system, to let the user put camera right where he/she wants it and also should allow ease of adjustment & better coverage.	
(ii) Video camera mount which holds video camera securely, adjustable ball & socket system, in order to let the user to put the video camera right where he/she wants it & also allow for ease of adjustment & better coverage.	
Should be supplied with the following:	
(1) Digital SLR Camera with 18-55 lens, CMOS Sensor, 16 GB card for recording good quality of photographs with computer interphase (18.0 Mega Pixel). HDMI cable & Carry bag should also be provided.	
(2) Video Camera: Quality should be suitable for purpose of recording grossing steps, a CC TV Camera should be provided.	
Specification for CC TV Camera:-	
○	Should have 16 Mega pixel or better.
○	Optical Zoom-12x or better
○	Digital Zoom-16x or better
○	Focus-Autofocus
○	Built-Durable & robust, shock resistant and capable of withstanding light showers.
○	Video-Full HD 1080, should save still images during video recording.
○	Sensor-CMOS Sensor
○	Connectivity-USB 2.0
○	A compatible DVR with foot switch should be provided.
○	Memory-Minimum 16 GB Micro SD Card or better.
○	Dimensions-Less than 90 mm (w) x 90 mm (h) x 200 mm (d)

o Weight-Not more than 900 gram.
o Accessories- USB Cable, AC Adaptor, Power Cord, Lens Cap, Micro HDMI Cable.
o Warranty-Two (2) years.
(3) Digital voice recorder: Audio recorder stacked with premium features and enhanced DSS Player Pro with flex arm microphone and Dictation software for outstanding performance should be available.
For IT support, the following should be supplied:
(i) Computer from Branded company 3.0GHZ, Intel Core i5 or more ,4 GB DDR 3RAM or more, DVD writer, 500 GB or higher HDD, along with 18" Flat LED screen monitor, 2USB 2.0 port SD Card slot with in-built CPU.
(ii) Mount for Monitor and keyboard with mouse.
There should be facility for digital measurement of grossing specimens
There should be IT support for storage and retrieval of data recorded with TFT display and recording system.
There should be a formalin tank on top of the station with direct supply system to the work area or there should be a formalin container with spigot.
Should have Hot and Cold water mixing faucet with foot operated control (foot switch/pedal) for hot and cold water On/Off.
The station should be made of noncorrosive high grade stainless steel.
Should have Self Contained Ventilation Assembly with blowers & replacement filters. 10 additional filters should be provided.
Sink with removable filter and ½ hp Commercial Disposal system of corrosion resistant stainless steel construction with on/ off switch should be provided.
ILLUMINATION:
(i) Top mounted LED LIGHT fixtures
(ii) Incandescent light with 3X MAGNIFIER mounted on flexible arm.
Magnetic front board should be available to stick instruments for grossing.
Dimension of the table should be approximately:
Length: 4.5 to 5.5 feet.
Height (Lowest): 6.5 to 7.0 feet.
Height (Fully elevated): 7.0 to 9.0 feet.
Width: 2 to 3 feet.
i. Equipment should have END RINSE ASSEMBLY (with ON/OFF valve) which allows debris to flow towards the sink basin.
ii. Should be supplied with SPRAY HOSE with Easy grip assembly with flexible hose, conveniently placed for easy spray cleaning of debris.
iii. DISSECTION BOARD: Polypropylene construction to help preserve dissecting knives and scalpels when in use.
iv. REMOVABLE MEASURING RULE: Anticorrosive metal device for ruling a portion of the subject should be provided, the ruler should include a scale in centimetres and inches.
Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
Five (5) years warranty and Five (5) years CMC.
Following Accessories should be provided:

1. KNIFE SHARPENER to provide straight and serrated edges; should be 100% diamond abrasive; should have a three step process to provide razor sharp edges. First step should be Sharpening, second step should be honing and the last step should be for stropping and polishing.
2. HAND HELD BONE SAW: Autopsy Saw with Bone vacuum dust collector having HEPA filter should be provided.
Autopsy saw should come with 10 feet cord for greater mobility and with following blades and accessories:-
i. Round Blade without arbour (2.5 in/6 cm): 2 Nos.
ii. Section Blade without arbour (2.5 in/6 cm): 2 Nos.
iii. Standard Saw Arbor: 2 Nos.
The saw should be able to be connected to the Bone Vacuum Dust Collector.
Bone Vacuum Dust Collector should come with vacuum nozzle, disposable filter cartridge (HEPA Filter) and 10 feet power cable.
3. C- FOLD PAPER TOWEL HOLDER: Made of stainless steel.
4. EYE WASH DRENCH ASSEMBLY: Should have flip down way to remove eye contaminants, auto flow eyewash.
5. HANDS FREE SOAP DISPENSER: should have pump mechanism to provide quick and precise dispensing; should be Deck or Wall Mount.
6. ADJUSTABLE AND STATIONERY STAINLESS STEEL SHELVING to keep accessories
7. WRITING PLATFORM with a lift over storage drawer.
8. HANGING DIGITAL AUTOPSY SCALE with Scale Pole & Bracket factory fitted to weigh specimens of 0.1 Kg x 13.6 Kg
• Ability to 0 tare bow, ring and pan
• Bow, ring and pan should be provided
• The Scale Pole height should be able to be secured anywhere along with 360 degree turning ability
9. CASSETTE HOLDERS: three boxes which can be mount to rail in front of the grossing station.
10. TWO FORM HOLDERS mounted on the table to store documents away from any fluids and risk of damage.
11. GLOVE BOX HOLDER·
05 YEARS WARRANTY WITH QUOTE FOR NEXT 05 YEARS CMC IS REQUIRED INCLUDING ALL ACCESSORIES.
European CE Certification or BIS approved.

Item Sl. No. 131

SN	**ESR ANALYZER**
1	The instrument should be able to perform ESR analysis directly from the EDTA vacutainers.
2	Through put should be approx. 60 ESR per Hour.
3	Analyzer should be able to load minimum 30 samples in a batch.
4	Principle should be based on westergren method (sedimentation of red blood cells).
5	Instrument should be equipped with an internal mixer and printer.

6	Analyzer should be equipped with dry technology i.e. there should not be any consumption of any reagent or blood while processing the samples.
7	Analyzer should be equipped with Internal Barcode reader.
8	Analyzer should have temperature correction facility for reporting accurate results.
9	Analyzer should have facility for Internal Quality Control Management.
10	Analyzer must permit Bi-Directional interfacing.
11	RS-232 Serial Connection Port facility should be available.
12	Should have European CE **or** US FDA certification or BIS approved
13	The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.
14	UPS backup adequate for the duration of one cycle of processing should be provided.
15	Start-up kit for at least 200 tests should be provided free of cost.
16	Appropriate work bench/ stand should be provided for the instrument.
17	Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
18	Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests to be provided by the company.

Item Sl. No. 132

	FLOW CYTOMETER
SN	Technical Specification
1	Bench Top Flow Cytometer should have 3 lasers (red, blue and violet) and should be capable of minimum 10 parameter analysis (minimum 8 fluorescent plus forward and side scatter).
2	The company should mention laser power output for all lasers in the offer.
3	Should have sample acquisition rate of at least 10,000 events per second or more.
4	The system should have threshold settings option on multiple channels/ parameters for a single sample run.
5	Must have compensation capability between all fluorescence channels manually and through auto compensation.
6	The system software should be capable of establishing baseline settings of system performance and be able to adjust for instrument variability thereby automating instrument setup.
7	The equipment should have analogue/ digital signal processing with dynamic range of at least 18bit data acquisition or more in order to get the clear resolution.
8	Optical filters should be easily changeable by user without having to call service engineers.
9	Carry-over of the fluidics of the system should not be more than 0.1%.

10	The company should provide standard software for complete plot and graphical analysis of flow files with facilities such as back gating.
11	The instrument should be capable of performing daily QC and of maintaining long term quality assurance data for monitoring performance of the instrument.
12	Must have automated loader with minimum of 30 tubes or more.
13	Must have provision for integrated bar code reading**/integrated with auto sampler** to identify carousel number & tube location.
14	System should be CE–IVD approved for maximum parameters used in analysis.
15	The data management system should have PC workstation with at least processor, 160 GB hard disk drive, DVD/CD writer(combo drive), 22" monitor and colour laser jet printer.
16	On-line UPS with at least 30 minutes backup should be quoted with the system and should be supplied with the equipment.
17	The company should provide multiple time to time free trainings to the users as per their requirement during setting up of flow lab and later for up gradation.
18	Participating company should have direct presence in India with relevant application and service specialist for anytime support.
19	The company should have proven capability demonstrated in the past in after-sale-service and application support in the field of flow cytometry instrumentation in India.
20	Equipment will be selected only after proper demonstration

Item Sl. No. 133

	WATER BATH
SN	Technical Specification
1	Should be rugged, high performance water bath, should maintain water temperature from ambient to 100°C.
2	Should have over-temperature safety circuitry designed to prevent thermal runaway, while auto-on and auto-off timers allow to optimize operation schedules.
3	Should be chemical and corrosion resistant, with epoxy powder-coated exterior, and easy cleaning of the chamber with seamless stainless-steel interior.
4	Should have smaller footprint for bench top use.
5	Should have advanced microprocessor controller designed for extended functionality.
6	Should protect work with audible alarms.
7	Should conveniently save commonly used settings with four temperature presets.
8	Bath should come with clear polycarbonate gable cover, diffuser tray, drain hose and rubber duck.
9	Chamber capacity should be approx. 20 Liter.

10	Temperature range should be ambient to 100°C.
11	Should be a precision water bath with temperature stability/ uniformity @ 70°C: ±0.1°C / ±0.2°C.
12	Work area measurement should be around (L x W x H): 11.7 x 19.7 x 5.9 in. (297 x 500 x 150 mm).
13	Should be able to work on global voltage: 100-115V/200-230V, 50/60Hz.
14	Heater output should be approx. 1200W.
15	Should be offered with stainless steel test tube rack& concentric ring cover.
16	Should be UL Listed.
17	Should have European CE or US FDA certification or BIS approved.
18	The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.
19	Should be provided with 3 KVA servo stabilizer for high and low voltage protection.
20	Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
21	Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

Item Sl. No. 134

	WEIGHING BALANCE
SN	Technical Specification
1	1. The unit should be semi microbalance with motorized auto calibration & adjustment.
2	2. The unit should have built-in plug & play for direct data transferring system to Microsoft Windows programs (GLP/GMP compliance).
3	3. The unit should have self-explanatory icons and plain-text prompts on the large touch screen to show all the information (touch screen display).
4	4. The unit should have manually operated ergonomic draft shield.
5	5. The unit should comply with approximately following technical requirements:
	Readability : 0.01 mg.
	Weighing Capacity: 40 to 120 gm
	Repeatability : 0.02 mg.
	Linearity : 0.1 mg.
	Weighing Pan : 80 mm dia
	Response Time : 2 (s).
6	6. Should have European CE or US FDA certification or BIS approved.
7	7. The calibration of the instrument should be performed at the time of installation and certificates should be provided.
8	8. Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
9	9. Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

Item Sl. No. 135

	LIQUID BASED CYTOLOGY SYSTEM
SN	Technical Specification
1	LBC System which is highly effective in greatly reducing false negative results and provides increased confidence in the detection of pre-neoplastic and invasive cancer, where present.
2	Low Inadequate rates and consistently high PPV (Positive Predictive Values) resulting in the identification of „true" disease.
3	Should ensure that 100% of the collected sample is sent to the laboratory and provides standardization in the collection process and reduces need for repeat recall and processing.
4	The system should be able to work with various collection methods as spatulas, brushes etc.
5	The retention of the brush head in the container eliminates the risk of any abnormal cells being discarded with the sampling device.
6	Should preferably use an **ethanol/methanol** based preservative as the collection medium.
7	Centrifugation process which effectively removes obscuring blood, mucus and polymorphs while still retaining the important diagnostic material.
8	Should process each specimen to produce up to **3-4** equally representative slides especially for additional testing.
9	Should be capable of handling a high throughput of **20-25** slides stained per hour.
10	Should be able to process multiple specimens at the same time for best laboratory efficiency.
11	Should be capable of running at regular electrical requirements.
12	The preservative fluid for collection of LBC samples must be non-hazardous with easy storage and transport facility.
13	Should be capable of preparing thin layered slide within a standardized smear diameter from the particular sample.
14	For processing of both gynaecological and non-gynaec samples.
15	Storage of samples at room temperature for about 4 weeks and in refrigerator for 6 months to allow performance of additional adjunctive tests such as HPV, if required.
16	Compatible with HPV Testing.
17	To provide the quotations for image analysis.**(Optional)**
	Added para: **The equipment should be European CE or US FDA or ISO 13485 certificate**
18	Hidden cost of all reagents and other items not included with the machine to be quoted separately in elaborate detail.

19	All labelling should be completed with the start of the process with bar coding of all samples and to include additional identification details such as name date of birth etc.
20	All consumables and reagent are provided for sample collection and processing.
21	Staining to be included as integral part of system to ensure high degree of standardisation.
22	**As per QC**
23	Appropriate work bench/ stand should be provided with the instrument.
24	Start-up kit for at least 100 tests should be provided free of cost.
25	UPS backup for the duration of one cycle of processing to be provided.
26	Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests to be provided by the company.

Item Sl. No. 136

	ELISA READER WITH WASHER
SN	Technical Specification
1	ELISA Reader
i	Should be able to support all plate formats U bottom, V bottom and flat bottom 96-well microplates
ii	PC based system
iii	Optical systems: LED lamp/ UV Xenon flash lamp
iv	Detection: Absorbance based
v	Reading Time: <15 Seconds for 96-wells
vi	Wavelength range: 340nm to 750nm or more
vii	Wave length selection should be double monochromator with 1nm increment
viii	System should have capability to do qualitative, quantitative, kinetics with any formulae including validation, transformation, factors and floating cut off
ix	Absorbance Range: 0- 4 OD
x	Resolution: 0.001 Abs.
xi	Accuracy: 1% +/- 0.010 OD
xii	Repeatability: 0.5% +/ -0.005 OD
xiii	System should perform self-check before every measurement
xiv	Power requirements: 220V-50/60Hz
xv	PC Requirements (All in one PC) : Intel core i7 processor, 4 GB RAM, 2 GB graphic, 1 TB hard disc, Full HD LED monitor 17", DVD writer, Wi-Fi, Wireless key board and mouse, 64 bit and latest version of Microsoft Window, with MS office licensed, Laser Printer (>20pages/min.) >5000pages/refilling of cartridge
xvi	PC Software packages (windows ® compatible) for on board data analysis

	Washer
1	Should have un-pressurized liquid system independent from bottle size and type with any type of bottle to be used
2	Dispensing and aspirating needles should be separate
3	Washer should have 8 or 12 channel wash head
4	Should have 2-4 independent liquid channels
5	Wash volume per well should be programmable
6	Should have residual volume of <2ml
7	Should have strip selection option which allows to wash selected strips only
8	The supplier should provide comprehensive training to users on operation of the instrument and application support onsite as per specifications
9	Branded compatible online UPS with at least 30 minutes backup

Item Sl. No. 137

	HIGH SPEED AUTOCLAVE
SN	Technical Specification
1	The Vertical Autoclave should have Chamber Capacity of: Effective volume 113 litres or more.
2	The chamber of Vertical Autoclave should be manufactured as per ASME standards and comply with Pressure Equipment Directive.
3	The Vertical Autoclave should work on the domestic power supply of : 230 V AC, 50 HZ, Single phase.
4	The Vertical Autocalve's internal chamber, cover lid and all wetted parts should be fabricated from stainless steel of 304 grade.
5	The Vertical Autoclave outer body should be of SS 304.
6	Temperature range should be up to 135°C and pressure up to 30 psi.
7	The Vertical Autoclave"s all joints should be smooth finished for crevice free internals.
8	The chamber should be hydro statically tested at 1.5 times of its working pressure and certificate should be supplied for the same.
9	The lid should be equipped with single lever lock mechanism and lever handle moulded from industrial plastic.
10	The lid should be provided with auto purge cum vacuum breaker valve and a manually operable valve for exhaust.
11	The unit should have a solenoid valve for auto purging of air & normal exhaust.
12	The Vertical Autoclave should have stainless steel pressure gauge with dual range dial display in KPA and PSI along with a co-related temperature scale for steam in degrees Celsius.
13	The operations of the unit should be controlled by touch screen programmable logic controller with 4 temperature channels & 1 pressure channel inbuilt.
14	The Autoclave should be equipped with Touch screen HMI PLC.

15	Controlling of chamber temperature should be on all 4 temperature channels.
16	To Ensure proper sterilization cycle autoclave should have facility of connecting external printer which can give instant print of all cycle data – customer and operator name , equipment number, recipe, hold time, batch number, date & time, temperature set-point, readings of at least four temperature sensors, pressure channels F0 summation and cycle status.
17	Inbuilt 6 recipes for different load should be available.
18	Provision of automatic water filling should be available.
19	The timer should be retentive & settable up to 95 mins.
20	Power fail restoration facility: in case of power failure, the Autoclave should give option of resuming cycle with automatic adjustment of sterilization hold time.
21	The unit should have safety valve to protect the equipment in case of over pressurization.
22	The Lid should be equipped with pressure interlock device to avoid opening under pressure.
23	Lid should be equipped with door switch to avoid cycle start if door is not locked properly.
24	To ensure effective sterilization, if temperature falls below temperature set point the sterilization timer should get automatically adjusted.
25	The unit should be provided with independent safety cut-out for high temperature.
26	The unit should give indication by audio-visual alarm on completion of set autoclave cycle.
27	The electrical safety should be ensured by inbuilt MCB.
28	The unit should be mounted on 04 Nos. PU coated castors out of which atleast 2 should have locking mechanism
29	The Vertical Autoclave should be PED certified and the same should be provided.
30	Manufacturer shall be ISO 13485 certified & should submit photocopy for the same.
31	Local service setup should be available for prompt and efficient post-sales support.
32	Autoclave should have service & calibration reminder facility.
	1) Autoclave should have the provision of password protection so that unauthorized people cannot access the equipment or cannot change the critical set parameters
33	Calibration reports should be provided with NABL traceability.
34	Autoclave should have option for (to be quoted separately)
	1) Air Ballast
	2) Positive Pulsing
	3) Drain Cooling.
35	Should have European CE or US FDA certification or BIS approved.
36	The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.
37	Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
38	Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

Item Sl. No. 138

	THERMAL CYCLER
SN	Technical Specification
1	The system should be Peltier based PCR system for high throughput amplification
2	he system should have Gradient block with sample capacity 3x 32 × 0.2 ml PCR tubes.
3	The system should allow user to set temperatures in gradient mode.
4	The system should have Temperature range 4 - 99 0C with temperature accuracy of + 0.2 0C to+ 0.3 0C
5	The system should have a ramp rate at least 60C /s and 40C /s or more for cooling & heating respectively,
6	The system should have adjustable ramp rate to meet critical amplification conditions.
7	Sample ramp rate should be at least 40C.
8	The heated lid should accommodate both flat & dome capped tubes
9	Instrument should be usable by three different users simultaneously or exclusive of each other with 2 temperatures selectivity for individual user.
10	The block should be interchangeable to set more than 96 samples.
11	User should be able to set different temperatures in lanes in gradient mode
12	The system should have a gradient range of 30-99 °C and range of gradient span should be 10°C –24 °C.
13	The system should have pre-programmed template for easy selection from different temperature protocols viz. 2 step, PCR, 3 Step PCR, Gradient PCR, Long Range PCR, Low volume PCR, RT, RT-PCR, Incubation, Cycle sequencing, Touchdown PCR, Hot Start PCR, Hot Start PCR manual, Large volume PCR, Nested cycles, reduced ramping etc.
14	Should have “Touch Screen” or high resolution LCD display for programs.
15	Intuitive graphical interface for rapid input of protocols and easy file management
16	Capacity to store minimum 500 to more programs, different login levels (i.e. administrator, guest and user)
17	Should have two or more USB ports to attach mouse and/or memory stick and to transfer programs from machine
18	System should have interchangeable block option
19	System should have Cloud connectivity
20	Should have European CE **or** US FDA certification or BIS approved.
21	The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.
22	Start-up DNA extraction kit for at least 200 FFPE samples should be provided free of cost
23	UPS backup adequate for the duration of 2 KVA with 60 minutes back up should be provided.
24	Appropriate anti-vibration table with granite top of standard make should be provided to accommodate the instrument, computer system and accessories.
25	Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
26	Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests to be provided by the company.

Item Sl. No. 139

	HORIZONTAL GEL ELECTROHORESIS SYSTEM
SN	**Technical Specification**
1	System should have at least two comb slots on the U.V. Transmissible (UVT) gel tray.
2	UVT gel trays should be silk screened with a florescent ruler for easy measurement of bands.
3	System should be supplied with two combs, 12 & 20 well, double-sided, 1.0/1.5 mm thick.
4	System should have flexibility to run 8 to 48 samples on 1 gel.
5	There should be power-off memory which retains settings after shut-down.
6	There should be soft-touch keypad allowing quick set-up.
7	Should have non-skid rubber feet to provide stability.
8	There should be a display for voltage or current
9	Timer should range from 0 to 999 minutes.
10	Should be supplied with compatible power supply and necessary accessories, 5000V, 1000V max one each.
11	Should have European CE or US FDA certification or BIS approved
12	The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.
13	A 5 KVA servo stabilizer with high and low voltage protection should be provided.
14	Appropriate anti-vibration table with granite top of standard make should be provided to accommodate the instrument, computer system and accessories.
15	Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
16	Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company

Item Sl. No. 140

	VERTICAL ELECTROHORESIS SYSTEM
	1. The system should runs two 10 x 10cm gels or one gel when used with blocking plate; accommodates 8 x 10cm gels utilizing the provided adapter
	2. The system should allow gels to easily be placed into the device
	3. The system should have wedge placed in front of the cassettes,to provide even pressure against the leak-proof gasket, places the cassettes in proper running position.
	4. The system should have two sizes of wedges accommodate varying thickness of precast gels.
	5. The system should be flexible; use precast polyacrylamide gels or hand cast gels.
	6. The system should not require cooling.
	7. The system should have measurements for chambers as follows:
	a. Double Sided Vertical System, 8-10 x 10cm gel system, 150mL to 300mL buffer volume.
	b. Length (Metric) Gel; 8 to 10cm
	c. Width (Metric) Gel; 10cm

	d. Volume (Metric) Lower Buffer Chamber Max; 300ml
	e. Volume (Metric) Lower Buffer Chamber Min; 150ml
	f. Volume (Metric) Upper Buffer Chamber; 150ml
	8. The system should have facility of power-off memory retains settings after shut-down.
	9. The system should comply with following power supply ranges; Voltage 230V, max. Voltage 300V, max. Current 400 mA, Hertz 50/60 Hz, 03 sets of input jacks, display voltage or current & timer 0 to 999min.
	10. The system should have soft-touch keypad to allow quick set-up.
	11. The system should have non-skid rubber feet provide stability.
	12. Should have European CE or US FDA certification or BIS approved.
	13. The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.
	14. Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.
	15. Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

Sl. No. 141

Complete chromatographic unit for Paper & TLC
Chromatography tank with cover for plates of different sizes, Size 20x20 cm
Moveable applicator with inbuilt thickness arrangement between 0 to 2mm (minimum div. 0.25mm) in further consists of the following components.
1. Spreader (applicator) made of electroplated brass.
2. Perspex base of 114x23 cm to support glass plates.
3. Plate rack alluminium, anodised for ten 20x20cm or 20x10cm plates.
4. Developing tank with lid.
5. Spotting template made of perspex.
6. TLC plates set of five 20x20cm. and two 20x5cm, or set of ten 20x10cm and two 20x5cm
7. Glass sprayer with rubber bellow, cap. 100m1
8. Micro-pipette
9. Subscriber for marking lines made of stainless steel.
Accessories for T.L.C. Apparatus :-
Glass sprayer with rubber bellow.
Perspex base of 114x23 cm to support glass plates.

Sl. No. 142

Double Demonstration eye piece
Double Demonstration eye piece
For simultaneous viewing with adjustable pointer and eye piece, detachable and rotable, moves in all direction eye pieces on extension tube can be focused independently.

Sl. No. 143

Stethograph
60cm long and 2cms diameter corrugated and impervious tube made of canvas with rubber one end closed other end open
Metal chain at both ends one chain with hook
Open end connected with pressure tube to tambour

Sl. No. 144

Fume cupboard
Fume cupboards is a fume cabinets which localised the fume extraction systems fitted in laboratories to protect users from harmful substances that could be inhaled. It should have a cabinet with a moveable front window made out of safety glass. It should properly functioning the fume hood exhausts hazardous gases, dusts, mists, vapors from a combined location. Cabinet Structure: Material: All steel (1.0mm cold-rolling steel or 1.0mm stainless steel) covered with electrostatic spraying after folding, welding, polishing, acid cleaning, phosphorization and chemical resistance. It should have all the accessories that is required.

Sl. No. 145

Chemical Balance

Description of Function
Electronic Balance is required for precision weighing of Lab samples.
Technical Specifications
Weigh accurately up to 3rd decimal place
Fully automatic time and temperature controlled internal calibration and balance should be capable to adjust itself
Auto zero Setting
Weighing capacity up to 200g
Readability 0.001g
Repeatability 1mg or less
Setting time - less than 2 seconds
Suitable for internal and external adjustment weights

PC connectivity
Balance should have
Liquid Crystal Display (LCD) for display
IR sensors for hands free operation
warns if balance is not correctly levelled
automatic and detachable draft shield
Detachable and adjustable terminal
Facility for user administration and password protection.
Integrated automatic safety function for external routine operations
Alphanumeric data entry of more than 2 IDs
Shall meet BIS standards or US FDA or European CE
Power Supply
Power input to be 220-240VAC, 50Hz
Suitable Auto voltage corrector with spike protector should be available.
Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
Resettable overcurrent breaker shall be fitted for protection

Sl. No. 146

Sl. No	CHEMILUMINESCENCE & GEL IMAGING & ANALYSIS SYSTEM
1	**5 megapixel or less, 16-bit Scientific-Grade CCD Camera for good resolution, cooled to ≤ -25deg C**
2	Optics should include f/1.4 lens or better with motorized optics
3	Should have UV trans-illuminator: 302 nm, Pull-out type; and Epi LED White light imaging
4	Must include at least 4-position motorized filter wheel with UV/IR Interference Filter
5	Should have Light-tight darkroom with UV safety switch
6	Should have integrated or external computer with LCD screen for operations of all system hardware, software & lenses
7	Should have storage at least 250 GB, 3 or more USB slots and at least 1 network port
8	Should provide selection of all instrument settings, capture, save and printing from one screen
9	Should have image acquisition, both Automatic as well as manual
10	Should download images over network via any web browser using a PC or Mac or internet enabled phones **/ real time with download facility**
11	Must have Stand-alone Software for enhancement, editing, annotation, archiving & analysis including features like 1-D multilane densitometry, 2-D spot densitometry **(2D software should include a dedicated application related to protein profiling like Spot matching between the gels, intensity difference across the complete range of proteins available on the gels with the help of normal staining and multiplexing with diferent dyes in the same gel)** , MW, Rfanalysis,Microtiter plate, Eli-spot, Array & Dot Blot Analysis, Colony, Cell & GFP Yeast Counting, Q-PCR, Zymogram gel analysis, Gel Scoring, Band matching, RFLP, RAPD, Fingerprinting, Dendrogram creation, options for Dice, Jacard, Pearson, Frequency, Similarity Coefficients & Cluster analysis with multiple methods including Neighbor joining, UPGMA, WPGMA, Simple linkage, complete linkage, ward, median, centroid etc., Multi-color fluorescence microscopy imaging & Movie Mode facility. Should include at least two stand-alone copies of the analysis software
12	Should have Chemiluminescence imaging tray, UV to white light conversion screen, Gel imaging sheet
13	Should be FDA or CE or BIS approved product

Sl. No. 147

Ophthalmoscope

Technical Specification

1	Should be battery operated.
2	Should have red-free and cobalt blue filters.
3	Should have LED illumination
4	Should have small and large spot sizes, fixation targets, slit aperture,hemi-spot and cobalt blue filter.
5	Should have wheel control with lens powers ranging from +20D to -35D
6	Should have illuminated lens dial.
7	Should have rubber brow rest.
7	Should have dust free optics and a spherical optical system.
9	Should be supplied with a carrying case.
10	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.

Approved Make: Welch Allyn, Heine, Keeler

Sl. No. 148

Sl. No	Simple Bench Top Flowcytometer
1	Bench top , pre-aligned flow cytometer
2	System should be equipped with solid state blue, Red & Violet lasers with at least 7 colours.
3	Fixed alignment, pre-optimized detector settings
4	Data acquisition should be at least 10000 event/second
5	Compensation setting before, during and after data collection.
6	System should have sampler to fit in at least 20 tubes, 48& 96 microtiter plates
7	System should be supported by appropriate software for acquisition & analysis of data
8	System should have high resolution with 5-7 decade
9	Touch/LCD screen computer with at least 21" monitor with color printer to run and analyze the data (4core processor, 1TB HDD, 16 GB RAM or Higher).
10	Compatible UPS with at least 1 hour back up should be supplied.
11	Should be FDA or CE or BIS approved product.
12	List of users and track record of installation of similar equipment should be provided.

Sl. No. 149

Sl. No	HPLC SYSTEM WITH CHROMATOGRAPHIC WORKSTATION
1	Reciprocating pump with a parallel connection of double plungers and an intelligent control of a microprocessor has higher operating pressure, smaller pulsation, stable performance, convenient operation and some other features, etc. Through alternating the double plungers to perfuse, the service life of the piston rod and that of the leather packing collar are twice longer than those of common pumps with connection in series
2	**Specification:**
3	Flow rate Range: 0.001-9.999 mL/min
4	RSD< 0.06%
5	**Peak Operating Pressure: 40MPa(0.001-9.999mL/min)**
6	Pressure Pulsation<0.1 MPa
7	**Deleted**

8 **UV Detector**

9 With its pioneering digital switch system, the detector directly outputs digital signal to the workstation, which avoids the signal distortion and interference that common UV detectors may bring about during their multiple analog-to-digital conversion of chromatograph signal

10 Specification:

11 Wavelength Range: 190-600nm

12 Baseline Noise: ±0.5-1.0×10^-5

13 Baseline Drift: 0.4×10^-4 AU

14 Minimum Detection: 1×10^-8 g/ML(Naphthalene/methyl alcohol)

15 Wavelength Repeatability: less than 0.2nm

16 Injection Port:

17 C18 Column

18 Chromatography Workstation

19 Chromatogram workstation software should be a full automated integration of UV detector and high-pressure constant flow pump, and has powerful control function and simple, convenient and swift operation.

20 Six kinds of quantitative algorithmic methods: normalization, revised normalization, revised normalization with factor of proportionality, internal standard method, and external standard method and index calculation.

21 Should be FDA or CE or BIS approved product

22 Amended Para:

23 Injection System: Auto Sampler

24 Suitable compatible PC, Laser Printer & UPS to be offered with the system.

Sl no. 150

Priestly Smith Perimeter

1 Should have a calibrated arc, revolving chart holder.

2 Should be able to rotate in any direction and fix at any position with a tightening screw. The arc should be graduated from 0° to 90° with a movable test object.

3 3 At the back of the arc arrangement should be provided for fixing of chart which has concentric circles corresponding to the degrees of arc.

4 Adjustable chin rest.

5 The above mentioned should be fitted over a sturdy base with receptacle for keeping charts.

6 Accessories:

a) Different sized (2mm & 5mm), shaped (round & square) and coloured (five different) objects.

b) Should be supplied with 20 packets of charts (100 charts/packet).

GENERAL TECHNICAL SPECIFICATIONS

GENERAL POINTS:

1. Warranty:

   a) Comprehensive Warranty as per Conditions of Contract of the TE document for complete Equipment from the date of installation, commissioning and handing over of equipment to Hospital/Institution/Medical College.

   b) 95% up time Warranty of complete Equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.

   c) All software updates should be provided free of cost during Warranty period.

2. After Sales Service:

   After sales service centre should be available at the city of Hospital/Institution/Medical College on 24 (hrs) X 7 (days) X 365 (days) basis. Complaints should be attended properly, maximum within 8 hrs. The service should be provided directly by the bidder. Undertaking by the Principals that the spares for the Equipment shall be available for at least 10 years from the date of supply.

3. Training:

   On Site training to Doctors/ Technicians/ staff is to be provided by Principal/ Indian Agents (if they have the requisite know-how) for operation and maintenance of the equipment to the satisfaction of the consignee.

4. Annual Comprehensive Maintenance Contract (CMC) of subject equipment with Turnkey:
   a) The cost of Comprehensive Maintenance Contract (CMC) which includes preventive maintenance including testing & calibration as per technical/ service /operational manual of the manufacturer, labour and spares, after satisfactory completion of Warranty period may be quoted for the period as specified in the List of Requirement on yearly basis for complete equipment (including Batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey (if any). The supplier shall visit each consignee site as recommended in the manufacturer's technical/service/operational manual, but at least once in six months during the CMC period
   b) The cost of CMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
   c) Deleted.
   d) The payment of CMC will be made on six monthly basis after satisfactory completion of said period, duly certified by end user on receipt of bank guarantee for 2.5% of the cost of the equipment as per Section XV valid till 2 months after expiry of entire CMC period.
   e) There will be 95% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.
   f) Deleted
   g) All software updates should be provided free of cost during CMC.
   h) Failure of the above [4. e) to 4. g)] by the supplier, may lead to the forfeiture of the Bank Guarantee for Annual CMC.
   i) The payment of CMC will be made as stipulated in GCC Clause 21.

Turnkey / Site Modification Work (wherever applicable):

Turnkey/ Site Modification Work is indicated in the technical specification of the respective items, wherever required. The Bidder shall examine the existing site where the item is to be installed, in consultation with HOD of Hospital/ Institution/ Medical College concerned. Turnkey/ Site Modification Work details of each

Hospital/ Institution/ Medical College are given at the end of Technical Specification. The bidder to quote prices indicating break-up of prices of the Machine and Turnkey Job/ Site Modification Work of each Hospital/ Institution/ Medical College. The Turnkey/ Site Modification Work costs may be quoted in Indian Rupee will be added for Ranking Purpose.

The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

The Turnkey Work should completely comply with AERB requirement, if any.

Note 1: Bidder's attention is drawn to GIT clause 18 and GIT sub-clause 11.1 A (iii). The bidder is to provide the required details, information, confirmations, etc. accordingly failing which it's tender is liable to be ignored.

Note 2: General: Bidders are requested to make sure that Electrical Safety Analyser/ Tester for Medical equipment to periodically check the electrical safety aspects as per BIS Safety Standards IS-13540 which is also equivalent to IEC electrical safety standard IEC-60601 is a part of the equipment. If the Electrical Safety Analyser/Tester is not available they should provide a commitment to get the equipment checked for electrical safety compliance with Electronic Regional Test Labs / Electronics Test and Development Centres across the country on every preventive maintenance call.

Note 3: Supplier should provide adequate training of personnel and supply only non-locked open software and standard interface interoperability conditions for networked equipment in hospital management information system (HMIS)

Note 4: Training shall be given to the doctors, nurses, operators with proper training material, adequate operating manual & preliminary troubleshooting.

SECTION – VIII
Quality Control Requirements

Proforma for quality control of the manufacturer(s)

Tender Reference No.
Date of opening
Time
Name and address of the Bidder:
Note: All the following details shall relate to the manufacturer(s) for the goods quoted for.

01 Name of the manufacturer
- a. full postal address
- b. full address of the premises
- c. e-mail address
- d. telephone number
- e. fax number

02 Plant and machinery details
03 Manufacturing process details
04 Monthly (single shift) production capacity of goods quoted for
- **a. normal production capacity: (Indicate the qty)**
- **b. maximum production capacity : (Indicate the qty)**

05 Total annual turn-over (value in Rupees)
06 Quality control arrangement details
- a. for incoming materials and bought-out components
- b. for process control
- c. for final product evaluation

07 Test certificate held
- a . type test
- b . BIS/ISO certification
- c . any other

08 Details of staff
- a. technical
- b skilled
- c unskilled

Signature and seal of the Bidder

SECTION – IX
Qualification Criteria

01. The Bidder must be a Manufacturer or its authorized agent.

02 **Qualification criteria for below mentioned items:**

Tenderers quoting below mentioned items should have executed at least one contract in the last five years from the date of tender opening of medical equipment anywhere in India of the any manufacturer.

Manufacture Authorization form for following items are also not required:

S.No.	Event No.	Name of the item
6	3000004122	Weighing Machine for organs/fetus (L P)
9	3000004125	Cadaver/ Autopsy carrier (L P)
11	3000004127	Student upright Binocular Microscopes
26	3000004144	Electronic pipettes digitally adjustable
29	3000004147	Automated tissue grinder (Homozenizer)
40	3000004159	Polycarbonate Anaerobic Jar with charges complete (Gas pack)to hold 5-9 plates
46	3000004166	Dry Heating block for PCR
74	3000004196	Cook's Pole Climbing Apparatus
77	3000004199	Elevated Plus Maze
78	3000004200	Portable Autoclave (25L)
85	3000004207	Multiple Choice Apparatus (with digital display)
94	3000004216	Student Electric Kymograph with drum
95	3000004217	Isolated Organ bath
99	3000004221	Multi Channel Pipette (Manual)
101	3000004223	Digital PH Meter(Spec Same as per Biochem/Micro Deptt)
105	3000004326	BMI Analyser
106	3000004327	Digital Colorimeters
109	3000004330	Opthalmoscope
110	3000004331	PA system
112	3000004333	Sound Level Meter
114	3000004335	Vortex Mixers
116	3000004336	Electronic muscle stimulator
117	3000004337	Mosso's Ergograph
118	3000004338	Priestly Smith Perimeter
133	3000004242	Water Bath
137	3000004246	High Speed Autoclave
138	3000004247	Thermal Cycler
142	3000004272	Double demonstration Eye Pieces
147	3000004346	Ophthalmoscope
150	3000004273	Perimeter

Qualification criteria for remaining items are as below:

03. (a) The Manufacturer should have supplied and installed in last Five years from the date of Tender Opening, at least 10% of the estimated drawl (rounded off to next whole number) of the similar equipment meeting major parameters of technical specification which is functioning satisfactorily.

(b) The Tenderers quoting as authorized representative of the manufacturer meeting the above criteria should have executed at least one contract in the last five years from the date of tender opening of medical equipment anywhere in India of the same manufacturer.

Note:

1. In support of 2 & 3, the Bidder shall furnish Performance statement in the enclosed Proforma 'A'. The manufacturer as well as the Bidder shall furnish Satisfactory Performance/ installation Certificate in respect of above, duly translated in English and self-certified along with the tender.

2. The Bidder shall furnish a brief write-up, with adequate data explaining and establishing his available capacity/capability (both technical and financial) to perform the Contract (if awarded) within the stipulated time period, after meeting all its current/present commitments. The Bidder shall also furnish details of Equipment and Quality Control in the enclosed Section VIII.

3. Notwithstanding anything stated above, the Purchaser reserves the right to assess the Bidder's capability and capacity to perform the contract satisfactorily before deciding on award of Contract, should circumstances warrant such an assessment in the overall interest of the Purchaser.

4. The bidders/ firms identifying as MSME and or start-up firms are exempted from fulfilling criteria at S. No. 2 and 3 stated above. However, this does not exempt any bidder/ firm/ manufacturer from fulfilling the quality requirements.

   Note: "If the bidder is a MSME, it shall declare in the bid document the Udyog Aadhar Memorandum Number issued to it under the MSMED Act, 2006. If a MSME bidder do not furnish the UAM Number along with bid documents, such MSME unit will not be eligible for the benefits available under Public Procurement Policy for MSEs Order 2012."
   Traders/resellers/distributors/authorized agents will not be considered for availing benefits under PP Policy 2012 for MSEs as per MSE guidelines issued by MoMSME.

NOTE:

1. The tenderer shall give an affidavit as under:
   "We hereby certify that if at any time, information furnished by us is proved to be false or incorrect, we are liable for any action as deemed fit by the purchaser in addition to forfeiture of the earnest money."

2. In support of 2 & 3, the Tenderer shall furnish Performance statement in the enclosed Proforma 'A'. The manufacturer (Tenderer)/ Indian Agent shall furnish Satisfactory Performance Certificate in respect of above, duly translated in English and duly notarized in the country of origin, alongwith the tender.

3. The Tenderer shall furnish a brief write-up, packed with adequate data explaining and establishing his available capacity/capability (both technical and financial) to perform the Contract (if awarded) within the stipulated time period, after meeting all its current/present commitments. The Tenderer shall also furnish details of Equipment and Quality Control in the enclosed Section VIII.

4. Notwithstanding anything stated above, the Purchaser reserves the right to assess the Tenderer's capability and capacity to perform the contract satisfactorily before deciding on award of Contract, should circumstances warrant such an assessment in the overall interest of the Purchaser.

5. The bidder should submit the manufacturer's production capacity, meeting the quantity requirement and delivery schedule requirement of this tender document along with the details asked for in SECTION –VIII: Quality Control Requirements .

6. The Purchaser reserves the right to ask for a free demonstration of the quoted equipment at a pre determined place acceptable to the purchaser for technical acceptability as per the tender specifications, before the opening of the Price Tender.

PROFORMA 'A'

PROFORMA FOR PERFORMANCE STATEMENT
(For the period of last five years from the date of tender opening)

Tender Reference No. : _____

Date of opening : _____

Time : _____

Name and address of the Bidder : _____

Name and address of the manufacturer : _____

Order placed by (full address of Purchaser)	Order number and date	Description and quantity of ordered goods and services (Model details, if any)	Value of order (Rs.)	Date of completion of Contract		Remarks indicating reasons for delay if any	Have the goods been functioning Satisfactorily (attach end user certificates as per format annexed)**
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder

**** The documentary proof will be certificate(s) from the consignee(s)/end user(s) with cross-reference of order no. and date in the certificate duly self certified by the bidder authenticating the correctness of the information furnished. If at any time, information furnished is proved to be false or incorrect, the earnest money furnished will be forfeited.**

SECTION – X

TENDER FORM

Date_____

To

HLL Infra Tech Services Ltd,,
B-14A, Sector-62, Distt.
Gautam Budh Nagar, Noida – 201307, UP

Ref. Your TE document No. _____dated _____

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____ (*if any*), the receipt of which is hereby confirmed. We now offer to supply and deliver_____ *(Description of goods and services)* in conformity with your above referred document attached herewith and made part of this tender.

If our tender is accepted for Rate Contract, we undertake to supply the goods and perform the services as mentioned above, in accordance with the delivery schedule specified in the Supply Order placed against the Rate Contract.

We further confirm that, if supply order is placed on us against Rate Contract, we shall provide you with a performance security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section-V – "Special Conditions of Contract", for due performance of the contract.

We agree to keep our tender valid for acceptance as required in the GIT clause 20, read with modification, if any in Section - III – "Special Instructions to Tenderers" or for subsequently extended period, if any, agreed to by us. We also accordingly confirm to abide by this tender up to the aforesaid period and this tender may be accepted any time before the expiry of the aforesaid period.

We further understand that you are not bound to accept the lowest or any tender you may receive against your above-referred tender enquiry.

We confirm that we do not stand deregistered/banned/blacklisted by any statutory Authorities as per govt. rules/procedures.

We confirm that we fully agree to the terms and conditions specified in above mentioned TE document, including amendment/ corrigendum if any

(Signature with date)
(Name and designation) Duly authorised to sign tender for and on behalf of

SECTION – XI

PRICE SCHEDULE

Price to be filled in the relevant field of Price Format in Excel provided in the e-tendering portal.

SECTION – XII

QUESTIONNAIRE

Fill up the Techno-Commercial Compliance Sheet Bid provided in spreadsheet (Excel file) and upload in the C-Folder

1. The tenderer should furnish specific answers to all the questions/issues mentioned in the Techno-Commercial Compliance Sheet. In case a question/issue does not apply to a tenderer, the same should be answered with the remark "not applicable".

2. Wherever necessary and applicable, the tenderer shall enclose certified scanned copy as documentary proof/ evidence to substantiate the corresponding statement.

3. In case a tenderer furnishes a wrong or evasive answer against any of the question/issues, their tender is liable to be ignored.

Note: *The documents like Priced Proforma Invoice (Single Proforma Invoice from Manufacturer's indicating uniform unit rates) and List of Consumables with prices can be uploaded in the Notes & Attachment under Rfx information (Please note, in the separate Notes & Attachment provided under Rfx information and not in the C-Folder Notes & Attachments).*

SECTION – XIII

BANK GUARANTEE FORM FOR EMD

Whereas _____ (hereinafter called the "Bidder") has submitted its quotation dated _____ for the supply of _____ (hereinafter called the "tender") against the purchaser's tender enquiry No. ___ _____. Know all persons by these presents that we ____of _____ (Hereinafter called the "Bank") having our registered office at _____ are bound unto _____ (hereinafter called the "Purchaser) in the sum of _____ for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this _____ day of _____ 20____. The conditions of this obligation are:

(1) If the Bidder withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.

(2) If the Bidder having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-

a) fails or refuses to furnish the performance security for the due performance of the contract.
or
b) fails or refuses to accept/execute the contract.
or
c) if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition(s).

This guarantee will remain in force for a period of forty-five days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorised officer of the Bank)

Name and designation of the officer

Seal, name & address of the Bank and address of the Branch

SECTION – XIV

MANUFACTURER'S AUTHORISATION FORM

To
HLL Infra Tech Services Ltd,
B-14A, Sector-62, Distt. Gautam Budh Nagar,
Noida – 201307, UP

Dear Sirs,

Ref. Your TE document No _____, dated _____

We, _____who are proven and reputable manufacturers of_____(*name and description of the goods offered in the tender*) having factories at_____hereby authorise Messrs____(*name and address of the agent*) to submit a tender, subsequently negotiated and process the same further and enter into a contract with you against your requirement as contained in the above referred TE documents for the above goods manufactured by us.

We further confirm that no supplier or firm or individual other than Messrs. _____ (*name and address of the above agent*) is authorised to submit a tender, process the same further and enter into a contract with you against your requirement as contained in the above referred TE documents for the above goods manufactured by us.

We also hereby extend our full warranty, CMC as applicable as per clause 15 of the General Conditions of Contract, read with modification, if any, in the Special Conditions of Contract for the goods and services offered for supply by the above firm against this TE document.

We also hereby confirm that we would be responsible for the satisfactory execution of contract placed on the authorised agent.

We also confirm that the price quoted by our agent shall not exceed than that which we would have quoted directly.

Yours faithfully,

[*Signature with date, name and designation*]
for and on behalf of Messrs_____

[*Name & address of the manufacturers*]

Note:

1) *This letter of authorisation should be on the letter head of the manufacturing firm and should be signed by a person competent and having the power of attorney to legally bind the manufacturer.*
2) *Original letter may be sent.*

SECTION – XV

BANK GUARANTEE FORM FOR PERFORMANCE SECURITY/ CMC SECURITY

To
CEO,
HLL Infra Tech Services Ltd,
B-14A, Sector-62, Distt. Gautam Budh Nagar,
Noida – 201307, UP

WHEREAS _____*(Name and address of the supplier)* (Hereinafter called "the supplier") has undertaken, in pursuance of supply order no_____ dated _____to supply (description of goods and services) (herein after called "the contract").
AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognised by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;
AND WHEREAS we have agreed to give the supplier such a bank guarantee;
NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of. _____ *(amount of the guarantee in words and figures)*, and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.
We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.
We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.
This guarantee shall be valid upto ____*(indicate date)*

…….
(Signature with date of the authorised officer of the Bank)
…….
Name and designation of the officer
…….
…….
Seal, name & address of the Bank and address of the Branch

SECTION – XVI

CONTRACT FORM FOR ANNUAL COMPREHENSIVE MAINTENANCE CONTRACT

Annual CM Contract No._____ dated_____
Between

(Address of Head of Hospital/Institute/Medical College)
And

(Name & Address of the Supplier)

Ref: Contract No_____ dated_____ (Contract No. & date of Contract for supply, installation, commissioning, handing over, Trial run, Training of operators & warranty of goods)

In continuation to the above referred contract, the Contract of Annual Comprehensive Maintenance is hereby concluded as under: -

1	2	3	4			5
Schedule No.	**BRIEF DESCRIPTION OF GOODS**	**QUANTITY. (Nos.)**	**Annual Comprehensive Maintenance Contract Cost for Each Unit year wise*.**			**Total Annual Comprehensive Maintenance Contract Cost for 3 Years [3 x (4a+4b+4c)]**
			1st	**2nd**	**3rd**	
			a	**b**	**C**	

a) Total value (in figure) _____ (In words) _____
b) The CMC commence from the date of expiry of all obligations under Warranty i.e. from_____ (date of expiry of Warranty) and will expire on _____ (date of expiry of CMC)
c) The cost of Annual Comprehensive Maintenance Contract (CMC) which includes preventive maintenance, labour and spares, after satisfactory completion of Warranty period may be quoted for next ___ years as contained in the above referred contract on yearly basis for complete equipment and Turnkey (if any).
d) There will be 95% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.
e) During CMC period, the supplier shall visit at each consignee's site for preventive maintenance including testing and calibration as per the manufacturer's service/ technical/ operational manual. The supplier shall visit each consignee site as recommended in the manufacturer's manual, but at least once in 6 months commencing from the date of the successful completion of warranty period for preventive maintenance of the goods.
f) All software updates should be provided free of cost during CMC.
g) The bank guarantee valid till _____ [(fill the date) 2 months after expiry of entire CMC period] for an amount of Rs. _____ [(fill amount) equivalent to 2.5% of the cost of the Equipmentas per contract] shall be furnished in the prescribed format given in Section XV of the TE document, along with the signed copy of Annual CMC within a period of 21 (twenty one) days of issue of Annual CMC failing which the proceeds of Performance Security shall be payable to the Purchaser/Consignee.
h) If there is any lapse in the performance of the CMC as per contract, the proceeds Annual CMC bank guarantee for an amount of Rs. _____ (equivalent to 2.5 % of the cost of the Equipment as per contract) shall be payable to the Consignee.
i) **Payment terms:** The payment of Annual CMC will be made against the bills raised to the consignee by the supplier on six monthly basis after satisfactory completion of said period, duly certified by the Consignee. The payment will be made in Indian Rupees.

j) **Paying authority:** _____ (name of the consignee i.e. authorised official)

_____

(Signature, name and address
of Institute official)
For and on behalf of_____

Received and accepted this contract

(Signature, name and address of the supplier's executive
duly authorised to sign on behalf of the supplier)
For and on behalf of _____
(Name and address of the supplier)

(Seal of the supplier)
Date: _____
Place: _____

SECTION – XVII

CONSIGNEE RECEIPT CERTIFICATE

(To be given by consignee's authorized representative)

To,
M/s

This is to certify that the goods as detailed below have been received duly inspected in good condition:

1)	Contract No. & date	:_____
	LC No: & date (for LC shipments)	:_____
2)	Supplier's Name	:_____
3)	Consignee's Name & Address	
	with telephone No. & Fax No.	: _____
4)	Name of the item supplied	:_____
5)	Quantity Supplied	:_____
6)	Date of Receipt by the Consignee	:_____
7)	Name and designation of Authorized Representative of Consignee	:_____
8)	Signature of Authorized Representative of Consignee with date, Designation & Tel. No	:_____
9)	Seal of the Consignee	:_____

Copy to,

1. M/s HITES
2.

SECTION – XVIII

FINAL ACCEPTANCE CERTIFICATE

(To be given by the Consignee)

No_____ **Date_____**

To
M/s *(Name & address of supplier)*
_____
_____

Subject: Certificate of commissioning of Equipment/plant.

This is to certify that the Equipment/plant(s) as detailed below has/have been received in good conditions along with all the standard and special accessories and a set of spares (subject to remarks in Para no. 2 in accordance with the contract/technical specifications. The same has been installed and commissioned.

(a) Contract No_____ dated_____

(b) Description of the Equipment(s)/plants:_____

(c) Equipment(s)/ plant(s) nos.:_____

(d) Quantity:_____

(e) Bill of Loading/Air Way Bill/RailwayReceipt/ Goods Consignment Note no. _____ dated _____

(f) Name of the vessel/Transporter:_____

(g) Name of the Consignee:_____

(h) Date of handing over the site for installation by the consignee _____

(i) Date of commissioning and proving test:_____

2. Details of accessories/spares not yet supplied and recoveries to be made on that account.

Sl. No.	Description of Item	Quantity	Amount to be recovered

- The proving test has been done to our entire satisfaction and operators have been trained to operate the Equipment(s)/plant(s).
- The supplier has fulfilled its contractual obligations satisfactorily ##

or

- The supplier has failed to fulfil its contractual obligations with regard to the following:
  - He has not adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to 'Technical Specifications'.
  - He has not supervised the commissioning of the Equipment(s)/plant(s)in time, i.e. within the period specified in the contract from date of intimation by the Purchaser/Consignee in respect of the installation of the Equipment(s)/plant(s).
  - The supplier as specified in the contract has not done training of personnel.
  - The extent of delay for each of the activities to be performed by the supplier in terms of the contract is
  - The amount of recovery on account of non-supply of accessories and spares is given under Para no. 2.
  - The amount of recovery on account of failure of the supplier to meet his contractual obligations is_____ (here indicate the amount).

Signature
Name
Designation with stamp

##Explanatory notes for filling up the certificate:

1) *He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to 'Technical Specification'.*
2) *He has supervised the commissioning of the equipment(s)/plant(s) in time, i.e. within the time specified in the contract from date of intimation by the Purchaser/Consignee in respect of the installation of the Equipment(s)/plant(s).*
3) *Training of personnel has been done by the supplier as specified in the contract.*
4) *In the event of documents/drawings having not been supplied or installation and commissioning of the Equipment(s)/plant(s) having been delayed on account of the supplier, the extent of delay should always be mentioned in clear terms.*

SECTION XIX

FORM OF INTEGRITY PACT

PRE-CONTRACT INTEGRITY PACT

This Pre-Contract Integrity Pact (herein after called the Integrity Pact) is made on ___31ST _____ day of the month of __ 2018_____

Between

HLL Infra Tech Services Ltd. [HITES], a wholly owned subsidiary company of M/s. HLL Lifecare Ltd. a Government of India Enterprise with registered office at HLL Bhavan, Poojappura, Thiruvananthapuram 695 012, Kerala, India. (Hereinafter called "HITES", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Party.

And

M/s._____ with office **at _____** represented by Shri _____ , Chief Executive Officer (hereinafter called the "BIDDER/Seller"/Contractor which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Party.

Preamble

[Both HITES and BIDDER referred above are jointly referred to as the Parties]

HITES intends to award, under laid down organizational procedures, Purchase orders / contract/s against Tender /Work Order /Purchase Order No. _____

HITES desires full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

1. Enable HITES to obtain the desired materials/ stores/equipment/ work/ project done at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement; and

2. Enable the BIDDER to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and HITES will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Clause.1. Commitments of HITES

1.1 HITES undertakes that HITES and/or its Associates (i.e. employees, agents, consultants, advisors, etc.) will not demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 HITES will, during the tender process / pre-contract stage, treat all BIDDERs with equity and reason, and will provide to all BIDDERs the same information and will not provide any such information or additional information, which is confidential in any manner, to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERs in relation to tendering process or during the contract execution.

1.3 All the officials of HITES regarding this Integrity Pact will report to IEM, any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach shall not be permitted.

1.4 HITES will exclude from the process all known prejudiced persons and persons who would be known to have a connection or nexus with the prospective bidder.

1.5 If the BIDDER reports to HITES with full and verifiable facts any misconduct on the part of HITES's Associates (i.e. employees, agents, consultants, advisors, etc.) and the same is prima facie found to be correct by HITES, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by HITES. Further, such an Associate may be debarred from further dealings related to the contract process. In such a case, while an enquiry is being conducted by HITES the proceedings under the contract would not be stalled.

Clause 2. Commitments of BIDDERs/ CONTRACTORs

2. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

2.1 The BIDDER will not offer, directly or indirectly (i.e. employees, agents, consultants, advisors, etc.) any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of HITES, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

2.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of HITES or otherwise in procuring the contract or forbearing to do or having done any act in relation to obtaining or execution of the contract or any other contract with HITES for showing or forbearing to show favour or disfavor to any person in relation to the contract or any other contract with HITES.

2.3 The BIDDER will not engage in collusion, price fixing, cartelization, etc. with other counterparty(s).

2.4 The Bidder (s) will not pass to any third party any confidential information entrusted to it, unless duly authorized by HITES.

2.5 The Bidder (s) will promote and observe ethical practices within its Organization and its affiliates.

2.6 BIDDER shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.

2.7 The Bidder (s) will not make any false or misleading allegations against HITES or its Associates.

2.8 BIDDERs shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

2.9 The BIDDER further confirms and declares to HITES that the BIDDER is the original manufacture/integrator/authorized government sponsored export entity of the defense stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to HITES or any of its functionaries, whether officially or unofficially to award the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

2.10 The BIDDER while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of HITES or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

2.11 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

2.12 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

2.13 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of HITES, or alternatively, if any relative of an officer of HITES has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.

The term 'relative' for this purpose would be as defined in Section 2(77) of the Companies Act 2013

2.14 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of HITES.

2.15 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract, and will not enter into any undisclosed agreement or understanding with other Bidders, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.16 The BIDDER will not commit any offence under the relevant Indian Penal Code, 1860 or Prevention of Corruption Act, 1988; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the HITES as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

2.17 The BIDDER will not instigate third persons to commit offences outlined above or be an accessory to such offences.

2.18 The Bidder(s)/Contractors(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractors(s) of Indian Nationality shall furnish the name and address of the foreign Principal(s), if any.

2.19 The Bidder(s) shall not approach the courts while representing the matters to IEM and the Bidder(s) will await their decision in the matter.

Clause.3. Previous contravention and Disqualification from tender process and exclusion from future contracts

3.1 The BIDDER declares that no previous contravention occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process

3.2 The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

If BIDDER before award or during execution has committed a contravention through a violation of Clause 2, above or in any other form such as to put his reliability or credibility in question, t HITES is entitled to disqualify the BIDDER from the tender process.

Clause.4. Equal treatment of all Bidders / Contractors / Subcontractors

4.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his Subcontractors a commitment in conformity with this Integrity Pact.

4.2 HITES will enter into agreements with identical conditions as this one with all Bidders and Contractors.

4.3 HITES will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Clause.5. Consequences of Violation / Breach

5.1 Any breach of the aforesaid provision by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle HITES to take all or any one of the following action, wherever required:-

i. To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

ii. If BIDDER commits violation of Integrity Pact Policy during bidding process, he shall be liable to compensate HITES by way of liquidated damages amounting to a sum equivalent to 5% to the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.

iii. In case of violation of the Integrity Pact after award of the contract, HITES will be entitled to terminate the contract. HITES shall also be entitled to recover from the contractor liquidated damages equivalent to 10% of the contract value or the amount equivalent to security deposit/ performance guarantee, whichever is higher.

iv. To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

v. To recover all sums already paid by HITES, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from HITES in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid amount.

vi. To encash the advance bank guarantee and performance guarantee /warranty bond, if furnished by the BIDDER, in order to recover the payments already made by HITES, along with interest.

vii. To cancel all or any other contract with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to HITES resulting from such cancellation/recession and HITES shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

viii. To debar the BIDDER from participating in future bidding processes of HITES for a minimum period of five (5) years, which may be further extended at the discretion of HITES or until Independent External Monitors is satisfied that the Bidder (s) will not commit any future violation.

ix. To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

x. In cases where irrevocable Letters of credit have been received in respect of any contract signed by HITES with the BIDDER, the same shall not be opened.

xi. Forfeiture of performance guarantee in case of a decision by HITES to forfeit the same without assigning any reason for imposing sanction for violation of the pact.

5.2 HITES will be entitled to all or any of the actions mentioned in para 5.1(i) to (x) of this pact also on the commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

5.3 The decision of HITES to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent External Monitor(s) appointed for the purposes of this Pact.

Clause.6. Fall Clause

The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems OR providing similar services at a price / charge lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found any stage that similar product/systems or sub systems was supplied by the BIDDER to any to the Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to HITES, if the contract has already been concluded.

Clause .7. Independent External Monitor(s)

7.1 HITES has appointed Sh. A.K. Arora, EX-DG, Indian Defense Service of Engineers as Independent External Monitor(s) (hereinafter referred to as IEM(s)) for this Pact in consultation with the Central Vigilance Commission. Contact details of IEM is as below:

Sh. A.K. Arora
Independent External Monitor (IEM)

Office: HLL Infra Tech Services Ltd
B-14-A, sector 62, Noida 201307, U.P
Tel: 0120 4071500

Residence: B-333, Chittaranjan Park
New Delhi – 110019
Tel: 011 26273406

Mobile: +91 8130588577
Email: iem@hllhites.com

7.2 The responsibility of the IEM(s) shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

7.3 The IEM(s) shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

7.4 Both the parties accept that the IEM(s) have the right to access all the documents relating to the project/ procurement, including minutes of meetings.

7.5 As soon as the IEM(s) notices, or has reason to believe, a violation of this pact, he will so inform the CEO/CMD.

7.6 The BIDDER(S) accepts that the IEM(s) have the right to access without restriction to all project documentation of HITES including that provided by the BIDDER. The BIDDER will also grant the IEM(s), upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to subcontractors engaged by the BIDDER. The IEM(s) shall be under contractual obligation to treat the information and documents of the BIDDER/ Subcontractor(s) with confidentiality.

7.7 HITES will provide to the IEM(s) sufficient information about all meetings among the parties related to the Project provided such meeting could have an impact on the contractual relation between the parties. The parties will offer to the IEM(s) option to participate in such meetings.

7.8 The IEM(s) will submit a written report to the CEO/CMD of HITES within 3 to 5 weeks from the date of reference or intimation to him by HITES/BIDDER.

Clause.8.Criminal charges against violating Bidder(s)/ Contractor(s)/ Subcontractor(s)

If HITES obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if HITES has substantive suspicion in this regard, HITES will inform the same to the Chief Vigilance Officer, HLL

Clause.9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, HITES or its agencies shall be entitled to examine all the documents, including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

Clause.10. Law and Place of Jurisdiction
Both the Parties agree that this Pact is subject to Indian Law. The place of performance and hence this Pact shall be subject to Delhi/ NCR Jurisdiction.

Clause.11. Other legal Actions
The actions stipulated in the Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

Clause.12. Validity and Duration of the Agreement
This Pact begins when both parties have legally signed it. It expires for the Contractor/Successful bidder 12 months after the last payment under the contract or the complete execution of the contract to the satisfaction of the both HITES and the BIDDER /Seller, including warranty period, whichever is later, and for all other Bidders/unsuccessful bidders 6 months after the contract has been awarded.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Chairman and Managing Director/ CEO of HITES.

Clause. 13. Other provisions

13.1 Changes and supplements as well as termination notices need to be made in writing. Both the Parties declare that no side agreements have been made to this Integrity Pact.

13.1 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

13.1 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions

IN WITNESS THEREOF the parties have signed and executed this pact at the place and date first above mentioned in the presents of following witnesses:

HLL Infra Tech Services Ltd. **Bidder**

_____ _____

Witness Witness

1…….. 1……

2…… 2……..

* Provisions of these clauses would be amended /deleted in line with the policy of the HITES in regard to involvement of Indian agents of foreign suppliers.

SECTION-XX
(Notice-cum-Cancellation Letter)

HLL Infra Tech Services Limited
B-14A, Sector-62
Distt. Gautam Budh Nagar
Noida – 201307, U.P.

(Application where the Purchaser decided to short-close the R/C)

No……..
To
M/s……
……

Sub: Rate Contract for supply of …….
Valid upto ……

Dear Sir,

(a) It has been observed that there has been notable downfall in the prices after conclusion of the R/C and that the stores are now obtainable on much lower rates (if it is possible to indicate a definite price at which the stores are now obtainable, the same can be counter offered to the R/C holder for their acceptance).
(b) The quantity of goods supplied against R/C so far have not been to the requisite standard in as much as there have been complaints from the user Departments in this regard, and
(c) Your conduct in performance of the R/C has not been satisfactory in respect of
(d) Any other reasons which can be indicated.

Note: Purchaser Officer has to assign any one or the other reasons as relevant.

3. In view of the above, it has been decided to short-clause the subject Rate Contract after ……. (allow 15 days from the date of issue of the letter). The Rate Contract may be treated as cancelled/withdrawn after…… (date given for the withdrawal of the R/C). Any order placed by the Direct Demanding Officers after the expiry of the notice period shall not be executed by you.

Your faithfully

For and on behalf of the Purchaser

SECTION XXI

REVOCATION-CUM-CANCELLATION

(Application where R/C is revoked by the R/C Holder)

To,
M/s HLL Infra Tech Services Limited
B-14A, Sector-62
Distt. Gautam Budh Nagar
Noida-201307
U.P.

Sub: Rate Contract for supply of …….
Valid upto ……

Sir,

It is not possible for us to continue to supply against the subject Rate Contract for the following reasons:-

(a)
(b)

In terms of Clause--- of GCC, I/We hereby revoke the Rate Contract which will take effect 15 days from the date of receipt of this communication by your office. Formal Cancellation letter may be issued at the earliest.

Yours faithfully

(M/s……)

Note for Purchase Officer:-

The Purchase Officer is expected to issue the cancellation letter counting 15 days from the date revocation letter is received to HITES stating that:-

> "In view of your letter dated ……the Rate Contract is hereby treated as short-closed/withdrawn with effect from ……..
>
> All orders placed prior to this cancellation are, however, to be executed at the earliest.

APPENDIX – A

No. P-45021/2/2017-PP (BE-II)
Government of India
Ministry of Commerce and Industry
Department of Industrial Policy and Promotion
(Public Procurement Section)
****

Dated 28th May, 2018
Udyog Bhawan, New Delhi

To
All Central Ministries/Departments/CPSUs/All concerned

ORDER

Subject: Public Procurement (Preference to Make in India), Order 2017 – Revision; regarding.

Department of Industrial Policy and Promotion, in partial modification of Order No.P-45021/2/2017-B.E.-II dated 15.6.2017, hereby issues the revised 'Public Procurement (Preference to Make in India), Order 2017" with immediate effect:-

Whereas it is the policy of the Government of India to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment, and

Whereas procurement by the Government is substantial in amount and can contribute towards this policy objective, and

Whereas local content can be increased through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them,

Now therefore the following Order is issued :

1. This Order is issued pursuant to Rule 153 (iii) of the General Financial Rules 2017.
2. **Definitions**: For the purposes of this Order:

   'Local content' means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

   'Local supplier' means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed under this Order or by the competent Ministries / Departments in pursuance of this order.

   'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

   'margin of purchase preference' means the maximum extent to which the price quoted by a local supplier may be above the L1 for the purpose of purchase preference.

.....Contd. p/2

'Nodal Ministry' means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services or works.

'Procuring entity' means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

'Works' means all works as per Rule 130 of GFR- 2017, and will also include *'turnkey works'.*

3. **Requirement of Purchase Preference :** Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to local suppliers in all procurements undertaken by procuring entities in the manner specified hereunder"

a. "In procurement of goods, services or works in respect of which the Nodal Ministry has communicated that there is sufficient local capacity and local competition, and where the estimated value of procurement is Rs. 50 lakhs or less, only local suppliers shall be eligible. If the estimated value of procurement of such goods or services or works is more than Rs. 50 lakhs, the provisions of sub-paragraph b or c, as the case may be, shall apply";

b. "In the procurements of goods or works which are not covered by paragraph 3a and which are divisible in nature, the following procedure shall be followed";

   i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is from a local supplier, the contract for full quantity will be awarded to L1.

   ii. If L1 bid is not from a local supplier, 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the local suppliers, will be invited to match the L1 price for the remaining 50% quantity subject to the local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such local supplier subject to matching the L1 price. In case such lowest eligible local supplier fails to match the L1 price or accepts less than the offered quantity, the next higher local supplier within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on local suppliers, then such balance quantity may also be ordered on the L1 bidder.

c. "In procurements of goods or works not covered by sub-paragraph 3a and which are not divisible, and in procurement of services where the bid is evaluated on price alone, the following procedure shall be followed":-

   i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is from a local supplier, the contract will be awarded to L1.

.....Contd. p/3

ii. If L1 is not from a local supplier, the lowest bidder among the local suppliers, will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such local supplier subject to matching the L1 price.

iii. In case such lowest eligible local supplier fails to match the L1 price, the local supplier with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the local suppliers within the margin of purchase preference matches the L1 price, then the contract may be awarded to the L1 bidder.

4. **Exemption of small purchases**: Notwithstanding anything contained in paragraph 3, procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.
5. **Minimum local content**: The minimum local content shall ordinarily be 50%. The Nodal Ministry may prescribe a higher or lower percentage in respect of any particular item and may also prescribe the manner of calculation of local content.
6. **Margin of Purchase Preference**: The margin of purchase preference shall be 20% .
7. **Requirement for specification in advance**: The minimum local content, the margin of purchase preference and the procedure for preference to Make in India shall be specified in the notice inviting tenders or other form of procurement solicitation and shall not be varied during a particular procurement transaction.
8. **Government E-marketplace**: In respect of procurement through the Government E-marketplace (GeM) shall, as far as possible, specifically mark the items which meet the minimum local content while registering the item for display, and shall, wherever feasible, make provision for automated comparison with purchase preference and without purchase preference and for obtaining consent of the local supplier in those cases where purchase preference is to be exercised.
9. **Verification of local content**:
   a. The local supplier at the time of tender, bidding or solicitation shall be required to provide self-certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made.
   b. In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
   c. Decisions on complaints relating to implementation of this Order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.

.....Contd. p/4

d. Nodal Ministries may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/ accountant's certificates on random basis and in the case of complaints.

e. Nodal Ministries and procuring entities may prescribe fees for such complaints.

f. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

g. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph 9h below.

h. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:

   i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;

   ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);

   iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

10. **Specifications in Tenders and other procurement solicitations**:

a. Every procuring entity shall ensure that the eligibility conditions in respect of previous experience fixed in any tender or solicitation do not require proof of supply in other countries or proof of exports.

b. Procuring entities shall endeavour to see that eligibility conditions, including on matters like turnover, production capability and financial strength do not result in unreasonable exclusion of local suppliers who would otherwise be eligible, beyond what is essential for ensuring quality or creditworthiness of the supplier.

c. Procuring entities shall, within 2 months of the issue of this Order review all existing eligibility norms and conditions with reference to sub-paragraphs 'a' and 'b' above.

d. If a Nodal Ministry is satisfied that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, it may, if it deems appropriate, restrict or exclude bidders from that country from eligibility for procurement of that item and/ or other items relating to that Nodal Ministry. A copy of every instruction or decision taken in this regard shall be sent to the Chairman of the Standing Committee.

.....Contd. p/5

e. For the purpose of sub-paragraph 10 d above, a supplier or bidder shall be considered to be from a country if (i) the entity is incorporated in that country, or ii) a majority of its shareholding or effective control of the entity is exercised from that country; or (iii) more that 50% of the value of the item being supplied has been added in that country. Indian suppliers shall mean those entities which meet any of these tests with respect to India."

11. **Assessment of supply base by Nodal Ministries**: The Nodal Ministry shall keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

12. **Increase in minimum local content**: The Nodal Ministry may annually review the local content requirements with a view to increasing them, subject to availability of sufficient local competition with adequate quality.

13. **Manufacture under license/ technology collaboration agreements with phased indigenization**: While notifying the minimum local content, Nodal Ministries may make special provisions for exempting suppliers from meeting the stipulated local content if the product is being manufactured in India under a license from a foreign manufacturer who holds intellectual property rights and where there is a technology collaboration agreement / transfer of technology agreement for indigenous manufacture of a product developed abroad with clear phasing of increase in local content.

14. **Powers to grant exemption and to reduce minimum local content**: Ministries /Departments of Government of India and the Boards of Directors of Government companies or autonomous bodies may, by written order,

    a. reduce the minimum local content below the prescribed level;

    b. reduce the margin of purchase preference below 20% ;

    c. exempt any particular item or procuring or supplying entities or class or classes of items or procuring or supplying entities from the operation of this Order or any part of the Order.

    A copy of every such order shall be marked to the Member-Convenor of the Standing Committee constituted under this Order.

15. **Directions to Government companies**: In respect of Government companies and other procuring entities not governed by the General Financial Rules, the administrative Ministry or Department shall issue policy directions requiring compliance with this Order.

16. **Standing Committee**: A standing committee is hereby constituted with the following membership:

    Secretary, Department of Industrial Policy and Promotion—Chairman
    Secretary, Commerce—Member
    Secretary, Ministry of Electronics and Information Technology—Member
    Joint Secretary (Public Procurement), Department of Expenditure—Member
    Joint Secretary (DIPP)—Member-Convenor

.....Contd. p/6

The Secretary of the Department concerned with a particular item shall be a member in respect of issues relating to such item. The Chairman of the Committee may co-opt technical experts as relevant to any issue or class of issues under its consideration.

17. **Functions of the Standing Committee**: The Standing Committee shall meet as often as necessary but not less than once in six months. The Committee
    a. shall oversee the implementation of this order and issues arising therefrom, and make recommendations to Nodal Ministries and procuring entities.
    b. shall annually assess and periodically monitor compliance with this Order
    c. shall identify Nodal Ministries and the allocation of items among them for issue of notifications on minimum local content
    d. may require furnishing of details or returns regarding compliance with this Order and related matters
    e. may, during the annual review or otherwise, assess issues, if any, where it is felt that the manner of implementation of the order results in any restrictive practices, cartelization or increase in public expenditure and suggest remedial measures
    f. may examine cases covered by paragraph 13 above relating to manufacture under license/ technology transfer agreements with a view to satisfying itself that adequate mechanisms exist for enforcement of such agreements and for attaining the underlying objective of progressive indigenization
    g. may consider any other issue relating to this Order which may arise.
18. **Removal of difficulties**: Ministries /Departments and the Boards of Directors of Government companies may issue such clarifications and instructions as may be necessary for the removal of any difficulties arising in the implementation of this Order.
19. **Ministries having existing policies**: Where any Ministry or Department has its own policy for preference to local content approved by the Cabinet after 1st January 2015, such policies will prevail over the provisions of this Order. All other existing orders on preference to local content shall be reviewed by the Nodal Ministries and revised as needed to conform to this Order, within two months of the issue of this Order.
20. **Transitional provision**: This Order shall not apply to any tender or procurement for which notice inviting tender or other form of procurement solicitation has been issued before the issue of this Order.

(B. S. Nayak)
Under Secretary to Government of India
Ph. 23061257

F.No.31026/36/ 2016-MD
Ministry of Chemicals & Fertilizers
Government of India
Department of Pharmaceuticals

Dated 18th May, 2018
Janpath Bhawan, New Delhi

Subject: Guidelines for implementing the provisions of Public Procurement (Preference to Make in India) Order (PPO), 2017, related to procurement of Goods & Services in Medical Devices - reg.

No. 31026/36/2016-MD: Whereas Department of Industrial Policy and Promotion (DIPP), pursuant to Rule 153(iii) of the General Financial Rules 2017, has issued Public Procurement(Preference to Make in India) Order (PPO), 2017 vide no. P-4502/2/2017-B.E.-II dated 15.06.2017.

Whereas DIPP, in order to facilitate the implementation of the PPO, 2017, vide D.O. No. P-45021/2/2017-BE-II dated 14.08.2017 has identified Department of Pharmaceuticals (DoP) as the Nodal Department for implementing the provisions of the PPO 2017 relating to goods &services related to Pharmaceuticals Sector. DIPP vide Office Memorandum no. P-45021/13/2017-PP Section BE-II dated 23.03.2018 has decided that the Nodal Ministry for product category Medical Devices shall be Department of Pharmaceuticals.

Whereas Para 3 of PPO, 2017 makes it mandatory for procuring entities to give purchase preference to local suppliers, Para 5 of PPO, 2017 empowers Nodal Ministry to prescribe percentage and the manner of calculation of minimum local content in respect of any particular item relating to medical devices and Para 9 of PPO, 2017 deals with verification of local content.

Now, therefore, DoP issues the following guidelines for implementation of the provisions of PPO, 2017 with respect to public procurement of Goods & Services in Medical Devices:

1) **Percentage of Minimum Local Content:** Medical Device Industry (MDI) is a multi-product industry responsible for provisioning of wide variety of crucial medical products ranging from simple tongue depressors & glucometer strips to large radiology & electronic medical equipment. The medical devices industry can be broadly classified as consisting of (a) medical disposables and consumables; (b) medical electronics, hospital equipment, surgical instruments; (c) Implants; and (d) In-Vitro Devices/Diagnostic Reagents. Individually there are around 5000 different kinds of medical devices and it is not practical to prescribe the local content and percentage of preference in domestic procurement for each medical device.

   Moreover, DoP needs accurate and reliable data regarding total capacity and production of various categories of medical devices in India, regarding the level

of competition in the market in different segment of medical devices and regarding the processes involved in the manufacture of medical devices for prescribing the percentage of minimum local content for each category of medical devices, for determining the manner of calculation of local content in the medical devices and for determining the purchase preference to be given to local suppliers in the procurement by the public agencies. The percentage of local content, the manner of calculation of the local content and the provision of supplies to be procured from local suppliers may be revised after relevant data in this regard becomes available.

However for the time being, based on the present level of understanding of the medical device market in India and discussion with various industry representatives, DoP in accordance with Para 5 of PPO, 2017 prescribes the following percentages of minimum local content for various categories of medical devices for preference in public procurement:

Category of Medical Devices	% of Minimum Local Content	% of Local Content proposed to be increased in phased manner over next three years
Medical disposables and consumables	50%	50% to 75%
Medical electronics, hospital equipment, surgical instruments	25%	25% to 45%
Implants	40%	40% to 60%
Diagnostic Reagents/IVDs	25%	25% to 45%

2) **Manner of calculation of Local Content:** DoP in accordance with Para 5 of PPO, 2017 prescribes the following manner of calculation of local content:

i. Local content of Medical Device shall be computed on the basis of the cost of domestic components in the device/service compared to the total cost of the device/service. The total cost of product shall be the cost incurred for the production of the medical device including direct component i.e. material cost, manpower cost and overhead costs including profit but excluding taxes and duties.

ii. The determination of local content cost shall be based on the following:
   a) In the case of direct component (material), based on the country of origin
   b) In the case of manpower, based on domestic manpower

iii. The calculation of local content of the combination of several kinds of goods shall be based on the ratio of the sum of multiplication of local content of each goods with the acquisition price of each goods to the acquisition price of combination of goods.

iv. Format of calculation of local content shall be as contained in **Enclosure-I**.

3) **Requirement of Purchase Preference**: Purchase preference shall be given to local suppliers by all procuring entities as per provisions laid down in para 3 of PPO, 2017. Further, as per provisions of Para 3(a) of the PPO 2017 i.e. in procurement of goods where sufficient local capacity and local competition exists and estimated value of procurement is Rs 50 Lakhs or less, a list of goods will be issued by this Department in due course. Till the time such a list is issued, provisions of para 3(b) or para 3(c) of PPO, 2017, as applicable, shall apply for all procurements without regard to value of procurement.

4) **Verification of Local Content**:

a) The local supplier at the time of tender, bidding or solicitation shall be required to furnish self-certification of local content in the format as contained in **Enclosure-II**.

b) In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

c) In each tender, procuring entity shall clearly mention the details of its competent authority which is empowered to look into procurement related complaints and the fees for such complaints, relating to implementation of PPO, 2017.

d) In case a complaint is received by the procuring entity against the claim of a bidder regarding domestic value addition in medical device, the procuring entity shall have full rights to inspect and examine all the related documents and take a decision. In case any clarification is needed, matter may be referred to DoP to the Grievance Redressal Committee consisting of the following:
   1. Chairman - Joint Secretary (Medical Device) in DoP
   2. Member - Director / Deputy Secretary (Medical Devices) in DoP
   3. Member - Representative (not below the rank of Deputy Secretary) from M/o Health & Family Welfare / CDSCO

e) Any complaint referred to the procuring entity shall be submitted along with all necessary documentation in support of the complaint regarding domestic value addition claimed in medical device and shall be disposed of within 4 weeks of the reference by the procuring entity.

f) In case, the complaint is referred to DoP by a bidder or procuring entity, the grievance redressal committee shall dispose of the complaint within 4 weeks of its reference and receipt of all documents from the bidder after taking in consideration, the view of the procuring entity. The bidder shall be required to furnish the necessary documentation in support of the local content claimed in medical devices to the grievance redressal committee under DoP within 2 weeks of the reference of the matter. If no information is furnished by the bidder, the grievance redressal committee may take further necessary action, in consultation with procuring entity to establish the bonafides of the claim.

g) In case of reference of any complaint by the concerned bidder, there would be a fee of Rs. 2 Lakh or 1% of the value of the medical devices being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, to be paid by way of a Demand Draft to be deposited with the procuring entity, along with the

complaints by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

5) All other provisions of PPO, 2017 shall be applicable as such and shall be adhered to by all procuring agencies for procurement of any medical device.

6) These guidelines shall remain applicable for one year or until further orders from the date of its issuance.

(Dinesh Kapila)
Economic Adviser
Ph. 23381927

Enclosure-I

Calculation of Local Content

Name of manufacturer	Calculation by Manufacturer (Cost per unit of product)		
Cost Component	Cost (Domestic Component) a	Total Cost b	Percentage of Local Content c=(a/b)*100
I. …. II. …. III. Total Cost (Excluding tax and duties)			

Note:

I. **Cost (Domestic Component)**: Cost of domestic component may be calculated based on one of the followings depending on data available. Each of these calculations should provide consistent result.

a. Sum of the costs of all inputs which go into the product (including duties and taxes levied on procurement of inputs except those for which credit/ set-off can be taken) and which have not been imported directly or through a domestic trader or an intermediary.

b. Ex-Factory Price of product minus profit after tax minus sum of imported Bill of Material used (directly or indirectly) as inputs in producing the product (including duties and taxes levied on procurement of inputs except those for which credit/ set-off can be taken) minus warranty costs.

c. Market price minus post-production freight, insurance and other handling costs minus profit after tax minus warranty costs minus sum of Imported Bill of Material used as inputs in producing the product (including duties and taxes levied on procurement of inputs except those for which credit / set-off can be taken) minus sales and marketing expenses.

II. **Total Cost**: Total cost may be calculated based on one of the following depending on data available. Each of these calculations should provide consistent result.

a. Sum of the costs of all inputs which go into the product (including duties and taxes levied on procurement of inputs except those for which credit / set-off can be taken).

b. Ex-Factory Price of product minus profit after tax, minus warranty costs.

c. Market price minus post-production freight, insurance and other handling costs minus profit after tax, minus warranty costs minus sales and marketing expenses.

Enclosure-II

Format for Affidavit of Self Certification regarding Local Content in a Medical Device to be provided on Rs. 100/- Stamp Paper

Date:_____

I_____**S/o,D/o,W/o**_____, Resident of

_____

do hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the policy of Government of India issued vide Notification No:

That the information furnished hereinafter is correct to best of my knowledge and belief and I undertake to produce relevant records before the procuring entity or any authority so nominated by the Department of Pharmaceuticals, Government of India for the purpose of assessing the local content.

That the local content for all inputs which constitute the said medical device has been verified by me and I am responsible for the correctness of the claims made therein.

That in the event of the domestic value addition of the product mentioned herein is found to be incorrect and not meeting the prescribed value-addition norms, based on the assessment of an authority so nominated by the Department of Pharmaceuticals, Government of India for the purpose of assessing the local content, action will be taken against me as per Order No. P-45021/2/2017-B.E.-II dated 15.06.2017 and Guidelines issued vide letter no. 31026/36/2016-MD dated 18.05.2018.

I agree to maintain the following information in the Company's record for a period of 8 years and shall make this available for verification to any statutory authority:

i) Name and details of the Domestic Manufacturer (Registered Office, Manufacturing unit location, nature of legal entity)
ii) Date on which this certificate is issued
iii) Medical devices for which the certificate is produced
iv) Procuring entity to whom the certificate is furnished
v) Percentage of local content claimed
vi) Name and contact details of the unit of the manufacturer
vii) Sale Price of the product
viii) Ex-Factory Price of the product
ix) Freight, insurance and handling
x) Total Bill of Material
xi) List and total cost value of inputs used for manufacture of the medical device
xii) List and total cost of inputs which are domestically sourced. Value addition certificates from suppliers, if the input is not in- house to be attached.
xiii) List and cost of inputs which are imported, directly or indirectly

For and on behalf of **(Name of firm/entity)**

Authorized signatory (To be duly authorized by the Board of Director)