



SANJAY GANDHI POST GRADUATE INSTITUTE

OF MEDICAL SCIENCES LUCKNOW-226014.

PHONES: 2668004-8,2668700,2668800,2668900

FAX: 91-522-2668973,2668218(JDMM)

GRAM: AYURVIGYAN

TENDER NOTICE

Sealed offers are invited from manufacturer/Direct importers/ authorized distributors for the supply of various medical and lab equipments viz. open surgical and laproscopic instruments, incubators, infusion pumps, laboratory refrigerators, C-arm, video endoscopes, pH meter, blood cell separators, Neuro navigation system, EMG machine, Bipaps vision ventilatory system, ESWL machine, Clinical microscopes, Elisa reader and washer, Nephelometer, image intensifier and various other equipments for existing superspecialities.

Detailed information like list of items, earnest money deposit & their specifications, you may please visit our website www.sgpgi.ac.in.

DIRECTOR

TENDER NOTICE



SANJAY GANDHI POST GRADUATE INSTITUTE OF MEDICAL SCIENCES RAEBARELI ROAD, LUCKNOW-226014.

PHONES:2668004-8,2668700,2668800,2668900

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Sealed offers are invited from reputed manufacturer/ Direct Importer/ distributor for supply of the following equipments, as per tender conditions as stipulated in the tender documents. Tender documents duly filled in will be received by speed post / regd. Post / courier only in the RSD cell , 3rd floor, Administrative block of the Institute in two bid system i.e. technical bid and price bid in separate envelop. Both envelops may be sealed in single envelop. The tender no and the name of the item must be superscribed on the top of envelop. The tender fee Rs 300.00 (Rs three hundred only) for each quoted item (Non refundable) along with the EMD (Refundable) for respective tender s as indicated against each tender may be enclosed separately with tender document in the shape of demand draft (Nationalised bank only) payable at Lucknow in favour of the Director, SGPGIMS, Lucknow. Bids will be opened in the presence of authorized representative of the bidders on scheduled date and time. If any working day is observed as holiday the next working day will be treated as last date. Incase any legal dispute, the legal jurisdiction shall be court of law at Lucknow (UP) India.

Advertisement No: 79 / 09-10

Slno.	Tender No.	Name of Equipment	Earnest Money (Rs)	Date of Submission	Date of Opening
1	PGI/MM/Anaes/101/ 09-10	Percutaneous neuromodulation pain therapy system	1000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
2	PGI/MM/Anaes/102/ 09-10	Radio frequency pain management system	2000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
3	PGI/MM/NS/103/ 09-10	Multi-dimensional neurological imaging system	1 Lac	28.01.2010 (4PM)	01.02.2010 (11PM)

4	PGI/MM/NS/104/ 09-10	Pachymeter	1000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
5	PGI/MM/CVTS/105/ 09-10	Syringe Infusion pumps	1000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
6	PGI/MM/CVTS/106/ 09-10	Transport monitor	5000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
7	PGI/MM/CVTS/107/ 09-10	Hyper-hypothermia water therapy system	1000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
8	PGI/MM/CVTS/108/ 09-10	Biphasic defibrillator monitor/recorder with pacemaker	5000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
9	PGI/MM/ CVTS/109/ 09-10	Six channel icu patient monitor	5000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
10	PGI/MM/Endsur/110/ 09-10	Head mounted microscope integrated with, light source and image capture system with high definition resolution lcd monitor (21") mounted over trolley and required accessories	10000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
11	PGI/MM/Endsur/111/ 09-10	Laposcopic instruments for the deptt of Endocrine surgery	2000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
12	PGI/MM Endscur/112/ 09-10	Surgical instruments for open surgery	2000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
13	PGI/MM/Endsur/113/ 09-10	Surgical ot table (to be compatible with stryker sidne communication system)	5000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
14	PGI/MM/Endsur/114/ 09-10	Video-endoscope (laryngoscope)	5000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
15	PGI/MM/IMM/115/ 09-10	Cryostat	4000.00	28.01.2010 (4PM)	01.02.2010 (11PM)
16	PGI/MM/ IMM/116/ 09-10	Deep freezers (-80 deg c)	2000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
17	PGI/MM/ IMM/117/ 09-10	Gel documentation system	2000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
18	PGI/MM/ IMM /118/ 09-10	Multi parametric auto processor for autoimmunity	8000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
19	PGI/MM/ IMM /119/ 09-10	Pcr machine	2000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
20	PGI/MM/ IMM /120/ 09-10	Phase contrast microscope	2000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
21	PGI/MM/ IMM /121/ 09-10	Syringe infusion pump	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
22	PGI/MM/ IMM /122/ 09-10	Ice flaking machine	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
23	PGI/MM/ IMM /123/ 09-10	Deep freezer -40°c	2000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
24	PGI/MM/ IMM /124/ 09-10	Table top centrifuge	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
25	PGI/MM/Gene/125/ 09-10	Centrifuge	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
26	PGI/MM/ Gene/126/ 09-10	Microcentrifuge	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
27	PGI/MM/ Gene/127/ 09-10	Transilluminator	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
28	PGI/MM/ Gene/128/ 09-10	Autoclave	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)

29	PGI/MM/Gene/129/ 09-10	Water bath shaker with lid	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
30	PGI/MM/Gene/130/ 09-10	Microscope binocular	1000.00	28.01.2010 (4PM)	02.02.2009 (11 PM)
31	PGI/MM Gene/131/ 09-10	96 well electrophoresis system	1000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
32	PGI/MM/Gene/132/ 09-10	96 well fast pcr	2000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
33	PGI/MM/Gene/133/ 09-10	Fluorescence microscope with all accessories	5000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
34	PGI/MM/Gene/134/ 09-10	Mili q system	2000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
35	PGI/MM/Gene/135/ 09-10	Electronic balance	1000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
36	PGI/MM/Gene/136/ 09-10	Power pack	1000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
37	PGI/MM/Gene/137/ 09-10	Elisa reader	1000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
38	PGI/MM/Neuro/138/09-10	Bipaps vision ventilatory support system	2000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
39	PGI/MM/Neuro/139/09-10	Key point emg/ep machine	10000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
40	PGI/MM/Neuro/140/09-10	Video polysomnography system	10000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
41	PGI/MM/ Neuro/141/09-10	Spike and seizure detection software	3000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
42	PGI/MM/Paed Gas/142/09-10	Video-endoscopes for pediatric gastroenterology	25000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
43	PGI/MM/ Paed Gas/143/09-10	Electro surgery unit for gastrointestinal endoscopy	3000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
44	PGI/MM/Path/144/09-10	Clinical microscope	2000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
45	PGI/MM/ Path/145/09-10	Multipurpose table top centrifuge	1000.00	28.01.2010 (4PM)	03.02.2009 (11 PM))
46	PGI/MM/ Path/146/09-10	PH METER:	1000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
47	PGI/MM/Path/147/09-10	Microwave oven	1000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
48	PGI/MM/Path/148/09-10	Electronic analytical weighing machine	1000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
49	PGI/MM/Path/149/09-10	Gross specimen photography unit (digital imaging system for gross specimen photography	2000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
50	PGI/MM Path/150/09-10	Semi-automated specimen advance with manual Cutting rotary microtome	3000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
51	PGI/MM/Path/151/09-10	Hot air incubator	1000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
52	PGI/MM/Path/152/09-10	Knife sharpener	2000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
53	PGI/MM/Path/153/09-10	Automatic tissue embedding centre	2000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))

54	PGI/MM/TM/154/09-10	Blood mixing & weight monitoring apparatus	2000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
55	PGI/MM/ TM/155/09-10	Blood weighing scale	1000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
56	PGI/MM/ TM/156/09-10	Mobile battery powered workstation	2000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
57	PGI/MM/ TM/157/09-10	Platelet aggregometer	4000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
58	PGI/MM/ TM/158/09-10	Semi-automated blood grouping & cross-matching system	3000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
59	PGI/MM/ TM/159/09-10	Table top non-refrigerated centrifuges	2000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
60	PGI/MM/ TM/160/09-10	Wireless data loggers	5000.00	28.01.2010 (4PM)	04.02.2009 (11 PM))
61	PGI/MM/URO/161/09-10	Fluoroscopy c-arm machine :	25000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
62	PGI/MM/ URO/162/09-10	Flexible ureteroscope	8000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
63	PGI/MM/ URO/163/09-10	Full HD Digital camera with High resolution monitor. + light source etc.	10000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
64	PGI/MM/ URO/164/09-10	Laprosopy hand instruments	3000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
65	PGI/MM/ URO/165/09-10	Open surgical instruments	3000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
66	PGI/MM/ URO/166/09-10	Extra shock wave lithotripsy machine (eswl)	25,000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
67	PGI/MM/Nephro/167/09-10	Hemo dialysis machine	25000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
68	PGI/MM/Nephro/168/09-10	Syringe infusion pump	1000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
69	PGI/MM/Nephro/169/09-10	Defibrillator monitor recorder with pacer	1000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
70	PGI/MM/Nephro/170/09-10	Auto analyser	8000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
71	PGI/MM/Nephro/171/09-10	Laboratory refrigerator	2000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
72	PGI/MM/Nephro/172/09-10	Co2 incubator	2000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
73	PGI/MM/Nephro/173/09-10	DEEP FREEZER – 80 °c	2000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
74	PGI/MM/Nephro/174/09-10	Automatic blood cell counter	15,000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
75	PGI/MM Nephro/175/09-10	Ph meter	1000.00	28.01.2010 (4PM)	05.02.2009 (11 PM))
76	PGI/MM/Nephro/176/09-10	Bi impedance analyzer	2000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
77	PGI/MM/Nephro/177/09-10	Near infra red reactance analyzer	3000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
78	PGI/MM/Micro/178/09-10	BOD incubator:	3000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
79	PGI/MM/Radio/179/09-10	Mobile c-arm digital fluoroscopy unit for intervention for department of radio-diagnosis	25,000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
80	PGI/MM/Haem/180/09-10	Automated blood cell separator-apheresis	15,000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))

		machine		(4PM)	(11 PM))
81	PGI/MM/Haem/181/09-10	Nephelometer for free-light chain quantification	4,000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
82	PGI/MM/ Haem/182/09-10	Portable colour doppler ultrasound unit & transducers	5,000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
83	PGI/MM/ Haem/183/09-10	Volumetric infusion pump	1000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
84	PGI/MM/ Haem/184/09-10	Ventilator bi-pap (non invasive)	2000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
85	PGI/MM/ Haem/185/09-10	Nanodrop spectrophotometer	4000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
86	PGI/MM/ Haem/186/09-10	Tube sealer	1000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
87	PGI/MM/Gastero/187/09-10	Gastro videoscope (adult) with single balloon video enteroscopy system	15,000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
88	PGI/MM/Gastero/188/09-10	Digital radiography system (1000ma) for ERCP application	25,000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
89	PGI/MM/Gastero/189/09-10	C-14 urea breath test	5000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
90	PGI/MM/ Gastero/190/09-10	Modular electro surgery workstation with APC for GI endoscopy suit:	8000.00	28.01.2010 (4PM)	06.02.2009 (11 PM))
91	PGI/MM/Gastero/191/09-10	Elisa plate reader	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
92	PGI/MM/Endo/192/09-10	Co ₂ incubator	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
93	PGI/MM/ Endo/193/09-10	Elisa reader	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
94	PGI/MM/ Endo/194/09-10	Elisa washer	1000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
95	PGI/MM/ Endo/195/09-10	Ice making machine	1000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
96	PGI/MM/ Endo/196/09-10	Laboratory refrigerators	1000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
97	PGI/MM/Endo/197/09-10	Low temperature freezers	1000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
98	PGI/MM/Endo/198/09-10	Semi auto analyzer	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
99	PGI/MM/ Endo/199/09-10	Ultra-low freezers	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
100	PGI/MM/ Endo/200/09-10	Calcium electrode (electrolyte analyzer)	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
101	PGI/MM Endo/201/09-10	Bone histomorphometry	8000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
102	PGI/MM/RT/202/09-10	Pin point chamber for brain lab	1000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
103	PGI/MM/ RT/203/09-10	Quality assurance phantom for IGRT	4000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
104	PGI/MM/ RT/204/09-10	Up-grade / replacement of radiation field analyser	20000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)

105	PGI/MM/ RT/205/09-10	Radiation immobilization accessories	2000.00	28.01.2010 (4PM)	08.02.2009 (11 PM)
106	PGI/MM/Nephro/206/09-10	Electronic balance	1000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
107	PGI/MM/Cardio/207/09-10	Portable echocardiography system	15,000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
108	PGI/MM/Cardio/208/09-10	Temp pacemaker pulse generator	2,000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
109	PGI/MM/ Cardio/209/09-10	Syringe infusion pump	1000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
110	PGI/MM/ Cardio/210/09-10	Fully automated ETO sterilizer	8,000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
111	PGI/MM/CVTS/211/09-10	Micro saw for Paediatric Stenotomy	3000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
112	PGI/MM/ CVTS/212/09-10	Suction machine	1000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
113	PGI/MM/ CVTS/213/09-10	GENERAL INSTRUMENTS for CVTS	25,000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
114	PGI/MM/CCM/214/09-10	Transport monitor	1000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
115	PGI/MM/ CCM/215/09-10	MRI compatible transport monitor	2000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
116	PGI/MM/ CCM/216/09-10	Syringe infusion pump	1000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
117	PGI/MM/ CCM/217/09-10	Volumetric infusion pump	1000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
118	PGI/MM/ CCM/218/09-10	Bi-level Positive Airway Pressure (Non-Invasive) Machine	3000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
119	PGI/MM/Micro/219/09-10	Anoxomate	3000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
120	PGI/MM/Micro/220/09	2D electrophoresis	8000.00	28.01.2010 (4PM)	09.02.2009 (11 PM)
121	PGI/MM/Micro/221/09	Liquid Nitrogen container	2000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
122	PGI/MM/Micro/222/09	Gel documentation system	4000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
123	PGI/MM/Micro/223/09	Autoclave	3000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
124	PGI/MM/Micro/224/09-10	Pulse field gel Electrophoresis system	5000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
125	PGI/MM/Gsurg/225/09-10	Laprosopy surgical instruments	10000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
126	PGI/MM/Gsurg/226/09	Open surgical instruments	10000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
127	PGI/MM/Gsurg/227/09	Portable color doppler ultrasound unit & transducers	15000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)
128	PGI/MM/Gsurg/228/09	Laprosopic equipments:	8000.00	28.01.2010 (4PM)	10.02.2009 (11 PM)

TENDER DOCUMENTS & TERMS AND CONDITIONS

sr	The offer must be fulfilling the following conditions:
	The following terms & conditions should be compiled with while submitting tender:
1	1 Unconditional warranty & Guarantee for 5 years from the date of installation. Tenderers should be submitted to the RSD Cell Located at 3 rd Floor of the Administrative Building, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Raebareli Road, Lucknow 226014, India. Under the sealed cover failing which the tender shall be disqualified.
2	2 An undertaking from the firm that the equipment is of the latest model and version. The tender terms and conditions be clearly typed or legibly written giving the full name and address of the tenderers. The tenderers should quote in figures as well as in words the rates and amount tendered by him/them. Alteration, if any unless legibly attested by the tenderers, shall be void.
3	3 The tender must be signed by the tenderers themselves or his/her authorized agent on his/her behalf. In case the tender is signed by the agent the authority letter in his favour shall be enclosed with tender documents.
4	4 Details of after sale service support.
3	5 Sealed Tenders should be submitted in two-bid system (in two identical copies) consisting earnest money, technical offer & price bid. In case of equipments tender the Earnest Money and Technical Bid shall be submitted in first part i.e. technical bid and price be submitted in second part i.e. price bid, both separately sealed.
4	6 An undertaking that the equipment is of latest art of technology and no other model is superceeded this equipment.
7	7 The tenderers should take care that the rates and amounts are written in such a way that inter-paragraphs are possible. No blank space should be left, which would otherwise make the tender liable for rejection.
5	8 Annual Maintenance Contract should be 1 % without spares without escalation of subsequent year & 3% with spares without escalation of subsequent year. Must be facilities as indicated. This contractual delivery date/period should be inclusive of all the lead-time.
6.	9 CUSTOM CLEARANCE: After arrival of the goods at New Delhi Airport, Indian agent or tenderers should clearly state whether he/she is manufacturer, accredited agents, or Indian subsidiary of the principal firm, is solely responsible for getting the material clearance from customs. Institute will provide all custom documents for custom clearance.
7	7 The tender shall be in hard copy. Tenderers should have soft copy of tender and sealed terms and conditions. No Financial guarantee shall be entertained in this respect. If acceptance or rejection of the tender is required, the bill along with documentary proof in original.
8	8 The quantity shown in the Schedule may be increased or decreased as per external depending upon NO DEMURRAGE, WHARFAGE CHARGES WILL BE PAYABLE BY THE INSTITUTE IN ANY CIRCUMSTANCES. NO ADVANCE PAYMENT WILL BE PAYABLE FOR CUSTOM CLEARANCE, FREIGHT, INSURANCE, ETC.
9	9 The tender shall be submitted to the sales services facilities within the Guarantee/Warranty period. The warranty period will be extended for the period of the Instruments remain out of order Break up of quoted items: Unit price of each product and accessories should be tendered also.
10	10 The tender shall also confirm the Installation, Commissioning, Demonstration and Training to the concerned of this Institute.
11	11 Each tender, individual item to be quoted must be sealed in a separate envelop, if submitted for two or more tender/ offer, failing with the tender / offer will not be received. Within 2 weeks from the date of receipt of order or establishment of letter of credit as the case may be. i.e. If two or more offers sealed in single envelop. The individual tender no. and name of item must be superscripted on the top of the envelop.
12.	12. The Institute reserves the right to cancel/reject in full or any part of the tender which generally do not fulfill the conditions stipulated in the tender without assigning any reason.
13.	13. Any action on the part the tender to influence any body of the Institute will make his tender liable to rejection.
14	14 The tenderers shall submit the offer with in original copy of the tender documents duly signed on each page. Item-wise rates indicating units can be offered on letter head of the firm.
15	15 In the case of placement of Purchase Order, the vendor (the tenderers whose tender is accepted) shall have to confirm the purchase order within 7 days from the date of the dispatch of purchase order otherwise it will be deemed that offer is acceptable to the firm. Notwithstanding any other provision, the terms & conditions and any other items given in the Purchase order will be treated as binding with "Errors & omission Expected" basis. However, if the supplier notices any mistake in the contentions of the order, he must bring the same to the notice of the Institute and seek clarifications. Supplier will have to bear the responsibility for failure to take this action.

16 The Institute may in writing make any revision or change in the purchase order, including additions or deletions from the quantities originally ordered in the specifications or drawings. If any such revisions/changes affect the price or delivery, the same shall be subject to the adjustment of price/delivery, where requires on a reasonable basis by mutual agreement in writing which should be communicated.

17 The tendered should furnish performance bank guarantee of 15% of the order value or FOB value at the time of the shipment of goods ordered this will be released after the successful completion of materials period as by written notice to the vendor, if :-

18 The vendor fails to comply with the terms of the purchase order including specifications and other technical requirement.

The vendor becomes bankrupt or goes into liquidation.

The vendor fails to deliver the goods in time and or does not replace the rejected goods promptly.

A receiver is appointed for any of the property owned by the vendor.

19 Upon receipt of the said cancellation notice, the vender shall discontinue all works of the purchase order and matters connected with it

20 **Earnest Money be paid in shape of D/D, TDR, FDR, drawn in favour of the Director, Sanjay Gandhi Postgraduate institute of Medical Sciences and payable at Lucknow (U.P.), India as mentioned in the tender notification.**

21 Unless otherwise specified in the order, the order price shall remain firm and will not be subject to escalation of any description during the pendency of the order, notwithstanding the change in the cost of materials, labor and/or variations in taxes, duties and other levies on raw materials and components the may take place while the order is under execution even if the execution of the order is delayed beyond the completion date specified in the order for any reason whatsoever.

22 For indigenous goods the price should be on F.O.R. SGPGIMS basis inclusive of all levies and duties wherever applicable which should be indicated clearly. The rates of sales tax should be clearly indicated wherever chargeable. The SGPGIMS is not eligible to issue 'C' or 'D' Form, however the concessional rate of Central Sales Tax admissible to Research Institutions on purchase of Scientific Instruments/Equipments etc. from certain States like Maharashtra., Delhi, West Bengal etc. is applicable to this Institute.

23 **Prices will be quoted on FOB as well as estimated CIF New Delhi (Insurance from firm warehouse to SGPGI warehouse basis) for imported goods. Indian Agency commission / rebate payable to Indian Agent, if any, shall be shown separately and that will be payable in equivalent rupee directly to Indian Agent as per declaration furnished by foreign suppliers. The Institute reserves the right to get their goods air-freighted/Sea freighted & air insured/marine insured upto site.**

24 The offer of the tenders shall remain valid for a period of atleast 180 days from the date of opening of the tender.

25 All goods or materials shall be supplied by the tenderers whose tender is accepted, strictly in accordance with the specifications, drawings, data sheets, other attachments and conditions stated any alterations of those conditions shall not be made without the consent of the Institute in writing which must be obtained before any work against the order is commenced.

26 ~~All the goods supplied by the seller pursuant to this order from the date of acceptance of the design and commissioning of the equipment has been to be delivered in accordance with the materials will be shipped in operating characteristics of the material and units to be installed by the date of installation the same shall be promptly as possible from a factory, design and replacement as soon as notified thereof, the seller shall at his own expenses and as promptly as may be necessary to permit the materials function in accordance with the specification and to fulfill the foregoing guarantee and capacity and of proper materials so as to fulfill in all respects with all operating conditions, if any, specified in this order.~~

- 27 The Institute may at his option, remove such defective materials at the seller's expense in which event the seller shall, without any cost to the SGPGIMS and as promptly as possible, furnish and install proper materials, repaired or replaced materials shall be similarly guaranteed for a period of not less 30 (thirty) months from the date of shipment.
- 28 In the event that the materials supplied do not meet the specifications and are not in accordance with the drawings, data sheets or the terms of this order, rectification is required at site, the SGPIGMS shall notify to the seller giving full details of differences. The seller shall attend the site, within seven days of receipt of such notice to meet an agree with representative of the SGPGIMS the action required to correct the deficiency.
- 29 If the seller fails to attend meeting at site within the time prescribed above, the SGPGIMS shall immediately get the same rectified the work/materials and seller shall reimburse the Institute all costs and expenses incurred by the SGPGIMS in removing such trouble or defect
- 30 100% payments shall be released within 30 days from the date of satisfactory receipt of materials. Where necessary performance bank guarantee @ 15% of the ordered value or FOB value shall be submitted to the Institute before arranging the delivery till expiry of warranty period.
- 31 The mode of payment will be through irrevocable letter of credit OR International Bank draft. However, Indian Agency Commission or Technical Services charges would be paid in Indian rupee after satisfactory receipt & installation of goods at site duly verified by concerned HOD . Please note in case of IBD , the original bank draft will be handed over to firm only after satisfactory receipt and installation of the equipment.
- 32 Time delivery as mentioned in Purchase order shall be the essence of the order and no variation shall be permitted except with prior authorization in writing from Purchaser.
33. In the event of delay in making delivery on the part of the vendor, it will be at purchaser's discretion to receive delivery with a reduction in price of the article/or equipment.
- 34 Any strike, or lock-out (only those exceeding ten continues days in duration) affecting the performance of the seller's obligations.
The seller shall advise the SGPGIMS by registered letter duly certified by Local Chamber of Commerce of Statuary authorities the beginning and end of the above causes of delay within 7 (seven) days of occurrence and cessation of such Forced Majeure conditions, in the event of delay lasting over one month, if arising our causes of Force Majeure, the SGPIGMS reserves the right to cancel the order and the provisions governing termination state under articles shall apply.
For delays arising out of Forced Majeure, the seller shall not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither the.

SGPGIMS nor the seller shall be liable to pay extra costs provided it is Mutually established that Force Majeure conditions did actually exist

The seller shall categorically specify the extent of Force Majeure conditions prevalent in his works (such as power restriction etc.) at the time of submitting the bid and whether the same have taken into consideration or not in the quotations.

In the event of delay delivery and/or unsatisfactory manufacturing progress and supply, the SGPGIMS has the right to cancel the purchase order as whole or in part without liability for cancellation charges.

In the event of rejection of non-confirming goods the vendor shall be allowed, without any extension of delivery time to correct the non-conformities, should however the vendor fail to do so within stipulated time, the SGPGIMS may cancel the order.

35 No Payment shall be made for rejected material nor would the tenderer be entitled to claim for such items.

36 Rejected items would be removed by the tenderer from the site within two weeks of the date of rejection at their own cost. In case they are not removed they will be auctioned at the risk and responsibilities of the suppliers without any further notice.

37 In the case of not honoring the supply order, Sanjay Gandhi Postgraduate Institute of Medical Sciences, will have the right to impose penalty as deemed fit to resort to make purchase at the suppliers cost and risk may forfeit his security to make purchase at the suppliers cost and risk

38 In the case of non-supply of stores within stipulated period, it will be at the discretion of the Sanjay Gandhi Postgraduate Institute of Medical Sciences to accept delivery with late delivery clause, in case of indigenous goods @ 1% per week maximum to the extent of 10% and incase of import 0.5% per week maximum to the extend of 5% of the ordered value for delayed supply.

39 All disputes and question, if any arise between the Institute and the bidder out of or in connection with the terms and conditions contained herein or as to the construction of application thereof, or the respective rights and obligations of the parties there under or as to any clause or thing herein contained or by reason of the supply or failure or refusal to supply any material or as to any other matter in any way relating to these presents shall be referred to the sole Arbitration, President of the Institute/Chief Secretary of the U.P. Govt. or his nominee. The decision of the sole arbitrator shall be final and binding upon both parties and subject to adjudication of Lucknow Court. Place for arbitration shall be at Lucknow (U.P.), India. Venue of such arbitration proceedings shall be the Institute. Arbitration and conciliation Act 1996 and rules made there under shall be applied to the proceedings under this clause.

40. Sales-Tax Registration certificate/ Vat registration certificate duly attested copy by a Gazzetted Officer should be also enclosed. Sales Tax, Income Tax clearance certificate or in absence of this certificate you can attach the copy of VAT registration and copy of current return submitted along with the affidavit from a notary that the firm has never been black listed must be attached along with the tender documents failing which the tender will be rejected. Tenderers hereby agree to all terms and conditions stipulated in N.I.T. and undertake to sign the rate Contract or Supply order within the given

days from the date of order failing which Security shall be liable to forfeit our requirement from time to time, against the guarantee / warrantee clause as per the terms and conditions agreed under negotiations would be provided at our Institute without fail. Any negligence on this account shall be the sole responsibility of foreign vendor and the liability for compensation will be fixed up by the SGPGI .

41. Comprehensive offer of same for 5 years would be finalized before placement of order either on comprehensive or semi / non comprehensive basis (with or without spare / consumables /accessories including labour charges) by the Institute to the tune of 95% uptime of equipment that AMC will be effective after expiry of warrantee period.

JOINT DIRECTOR (MM)
For DIRECTOR
Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow

SPECIFICATIONS

TENDER NO: PGI/MM/Anaes/101/09-10

Deptt of anesthesiology

Technical Specifications for Percutaneous Neuromodulation Pain Therapy System

1. Be microprocessor based system capable of delivering output through Percutaneous electrode Array (1.5” diameter microneedle array within 2.5” diameter hydrogel-based sterile electrode.

2. Have signal output through two feed electrodes (feed frequency 1:3858 Hz, Feed Frequency 2:3980 Hz).
 3. Have voltage range : 0-27.5 V rms & waveform should be sum of 2 sinewaves.
 4. Have power souce 12 V DC, 3850 mAh rechargeable NiMH internal battery.
 5. Have compatibility with following accessories.
- 5a) Percutaneous electrode Arry having 1000 microneedles 0.74 mm (1.5" diameter microneedle arry within 2.5" diameter hydrogel-based sterile electrode.
- 5b) Surface feed electrodes of various sizes (2"X4" and 5" X 8").

TENDER NO: PGI/MM/ Anaes/102/09-10

Technical Specifications for Radio Frequency Pain Management System

1. Should have LCD display to view the various parameters like temperature of treatment, power, voltage and show impedance values and plot online graphs of temperature and power with respect to time during the procedure.
2. The RF treatment should automatically out off when the high impedance or low impedance is detected and give error signals with possible rectification of error.
3. Should verify cannula placement before lesioning using sensory and motor stimulation frequencies.
4. Radio frequency output should be 460.8 KHz+1% Quasi sinusoidal with maximum output power 50W.
5. The Stimulation Amplitude in Voltage mode from 0.0-10 V,0.1V increments and in Current mode 0.0-10 mA in increments of 0.1mA.
6. The frequency of stimulation rate to be varied from 1 shot -200 Hz in 10 steps. Pulse duration of stimulation to be varied from 0.1ms-1.0 ms.
7. Should have Standard RF Lesioning with automatically adjusted power to attain set temperature, ramp rate to set temperature is programmable lesion.
8. System should also be able to perform Pulsed RF Lesioning aimed at delivering RF while maintaining non-lethal temperatures.
9. Should have manually adjustable power to obtain desired temperature in both the standard and Pulsed modes.
10. Should give visual confirmation of stimulation output.
11. System should give used friendly descriptive messaging.
12. System should be supplied with probes of length 54mm-1 no, 100 mm-1 no and 145 mm-1 no and the corresponding cannula size of 10 nos. each to be provided.
13. System should have facility to perform Cooled Radio Frequency procedures and should be complete including the cooling unit, disposable probe kit for treating Transdiscal procedures.
14. The supplier need to provide the individual prices of all the consumables/disposables required for operation of the system.
15. There should be provision of maintaining the complete record of patient and the software for keeping the database of each patient on a notebook PC to be provided.

TENDER NO: PGI/MM/NS/103/09-10

SPECIFICATION FOR MULTI-DIMENSIONAL NEUROLOGICAL IMAGING SYSTEM

A fully digital 3D c-arm with intergrated neuronavigation for cranio-spinal applications is required for neurosurgery operation suite at Department of Neurosurgery, SGPGIMS, Lucknow, UP. The unit should have the following specifications. Details of specifications must be supported by technical by data sheet from the manufacturer.

Generation:

1. High frequency X-ray generator with automatic regulation of radiation dose rate.
2. System should have continuous fluoroscopy and digital radiography mode. Ability to have pulsed fluoroscopy is desirable and will be preferred over continous fluoroscopy.
3. Should allow high resolution fluoroscopy (>50LP/in. in low dose mode)
4. It should have 20kW to 40 kW x-ray generator for imaging dense anatomy.

X-ray tube

5. X-ray tube should be dual focus suitable for fluoroscopy and radiography with high cooling rate to ensure continuous operation.
6. Anode heat storage should be large. Please specify.
7. Total heat capacity should be large. Please specify.
8. Automatic dose control.

C – Arm

9. It should have a 270° to 360° scan and should be motorized
10. It should allow lateral patient access
11. The bore diameter of the imaging system should be at least 75cm
12. The imaging system should offer 10cm volume cube or more anatomical coverage.
13. It should have a power drive for easy handling of imaging system.
14. It should have a robotic positioning system.
15. It should have the ability to position x-ray tube on either side of patient for decreased radiation exposure to operating surgeon.

Image intensifier

16. Please mention the diameter of the image intensifier
17. Input screen should be amorphous silicon/cesium iodide for increase resolution
18. Pixel pitch should be less than 0.2mm
19. Resolution should be minimum of 2.0k x 1.5k
20. Besides foot and hand control, it should allow image manipulation and viewing wirelessly from the sterile field.

Imaging Viewing

21. It should have LCD display [minimum 29” (diagonal)] with minimum of 3 mega pixel resolution.
22. An extra LCD display [minimum 29” (diagonal)] will be ceiling/wall mounted for surgeons viewing convenience.

Image acquisition and processing

23. Must be a fully digital imaging chain for acquisition, processing, storage and archiving
24. It should processing facility to provide high resolution 3 D axial, coronal and sagittal planes.
25. It should have the ability to go ‘full-screen’ on any image.
26. It should have facility of storage of pre-set imaging positions to avoid the need for re-scouting.
27. The 3D image should be displayed in less than 30 seconds from initiation of acquisition.
28. The imaging system should have a provision for selecting region of interest for automatic brightness and window/level control.
29. The imaging system should have an automatic noise reduction, edge enhancement, full screen, zoom, digital image rotation, digital window/level control, left/right and top/bottom image reversal positive/negative image inversion.
30. The imaging system should offer different levels of operation allowing optimal slice thickness/reconstruction time selection based on the clinical application.

Image Archiving and software interface

31. The imaging system should have on board hard drive for data archival and retrieval as well as DVD R/W
32. The imaging system should have DICOM functions and full DICOM 3 ready. It will be the responsibility of the vendor to seamlessly integrate the system with the PACS network whenever it is available in the Department of Neurosurgery, SGPGIMS, Lucknow, UP.
33. There has to be various outputs like internet, USB, composite video and S – video.

Image Guidance system

34. The multi dimensional surgical imaging system should be supplied with compatible/integrated surgical navigation system. The navigation system should be loaded with all spine and cranial applications. All related navigation instruments for spine and cranial should also be supplied.
35. A portable ultrasound machine which is integrated/compatible with the image guidance system should be supplied. The ultrasound machine will be supplied with trolley and three probes for various cranial and spinal applications along with all accessories.

Essential accessories

36. Lead apron 8 nos
37. Thyroid shield 8 nos
38. Laser printer for film of different sizes (specify)
39. Table extension should be provided along with the multi dimensional surgical imaging system.

Disposables

40. One year's supply of all disposable should be supplied (including 100 disposable drapes for the imaging system and 50 sets of fiducials).
41. Prices of all disposables required for the imaging system and image guidance system should be quoted at the time of price bid and will be frozen for 5 years.

Warranty/after sales service/Training

42. The complete multidimensional imaging system should come with a 5 year comprehensive warranty (spares & labor) (including x-ray tube, image guidance system and ultrasound machine, as well as all accessories. This will be followed by 5 years of comprehensive AMC. Spares should be available for at least 10 years after installation.
43. Training on the multi dimensional surgical imaging system should be provided to four neurosurgeons in batches (specify details).
44. 98% uptime guarantee should be given. In case down-time exceeds 2%, penalty in the form of extended comprehensive warranty, double the days for which the equipment was out of service, will be applied. Also, cash penalty of Rs. 10,000/_ day of downtime will be levied during warranty and post-warranty period.
45. Schedule of preventive maintenance, service response time should be mentioned.

TENDER NO: PGI/MM/NS/104/09-10

Pachymeter

- Probe Frequency : 15 Hz
- Measurement range : 0.30mm – 1.0mm
- Precision : +/- 1 micron
- Instrument accuracy : +/- 0.1 micron
- Acceptable Angle : 10°
- Calibration : Automatic
- Records 1- 33 corneal locations with programmable bias
- Thermal Printer optional

TENDER NO: PGI/MM/CVTS/105/09-10

Department of CVTS

Syringe Infusion Pumps

1. A syringe pump should be deliver critical drugs frequently at a very low flow rate to critical patient.
2. Syringe Size should be 10ml, 20ml, 30ml, 50ml.
3. Should be compatible will all leading brands.
4. Flow Rate should be 0.1 to 200ml/hr (10ml Syringe)& 0.1 to 300ml/hr. (20ml Syringe) in 0.1ml increment.
5. Bolus Rate should be Approx. 200ml/hr. (10ml Syringe), Approx. 350ml/hr (20ml Syringe), Approx. 450ml/hr. (30ml Syringe) & Approx. 800ml/hr. (50ml Syringe).
6. Should be drive accuracy + 1% (syringe driver) ::: + 3% (with syringe).
7. Infusion of Volume should be 0.1 to 999.9ml with reset function Display.
8. Should be three Pressure level to detection of occlusion.
9. Should be low pressure, Medium pressure & High pressure facility.
10. Should be these alarms facility Occlusion, End of Infusion, Low Battery, Near Empty, Syringe Dislodged, System Error, Start-me.
11. Should be rechargeable Battery Nickel Cadmium.
12. Operation Time should be 4 Hours with new, fully charged battery.
13. Should be either FDA OR CE approved.
14. Guarantee Warranty and CMC clauses as per the Institute Norms.

TENDER NO: PGI/MM/ CVTS/106/09-10

Transport Monitor

1. Minimum 10” TFT with touch screen
2. Monitor should operate on dual supply i.e. and battery back up
3. Battery to be of NIMH or higher quality
4. Battery backup for minimum 03 hours
5. Single channel ECG
6. SpO2
7. NIBP with adult and pediatric cuff
8. 02 invasive pressure
9. 01 temperature (core)
10. High-low alarms for all vitals
11. Each unit must be supplied with two sets of Operating Manual, Service Manual and Any Circuit Diagram.
12. Guarantee, warranty and CMC clauses as per the Institute Norms

TENDER NO: PGI/MM/ CVTS/107/09-10

Hyper-Hypothermia water therapy system

- The product should meet international safety standards and should have CE approval.
- The unit should be compact, low noise and easy to handle.
- The unit should be compatible to use different size of water mattress according to the patient’s requirements (Adult & Pead.).
- Should have a single provision to set different / adjust temp.
- Each unit must be supplied with two sets of operating manual / service manual.

• **TECHNICAL SPECIFICATION**

- Operating Voltage : 220 – 230 VAC / 50 Hz

- Power consumption : 320 W
- Setting range for water Temperature : 15 – 39 C
- Pumping Limit : max. 11 l/ minute max. 0.15 bar
- Cooling time (20 – 15) :abt. 5 – 10 min.
- Warming – up time (20 -37 C) : abt. 5-10 min.
- Safety cutoff : 41.5 C
- System of protection : 1, BF
- Noise rate : abt. 50 dB (A)
- Alarm level : > 65 dB (A)
- Guarantee Warranty and CMC clauses as per the Institute Norms.

TENDER NO: PGI/MM/ CVTS/108/09-10

Technical specifications for biphasic defibrillator monitor/recorder with pacemaker:

- Should be a Biphasic Defibrillator monitor recorder and latest model
2. Should be light weight and portable. Should have defibrillator testing facility
 3. Should be operable both on AC Mains and rechargeable battery
 4. Should have Automated External Defibrillation as the standard feature along with Manual defibrillation.
 5. Manual selection up to 270 J. Should be capable of doing both synchronized and a synchronized cardioversion.
 6. Should have impedance compensation for a range of 25-150 ohms.
 7. ECG pickup should be available either form ECG leads or directly from paddles
 8. Defibrillator shall be capable of delivering at least 250J of biphasic energy
 9. Shall be able to charge to maximum energy level in < 3sec. Charging indicator should be there.
 10. Should be capable of delivering energy in increments of 102 Jules up to 30 J and increments of maximum 50 J thereafter.
 - 11. Should have external paddles as well as Internal Paddles for both adult and pediatric purpose (one each)**
 12. Should be able to deliver at least 70 shocks of 250 Joules or at least 120 min of monitoring with fully charged battery
 13. Should have fast ECG recovery for immediate monitoring after defibrillation
 14. Should have minimum 5.5” color TFT LCD monitor with waveform display of Heart rate, alarm status and other formatting messages
 15. Defibrillator should have 2 channel thermal array recorder
 16. Should provide summary for Critical Event Record
 17. Heart rate alarm and VF and VT alarm
 18. Should have a Synchroniser with indication on screen
 19. Power Supply : 220V AC 50Hz. Should be able to operate continuously in ambient temperatuof 10-40 degree C and relative humidity of 15-90%. Resettable overcurrent breaker should be fitted for protection.
 20. Equipment must conform to International Safety standards and IEC 60601-1-2:2001 (or equivalent BIS) general requirements of safety for electromagnetic compatibility.
 21. Comprehensive warranty for 5 years and provision of AMC for next 5 years.

Pacing Option:

- Non Invasive Pacing.
 - Pacing: Demand or Non Demand
 - Pacing Rate: 40 to 170ppm
- Output should be fully defibrillator protected and isolated

Accessories:

1. External paddles (adult and pediatric, one each)

2. Internal paddles with discharge control on paddle grip (adult- 6 cm diameter, pediatric-4.5 cm diameter, and neonatal- 2.8 cm diameter one each)
3. Patient cable 2
4. ECG rolls 50
5. Disposable pads 10
6. Complete set of ECG leads 02
7. Multifunction electrodes and multifunction pad electrodes (10 each)

TENDER NO: PGI/MM/ CVTS/109/09-10

Six Channel ICU Patient Monitor

- Should not be less than 10.4" screen.
- Should be touch screen TFT+ LCD/ TFT/LCD
- Should have the good resolution minimum (800 * 600 dots)
- Should have the option for real time ecg wave forms and episode.
- Should have the standard facility to monitor ECG , NIBP, Spo2 , temp, resp,
- Should have the facility to measure and display IBP and etco2
- Should have the facility to monitor the EtcO2 For both (intubated and non intubated)
- Should have the minimum 6 channel.
- It should have facility to measure simultaneously 2 ibp.

It should have the **Trend parameters:** Heart rate (or pulse rate), respiration rate, VPC rate, ST level, Event (arrhythmia), apnea (time), apnea (frequency), SpO2, NIBP (systolic, diastolic, mean), IBP (systolic, diastolic, mean), Temperature, ETCO2

Trend time: 1, 2, 4, 8 or 24 h

- **Data storage time:** 1 min for 1, 2, 4, 8 hours, 3 min for 24 hour.

Vital Signs List

Parameters: Heart rate (or pulse rate), VPC rate, ST level, NIBP (systolic, diastolic, mean), SpO2, IBP (systolic, diastolic, mean), respiration rate, temperature, ETCO2

Number of files in list: 120 for periodic list, 120 for NIBP list

List interval: 1, 5, 15, 30 or 60 min for periodic list, at

- NIBP measurement for NIBP list.
- Should have the facility of OCRG screen.
- Should have the facility to store alarm up to 200 and displayed on the alarm history.
- Should have the battery backup of 3 hr,
- Should be able to store 16 arrhythmia episodes which can be edited for arrhythmia analysis.
- Should have the facility to enlarge the numeric display.
- Should have the faculty to freeze the wave forms.
- Should have the optional facility to monitor, transmit waveforms and parameter data to another monitor or CNS via telemetry.
- Should have the optional facility to connect all monitor for data transfer from each other (the interbed screen display at least one wave form, numeric data and alarm of each bed.
- Should have the optional facility to connect and measured anesthetic agent. The monitor automatically distinguishes the agent type during measurement.
- Should have the optional facility to connect and measure BIS.

TENDER NO: PGI/MM/Endsur/110/09-10

Department Endocrine – Surgery

Head mounted Microscope integrated with, Light Source and Image Capture System with High Definition Resolution LCD Monitor (21") mounted over Trolley and required accessories

Specifications

Working distance: 300mm to 700mm (11.81 to 27.56 inches)
 Field of vision: 30mm to 224mm (1.18 to 8.82 inches with standard oculars)
 Magnification:
 -Stepless
 -Standard Oculars: 20 x (2.9-7x)
 -Interchangeable oculars I: 14 x (2.0-4.8x) (optional)
 -Interchangeable oculars II: 26 x (3.75-9x) (optional)
 Individual vision correction:
 -Wide-field oculars for spectacle wearers
 -Dioptric setting for individual vision correction (+7 dpt)
 Integrated coaxial light: -Shadow-free illumination of the work area at every working distance
 Integrated autofocus camera: -Higher quality documentation from the user's point of view, ½ inch colour
 CCD, PAL or NTSC, compatible to every S-VHS connector
 Swiveling angle: 72 degree
 Hygiene: All parts can be disinfected
 Footswitch control

TENDER NO: PGI/MM/ Endsur/111/09-10
Laprosopic Instruments

Forceps 10mm (Laheys)
 Applicator 10mm (Hemolock applier)
 Applicator 10mm (Multifire applier)
 Applicator 10mm (Ligaclip applier (LT-300))

TENDER NO: PGI/MM/ Endsur/112/09-10

Surgical Instruments for open surgery*

Open Surgical Instruments
Open Surgical Instruments
Scissors (250 mm, 10") (Nelson Metzenbaum)
Scissors (200 mm, 8") (Metzenbaum)
Scissors (180 mm 7") (Metzenbaum)
Scissors (230mm, 9") (Nelson Metzenbaum)
Scissors (145mm, 5-3/4") (Baby Metzenbaum)
Scissors (225mm, 9") (Mayo Harrington)
Scissors (170mm, 6-3/4") (Mayo)
Scissors (150mm, 6") (Stille)
Tissue forceps (145mm, 5-3/4") (Mittelbreit Medium)
Tissue forceps (160mm, 6-1/4") (Standard)
Tissue forceps (180mm, 7") (Cushing)
Tissue forceps (120mm, 4-3/4") (ADSON)
Tissue forceps (250mm, 10") (Cushing)
Tissue forceps (105mm, 4-1/8") (Standard)
Tissue forceps (145mm, 5-3/4") (Standard)
Artery forceps (160mm, 6-1/4") (RANKIN) (Curved)

Artery forceps (160mm, 6-1/4") (RANKIN) (Straight)
 Forceps (12cm, 4-3/4") (Mosquito) (Curved)
 Forceps (12cm, 4-3/4") (Mosquito) (Straight) Application (6") (Clip applicator LT100) 6"
 Application (18.5 cm) (Clip applicator LT200) 18½ cm
 Tissue forceps (20 cm)
 Tissue forceps (17 cm)
 Needle holder (150 mm, 6") (Crile wood)
 Needle holder (180mm 7") (Mayo Hegar)
 Fine Needle holder (180mm, 7") (DeBakey)
 Needle holder (265mm, 10.5") (Masson)
 Fine suction canula (Charr. 10, 18 cm) (Frazier, Fergusson)
 Fine suction canula (Charr. 12, 18cm) (Frazier, Fergusson)
 Retractor (1-1/4" x 2" (32mm x 51mm) (Morries)
 (double ended) (1.5" x 2") (38mm x 51mm)
 (8.5") (216mm)
 Amputation saw (16-3/4") (420mm) (BIER)
 (Blatt large Lengthof blade, 10.5", (270mm)
 (complete with one saw blade each 4mm, 6mm, 8mm)
 Forceps (6 x 7 Zahne) (6 x 7 teeth) (ALLIS THOMS)
 Forceps (8.5", 215mm) (Babcock)
 Forceps (19 cm) (Laheysweet)
 Cardiovascular clamp (45°, 12cm) (Debakey AT)
 Cardiovascular clamp (17 cm) (Debakey AT)
 Cardiovascular clamp (90°, 10.5 cm) (Cooley AT)
 Cardiovascular clamp (12 cm) (Cooley AT)
 Cardiovascular clamp (150mm, 6" (Cooley Beck)
 Cardiovascular clamp 19 cm (DeBakey AT)
 Bone Rongeurs 170mm, 6-3/4 (Mayfield)
 Bone cutting forceps 260mm, 10-1/4" (Liston stille)
 Knife handle 31cm (Humby)
 Self retaining retractor (Balfour) fenestrated blade 100mm (4") deep with centre blade 70 x
 100mm (2-3/4" x 4") 180mm (7-1/8") Max spread 250mm (10") max spread
 Scalpel handle 1/1 long (Scalpel handle)
 Scalpel handle 1/1 (long with band front) (scalpel handle)
 Forceps 220mm, 8-3/4" (ALLIS)
 Retractor (JOLLS) adult
 Bipolar Co-agulation forceps 16.5cm (Blunt)
 Bipolar Co-agulation forceps 16.5 cm (Sharp)
 Forceps 23 cm (Babcock)

Retractor (with complete set (Kent)
Tissue forceps 12cm (Micro Adson
Tissue forceps 15 cm (Micro Adson
Mallets (Hammer) 21cm (Hajek)
Bone chisels 30mm (Murphy)
Bone chisels 40mm (Murphy)
Rongeurs 18cm (Bone)
Rongeurs 16 cm (Hartmann
Vascular Clamp 30cm (DeBakey AT)

TENDER NO: PGI/MM/ Endsur/113/09-10
Surgical OT Table (to be compatible with Stryker SIDNE communication system)

Specification

Table Length 76" (193 cm)
Table Width 20" (508 cm)
Table Height Range 27" to 44" (686-1118 cm)
Patient Weight Capacity 1,000 lbs. (454 kg) – normal orientation
500 lbs. (227 kg) – side tilt & reverse orientation
Table Shipping Weight
918 lbs. (416 kg) electric-powered
920 lbs. (417 kg) battery-powered
X-ray tops add 40 lbs. (18 kg) to shipping weight
Upper Body Imaging Area
Normal orientation (28" x 16")
Normal orientation with IA extender (36" x 16")
Reverse orientation, head section reversed (45" x 16")
Reverse orientation,
36" carbon fiber fluoro extension (36" x 20")
448 sq. in. (2890 cm²)
576 sq. in. (3716 cm²)
720 sq. in. (4645 cm²)
720 sq. in. (4645 cm²)
Lower Body Imaging Area
Normal orientation (33" x 14")
Normal orientation, head section reversed (45" x 16")
Normal orientation,
36" carbon fiber fluoro extension (36" x 20")
Normal orientation with Fem/Pop board (55" x 16")
462 sq. in. (2980 cm²)
720 sq. in. (4645 cm²)
720 sq. in. (4645 cm²)
880 sq. in. (5678 cm²)
Hand control features Normal/reverse orientation button
Return to level button
Trendelenburg / Reverse 25° / 25°
Lateral Tilt (left/right) 18° / 18°
Head Section +90° to -90°
Back Section +55° to -25° (normal)
+80° to -105° (reverse)
Leg Section +80° to -105° (normal)
+55° to -25° (reverse)
Flex/Reflex 20° / 25°

Manual Override Yes
Perineal Cut-out Yes
Kidney Elevator 4" (10 cm.) manual
Remote Control compatible with Stryker SIDNE communication system

TENDER NO: PGI/MM/ Endsur/114/09-10
Video-Endoscope (Laryngoscope)

Specification

- Flexible Endoscope for viewing and taking biopsy from Larynx and cervical tracheal region
- Integrated biopsy system with Five Biopsy Forceps
- Integrated High Definition (1920X 1080 resolution) LCD Display / Monitor (21")
- Integrated Device for Image capture in both video / still frame, digital recording in DICOM format, Archive and transfer to DVD USB device and other digital capture devices. Image out put should be in DICOM format and should integrate in to Digital Operation Theatre System Network
- UPS (Two KVA with 30 minutes back up
- Trolley to house all the above items of equipment with Lockable Wheels
- Necessary Cable, Connectors and other items necessary for to Develop an integrated solution

TENDER NO: PGI/MM/IMM/115/09-10
Department of Immunology

Cryostat

- Open top, heated sliding window, corrosion proof, stainless steel cryo chamber with good
- Fluorescent illumination.
- Cooling via two separate refrigeration system.
- Temp. of cryo chamber should be at least -30° c Facility for integrated peltier quick
- Specimen freezing up to -45° C. Separate cooling should be adjustable up to -50°C.
- Temperature of the cryo chamber should be maintained within $\pm 2^{\circ}$ C of set temperature and maintained by hermetically sealed compressor system.
- Automatic programmable defrosting and manual defrosting should also be possible.
- Fully motorized microtome – movement controlled by manual as well as foot switch.
- Microtome should be encapsulated to support efficient spray disinfection.
- Microprocessor / Microcontroller based touch key control panel with LCD display for all functions including microtome
- Space for other specimen rack minimum 6 blocks . Removable section waste tray.
- Section thickness setting must be outside the cryo chamber.
- Disposable blade holder for low and high profile blades and Knife holder which can hold minimum 16 cm C type knife.
- Specimen holder can hold specimen size up to 70 x 50 mm. Facility for both 360° rotation as well as movement in X Y axis. Section thickness cutting 1-60 micro meter.
- Specimen retraction around 50 micron.
- Trimming in steps from 5 to 150 Microns
- Motorised coarse speed 500 micro meter /sec & 1000 micro meter / sec
- Control for number of sections.
- Cryo cabinet should be of appropriate size.
- Voltage - 220 -240 V, 50 Hz
-

TENDER NO: PGI/MM/ IMM/116/09-10
Deep Freezers (-80 deg C)

- Ultra low temperature freezer upright type, made of sturdy galvanized material and internal casing of SS

- With operating temperature of -10oC at ambient temperature of up to 35oC
- Approx 380 to 400 L capacity (not less than 350 L)
- CFC, HCFC, HFC refrigerant free; air cooled hermetic compressors with dual condenser fans
- Mounted on 4 castors.
- Microprocessor controlled with touch pad data entry and digital display of all functions
- Key operated main switch; battery powered independent operating temperature and high/low limit alarm functions for high low temp +/- 10 K to set temperature; automatic voltage boost to compensate for low voltage
- Onboard power monitoring with display of incoming voltage.
- Heated door sealing, sturdy inner doors and minimum of 4 independent inner compartments
- High-density door insulation; door provision for padlock. Compressor warranty of 5 years.
- Optional: Provision for vacuum release assembly for rapid opening of door for re-entry
- Racks, boxes of different sizes and dividers for half the freezer. 230V AC
- 50 Hz cycle.
-

TENDER NO: PGI/MM/ IMM/117/09-10

GEL DOCUMENTATION SYSTEM

- UV and white light transilluminator with CCD camera (with UC filter and zooming facility)
- Dark room hood, and image viewing facility and image acquisition software should allow integration of image over a variable duration of time.
- Image analysis software with possibility of rotation
- Mirror inversion, brightness and contrast alteration
- Identification of bands and lanes calculation of MW and intensity, etc.
- Should allow integration of image over a variable duration of time.
- Operation on 230V, 50 Hz power supply 2-year
- Warranty.230V AC; 50 Hz cycle

TENDER NO: PGI/MM/ IMM/118/09-10

MULTIPARAMETRIC AUTOPROCESSOR FOR AUTOIMMUNITY

- Automated Closed System for ELISA & CFT
- Programmable Autoprocessor with all reagents
- Should be able to perform autoimmune parameters : ANA, Anti dsDNA, AMA, ASMA, APCA, Anti Cardiolipin IgG / M, Anti SCL-70, Anti Jo-1, Ra, La, anti B2 gp I
- Data transferable to central HIS System
- Bar code concept / external & internal bar code reader with built in thermal printer.
- Multi wave length photometer 450, 640, 650 nm
- LCD touch panel
- Power 110 / 220V AC
- Frequency 50-60 Hz
- Power consumption 360 W
- Size 450 X 640 X 520
- Microprocessor 16 bit
- 512 Kb RAM / 1 Mb flash - ROM
- Internal modem for tele assistance
- Software upgrade for remote control.

TENDER NO: PGI/MM/ IMM/119/09-10

PCR Machine

- Capacity : 80x0.2 ml PCR tubes or 32x0.5 ml PCR tubes (Combi block)
- Temperature: 4°C to 99°C

- Heating rate: upto 3°C / sec.
- Cooling rate: upto 2°C/sec.
- Nickel plate aluminium sample block
- Uniformity: ± 0.5 °C with 15 sec.
- Heated lid temperature: 105°C
- Heated lid pressure: spring loaded
- Programming display: 5.7" diag. touch screen
- No. of Program: 60
- Max. program stages: 5
- Max. steps per stage: 5
- Max. programmed dwell time: infinite
- Pause function facility
- Run "end time" calculation
- Temperature control options: Block control & simulated tube control

TENDER NO: PGI/MM/ IMM/120/09-10
PHASE CONTRAST MICROSCOPE

- Phase Contrast Microscope for Bright field, Dark field, Phase Contrast and Fluorescence applications with built in Halogen Illumination system.
- Objective nosepiece with turret.
- Universal Condenser for Bright Field, Dark field, Phase contrast and Automatic light intensity control.
- Step focusing (Coarse / Medium / Fine).
- Eyepiece for Field of View
- Objective High Resolution Objectives (Magnification): 10x to 100x / oil emulsion
- Height Adjustable focus knobs.
- Capability to change the focus knob assembly from one side to another of the microscope and one hand focus and stage control.
- Phototube with facility for beam splitting positions.
- Heat compensated to prevent focus shift and facility of drawers for easy lamp exchange.
- Fluorescent light illumination system with lenses achromatic collector, UV optimized transmission with Fluorescent filters.
- High Resolution Digital camera compatible with the system. Full size live images with maximum frames per sec with Imaging software for Chromosome analysis and Gram staining for identification of bacteria, fungi.
- The digital camera & computer software should be compatible with Microscop

TENDER NO: PGI/MM/ IMM/121/09-10
SYRINGE INFUSION PUMP

- Capability for working on AC power and internal rechargeable battery lasting over 3 hours with full charge. Battery should be easily replaceable should have provision for running on 12V DC supply like ambulances.
- Should be capable of using 10ml, 20ml and 50ml syringes of more than 5 commonly available commercial syringes.
- Delivery rate should be form 0.1 ml/hr to over 100 ml/hr.
- Selectable purge rates for different syringes.
- High occlusion pressures in multiple settings should be able to deliver in arterial lines.
- Pump operation should be microprocessor controlled with accuracy of $<+5\%$.
- Alarms for occlusion, near empty, low battery etc, at different settings.
- User-friendly operation knob.
- Optional capability for setting the proper flow rate when dose rate, body weight etc. are given-capable of changing from ug/kg/min to mg/kg/h.

- Light weight, portable and capability for pole mounting. Separately quote for angle adjustable pole camp.

TENDER NO: PGI/MM/ IMM/122/09-10
ICE FLAKING MACHINE

- Production Capacity: 70 Kg / 24 hrs.
- Storage Bin Capacity: 35 Kg
- Condenser should be Air Cooled
- Cabinet should be Stainless Steel (SUS 304)
- Storage Bin should be Stainless Steel (SUS 304)
- Water consumption: According to ice-production, no waste
- Electricity 230 Volt / 50 Hz
- Arrangement for water inlet from local source

TENDER NO: PGI/MM/ IMM/123/09-10
DEEP FREEZER -40°C

- Ultra low temperature freezer upright type, made of sturdy galvanized material and internal casing of SS
- With operating temperature of -10oC at ambient temperature of up to 35oC
- Approx 380 to 400 L capacity (not less than 350 L)
- CFC, HCFC, HFC refrigerant free; air cooled hermetic compressors with dual condenser fans
- Mounted on 4 castors.
- Microprocessor controlled with touch pad data entry and digital display of all functions
- Key operated main switch; battery powered independent operating temperature and high/low limit alarm functions for high low temp +/- 10 K to set temperature; automatic voltage boost to compensate for low voltage
- Onboard power monitoring with display of incoming voltage.
- Heated door sealing, sturdy inner doors and minimum of 4 independent inner compartments
- High-density door insulation; door provision for padlock. Compressor warranty of 5 years.
- Optional: Provision for vacuum release assembly for rapid opening of door for re-entry
- Racks, boxes of different sizes and dividers for half the freezer. 230V AC
- 50 Hz cycle.

TENDER NO: PGI/MM/ IMM/124/09-10
TABLE TOP CENTRIFUGE

- ISO 9001 Certified Product.
- Microprocessor controlled
- Max. Speed for Angle Rotor: RPM 15000 with RCF of 21382xg
- Max. Speed for Swing Rotor: RPM 5000 with RCF of 4193 x g
- Max. Capacity: 4 x 100 ml standard tubes
- Max. Capacity: 28 x 15 ml tubes, Vacutainers
- Corrosion free stainless steel interior
- Maintenance Free, Noiseless, Brushless Induction Drive
- Automatic Magnetic Rotor Identification
- Automatic Rotor Imbalance identification & switch off
- Digital Display of time / rcf / speed
- Impulse key for short run
- Running time 1-99 min or continuous
- SS Centrifugation Chamber
- Programmable Acceleration / Deceleration Brakes
- Autoclavable & Phenol Resistant Rotors

- Lid locking and holding during rotor run
- Emergency Lid lock release
- Lid dropping Protection
- Motor overheating Protection
- Chamber overheating Protection
- Imbalance switch off
- Easily exchangeable rotors adaptability
- (Angle rotor, Swing out rotor, Drum rotor, Microplate rotor and Cyto rotor)

TENDER NO: PGI/MM/ Gene/125/09-10

Department of Medical genetics

Centrifuge:

- ❖ Compact Refrigerated centrifuge for speed up to 13200 rpm.
- ❖ Dial and digital display for easy setting
- ❖ Rotor for 24 x 1.5, 2ml tubes
- ❖ Adaptors for 0.2 ml and 0.5 ml tubes
- ❖ Motorized lid latch
- ❖ Brushless motor
- ❖ Autoclavable rotors
- ❖ Temp range 0-40°C
- ❖ Fast cool function, stand by cooling, Quick Run facility
- ❖ Acceleration Time \leq 13 Sec.
- ❖ Breaking Time \leq 12 Sec

TENDER NO: PGI/MM/ Gene/126/09-10

Microcentrifuge

- ❖ Refrigerated fast cool -9°C ambient
- ❖ CFC free large LED display and soft touch keypad.
- ❖ Speed upto 14000 rpm and 20000 g fast acceleration to maximum in less than 15 seconds.
- ❖ Brushless whisper quiet motor.
- ❖ Timer setting upto 99 minute.
- ❖ Hold function.
- ❖ Quick release rotor with 24 1.5/2.0 ml microtubes.
- ❖ Rotor for 0.2 ml PCR tubes

TENDER NO: PGI/MM/ Gene/127/09-10

Transilluminator

- ❖ UV transilluminator with filter 312 mm, size 20 x 20 cm.

TENDER NO: PGI/MM/ Gene/128/09-10

Autoclave

- ❖ Microprocessor controlled autoclave for 220/230v
- ❖ Microprocessor PID Temperature Controller to maintain accurate sterilization temperature
- ❖ Alarm and safety device like Door switch, pressure safety valve, Thermistor safety detector function, Overheating protection function, Door Protection function, Audible and visual alarms for end of cycle and error conditions Sterilization finished alert function, Safe to open door function, Safe to remove contents alert function (Cycle fully complete)
- ❖ Temperature 105°C to 121°C
- ❖ Dry scorch function for low water level
- ❖ Door close lamp for proper door closed mechanism

- ❖ Safety valve release pressure:200KPa
- ❖ Pressure Gauge Range:0-0.3MPa

TENDER NO: PGI/MM/ Gene/129/09-10

Water bath shaker with lid

- ❖ 28 Ltr., Digital, 240 V, 50/60 Hz

TENDER NO: PGI/MM/ Gene/130/09-10

Microscope Binocular

- ❖ The instrument should be sturdy, fitted with plan achromatic objectives plan 4x, 10x, 60x (spring loaded) and 100x (spring loaded) on a reversed quintuple nosepiece with click stops.
- ❖ The optical system should be color corrected for infinity with antifungus property built in transmitted Koehler illumination.
- ❖ The microscope stand should have co-axial focusing knobs for coarse and fine adjustment with upper limit stopper.
- ❖ Wide field high point eye piece 10x, 22 mm with diopter adjustment (+2 to -8) and rubber eye shield (pair) with interpupillary distance of 48 to 75 mm.
- ❖ Binocular head inclined at 30-45 degree with 360 degree rotation.
- ❖ Rectangular scratch resistant stage with right hand control with double slide holder and vernier calipers on X Y axis.
- ❖ Plan achromatic universal type condenser (dry type) with numerical aperture 0.9-1.2.
- ❖ Transmitted light filters for day light and neutral light.
- ❖ Illumination - Minimum 6 V, 20 W quartz halogen lamp.
- ❖ Power - 220 \pm 10 V, 50 Hz.
- ❖ Vinyl dust cover.
- ❖ All the necessary adaptor and power cord should be provided for functioning of microscope.
- ❖ Five additional halogen lamps should be provided.

TENDER NO: PGI/MM/ Gene/131/09-10

96 well electrophoresis system

- ❖ Horizontal Gel unit with removable gel casting tray with a comb having 96 wells.

TENDER NO: PGI/MM/ Gene/132/09-10

SPECIFICATION FOR 96 WELL FAST PCR

- ❖ Peltier based PCR system (four peltier beneath the blocks)
- ❖ Fast PCR reaction times of 30 minutes or less.
- ❖ 96 well Aluminum block format for 96 x 0.2 ml reaction tubes or 96 well reaction plate .
- ❖ Sample volume range should be 10-30ul.
- ❖ Temperature range 4.0 - 99 degree C
- ❖ Heated lid should be present to prevent any condensations or refluxing of the contents of the tube and thus eliminates the need for mineral oil overlay (lid should fits tightly over the tubes and thus no tube sealing should be required).
- ❖ Ramp Speeds: Heating - 5.0 deg C/Sec; Cooling 4.1 deg. C/Sec
- ❖ Thermal Non-Uniformity (95 deg. C, 10 seconds after clock start):< 0.5 deg C
- ❖ (55 deg. C, 10 seconds after clock start): <0.5 deg. C
- ❖ Fast and standard modes of operation to address to the current and future PCR needs.
- ❖ Reagents & Chemistries to perform fast PCR
- ❖ Authorized Thermal Cycler for PCR
- ❖ Block Temperature accuracy (+/-) 0.25 degree C over range of 35-100 degree C
- ❖ **Software**
 - Internal memory-storage of 100 complete PCR methods should be available.
 - Modifiable programs standard software functions should include variable up and down ramp speeds, auto extend/decrement for both times and temperatures, programmed pauses, time and date
 - User diagnostics:

- Diagnostics software should be there which helps in verifying heating and cooling rates, overshoots and check display functions.
- Commercial port- PCMCIA slot
- Auto restarts facility: should be there to allow for power outage and safe continuation of a PCR experiments after resumption of power.
- Should have software feature to calculate Tm by nearest neighbor method.
- Should have programmed methods for hot start PCR, Cycle sequencing, long PCR, Touchdown PCR.

TENDER NO: PGI/MM/ Gene/133/09-10

FLUORESCENCE MICROSCOPE WITH ALL ACCESSORIES

OPTICAL SYSTEM	UIS2 Universal Infinity corrected Optical system As per ISO standards
FRAME	Ergonomic Design frame with built in filters LBD-IF, ND6, GIF,ND25 and an empty slot for additional filter, condenser movement should be on both left and right side, built in Auto Photo Preset switch including Motorized Z-focusing with minimum increment of 0.01 micron,
OBSERVATION TUBE	Widefield Trinocular tube, inclined at 30 degree with 3 position light path selector (100:0, 20:80, 0:100), interpupillary distance adjustment range of 50-76mm.
ILLUMINATION STAGE	Built in Koehler illumination of 12V 100W transmitted light Ceramic Coated Rectangular Mechanical Stage (left handle) with stage size of 191 x 151mm and travel area of 76 x 52 mm. The movement of the stage should be based on wire diagram system. The stage should be capable of holding two slides at a time, stage rotation should be in the range of 250 degrees. The stage should have tactile covers for light touch stage movement.
CONDENSER	Abbe Condenser N.A. 1.1
NOSEPIECE	Interchangeable Sextuple (6 holes) revolving nosepiece with a slot for polariser or DIC slider with inward tilt. It should have a slot for Polarizer/DIC.
OBJECTIVE	Plan Apochromate Objectives: 10 X/ 0.25 W.D. 10.5, 20 X/ 0.75 W.D. 0.6 Plan Apochromat Objectives 60 X/0.9 W.D. 0.2 with corrected collar 100 X /0.5-1.4 W.D. 0.12 (spring, oil, iris)
EYE PIECE TUBE	Trinocular
EYEPIECE	Widefield paired eyepiece of 10X
LENS CLEANING KIT	Cleaning kit should be part of standard supply
FLUORESCENCE ATTACHMENT	Motorized universal reflected light fluorescence illuminator equipped with motorized shutter, field stop, aperture stop, motorized 6-position mirror unit cassette, including UV protection shield with 100 W mercury burner and built in hour meter in the power supply. Filter cubes for FITC, TRIC, DAPI Spectral aqua (400-440nm), Spectrum gold (540-560 nm), FITC +TRIC +DAPI, , clear
Digital Camera Attachment	Digital Camera with effective resolution of minimum 7.1 million pixel with resolution 7.4 megapixel gross. Shutter speed - 1/4000 sec - 16 sec (under various conditions) Memory :64 MB x D Picture Card 1.8 Inch semi transmissive TFT color Swivel LCD monitor with tiltable facilities in order to have convenient viewing. Metering system - Digital ESP multi pattern, spot Multi spot. Flash - Built in Flash & hot shoe for external flashes Image adjustments - Sharpness, Contrast, Saturation, Each adjustable +/- 5 steps.

	Optical zoom 1x-4x (upto 20x with 5x digital zoom) Image editing : Resizing, Trimming, Red eye flx, raw data editing Compatible adapter
Photography tube	The system should be compatible with applied imaging cytovision system
Power consumption	220-240 volt/50 Hz

TENDER NO: PGI/MM/ Gene/134/09-10

Mili Q System

- ❖ Two stage purification 5 micron and 1 micron polypropylene graded density wrapped type depth filter with low voltage 20 watts powered DC pump with noise levels of 50 bp.
- ❖ Product water should have Resistivity of 10-15 Megohm, TOC levels less than 30 ppb and Bacteria level of < 1 cfu/ml, Flow rate 8-12 litre/hour should have 3 stage purification step.
- ❖ Stage 1: Pretreatment cartridge with antiscaling compound and silver impregnated. Stage 2: A high flux thin film RO membrane with 100 Dalton cutoff and compatible with feed water quality of SDI upto 20 and free chlorine level of 3 ppm and conductivity of 2000us. System should have a conductivity meter before and after RO membrane to monitor. Stage 3: Self regenerating Electrodeionisation module with mixed bed ion exchange resin should have carbon bead at cathode and should not have conditioning cartridge before EDI. Monitoring : coaxial resistivity cell with cell constant 0.01 cm⁻¹ & autotest resistivity measurement. Unique temperature feed back pump with temperature compensation to 0.1° C for consistent flow rate irrespective of temperature changes. System should have an in built display to ensure the system operating parameters are displayed a all times. System should have Auto diagnostic (facility with Error No and Alarm code for easy Blow molded cylindrical conical bottom PE reservoir with 30 L capacity with sensor rod float switch and single 3 stage vent filter consisting of soaline and activated carbon and 0.65 micron hydrophobic membrane and have the option of using automatic sanitization module to prevent the bacterial growth and biofilm formation.
- ❖ Final product water having Resistivity of 18.2 Meg ohm. Cm, TOC 5-10 ppb, Bacteria < 1 cfu/ml, Pyrogen < 0.001 Eu/ml is delivered by point of use dispenser with rocker arm, volumetric dispensing and auto shut off facility. Stage 1: should have separate feed water specific purification cartridge and application specific polishing cartridge. The cartridge flowpath should have UPFLOW in purification step and DOWNFLOW in polishing step. Cartridge must remove volatile organics application specific cartridge both must remove volatile organics. Step 2; Should have a 5000D cutoff UF cartridge with UV between 5.6 and 7.65 over pyrogen challenge levels of 442 and 44200 EU/ml. Stage 3: Final filter 0.22 micron PVDF, stacked disc validated membrane. System must have a Footswitch for Hands free operation.
- ❖ Monitoring : System should have a provision to install built in TOC monitor with separate Uvlamp having optimum oxidation cycle for complete photo oxidation of organics and should measure the TOC range in the unit of 1 to 999 ppb confirming to USP 26 suitability test requirement.

TENDER NO: PGI/MM/ Gene/135/09-10

Electronic Balance

- ❖ High precision digital electronic balance from reputed manufacturers. Capacity 1500 gm.
- ❖ Readability 0.1 mg. Internal calibration. Weighing mode in grams/milligrams. Easy access door. 200 V, 60 Hz. Soft touch pad.

TENDER NO: PGI/MM/ Gene/136/09-10

Power Pack

- ❖ 50-500 V power supply with battery backup

TENDER NO: PGI/MM/ Gene/137/09-10

Elisa Reader

- Operating panel : Membrane Keypad with 4 arrow, 7 function and 11 number keys.

- Display : 4 lines by 20 characters LCD
- Warm up time : 3 min.
- Self Diagnosis : Checks filter disk, plate transport, electronics, main PC board, battery, memory
- Reading Speed
- Fast read mode : 6 sec, single wavelength; 10 sec, dual wavelength
- Step read mode : 15 sec. single wavelength, 30 sec dual wavelength
- Mixing Capability : 3-speed setting, programmable time 0-999 sec
- Compatible plates : Polystyrene flat, U and V bottom plates
8 and 12 well strip plates.
- Data Storage buffer : Last 10 plate data for end point or
Last 30 plate data for kinetic reads
- Report type : Raw, absorbance matrix, limit, cutoff concentration Curve
Fit, difference and kinetic
- Computer Interface : Bi-directional RS-232C serial communication port
- Memory backup : 5-years lithium battery
- Photometric methods : Single and dual wavelength
- Photo detectors : 8 silicon photodiode detectors for measurement
and I for reference
- Light source : Tungsten-Halogen 20W, 3000 hr life
- Spectral Range : 400-750nm
- Filter Capacity : 8 interference filters
- Band width : 10nm
- Standard Filters : 415,450,490, and 655 nm
- Induction range : 0.000-3.500 OD
- Resolution : 0.001 OD

TENDER NO: PGI/MM/Neuro/138/09-10

Department of Neurology

BIPAPS VISION VENTILATORY SUPPORT SYSTEM

1. Bilevel positive pressure ventilators(BiPAP)

- a. Capability to independently control inspiratory and expiratory pressure levels
- b. Inspiratory pressure range from 3 upto 25 cm H₂O or better
- c. Expiratory pressure range from 3 upto 25 cm H₂O or better
- d. Automatic leak compensation
- e. Apnea back-up ventilation
- f. Numeric display of set inspiratory / expiratory pressures, and leak
- g. Alarm for leak and disconnection
- h. Compatible integrated humidifier
- i. Flexible plastic tubing, at least 2m in length
- j. Built-in air filter
- k. Two adult full face masks with their head straps
- l. All necessary tubings, connectors, adaptors and cables.
- m. Should have the following modes of operation-CPAP, Spontaneous, S/T, Time, Pressure Control (PC).
- n. Should be able to ensure Average Volume in all modes of operation (except CPAP) up to 1500 ml or more.
- o. Breath Rate should be adjustable up to 30 BPM
- p. Timed Inspiration should be adjustable up to 3.0 sec with an accuracy of not more than +/- 0.10%.
- q. Rise time should be adjustable up to 600 m sec or more.
- r. The machine should be capable of triggering in inspiratory pressure within 6m sec or at 6 cc Volume to ensure better patient – machine synchronization.
- s. Unit should have integrated memory system to see the improvement in therapy on a day to day basis & real time display of Vte, RR, Leak etc., other than the Apnea alarm, high leak alarm, low Vte alarm, Min Vent alarm etc.

TENDER NO: PGI/MM/ Neuro/139/09-10

KEY POINT EMG/EP MACHINE

4 Channel modular EMG/EP system. It should be capable of conducting MNCV, SNCV, inching techniques, interference pattern, Decrement studies, SEP, etc with following building facilities for processing & analyzing the data:

- 100 % Automatic MUP with power spectrum for fatigue studies along with Single MUP, T/A analysis etc.
- Comprehensive nerve, muscle, roots inbuilt directory so that on line help can be taken without losing the data.
- On line help to guide placement of electrodes as well as conduction of tests.
- Integrated data management system along with automatic report generation.
- EMG finding system to automatically summarize the results of different tests conducted.
- Software for comparing normal value with patient results digitally as well as graphically.
- Inbuilt integrated software for EMG, NCV, SEP's, AEP, VEP and other advanced EMG/EP tests like H-Reflex, Blink Reflex and other advance features like, Heart Rate, Single fibre, Jitter analysis, P300, Temperature measurement etc.
- Superimposition, addition, subtraction of wave forms for analysis of results.
- Inbuilt LAN facility for easy transfer of data through normal telephone lines.
- The EMG should be stored on Hard disk and should not be limited to 10 sec., only
- Each software should have open programmes/user option program.
- Each test should have inbuilt individual technical parameter setting so that test can be started immediately.

Software details:

Following software should be made available in the equipment:

- QEMG with single/manual/spontaneous MUP, interference pattern, T/A analysis.
- Nerve conduction (NCV)-MNCV,SNCV, F wave & inching techniques, fatigue studies.
- Decrement: Upto 200 stimulation
- H-Reflex, Blink Reflex.
- SEP, VEP, AEP: Two separate averagers should be available to ensure two separate runs. It should minimum 20 open programmes/user option program.

Computer configuration: Desktop PC with latest configuration, Pentium IV, 17" color monitor, 256 MB RAM, 40 GB Hard disk, DeskJet color printer.

The system should have following technical features in built:

- Sensitivity -0.5 micro volts/div and display sensitivity 0.05 uv/div.
- Low frequency- 0.1-3 KHz - High frequency- 0.02 to 20 KHz
- Noise level – 0.6 uV
- Sweep speed – program dependent 0.1 ms/d-16 s/d
- Averagers- 2 Avg./ch is must
- Digital resolution – 16 bits
- Sample rate- 48.0 KHz per amplifier

Stimulator:

- Constant current electrical stimualtor.
- Visual stimulation- pattern stimulation with checkerboard, horizontal & vertical bars, flash stimuator and led google stimualator.
- Auditory stimulation- calibrated headset with click, Tone, burst, PIP, half sine, full sine with masking level- 15 to +99 d B pe SPL.

Electrode/Accessories:

Bipolar stim electrode=2	Electrode cable=2
Auto con. Needle electrode=3	Electrode cable=2
Auto sensory needle=2	Dan tens=3
Finger Electrode=4	Ground Electrode=4
Auto Scalp needle electrode=8	EEG/EP cup electrode=30
Fixation strap =2	Disp surface electrode=100
Gold cup electrode=2	Conductive Gel, 147 grms=4
Velcro digital ring electrode with cable=2	

TENDER NO: PGI/MM/ Neuro/140/09-10**VIDEO POLYSOMNOGRAPHY SYSTEM**

A complete sleep lab system is required which should have following specifications.

1. 40 channel amplifier comprising of 24 referential channels, 8 bipolar channels and 8 hi level DC channels with inbuilt pulse oximeter.
2. The amplifier must be based on Ethernet technology for connective the amplifier with acquisition system.
3. Should be supplied with complete sleep analysis hardware and software in order to record various physiological parameters like SaO₂, heart rate, air flow, leg movement apart form EEG, EKG, and EMG.
4. Should be supplied with all the transducers required for recording the pressure, respiration, body position etc.
5. The sleep staging software should have automatic and manual scoring and staging and also have advance apnea analysis, periodic leg movement analysis, ECG analysis, Respiratory disturbance index, Apnea/Hypopnea, index.
6. Provision for marking events along with sleep recordings using keyboard/mouse.
7. Complete programmable control of montage selection, acquisition sensitivity, filter settings, etc.
8. should have facility for user definable events and preferred recording and review settings such as amplifier set-ups, event palettes and view to be saved as specific user protocols.
9. Should have provision for notch (line) filter.
10. CMRR of amplifiers should be grater than 110 dB.
11. ADC resolution should be stored at 22 bits for best quality digital signal.
12. Should have impedance check facility on the head box an on recording PC.
13. The system should be supplied with inter core2 Duo PC with 512 MB DDR2 RAM or higher, network card, multimedia speakers, optical mouse, 80 GB or more SATA hard disk and shall operate under Windows XP operating system, 17" TFT color monitor, Laser printer, DVD Writer, UPS of suitable rating.
14. The system should be supplied on a highly durable mobile trolley form principals.
15. Should be provided with high resolution IP controlled camera with able to record both in day in color mode and able to record in black with white mode during no light conditions. The Day/night mode should be automatically switch able and camera able to adjust the mode depending on the light conditions. The camera should be having auto focus, auto Iris, Optical zoom of 10X or more.
16. Facility for exporting data using the image of the sleep data for review on any PC with any additional software is a must.
17. Should have facility to prune recordings to store only sections of interesting records.
18. The equipment shall confirm to international standards with certification authorities.

19. The amplifier should provide remote control start and stop recordings of recording or from recording PC.
20. Report generation to be customizable and in MS word format.
21. The test information database software which should include information of patient database, resource scheduler and it should be customizable according to the end user.
22. The distance between the acquisition station and amplifier to be minimum of 75 meters.
23. The electrode kit should be complete and not limited to 40 nos of gold disc electrodes, 1.5 meter; 20 nos of EEG conductive paste, 200 gm; 10 nos of skin prepping paste, 114 gm an one set of complete sleep transducers to quoted.
24. The bidder should provide the list of users pertaining to sleep lab systems installed with their contact numbers and date installation and user certificate form at least 2 institutes wherein the system is working trouble free from past 2 years failing which the bid will be liable for rejection.

TENDER NO: PGI/MM/ Neuro/141/09-10

SPIKE AND SEIZURE DETECTION SOFTWARE

Comprehensive software required fro automatically detecting spikes and seizures either offline or online recording of EEG. The software should have following specifications.

1. The software quoted by bidder must be compatible for use with Biologic EEG system.
2. The software should be based on neural network algorithms with good accuracy in detecting spikes and seizures in EEG recordings.
3. Able to view a multi-hour overview of spike and seizure detections, or focus on just the last few minutes with the online graph that displays spike density, seizure perception, and duration.
4. Should have facility to customize visual and audible notifications for spike burst and rhythmic burst seizures while the scan is in progress.
5. The software should be able to sort spike events into similar groups based on topology and /or morphology.
6. Should be able to compare left and right hemisphere discharges with side-by side tracings.
7. Should be able to examine spikes within the context of the EEG page.
8. Should be easily distinguished between Rhythmic burst vs spike burst with color coding.
9. Should have provision to review seizures and rapidly review spikes grouped automatically even while the recording is in progress.
10. Above all, the software should be user friendly and able to delete the false positive spikes in review mode after automatic detection and generate a report with waveforms/graphs etc.
11. The bidder should specifically mention the name of the software quoted and should provide adequate printed information of the software and should be prepared to provide a demo at site for a period on one week on the Biologic EEG system.

TENDER NO: PGI/MM/Paed Gas/142/09-10

Video-endoscopes for Pediatric Gastroenterology

- A. Video Upper Gastrointestinal Endoscopes
- B. Video Lower Gastrointestinal Endoscopes (Colono Videoscope)
- C. Video Duodenoscope
- D. Video Duodenoscope infant/ neonatal
- E. VIDEO Processors (RGB O/P)
- F. Xenon light source preferably with emergency lamp. Power supply as per Indian standards.
- G. LCD Color monitor
- H. Endoscopy reporting software and Hardware with color laser printer

Video-endoscopes:

- Slimmer, lighter and should possess high resolution image quality, fully immersible in disinfectant solution, in built scope identification memory chip for monitor display of scope's with automatic white balancing control etc. convenient distal end irrigation nozzle.
- All sizes of distal end outer diameters and inner channel diameters and also both pediatric and adult video-endoscopes should be quoted.
- Diagnostic and therapeutic endoscope models both.
- Latest models

TENDER NO: PGI/MM/ Paed Gas/143/09-10

**SPECIFICATIONS FOR ELECTRO SURGERY UNIT FOR GASTROINTESTINAL
ENDOSCOPY**

1. The unit should have all currently available electrosurgical regulative technologies in a single unit – with automatic output dosage.
2. Should be of latest technology
3. It should be individually configured to meet the requirements of specific indications and procedures of gastrointestinal Endoscopy.
4. TFT display
5. It should have CuT/CoaG of different modes preferably also with blend mode.
6. It should have two separate fractionated Cutting modes with controlled cutting with needle electrode and loop electrode for Papillotomy and Polypectomy procedures respectively.
7. It should have facility to switch between two different User Settings and modes using Remode button on the foot switch.
8. The unit should have certified standards.
9. It should be supplied with following accessories:
 - A. Reusable silicon patient plate with connecting cable – 2 No.
 - B. Universal adaptor for Endoscopic cable – 2 No.
 - C. Two pedal foot switch with ReMode Function facility – 2 No.
 - D. Trolley/Cart for mounting the units – 1 No.
10. Should function on power supply of Indian conditions.
11. Software with update facilities.
- 12.

TENDER NO: PGI/MM/Path/144/09-10

Department of Pathology

CLINICAL MICROSCOPE :

- 1). Infinity corrected optics.
- 2). Built-in Koehler illumination (6V, 30W halogen bulb) with field diaphragm.
- 3). Focus: Fine 0.1 mm to coarse 15mm per rotation, Torque adjustment for coarse focus.
- 4). Eyepiece tube : Binocular, inclination 10^0-30^0 with adjustable interpupillary distance, wide field 10X eyepieces.
- 5). Nosepiece: Revolving, interchangeable, quintuple for 4X, 10X, 20X, 40X, 100X (oil) objective lens (plan achromatic) with compatible universal condenser (NA 1.25 or more) with aperture diaphragm.
- 6). Mechanical graduate stage with specimen holder for 2 slides.
- 7). Anti mould treatment.

TENDER NO: PGI/MM/ Path/145/09-10

MULTIPURPOSE TABLE TOP CENTRIFUGE

Microprocessor controlled timer and digital display, 40x15ml 4 bucket, swing out rotor, Minimum speed 100-300 rpm, maximum speed 3000-5000 rpm, 20x10 ml angle rotor, motorised lid lock, with stabilizer

TENDER NO: PGI/MM/ Path/146/09-10

pH Meter:

pH/m V/ORP/Temp. Meter
Range pH-2.000 to 19.999
Resolution-0.001/0.01/0.1
Relative Accuracy ± 0.002
Range ORP/mV- ± 1999.9
Resolution-0.1
Relative Accuracy- ± 0.2 m V or 0.05%
Range Temperature-5 to 105 C
Resolution 0.1 up to 99.9C, 1.0 over 99.9C
Relative Accuracy ± 0.1 C
- Tricombination pH/ATC electrode
- Calibration buffer solutions
- Dust cover
3 yrs warranty

Salient Features

Bright & Big LCD display with back light
Simultaneous display of pH temperature measurements

TENDER NO: PGI/MM/ Path/147/09-10

MICROWAVE OVEN

Specifications:

Capacity: 25-35 Lits
Type : Microwave with Convection
Cavity : Stainless Steel
Type of Wave : Three dimensional Distribution wave
Programme Panel : Touch / Tactile
Display : LCD, with temperature display
Power Out put : 900-1000w Warranty : 1year

TENDER NO: PGI/MM/ Path/148/09-10

ELECTRONIC ANALYTICAL WEIGHING MACHINE

Specifications:- Electronic Analytical Weighing Balance with cover and metallic Pan with following features

- Least count 1.0 mg
- Range at least 1 mg to 3 k.g dual range optional
- Capacity –up to 3 k.g
- Power supply – 220-230 V (50-60 Hz)

TENDER NO: PGI/MM/ Path/149/09-10

GROSS SPECIMEN PHOTOGRAPHY UNIT (DIGITAL IMAGING SYSTEM FOR GROSS SPECIMEN PHOTOGRAPHY SPECIFICATIONS

Comprising of Digital camera, connected with computer along with appropriate software and mountable with photography stand

Digital Camera

Atleast 5 megapixel, High quality optics,
With atleast 4X optical zoom
Macro mode photography
Foot control device shall be preferable

Computer

High end computer atleast 3.0 Ghz with core to duo processor
Atleast 250 GB storage capacity Hard disc
2 GB RAM to handle and process images
Network compatible
21" TFT Monitor (touch screen shall be preferable with touch pen)
UPS

Softwares to integrate camera with computer

Dedicated software for Image annotation, editing and archiving software. Easily interfaced with Laboratory/ Hospital/ Information System

Stand:

Photographic stand with water resistant base and easily /freely movable camera holder for height adjustment with both side day light even and powerful illumination.

Justification:

Additional advancement in histopathology services to archive. Gross specimen photographs for patient care and teaching and research.

Remarks: computer and camera specification shall be acceptable latest at the time of procurement of system

TENDER NO: PGI/MM/ Path/150/09-10

SEMI-AUTOMATED SPECIMEN ADVANCE WITH MANUAL CUTTING ROTARY MICROTOME

Specifications:

Power supply 220-230 V, 50/60 Hz
Section thickness via precision stepping motor from 0.5 or less to 100 micron.
Trimming thickness from 1-2 micron onwards.
Horizontal feed of approximately 30 mm
Vertical specimen stroke 50-70 mm
Specimen retraction of varying microns.
Facility for precise specimen orientation in X,Y directions
Standard quick release specimen / cassette clamp can hold specimen blocks up to 60 mm.
Spacious removable section waste tray.
Knife angle position locking facility
Knife holder base and knife holders for
1). Low profile disposable blade
2). High profile disposable blade
3). Steel knife of profile "C" and profile "D".
Cold light source and cold plate dry type.
1). High quality High profile blades 30 X50
2). High quality Low profile blades 15X50
3). Steel knives "C" profile type, 16 cms or more - Five
4). Microtome Lubricant oil - 5 Bottles
Standard tools & accessories
Service and Operator Manual
Servo type appropriate rating voltage stabilizer

Note:

1) Warranty period – 36 months from date of installation.
Quote separately for comprehensive and non-comprehensive AMC from 4th year to 9th year.

TENDER NO: PGI/MM/ Path/151/09-10

HOT AIR INCUBATOR

heater of 1-1.5 kw, +5-200⁰C temp range,
LED digital display, 2-3 adjustable shelves, timer,
capacity at least 150-160 Lt with glass window.
Temperature range +5 - 80⁰C
Temperature display
Internal Capacity 150-160 lit
Air Jacket chamber
Microcomputer control system

TENDER NO: PGI/MM/ Path/152/09-10

4. PATHOLOGY DEPARTMENT (Histopathology)

Equipment :- **KNIFE SHARPENER**

- Effective sharpening of c-& d profile steel knives of size at least 22 cm in length
- Compatible to accommodate different knife lengths
- Provision for two different knife holders
- Provision for two honing technicians- coarse and fine
- Glass-plate oscillation
- Optional height adjustment
- Easy single-button operation
- Transparent plastic cover for dust free environment
- All standard accessories
- 10 packets of honing compound for fine and coarse honing.

TENDER NO: PGI/MM/ Path/153/09-10

AUTOMATIC TISSUE EMBEDDING CENTRE

Specifications:

Complete paraffin embedding system. Preferably 2-3 pieces modular unit including paraffin dispensing unit with hot plate, fast achievable temperature of cold plate and mould/cassette storage unit with following features:

- Digitally controlled touch screen display.
- Paraffin tank 3-5 liter.
- Cold plate to hold 60-80 standard size moulds.
- Peltier controlled cold spot for specimen orientation and making blocks for stat work.
- Easy drainage and disposal of melted wax.
(Drained wax should remain in melted form)
- Hand & pedal switch for control of paraffin flow rate
- Magnifying glass with cold light source.
- Preferably in-built heated forceps module for different size of forceps tips.
- Large tissue storage area.
- Cold plate temperature - -5 to -15 degree Celsius
- Hot plate - 55 to 75 degree Celsius
- Tissue storage - 40 to 80 degree Celsius
- Mould storage - 50 to 75 degree Celsius
- Paraffin tank - 40 to 75 degree Celsius
- Servo voltage stabilizer of appropriate rating
- Moulds of different size – 80 number
- Three years comprehensive warranty
- Power requirement : 220 – 230 V, 50/60 MHz
- Mention items included with equipment
- Also mention optional accessories separately

Department of Transfusion Medicine

TENDER NO: PGI/MM/TM/154/09-10

Blood mixing & weight monitoring apparatus

Compact instrument to provide smooth and gentle rocking for homogeneous mixing with anticoagulant; Volume should be set in 1 ml. increments. Provision of pausing collection and change programmed volume during pause. Micro-controller based program. Volume can be set from 1 ml to 999 ml. Display of weight and volume. Auto tare facility to accurate for the weight of the bag. Motor activated clamping at the end of the collection. Audio Visual alarm to alert in case of any abnormal condition. Auto Calibration. Over load indication.

TENDER NO: PGI/MM/ TM/155/09-10

BLOOD WEIGHING SCALE

Micro controller based Scale designed for weighing blood and blood components; LCD display, displays the weight and volume with an accuracy of 1 gm/ml.; Easy conversion of weight to volume and vice versa; Auto Calibration. Should have a built-in interface to integrate an Electronic Plasma Expressor

TENDER NO: PGI/MM/ TM/156/09-10

MOBILE BATTERY POWERED WORKSTATION

Battery powered Mobile workstation with automated hook-rack and shelf for handling of blood bags for leukoreduction, bacterial detection testing or pooling of blood components; 24 hook racks; adjustable working height; lockable swivel wheels; stainless steel body.

TENDER NO: PGI/MM/ TM/157/09-10

PLATELET AGGREGOMETER

Automatic optical aggregation system minimum 2 channel for aggregation test in whole blood, diluted blood, platelet rich plasma; should involve low sample volumes

(250-500 µls); should have facility for von Willebrand co-factor assays; should have facility to display the instructions for easy operation; ability to store standard curves for future use; able to calculate test results in percentage of activity; possible to run test in replicate with ability to monitor CV; able to display real time growth amplitude and slope data & possibilities to store & recall test curves & associated data; system should be able to run with windows type of software for ease of operation & convenient data reduction. The machine should be quoted complete with software and data reduction device including necessary liquid handling systems & reagents. Appropriate stabilizer or UPS with 1 hour battery backup.

TENDER NO: PGI/MM/ TM/158/09-10

SEMI-AUTOMATED BLOOD GROUPING & CROSS-MATCHING SYSTEM

System should be based upon solid phase technology; Should use reagent red cell antigens in dried format; Shelf life of the red cell antigens should be more than three months at the time of supply; Should have positive & negative control run as a protocol; Should be able to perform Antibody screening, antibody identification, crossmatching, syphilis, CMV IgG+IgM, Platelet antibodies & platelet crossmatch; Should have an incorporated wash step for processing of hemolyzed, rouleaux, lipemic or icteric samples System should contain a centrifuge, an incubator & a washer dedicated for the procedure; Reagents should be US FDA approved

TENDER NO: PGI/MM/ TM/159/09-10

TABLE TOP NON-REFRIGERATED CENTRIFUGES

Microprocessor control system; Automatic lid locking, auto lid lift ; swinging bucket rotor, stainless steel bucket; max speed not more than 5000 rpm, speed setting in increment of 10-100 rpm; 80 X 15 ML ; Precise temperature control upto 40 C; digital timer display with 1 minute increment ; Alarm display on Lid open, Imbalance, Over speed; Can spin microplates apart from test tubes if required.

TENDER NO: PGI/MM/ TM/160/09-10

WIRELESS DATA LOGGERS

Datalogger with an external temperature probe. Single remote module, with one external probe (digital-type sensor). Temperature Range : -55°C to +125°C.; Real Time Alarms and Collection of Data; System should be radio frequency based and approved for usage in India ; User defined for collection and transmission of data from 1 minute to 1 day. Sensors are calibrated. Accuracy of Temperature +/- 0.1C. Digital signaling for no loss of data.; Alarms are transmitted by landline, mobile phone, email, fax, and print out; User friendly software for easy monitoring of parameters; Software should be LAN enabled and can be upgraded. Parameters such as Temperature, humidity, CO2, Dry Contacts and Differential Pressure can be monitored.; Alarms are generated for any technical fault.

TENDER NO: PGI/MM/Uro/161/09-10

Department of Urology

Fluoroscopy C-Arm machine :

Specifications: -

A	<p>C-Arm LAO / RAO upto 90 degree. Cranial / caudal upto 30 degree Longitudinal movement at least 100 cm Image intensifier movement (forward/backward) Angulation speed at least 10 degrees/sec. C-Arm movement during lateral fluoroscopy projection</p>
B	<p>Generator & Tube:- (I)Generator :- Suitable high frequency minimum 80 KW output generator for serial radiography, to give 1000mA at 80 KV and 800 mA at 100 KV. Minimum exposure time of 1 m sec in automatic & manual mode. Automatic exposure control.</p> <p>(II) Image intensifier & monitors: 512X512 matrix for serial digital radiography, with high definition image intensifier TV systems and monitors with automatic dose rate control. Last image hold capacity. Multi-field image intensifier with at least 2 range input field (9”X12”). High contrast & high resolution monitors. Tele transfer of flouro screen should be possible online.</p>
C	<p>Storage & Data transfer: Can store upto 500 images. Images can be converted & copied into CDs / DVDs /HDD. Dicom software should positive.</p>

TENDER NO: PGI/MM/ Uro/162/09-10
FLEXIBLE URETEROSCOPE

Preferably with Chip on tip technology

Primary deviation should be at least 270 degrees, preferably in two axis, secondary deviation, if present is desirable.

Channel diameter should preferably be not less than 3.5 F.

Loss of deflection should not be more than 30-50 degrees after placing a 3F instrument.

Working channel should allow 200 micron and 360 micron laser fibres without loss of deflection exceeding 10-20 percent.

Waterproof and fully immersible in solution especially Cidex

Small diameter- as small as preferable

Should fit to all other standard Endourological accessories and armamentarium (should not require a special light source)

Durable, should at least cross 50 -75 cases.

TENDER NO: PGI/MM/ Uro/163/09-10

LAPROSCOPY AND ENDO-UROLOGICAL ARMAMENTARIUM

Specifications for Full High Definition Digital Camera

The system should have following features:

- It should have Pure digital signal with high definition video of 1920 x 1080p (min) native resolution and progressive scan technology both on camera head and console
- It should be compatible with Aspect ratio of 4:3 and 16:9
- The system should have Digital Zoom to enhance the quality of Image size & cross specialty standardization of the camera system, regardless of the telescope used.
- Digital zoom, white balance control and two peripheral controls on camera Head
- Integrated Gain/Shutter/Enhancement with automatic brightness control
- Video Outputs: two DVI, one SVHS, direct fiber optic output
- The system should automatically optimize all settings. The system should be ready- to- use as soon as it is connected to the camera control unit.
- The system should be touch screen Menu driven, thus allowing the surgeon to program the camera head functions as per the surgical needs & requirement.
- The system should have 8 surgical specialty settings.

Technical Specifications:

Image System:	1/3" Progressive Scan CCD
Pixels	1920 X 1080 pixels per chip (min)
Camera Head Weight	< 100 gms.
AGC:	Microprocessor controlled
Signal-to-noise ratio	65-75 dB
Video output:	S-video signal
	Digital Video Interface
Power Supply	100-240 VAC, 50/60HZ

HIGH RESOLUTION MONITOR (HD)

The system should have:

- Hi Definition Colored Monitor 26" Flat Panel Monitor
- PAL system compatible.
- Composite, S-Video and DVI inputs.
- Compact & Lightweight design.
- Resolution more than 1100 lines

LIGHT SOURCE

Qty-1

The system should have:

Electrical specification

- Primary: 100 - 240 VAC, 50/60 Hz, 400 W
- Fuses (2): 5.0A 250V

Light Engine

- Type: Red, Green, Blue LEDs (Should have LED's for light emission)
- Light outlets: 1
- Light intensity adjustment: continuously adjustable from 0 to 100% manually
- It should have Standby mode which will reduce light output to a minimum, preventing the light cable from generating excessive heat
- It should have Electronic Scope Sensing Technology (ESST), a special safety feature that helps prevent accidental burns caused by a light cable that is not connected to the scope.
- Intuitive simple user Interface with LCD touch screen
- Universal Jaw Assembly to adapt any make of Fiber Optic Cable
- Bulb life minimum 3000 Hrs.

INSUFFLATOR

Qty-1

- 45 liter of high flow & having LCD Display
- Microprocessor controlled & Software driven for real time pressure measurement.
- Soft approach pressure control for safe recovery of abdominal pressure
- Should have four mode & visual and audible alarms with min 0.1 L flow rate
- Internal leakage detection capability
- Integrated Gas heating
- Having internal venting system for safety
- Should have video on screen display
- Unit should include heated tubing, hose & yoke

LAPAROSCOPES: 10mm & 5mm

Qty-1

- Should be Fully Autoclavable
- Should be in both 0 and 30 degree
- Should be Wide Angled distortion free view
- Must be equipped with Universal Adaptor for other Light Sources
- Should have Yellow Sapphire Glass Tip Index for Optimum Evenness of Focus & Contrast

FIBER OPTIC CABLE**Qty-1**

- Should be at least 4mm diameter and it should be compatible to transmit the best picture quality from HD camera system.
- It should have the technology to ensures that the light source goes to standby mode when it is detached from the scope

TENDER NO: PGI/MM/ Uro/164/09-10

LAPROSCOPY HAND INSTRUMENTS:-

Specification:

- Veress Canula should have working length of 120mm(Including luer lock connector).
- Trocar sleeve-4 , with magnetic-ball-valve, metal sleeve straight distal tip, 10 mm capacity, working length should be 100mm.
- Trocar sleeve-4, with magnetic-ball-valve, with insufflation tap, metal sleeve standard, straight distal tip, capacity 5.5 mm, working length should be 100mm.
- Trocar with pyramidal tip, capacity 5.5 mm-4, should have working length 100mm.
- Trocar, pyramidal tip, for Trocar sleeves diameter 10mm-4, should have working length 100mm.
- Grasping and dissecting forceps, 5mm, curved left, both jaws opening, "Maryland-Dissector" WL 310 mm comprising: Jaw insert, sheath tube, isolated, handle with locking mechanism, swiveling. Should be Rotatable, dismountable and autoclavable.-5
- Atraumatic Grasping forceps, 5mm, both jaws opening, WL 310 mm comprising: Jaw insert, sheath tube isolated, handle with locking mechanism, swiveling. Should be Rotatable, dismountable and autoclavable.-5
- Laparoscopic Satinsky's vascular Clamp, atraumatic, size-10mm, long version, length of jaws 10cms, jaw depth 2.5 cms, straight sheath 30 cm with axial ring handling, ratchet with security locking device, at least 2 sizes compatible with 10mm port.-1
- Laparoscopic Bowel clamps at least 2, should be non crushing.
- Laparoscopic weck clip applicator compatible with 10mm port size and to accommodate Large size and Medium Large size weck clips(Hemolock clips)-1
- Curved Scissors, 5mm, curved left, both blades opening, "Metzenbaum", and WL 310 mm comprising: Jaw insert, sheath tube isolated, handle without locking mechanism, swivelling. Should be Rotatable, dismantable and autoclavable.-4
- Babcock tissue grasping forceps 10mm, atraumatic, jaws with multiple teeth, fenestrated-4
- Babcock tissue grasping forceps 5mm, atraumatic, jaws with multiple teeth, fenestrated-4.
- Universal grasping forceps, 5mm, both jaws opening, WL 310 mm comprising: jaw insert, sheath tube, isolated, handle with locking mechanism, swiveling. Should be Rotatable, dismountable and autoclavable.-4
- Hook electrode should have diameter 5 mm and working length 340 mm. -2
- HF Monopolar Connecting Cable should be 3 m long.-2
- Combination suction and irrigation tube with stop valves, working length should be 300 mm and diameter 5mm.-2
- Injection Cannula and puncture Cannula should have diameter 5mm, with 3 mm Luer connector, working length should be 415 mm.-1
- Grasping forceps 2/3 claws, working length should be 335mm and diameter 10 mm.-4
- Clip applicator should have working length 340mm and diameter 10 mm – dismantling, rotating applicator for 300mm titanium clips-2.
- Reducing adapter, for reduction from 10.0 mm to 5.5 mm.-2.
- Pediatric laparoscopic trocars :- 5mm length=10cm – 2nos. , 3.5mm length= 10 cm with magnetic field with pyramidal tip – 03 nos. , 3.5 mm length = 20 cm with magnetic field with pyramidal tip – 02 nos. , needle holder 3.5mm, length = 30cm – 02 nos.
- Pediatric laparoscopic accessories: 5mm laparoscopic clip applicator – 2 nos. , Needle holder 3.5mm length=30cm – 2 nos. , Dissecting & grasping forceps/Maryland (atraumatic) 3 mm; length 36cm – 3 nos. , Dissecting & grasping forceps Maryland (atraumatic) 5 mm, length 35 cm – 03 nos. , Bipolar cautery hook 3mm – 2nos. , Micosiccors 3mm – 03 nos. , Bowel grasper – 2 nos. , paediatric laparoscopic suction 3mm- 2 nos. , Laparoscopic reducer caps 10 to 5 mm – 3 nos.

TENDER NO: PGI/MM/ Uro/165/09-10

OPEN SURGICAL INSTRUMENTS

S.No	Name of instrument	Size	Qty
1	Bachaus towel clamp	100mm 4"	4
2	Needle holder (Duro grip)	180mm 7"	2
3	Needle holder (Duro grip)	200mm 8"	2
4	Needle holder (Duro grip)	230mm 9"	2
5	Needle holder De Bakey	180mm 7"	1
6	Needle holder De Bakey	230mm 9"	1
7	Needle holder De Bakey	250mm 10"	1
8	Needle holder De Bakey	195mm 7 ¾ "	1
9	Needle holder De Bakey	245mm 9 ¾ "	1
10	Hager Mayo seedy needle holder	200mm 8"	1
11	Wangansteen needle holder	275mm 10 ¾ "	1
12	Hegar Mayo needle holder	150mm 6"	1
13	Hegar Mayo needle holder	180mm 7"	1
14	Hegar Mayo needle holder	200mm 8"	1
15	Hegar Mayo needle holder	200mm 8"	1
16	Hegar Mayo needle holder	240mm 9 1/2"	1
17	Ryder needle holder	130mm 5 1/8"	1
18	Ryder needle holder	180mm 6"	1
19	Ryder needle holder	180mm 7"	1
20	Ryder needle holder	200mm 8"	1
21	Ryder needle holder	265mm, 10 1/2"	1
22	Crile wood needle holder	160mm 6 1/4"	1
23	Myo hegar needle holder	150mm 6"	1
24	Myo hegar needle holder	180mm 7"	1
25	Myo hegar needle holder	200mm 8"	1
26	Jameson needle holder	235mm 9/14"	1
27	Massan needle holder	265mm 10 1/2"	1
28	Castroviejo needle holder	140mm 5 1/2"	1
29	Castroviejo needle holder	140mm, 5 1/2"	1
30	Barraquer needle holder straight	120mm 4 3/4"	1
31	Barraquer needle holder straight with catch	120mm 4 3/4"	1
32	Reill needle holder straight	150mm 4 3/4"	1
33	Reill needle holder straight	120mm 4 3/4"	1
34	Finochietto needle holder	260mm, 10 1/4"	1
35	Skin straightening plate		1
36	Mouth gag set		1

37	Turner warvick ring retractor with blade		2
38	Turner warviek needle.		1
39	Baby mosquito (Hartmann) straight)	95mm 3 3/4"	
40	Baby mosquito (Hartmannn) curved	95mm 3 3/4"	8
41	Micro halstead mosquito straight	125mm 5"	4
42	Micro halstead mosquito curved	125mm 5"	4
43	Halstead mosquito straight	124mm 5"	4
44	Halstead mosquito curved	125mm 5"	4
45	Rankin haemostatic forceps straight	160mm 6 1/4"	4
46	Rankin haemostatic forceps curved	160mm 6 1/4"	4
47	Pocket instrument set		1
48	Breiskey Narvatil retractor with hook		1
49	Langenbeck green retractor	160mm, 6 1/3", 16x6mm	4
50	Longen beck green retractor	160mm 6 1/4" 25x6mm	4
51	Methew retractor	190mm 7 1/2"	2
52	Dever retractor	180mm 7" , 20mm	1
53	Dever retractor	215mm 8 1/2", 22mm	1
54	Dever retractor	230mm 8 1/2", 22mm	1
55	Dever retractor	300mm 12" , 25mm	1
56	Dever retractor	330mm 13 1/8" , 25mm	1
57	Dever retractor	300mm 12" 38mm	1
58	Dever retractor	300mm 12", 50mm	1
59	Dever retractor	300mm 12", 75mm	1
60	Kocher retractor	240mm 9 1/2", 75mm	1
61	Kocher retractor	240mm, 9 1/2", 80x50mm	1
62	Kocher retractor	240mm 9 1/2", 80x60mm	1
63	Langen beck retractor	240mm, 8 1/4", 42x13mm	1
64	Retractor trachea	160mm, 6 1/4"	1
65	Retractor trachea	160mm 6 1/4"	1
66	Retractor trachea	160mm 6 1/4" 25x6mm	1
67	Retractor trachea	160mm 6 1/4"	1
68	Vein retractor cushioning	200mm 8", 11x14mm	1
69	Vein retractor cushioning	200mm 8", 13x17mm	1
70	Vein retractor cushioning kocher	180mm 7", 10x10mm	1
71	Dissecting forceps rumel	230mm 9"	1
72	Skin retractor kilner	150mm 6"	1

73	Skin retractor Gillies	180mm, 7"	1
74	Skin retractor fisch	180mm, 7"	1
75	Guyan catheter guide	365mm, 14 1/2"	1
76	Kocher intestinal clamp	280mm, 11"	2
77	Fergusson suction instrument (olive)	2mm	1
78	Fergusson suction instrument (olive)	2.5mm	1
79	Fergusson suction instrument (olive)	3.0mm	1
80	Fergusson suction instrument (olive)	4.0mm	1
81	Fergusson suction instrument (olive)	5.0mm	1
82	Babcock	155mm, 6"	4
83	Bobcock	215mm, 8 1/2"	4
84	Debakey tissue grasping forceps	150mm , 6"	2
85	De Bakey tissue grasping forceps	200mm, 8"	2
86	Baby allis	150mm, 6"	4
87	Baby allis	120mm, 4 3/4"	4
88	Allis Thomas	200mm, 8"	4
89	Rib spreader finochietto burford		1
90	Self retaining retractor weitlaner	130mm, 5 1/8"	1
91	Self retaining retractor weitlaner	165mm, 6 1/2"	
92	Abdominal retractor oettingen	Complete set	1
93	Abdominal retractor oettingen masses	Complete set	1
94	Kidney basin medium size		2
95	Bowl medium size		2
96	Bowl large size		2
100	Penile clamp		1
101	Surgical dressing drums		1
102	Dressing trolley		1
103	Cidex tray		1
104	JJ stent removing forceps		1
105	Trocar set for SPC (Suprapubic cystostomy)		1
106	Curettes	200mm, 8"	1

TENDER NO: PGI/MM/ Uro/166/09-10

Extra Shock Wave Lithotripsy Machine (ESWL)

Technical specifications :

Main Features:-

	Therapy unit incorporating shockwave generation by electro-magnetic technology.
	Dual mode integrated imaging by ultrasound as well as x-ray.

	Integrated multipurpose patient positioning table .
	Isocentric positioning of shock head x-ray beam and ultrasound beam.
	Description:
A	Therapy unit with electro-magnetic shock wave source:-
	Electro-magnetic shockwave source.
	Therapy head three dimensionally movable with motorized positioning system with remote control and 50 degrees of movement along C bow for various windows for renal stones.
	Should permit both over table and under table position with above mentioned degrees of freedom.
	Focus distance (approx) 150mm.
	Focal pressure 36.6 to 90 Mpa.
	Optimum focal size capable of treating small & large stones.
	Energy flux density 01 to 0.7 mJ/meter ² .
	Shockwave frequency 1 to 2SW/sec or ECG Triggering.
	Energy level: variable levels from 7.1 to 45mJ.
B	X-ray localization system:
	Generator : High frequency x-ray generator (approx 20 KHz).
	X-ray tube: Fixed anode double focus x-ray tube.
	Image intensifier: 9" Tri mode image intensifier.
	Grid: 8:1 ratio 51 Vcm
	TV Camera: TV chain with CCD Camera.
	Radiography and Fluoroscopy : KV Range:40to 110KV range, MV range :0.2 to 8.
	X-ray C-arm should move isocentric to the shock wave source in both directions around the source in CC position, to get the third dimension (Z-axis) of the stone after getting the first two dimensions (X& Y coordinates)
C	Integrated Ultrasound locating system
	B/ W Image with linear convex real time scanner
	Transducer:3.5.to 5 MHz convex transducer for imaging with Isocentric Scanner Guide with manual & motorized movement.
	Ultrasound guided stone localization, patient positioning.
	Both x-ray and ultrasound software and hardware provision for parallel image grabbing, archiving, patient annotation and image processing with capability to have compatibility with the existing hospital information system and DICOM 3.0 capability.
D	Patient positioning system: Integrated patient positioning table with different capabilities.
E	Complete installation to be done by the equipment's supplier.
	Training: Cost to be born by supplier.
	Clinical training: Application training (upto one week) at the site or operator training at overseas reference site.
F	Standards: FDA and CE approved.
G	Major spares: Shockwave generator, coil, bellows. Ultrasound transducer.
H	Warranty- After installation three years with service & spares. Guarantee : Upto 5 years after expiry of warranty

TENDER NO: PGI/MM/Nephro/167/09-10

Department of Nephrology
HEMO DIALYSIS MACHINE

Blood Pump

Flow rate range : 15-600 ml/min for haemodialysis in 5 ml/min increment.
Accuracy : ± 10%

Effective blood flow rate should be calculated and displayed on the front panel in a real-time basis during dialysis automatically.

It shall be easy and safe to thread with bloodline diameter from 2 mm up to 10 mm.

Automatic set up and priming is preferred.

An emergency hand crank shall be provided for returning blood to patient when electrical power is lost. Direction of rotation shall be limited or visually indicated.

Heparin Pump

Infusion rate: 0.1 – 10ml/hr in 1 ml/hr increment

Accuracy: $\pm 5\%$

Positive and negative extracorporeal circuit pressure shall not affect the infusion rate.

Stop Time: Heparinization stop time (before end of treatment) 0-9hr 59min user-adjustable in 1 min increment.

Pressure Monitoring and Alarms

- Venous pressure monitoring
- Range: -60 to +520 mmHg. Accuracy: ± 10 mmHg
- Venous pressure alarm
- Adjustable high & low/alarm limits (M)
- Alarm limit can spread and be reset automatically on adjustment of blood flow (M)
- Arterial pressure monitoring Range : -300 to 280 mmHg. (M)
- Accuracy: ± 10 mmHg (M)

Arterial Pressure Alarm

- Adjustable high & low alarm limits (M)
- Alarm Limit can spread and be reset automatically on adjustment of blood flow (M)

Air Detection

- Alarm shall be activated for air bubbles and microbubbles over the entire blood flow range. (M)
- The tenders shall state the sensitivity of the detection mechanism in terms of air bubble size at particular blood flow rate. (M)
- On detection of excessive air on the venous line, the blood pump shall be stopped and the venous return line shall be clamped at a point below the air detector. (M)
- Ultrasonic sensor shall be used for preventing being affected by ambient light . (M)

Dialysate Flow Rate

- 200, 300, 500, 800 ml/min, user-selectable. (M)
- Accuracy : $\pm 10\%$ (M)

Temperature Control and Alarms

- Control range: 35.0 to 39.0 C in 0.5 C increment (M)
- Alarm limits: 33.5 to 40.0 C (M).

Conductivity Control and Alarms

- The dialysate conductivity shall be adjusted by setting the sodium concentration(M)
- For acetate dialysis, sodium concentration shall be adjustable from 125 to 150 mmol/l. in 1 mmol/L increment (M).
- For bicarbonate dialysis, sodium concentration shall be adjustable from 125 to 150 mmol/l and bicarbonate concentration shall be adjustable of ± 8 mmol/l from the original mixing concentration. (M)
- Conductivity measurement
- Range : 12.8 to 15.7 mS/cm. (M)
- Accuracy: ± 0.1 mS/cm (M).

Blood Leak Detection

- Alarm shall be activated for blood loss rate not greater than 0.5 ml/min into dialysate at max. dialysate flow of hemoatocrit about 20-25%. (M)
- Photo detector shall be used. (M)
- Different types of alarms shall be shown to differentiate a true blood leak incident or dirtiness. (M)

Volumetric Ultra filtration Control,

- Control range: 0 to 4L/hr given by the set values of UF volume and treatment time (M)
 - Accuracy: $\pm 1\%$ (M)
 - UF volume : 0 to 9.99L adjustable in 1 ml increment (M).
 - Treatment Time: adjustable up to 9 hr 59 min. in 1 min increment (M)
 - TMP monitoring: -60 to +520 mmHg. (M)
 - Isolated ultra filtration process shall be provided. (M)
-
- The equipment shall provide a reminder message as the end of filter's service life or maximum number of treatment is about to be reached.
 - The equipment shall have an automatic program and guidance message for changing the filter, which is including emptying and filling of the fluid filter. (M)
 - The equipment shall perform a flushing for the fluid filter during treatment automatically in a fixed time slot not less than 1 hour. (M)

Dialysis Parameter Display

The equipment shall digitally display the parameters:-

- Arterial pressure (M)
- Venous pressure (M)
- Blood flow rate (M)
- Dialysate conductivity (M)
- TMP (M)
- UF volume (M)
- UF rte (M)
- Remaining treatment time (M)
- Heparin infusion rate (M)
- Alarm information in text format (M)

Online Clearance Monitoring

- Built-in device for measurement and monitor of effective urea clearance (K), dialysis dose (Kt/V), and plasma sodium (Na) automatically during treatment (M).
- The measurement of effective urea clearance (K), dialysis dose (kt/V and plasma sodium (Na) shall be performed in non-invasive, realtime mode without additional disposable required during treatment (M).
- Measuring accuracy
- Clearance measurement accuracy: $\pm 5\%$ (standard deviation) (M). Kt/V determination accuracy: $\pm 9\%$ (standard deviation) (M)

Battery Backup

- The equipment shall be able to operate and monitor the extracorporeal circuit without interruption for at least 15 min. in case of AC power failure by backup battery. (M)
- Machine should have protection against the ingress of foreign bodies and dripping water.
- Air detector cover, pin holder and side clamp should be unbreakable.
- The machine should have blood pressure monitor BPM.
- Facility for heat, chemical disinfection and auto-switch off.

TENDER NO: PGI/MM/ Nephro/168/09-10

SYRINGE INFUSION PUMP

Specification

- Ac powered 220 with battery back-up (upto 2 hr max). Stackable in combination.
- Infusion Mode : Continuous, preset volume, preset time and intermittent.
- Programming Modes: Volume and mass Unit. Volume (ml/hr) and mass units infusion programming.
- Infusion Rate Range : 0.01-200 ml./hr.
- Preset Time Range : 4 secs to 24 hours or stat. accepts and automatically senses the size of syringes from the major manufactures.
- Inline pressure sensing and occlusion alarm volume infused totalizer.
- Accepts electrical input from one cable for stacked pumps
- Automatic anti-free flow locking device
- Automatic and manual syringe loading.
- Accepts all major syringe in sizes from 10ml to 50/60ml.

TENDER NO: PGI/MM/ Nephro/169/09-10

DEFIBRILLATOR MONITOR RECORDER WITH PACER

- Biphasic Defibrillator Monitor Recorder
- Operable both on AC mains and Rechargeable battery.
- Capable of Delivering up 360J.
- LCD monitor size 5.5" color TFT.
- Recorder should automatically record events and ECG during defibrillation episode).
- Power supply 220V AC 50 Hz.
- Pacing Rate 40-170 ppm.

TENDER NO: PGI/MM/ Nephro/170/09-10

SPECIFICATIONS FOR AUTO ANALYSER

1. A free standing system console with colour monitor, onboard Bar Code Reader and Direct Primary Tube Sampling Capability.
2. System should be Fully Automatic, Discrete and Random Access Analyzer of a reputed make capable of analyzing General Chemistry (Substrates & Enzymes), Proteins, therapeutic drugs and drugs of abuse. Onboard I.S.E. (Na, K, Cl, Ca & CO₂) should be available.
3. Throughput : At least 600 tests per hour.
4. The system should have capability of at least 25 chemistries (with minimum 3 reagents/chemistry) and 5 I.S.E. based chemistries on board. Reagent bar code ID should be available. Reagent loading while running should be possible.
5. System should have true STAT facility with positive sample identification of the STAT sample. The loading of sample should be possible while the system is running. It should be possible to intermix the sample type (Serum, Plasma, Urine and CSF). Micro sampling with low sample detection should be possible.
6. The system should have bar-code reading capability laser based reader. Positive sample identification should be available for all the sample positions including STAT. There should not be any fixed positions for STATS/Controls.
7. The system should have level sensing for both samples and reagents.
8. System must have holographic diffraction grating optics with a long life lamp source with at least Five years guarantee (preferably Xenon Flash Lamp).

9. On board washing facility for cuvettes and probes. The system should have permanent quartz glass cuvettes. Washing system should include cleaning and checking of individual cuvettes after every wash at all the usable wavelengths.
10. Reaction carousel should be maintained at 37 Degree C preferably by phase change heat pipe system.
11. Should have upgradable Hard Disk based software which is capable of real time Host Query bi-directional function.
12. Should have following operating interface features:
 - (i) Choice of report formats with customized header.
 - (ii) Capable of generating patient summary reports.
 - (iii) User defined reference ranges.
 - (iv) 40 special calculations for all chemistries including user designed chemistries.
 - (v) CLIA compatible calibration verification software.
 - (vi) Absorbance vs time plots both on screen and in printed formats.
 - (vii) QC action log for documentation of QC result violation. Upto 50 definable controls.
13. The manufacturer should preferably have ISO 9000 certification and US FDA approval.
14. should include :
 - a) Electronic deionisation water supply unit for Deionised water for the continuous supply of water to the instrument.

TENDER NO: PGI/MM/ Nephro/171/09-10

LABORATORY REFRIGERATOR

1. Microprocessor control system with digital display.
2. Should have Eye Level Digital LED display of actual inner temperature and set temperature of Refrigerator.
3. Should have Two Sensors, One for Upper Cabinet Temp. and the other for Lower Cabinet Tem. Of the Freezer as well as to see the average temp. of the Freezer.
4. Temperature range adjustable from 2 deg C to 8 deg C with an increment of 0.1deg.C.
5. Instrument should give the malfunction alarm both in audible and flashing.
6. Malfunction alarm should include High temperature; low temperature, Sensor failure, and power supply failure, Door Open and Low Battery.
7. Should have key on control panel to silent alarm.
8. Provision should be there inside the cabinet to fix the bottles containing Glycerin or Glycol for upper and lower temperature sensors.
9. Should have calibration key to calibrate temperature sensors of both upper and lower cabinet.
10. Should have provision to test the alarm function.
11. Should have built-in chargeable battery to display cabinet temperature for at least 72 hours after power failure.
12. Should have switch for internal florescent lighting with 10-20 watt tube.
13. Should have adjustable shelves, at least 5 nos.
 - (a) The machine should be capable of working with broad range of voltage from 200V to 250V and A maximum ambient temperature of 32 deg C without compromising the performance.
14. Should have caster wheel for easy movement.
15. Body should be made of Acrylic finish backed on zine galvanized still with rounded corner.
16. CFC free refrigerant & insulation.
17. Remote alarm system.
18. Automatic Cyclic Defrosting System.
19. Should be 14001 and CE certificate.

TENDER NO: PGI/MM/ Nephro/172/09-10

SPECIFICATION OF CO2 INCUBATOR

- Microprocessor PID controlled temperature, plus chamber direct sensing.
- Temp. Range: Ambient+5 to 50 deg. C
- Temp. Uniformity: ± 0.2 deg. C
- Volume : 164 liters (5.8 cu.ft).
- Direct Heat & air (DHA) Jacket System
- Humidity: Natural vaporization with water in SS humidity pan
- Humidity level : 93-98 %Rh
- CO2 Range: 0.20 %
- Automatic stop mechanism of CO₂ gas on door opening
- Door mounted control panel
- Gentle air circulation system by fan
- Door switch activates fan off
- Auto calibration of CO2 level
- Patented copper alloyed stainless steel “inCu-saFe” construction.
- Prevents both contamination and corrosion.
- A remote alarm contact
- Audio & visible alarm for both temp. & CO2 level
- Independent overheat protection circuit and sensor
- Safety: ISO 9001 certified
- Dimension : 620X685X900mm (WxDxH)

TENDER NO: PGI/MM/ Nephro/173/09-10

SPECIFICATION OF DEEP FREEZER – 80 °C

- Should have 8mm latest generation of insulation to improved the quality and space.
- Vacuum insulated panels.
- Storage capacity: 48000 – 2ml vials on 0.75m².
- The operating time of the compressors should be reduced and for electricity consumption.
- The autonomy in the event of a temperature rise is improved by over 22%
- Temp range should be : approx. – 86 °C.
- Volume : Approx. 510 or more.
- Should be made of high quality stainless steel cabinet
- Safety key lock should be included in the supply
- Pressure regulation: Yes
- Insulated inner doors should be standard supply
- Castors for easy transportation and mobility.
- Cable port for different attachment
- Audible visual alarm for time and temperature alarm
- Battery back up option should be provided as optional
- Remote alarm contact should also be provided as option.
- CO2 backup system should be quoted
- LN2 backup system should be provided as optional accessory.
- Provision of minimum at least three compartment should be present.

TENDER NO: PGI/MM/ Nephro/174/09-10

AUTOMATIC BLOOD CELL COUNTER

1. System should be fully automated, Microsoft windows based operating system with LCD/TFT colour monitor, printer and with full on board quality control.
2. System reportable parameters should include WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, NEUT%, NEUT#, LYMPH%, LYMPH#, MONO%, MONO#, EOS%, EOS#, BASO%, BASO#, RETI#, RDW, MPV, PDW & PCT.

3. System should be able to give morphology result for WBC, RBC & platelets in the form of left shift, atypical lymphocytes, blasts, immature granulocytes, RCB, anisocytosis, microcytes, macrocytes, hypochromia, hyperchromia, platelet clumps and large platelets.
4. System should do discrete testing for following modes: CBC mode; CBC+Diff mode; CBC+Diff+Reti mode, CBC+Reti mode.
5. Linear ranges for the system should be: - WBC=0.00-45-x10³/μ l; RBC=0.007.50x10⁶/ l; HBG=0.0-23g/dL; PLT=0.00-3500x10³/μl.
6. System should have clot filter, autosampler, proper waste disposal and should be convenient to use.
7. Aspirating sample volume and result time per test of the system should be between 50-160μl and 30-60 seconds respectively.
8. Throughput of system should be 50-130 samples/hr.
9. The system should be capable of storing the data of upto 5000 patient samples.
10. Operating temperature of system should be bdtween 15-30 °C.
11. Power supply required should be in the range of 100 -120V/220-240V (50-60Hz).

TENDER NO: PGI/MM/ Nephro/175/09-10

PH METER

- pH/mV/Temperature Meter is designed & manufactured by (ISO 9001-2000 COO).
- 3 Decimal place pH resolution.
- 3 point pH calibration
- Choice of pH input.
- Differential pH input.
- Security code protected user data
- Calibration reminder
- 500 reading memory
- Comphrehensive data logging options.
- GLP supported model.
- RS 232 serial interface and IrDA printer interface.
- Automatic Buffer recognition & temperature compensation
- Alarm outputs (open collector and audible)
- Anologue recorder output.
- Wall mounting option
- Back lit 1/8, VGA monochrome liquid crystal display (LCD).
- Multi – language operation
- Power supply 230 V

pH	mV	Temp.
Range-2000to 20.000pH	+1999.9mV	-10 to +105C
Resolution 0.0001/0.01/01 pH	0.1/1mV0.1 C	
Accuracy ±0.003 pH	±0.2 mV±0.5 C	

TENDER NO: PGI/MM/ Nephro/176/09-10

BI IMPEDENCE ANALYZER

Technical:

- Multi – frequency 5, 50, 100 and 200 KHZ's.
- Raw data Impedance, phase angle, resistance, reactance, capacitance, 2 channel 8 points direct measurement.
- Calibrated for children, adults, older population, normal, lean, obsess, clinically diseased patients.
- Calibratd for different ethnicity.
- Large colour display.
- Bluetooth.

- Certified medical isolated USB
- Stores 1000 patients results.

DIRECT ASSESSMENT IN ANY CONFIGURATION:

- Single assessment
- Continues monitoring.
- Real time monitoring.
- Segmental direct monitoring.
- Abdominal director monitoring.
- Pre – defined testing monitoring.
- 5 Segmental assessments.
- 3 segmental assessments.
- Star Assessment.

45 Different Parameters in Following Category:

- Dry weight for renal patient
- Body cell mass (BCM).
- Glomerular filtration rate (GFR) using plasma creatinine.
- Fluid status (ECW/ICW and interstitial – fluid extravascular etc.)
- Body composition
- Nutritional status
- Mineral
- Protein
- Creatinine clearance
- Malnutrition screening

Abdominal composition.

- Visceral, subcutaneous fat.
- Visceral, subcutaneous fat. Depth.
- Metabolic syndrome risk
- One side full body assessment
- Both right/left full body assessment
- Both right/left full body differences
- Multi-segmental muscle volume, muscle mass, for upper and lower arms, torso, upper and lower legs assessment.
- Multi – segmental ECW and ICW for upper and lower arms, torso, upper and lower legs assessment.
- Upper arms cross sectional area of muscle, fat and bone
- Upper and lower arms, torso, upper and lower legs multi – segmental assessment.
- Z score
- Vector analysis
- Blood pressure analysis
- Blood pressure & cholesterol risk
- Statistical analysis
- Complete with software.

TENDER NO: PGI/MM/ Nephro/177/09-10
NEAR INFRA RED REACTANCE ANALYZER

Provides fast accurate measurements of essential body fat, reserve body fat, and excess body fat. Advanced body composition analyzer FDA 510(k) cleared and carries the CE medical mark for international use.

Provides the following results:

- Percent body fat total body fat (pounds or kg).
- Weight of “Essential body fat.”
- Weight of “Reserve body fat”
- Weight of “Excess body fat”
- Total lean mass (pound or kg) basal metabolic rate total body water body mass index.

Product Features :

- FDA 510(k) cleared.
- European medical CE (0459) marked
- Portable (battery Operated)
- Includes power adapter for use with AC Electricity.
- Easy to use
- No special training needed
- No pre - test protocols
- Includes powerful software for post measurement reports and client tracking.

Includes an attractive, durable carrying case with all needed accessories:

- 6 Rolls of thermal paper (for test results)
- Operations manual
- Light shield
- Optical standard
- Biceps locator
- Snap shot of your health & fitness form (for post test interpretation)
- Computer Communications cable.
- Bodyometry software
- Couon software
- AC adapter
- 6 AA Batteries.

Calibrated for adults age 18 and above, and includes a separate calibration for children from the ages of 5-17.

Powerful analysis software with body metry & body composition/fitness analysis report

- The importance of body fat
- The importance of weight
- The body’s use of food energy
- Nutrition & exercise recommendations
- Generte “Update” reports to evaluate progress.

Physical analysis ratings report

Provides a complete fitness assessment package to evaluate:

- Cardiovascular & Respiratory capabilities
- Aerobic capacity
- Body composition
- Flexibility

- Muscular strength
- Muscular endurance.

TENDER NO: PGI/MM/Micro/178/09-10

Department of Microbiology

BOD Incubator:

Specification:

Double walled, with the temperature range of +5 deg to 50 deg, ± 1 deg
 Thermostat controlled inside chamber and shelves of stainless steel and out side of mild steel sheet, fitted with two air circulating fans and acrylic transparent door inside.
 Size: 900x650x580mm
 Capacity: 336 liter
 Digital temperature controller cum temp indicator with sensitivity of ± 0.5 deg

TENDER NO: PGI/MM/Radio/179/09-10

Department of Radiology

Technical specifications for mobile C-Arm digital fluoroscopy unit for intervention for department of Radio-diagnosis

The mobile C - arm digital fluoroscopy system should be state of the art machine with motorized C-arm movements.

1. C-Arm mechanical movements

- The C-arm should be iso-centric.
- The C-arm should be mobile and not floor mounted or ceiling mounted.
- 9" Image Intensifier or more.
- 30 inches (73cm or more) depth in arc of C-arm or more.
- +90deg / - 45 deg minimum motorized movement in orbital.
- 360 deg motorized rotational movements.
- 17" (43 cm) motorized vertical travel.
- Digital display of all angles in CRAN / CAUD / RAO / LAO.
- Table side controls for motorized c-arm movement, table movements, collimator controls, Image magnification, and emergency switch to stop all movement in an emergency.
- The orbital, vertical and rotational movement should be motorized and all the controls should be present at the table side.
- Orbital speed should not be less than 9 degree/sec and rotational speed should not be less than 9 degrees/sec.
- Manual override clutch which disengages the motor mechanism for orbital movements should be provided.

2. X-Ray generator

- High frequency generator, 40 kHz or more, 15kW or more.

- Maximum cine KV – 120 KVp or more.
- Maximum cine mA – 150 mA or more
- Maximum fluoro KV – 120 KVp. or more
- Maximum continuous fluoro mA – 6 mA. Or more
- Should be able to work for long procedure times without heating. .

• **3. X-Ray modes through generator**

a. Continuous fluoroscopy

- Voltage : 40KVp to 120KVp or more
- Current : upto 6mA or more

b. DSA

- Voltage range : 40KVp to 120KVp
- Current : Upto 150 mA
- DSA should be possible at upto 8 frames/sec.

4. X-Ray tube unit

- Rotating anode x-ray tube with 0.6mm focal spot (dual focus with 0.3 mm focal spot in addition is preferable).
- Anode cooling rate – 800 Watts + or more
- Anode heat storage capacity – 300 KHU + or more.
- Housing heat storage capacity – 1500 KHU.
- Housing heat dissipation rate – 150 Watts.

5. Collimator system:

- Motorized hexagonal collimation.
- Motorized semitransparent and opaque collimation, which can be rotated.
- Automatic positioning of soft shutter with C orbital motion (LAO / RAO).

6. X-Ray Image Intensifier

- Triple field 23cm / 15cm / 10cm image intensifier.
- High resolution. Mention LP/cm.
- DQE 65% or better.
- With high resolution input phosphor screen.
- Grid ratio: 10:1.

7. TV system

- 1000 X1000 X 12bit CCD (minimum).
- Photo diode controlled ADR (auto dose regulator).

- c. Motorized Iris.

8. Monitors

- a. Number: 2 monitors with suitable monitor trolley.
- b. Size: 18" flat panel monitors.
- c. Features: high brightness, contrast, progressive scan and antiglare, which is flicker free.
- d. Brightness: minimum 650cd / m².
- e. Contrast: 600 : 1.
- f. Resolution: 1280 x 1024.
- g. Has to conform to DICOM calibration.
- h. Capable of scaling non-native resolution formats.
- i. Dual video inputs: DVI (Digital Video Interface) and analog VGA interface

9. Digital imaging and acquisition system

Workstation with suitable specifications and storage capacity.

- a. Matrix: 1024 X1024 X 12bit.
- b. Modes
 - Continuous fluoroscopy.
 - DSA upto 8 frames / sec online.
 - Roadmap online.
- c. Minimum total storage capacity of 15,000 images in 1024 x 1024 format.
- d. Acquisition, display, storage and replay at 1024 X1024 X 12bit at 8 frames / sec in all the above 5 modes are required.
- e. Acquisition at 8 frames / sec in 1024X1024 matrix for 8 secs.
- f. Capable of saving cine and images in fluoro, cine, roadmap and DSA modes.
- g. CD storage and DVD storage with suitable integrated writer.
- h. Viewer software to see the cine loops.
- i. Integrated DICOM interface with DICOM: CD writing, store SCU, print SCU.
- j. DICOM viewer: Should be automatically loaded on the CD. It should have Window level and width as post processing functions. DICOM viewer should also have edge detecting, zoom, replay in zoom functions.
- k. DICOM viewer in CD and work station should be able to view DSA Cineloops too.
- l. Complete patient data management system with patient, procedure and run information. Storage, retrieval of information through patient, run and procedure name.
- m. Cineloop viewing as well as frame by frame viewing.
- n. All functions operation through keyboard and mouse. Query database using key words.

10. Image processing

- a. Edge sharpening both real time and offline.
- b. Contrast and brightness, both real time and offline.
- c. Mosaic
- d. Recursive noise filters.
- e. Stenosis and length measurement.
- f. Annotation.
- g. Land marking.
- h. Pixel shift.
- i. Selective pixel shift.
- j. Image negation.
- k. Software image collimation.
- l. Zoom.
- m. Automatic replay of the cine loops.
- n. Automatic save of cine loops in cine and DSA modes.
- o. Flip in all axes.
- p. Convert fluoroscopic images with contrast into DSA and vice versa.
- q. Remasking.
- r. Show mask and change mask for DSA.
- s. Image format conversion to BITMAP, JPEG, AVI and TIFF formats for presentation.

11. Power supply requirements: Single phase 230volts AC, 15amps, 50Hz.

12. Angio table

- Angiographic patient positioning table with floating carbon fibre table top and motorized up-down movement.
- Manual longitudinal travel : minimum 800 mm (more, upto 1200 mm will be preferred)
- Manual transverse travel : +/- 200mm
- Vertical travel : 300mm
- Minimum vertical travel speed : 15mm/sec
- Maximum unobstructed overhang (without any metal railings for the support of the carbon fibre) : 1200mm
- Total length of radiolucent top : 2000mm or more
- Length of table top : 3275 mm or more.
- Type of table top : carbon fibre with <1mm aluminium equivalent at 100kv.
- Vertical movement of table top should be motorised and longitudinal and transverse movement can be manual with electromagnetic lock.
- Patient weight carrying capacity : 150kgs
- Patient arm support

- Rubber mattress (2 Nos.)
- IV pole
- Table side lead drapes

13. Essential accessories

- a. 1 set of sterile cover for I I and X-Ray tube.
- b. Six nos. lead aprons with thyroid collar.
- c. Suitable UPS with 20 min. back up for the digital system.
- d. 10" * 12" cassette holder

14. Optional items

- a. DICOM worklist enabled
- b. Extra 18" monitor with similar specifications for console room.

15. Installation:

Free of cost. It includes dismantling and removing any existing machine in the room and minor civil modifications if required as well as suitable flooring and wall furnishing (PVC flooring in console and machine room and wall tiles up to false ceiling).

16. Warranty :

- Comprehensive warranty for five years.
- Quote separately for 2 year warranty.

17. CMC :

Post warranty comprehensive maintenance contract for five years.

18. Uptime:

Uptime during warranty and comprehensive AMC will be 95%.

19. Conditions and Certifications –

- The C-arm DSA system should be certified for radiation safety by AERB, Government of India or should have equivalent international certifications like CE, FDA etc.
- Adequate service infrastructure is essential. (Also give a list of equipments installed and operating in India)

Specifications: Automated Blood Cell Separator-Apheresis Machine

The Apheresis Machine should have facility for all blood component collection including peripheral blood stem cells, platelet pheresis, red cell pheresis, granulocyte pheresis, lymphocyte pheresis and therapeutic plasmapheresis with both single & double access.

1 Operational Requirements

- 1 Fully automatic, microprocessor controlled with access operator control panel such as touch screen.
- 2 Should perform both single and double access Apheresis

2. Technical Specifications

- 1 It should be based on continuous flow technology during both double & single needle access to minimize procedure time & increase the efficiency.
- 2 Equipments should ensure all donor safety parameters before starting the procedure and at all time during operation.
- 3 Capable of priming with normal Saline and or mixture of Normal Saline and ACD
- 4 In – built cuff pressure and prompt grip for donor comfort and adequate blood flow.
- 5 It should have auto cuff mechanism for automatic inflation & deflation.
- 6 Facility to use platelets additive solution and / or normal Saline for re-suspension and storage fluid in place of plasma
- 7 Advance help menu should be available at any time during alarm conditions
- 8 Lower extra corporeal volume, less than 200 ml in case of both single and double needle apheresis
- 9 Yield estimator to help decide yield, volume to be processed and suggested storage fluid and should have optical sensor at PRP line for online monitoring of component collection against the desired yield.
- 10 Capable of downloading or printing full procedure report any time after procedure.
- 11 Should have rechargeable battery to store data and restart in case of power failure.
- 12 Continuous monitoring of collection to avoid any contamination through Interface detector.
- 13 Inlet and return flow rates up to 100ml/min
- 14 Should have fluid leak detector for donor safety
- 15 In case of inlet line occlusion, machine should be able to re-start automatically.
- 16 Should have provision for saline re-infusion to donor.
- 17 Should be able to regulate ACD delivery, should not have bolus return of blood to ensure reduction in citrate reaction.
- 18 Should have automatic door lock for centrifuge during the procedure.
- 19 Lockable castors/ wheels for mobility.

3. System Configuration Accessories, spares and Consumables

- 1 System as specified-
2. Apart from this 10 consumables should be provided
- 3 Consumables should be available for atleast 10 years after the sale of machine.

4 All consumables required for installation and standardization of system to be given free of cost.

5 The final cost of the machine will include

- a) Original cost of the machine,
- b) AMC,
- c) Cost of consumables for evaluation.

4 Power Supply

1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

2 Suitable Servo controlled Stabilizer/CVT

3 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

5 Standards and Safety

1. Manufacturer should be ISO certified for quality standards.

2. Comprehensive training in – house and for 2 persons at a site where machine is regularly operational

6 Documentation

1 List of installations in the country along with user's certificate should be provided.

2 List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.

3 List of important spare parts and accessories with their part number and costing.

4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist.

5 User/Technical/Maintenance manuals to be supplied in English.

TENDER NO: PGI/MM/ Haem/181/09-10

: Nephelometer for Free-Light Chain Quantification

1. Fully automated nephelometric system for precise quantification of body fluid proteins including free light chains, immunoglobulin heavy chain/light chain pairs, immunoglobulins (IgG, IgA, and IgM), β 2-microglobulin and high sensitive-CRP.
2. The system should have at least two measuring modes and the quantification sensitivity of the equipment for free kappa and lambda light chains @ 1/5 dilution of the samples should be less than 0.5 mg/L.
3. The free kappa and lambda light chain quantification range of the system should be 5-150 mg/L.
4. The system should have device for automatic dilutions of samples and other reagents used in quantification assay.
5. The system should have device for antigen excess detection and re-measure the samples with antigen excess after automatic re-dilution.
6. The calibration should be single or multi-point using a single standard and calibrations of at least two different reagent lots should be stably retained by the system.

7. The system should have bar code identification device for standards and control reagents and sensor to detect liquid level in the reagent vials.
8. Should have capacity of more than 25 onboard reagents and throughput of more than 50 results per hour.
9. The system should use disposable or semi-disposable cassettes or tubes in the quantification assays for data precision.
10. System should have integrated QC programme and software for auto-calculation of results.
11. Electrical Requirements: 200-240 volts AC, 50-60 Hz.
12. Certification: At least one of CE/UL/C-UL.

TENDER NO: PGI/MM/ Haem/182/09-10

PORTABLE COLOUR DOPPLER ULTRASOUND UNIT & TRANSDUCERS

I. fully digital, compact portable Colour Doppler Ultrasound machine is required with following technical features

1. The unit should be compact, lightweight and portable. Specify weight and dimensions. Weight should not exceed 5kg (+10%) excluding cart and accessories.
2. It should be suitable for abdominal, Ob/Gyn, FAST exam, cardiac, vascular, musculoskeletal, breast, small parts applications
3. The unit must have real time compound imaging for improved contrast resolution and eliminating ultrasound artifact to achieve optimum image quality on convex & linear transducers.
4. The unit must have automatic gain adjustment for B mode.
5. Scanning depth must be available up to 30 cm or more.
6. System should support broad band / wide band Transducer Technology. System should have Linear Array, Curved Array, Phased Array, Multiplane TEE transducer; attach detail of all the transducer.
7. System must have frequency range from 1 – 14 MHz (± 1 MHz)
8. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Continuous wave Doppler (on all cardiac probe), PW-TDI, Power (energy) Doppler should be available.
9. Controls for 2D mode: Total gain, depth, dynamic range, auto gain
10. System must have fast start up to scanning in less than 30 seconds as essential in critical and emergency situation in ICU, emergency, OT.
11. Unit must be sturdy, resistant to breakage & damage on fall/ hit against the wall or hard surface.
12. Cine memory on all modes.
13. System should be DICOM ready system with print, save, modality worklist. Ready to connect to PACS.
14. Inbuilt Flat LCD/ TFT monitor of 10" or more.

15. Alphanumeric soft keys keyboard with easy access scans controls, system must have sealed keyboard for sanitization. This must be possible to avoid cross contamination
16. Onboard storage of at least 10000 images.
17. USB port for connectivity to computer.
18. System should have extensive calculation package for cardiac, Ob/Gyn, Vascular measurement and calculation provision for distance, area, volume and circumference.
19. Must be able to operate both on AC and inbuilt battery. Inbuilt battery pack should be self-recharging and should last at least for 2 hours when fully charged.

II. Transducers

1. Convex transducer 2-5 MHz for abdominal applications
2. High Frequency Linear transducer 5-10 MHz for Vascular Imaging, musculoskeletal, breast, small parts. Higher frequency will be preferred, with biopsy attachment
3. Echocardiography probe

III. ESSENTIAL REQUIREMENT: The firm must have minimum number of 50 installations of the same model in India, attach list of installations, and also provide performance certificates.

IV. WARRANTY: The unit, transducers and all accessories should be covered with comprehensive onsite warranty for five years commencing from the date of issue of installation certificate.

TENDER NO: PGI/MM/ Haem/183/09-10

VOLUMETRIC INFUSION PUMP

1. Ambient Temperature 50-400.
2. Power supply AC (220V, 50Hz) –Range 100-240 Volt AC, 50-60 Hz.
3. Operating Principle: Liner Peristalsis- Linear Peristalsis.
4. Infused Volume Display 1-999ml/hr.
5. Flow option: 10-3000 ml/hr, 1-1000 ml/hr.
6. Time limitation option: 1 Min- 24 Hrs., 1 min- 96 hrs.
7. Infusion Accuracy: Error Not more than 10% for a range of 10-3000ml/hr, Infusion Accuracy -5%.
8. Alarms: Infusion Completion, Bubble, Block, Open Door, Low battery.
9. Battery Backup: 4-6 Hrs., 5.30hrs @ 125ml/hr.
10. Mountable on standard IV stand, Mountable on IV pole wt. 2.9 Kg.

11. Adaptable to generic IV set, Adaptable to all generic IV SET. Paediatric Utility contains Micro Mode also suitable for Paediatric Utility.

TENDER NO: PGI/MM /Haem/184/09-10

Specifications of Ventilator Bi-Pap (Non Invasive)

- 1- Non-Invasive Positive Pressure Ventilation System.
- 2- Both inspiratory & expiratory positive pressure system (BIPAP).
- 3- IPAP range 5 to 25 cm. water.
- 4- EPAP range 5 to 25 cm. of water.
- 5- Face mask system with both adult and pediatric full face and nasal masks.
- 6- With Spontaneous & timed mode function and synchronization flow triggering.
- 7- Automatic leak compensation.
- 8- LCD display and alarms with humidifier.
- 9- Provision for Apnea Ventilation.
- 10- Power Supply 250 V with battery back up.

TENDER NO: PGI/MM/ Haem/185/09-10

Nanodrop Spectrophotometer

1. Compact multipurpose system for precise and quick measurement of DNA, RNA, Oligos and proteins in micro volume of sample.
2. The system should have built-in methods for determination of microarray (fluorescent dye labelling efficiency) and determination of cell density.
3. The system should have all UV/Vis applications in molecular biology, biochemistry and microbiology with full spectrum scan and kinetic methods.
4. Should have built –in computer and printer with USB device for data transfer to computer.
5. Should have high resolution graphical display of the results, calibration curves, kinetics or ratio measurements.
6. Should have both cuvette and cuvetteless based measurement systems.
7. Measuring sample volume should be from 1µl to 5µl.
8. Should have provision of auto correction of dilution factors.
9. Should have provision of sample recovery without contamination.
10. System should have measurements of the concentration and purity of nucleic acid in variety of units pg/ µl, ng/ µl , µg/ µl µg/ml.
11. Instrument should have calibration reagent, calibration checks and provision of re-calibration by users.
12. System should have pre-programs on key board and storage of at least 90 custom methods

13. Wavelength reproducibility and accuracy: +/- 0.2nm.
14. Wavelength Range from 200 to 1100 nm and wavelength scan range from 200 to 900 nm.
15. Light Source: Xenon flash lamp
16. Power: 220-240VAC/50 Hz.
17. Warranty: As per Institute norms.

TENDER NO: PGI/MM/Haem//186/09-10

Tube sealer

1. Fully automatic portable sealing system for sterile, leak-proof and temper-proof sealing of blood bag and cryocyte-bag tubings for aseptic processing and storage of cellular products at various temperatures from ambient to -180°C.
2. The system should efficiently seal empty or fluid filled PVC/thermoplastic tubings of 5 to 10mm diameter and wall thickness 0.25 to 0.75mm.
3. The equipment should have a power unit and sealing handle with minimal cable length of 1.5meter.
4. The sealing time should be 2.5 sec to 10 seconds with auto adjustment of timing depending upon tube thickness..
5. The seals created should have minimum width of 2.5mm.
6. System should run on both mains and battery (more than 3 hrs. back up and charger).
7. Should have automatic power adjustment for uniform sealing irrespective of power supply variation.
8. Should have indicators for Power, Ready and Sealing Completion modes.
9. Power supply: 220-240VAC/ 50 Hz fitted with appropriate Indian plugs and sockets.
10. Certification: CE/ISO or equivalent.
11. Approval: FDA /CSA or equivalent for sterile sealing of blood bags and cryocyte-bags.
12. Documents: User Manual, Service Manual and List of important spares & accessories with their part number and pricing.

TENDER NO: PGI/MM/Gastro/187/09-10

Deptt of Gastroenterology

PART - A

GASTRO VIDEOSCOPE (Adult):

-Fully immersible in disinfectant solution & compatible with leak testing device with automatic regulation of air flow & pressure..

- Capable of optically generating the images while using special band of light intended for finer mucosal detailing.
- In built scope identification memory chip.
- Separate inlet ports for air & water supply.
- Four or more no. of remote control switches on control body.

Field of view	:	140 degree or more
Direction of view	:	0 degree, forward viewing
Depth of field	:	3 to 100 mm or better
Distal end outer diameter	:	8.8 mm or less
Insertion tube outer diameter	:	8.8 mm or less
Tip Bending rage	:	Up 210 deg, Down 90 deg, Left & right 100 deg.
Working length	:	1030 mm or more
Channel inner diameter	:	2.8 mm or more
Minimum Visible distance of instrument used thru channel	:	3 mm or closer from distal end.

COLONO VIDEOSCOPE (Full length):

- Fully immerssible in disinfectant solution.
- Four or more no. of remote control switches on control body.
- Adjustable stiffness (controllable by knob at control section).
- Capable of imaging with special band of light for finer mucosal detailing.
- In built scope identification memory chip.
- Auxiliary water jet for mucosal cleansing

Field of view	:	170 degree or more
Direction of view	:	0 degree, forward viewing
Depth of field	:	3 to 100 mm or better
Distal end outer diameter	:	13.2 mm or less
Insertion tube outer diameter	:	12.8 mm or less
Tip Bending range	:	Up & Down 180 deg, Left & right 160 deg.
Working length	:	1675 mm or more
Channel inner diameter	:	3.7 mm or more
Minimum Visible distance of instrument used thru channel	:	3 mm or closer from distal end.

DUODENO VIDEOSCOPE (Therapeutic):

- Fully immerssible in disinfectant solution.
- Four or more no. of remote control switches on control body for user's ease of operation.
- In built scope identification memory chip.
- Detachable distal cover for easier cleaning of scope tip.

Field of view	:	100 degree or more
Direction of view	:	5 degree, backward oblique viewing
Depth of field	:	5 to 60 mm or better
Distal end outer diameter	:	13.5 mm or less
Insertion tube outer diameter	:	11.5 mm or less
Tip Bending rage	:	Up 120 deg, Down & Left 90 deg, & right 110 deg.
Working length	:	1235 mm or more
Channel inner diameter	:	4.2 mm or more
Minimum Visible distance	:	10 mm or closer from distal end.

VIDEO PROCESSER :

- Digital signal processing for signals received from a Colour CCD chip.
- Equipped with high definition & special light band Imaging capacity.
- Automatic IRIS control.
- Picture in Picture display possibility with option to have full screen images from both the image sources.
- HDTV & SDTV Signal Output : RGB or YpbPr output, Digital (IEEE-1394), Y/c
- Should have Automatic Gain control and Contrast control functions.
- Edge/Structure enhancement : 3 to 8 levels of switchable settings
- Image display size : 3 or 4 different sizes of image display on monitor

XENON LIGHT SOURCE (300 watts):

- Automatic switch off function when source is not used for extended period of time
- Backlit front panel indicators.
- Equipped with special filters required for finer mucosal detailing.
- High intensity Xenon Light source (300W)
- Compact & light weight design.
- Emergency halogen light.

Cooling : Forced air cooling
 Electric shock protection : Type Class I with Type BF applied part.
 Power supply : 220 -240 V AC, Frequency 50/60 Hz, Input current 3 A.
 Weight : Around 15 – 16 Kg.

HIGH RESOLUTION LCD MONITOR :

- Flat – Panel LCD, progressive scan monitor with high resolution.
- Superb high resolution imaging performance with exceptional image quality.
- 19 inch LCD screen with 1280 x 1024 native resolution
- Display devices : TFT active matrix
- Display dots : 1280 X 1024 dots (SXGA)
- Video input (signal) format : Composite (BNC)
- Y/c input signal format : 4 pin mini – DINI
- Analog RGB + Ext Sync / YpbPr_input : BNC connector (X4)
- Video Output : BNC, Y/C, RGB,

PART - B

SINGLE BALLOON VIDEO-ENTEROSCOPY SYSTEM

VIDEO ENTEROSCOPE

- *High resolution CCD for quality imaging and finer details.
- *Suitable for Narrow Band Imaging observation.
- *Slimmer insertion tube.
- *Fully immersible in disinfectant solution.
- *Suitable for antegrade and retrograde application both.
- Field of view : 140 degree or more
- Depth of view : 3-100 mm or better
- Distal End & Insertin tube dia. : 9.2 mm or less
- Tip bending range : Up & Down 180 degree
Left & Right 160 degree
- Working length : 2000 mm or more
- Instrument Channel dia. : 2.8 mm or more
- Minimu visible distanct from D/E : 3 mm or less

BALLOON CONTROL UNIT:

- *Automatic pressure control function
- *Simple operational system for balloon inflation and deflation.
- *Balloon inflation and deflation control on front panel of unit and thru compact remote control.
- *Balloon pressure indicator with display on front panel.
- *Power consumption : 150 VA or less
- *Set Pressure of Balloon : 5.4 kPa (+2.6kPa, -0.0 kPa)

SPLINTING TUBE (with Hydrophilic coating) :

Insertion Tube Outer dia. : 13.2 mm or less
Insertion Tube Inner dia. : 11.0 mm or more
Working length : 1320 mm
Total length : 1400 mm
Material of tube & balloon: Silicon rubber (Latex free material)
Inlet for water insertion for lubrication during procedure.

Video Processor (RGB O/P) & Light Source :

Video Out Put : RGB, Y/c, BNC & XGA outputs
Digital Out Put : Type IEEE1394
Structure Enhancement : 2-3 mode.
Light Source : Xenon or Halogen 150 Watts or more.
Spare lamp : Swichable as and when required.

HIGH RESOLUTION LCD MONITOR :

-Flat – Panel LCD, progressive scan monitor with high resolution.
-Superb high resolution imaging performance with exceptional image quality.
-19 inch LCD screen with 1280 x 1024 native resolution
Display devices : TFT active matrix
Display dots : 1280 X 1024 dots (SXGA)
Video input (signal) format : Composite (BNC)
Y/c input signal format : 4 pin mini – DINI
Analog RGB + Ext Sync / YpbPr_input : BNC connector (X4)
Video Output : BNC, Y/C, RGB,

TENDER NO: PGI/MM/ Gastero/188/09-10

Digital Radiography System (1000mA)

For ERCP application with overcouch tube

The company should quote latest state of art equipment with IITV multipurpose X-ray system for GIT, Urology, Vascular, Endoscopy etc. The system should have over table X-ray tube and under table SFD with remote operation from control room as well as from the table side.

1. Patient table

- a) Patient should be accessible from back and front side
- b) Motorized tilt of -15 to +90 degree Celsius
- c) Digital fluoroscopy with real time fluoroscopy recording of 25 frames per second. The maximum fluoroscopy recording time of 20 sec at 7.5 frame/sec.
- d) Suitable tabletop/imaging chain movement for head to toe coverage of patient of 150 cm or more without repositioning the patient. Lateral motorized tabletop movement of 25 cm.
- e) Patient load ability 150 kg. or more.
- f) It must have lead radiation protection mounted on tube/ceiling.
- g) Bucky for over table radiography – grid ratio 10:1 or more. Mention the line per centimeter in the grid.

2. Generator

- a) High frequency generator 80 KW or more (specify the name and the details of the generator).
- b) 40 KV to 150 KV
- c) Exposures:
 - i. 100 mA at 80 KV
 - ii. 800 mA
- d) Minimum exposure time must be 1 ms or less in automatic/manual mode.
- e) Remote diagnostic or standard quality.
- f) AEC (Automatic Exposure Control) for high contrast level of image quality.

3. X-ray Tube

- a) Dual focal spot x-ray tube. Mention the size of small and large focus.
- b) Rotating anode of high speed more than 8000 rpm.
- c) Tube collimator with IRIS collimation;
- d) Pulse fluoroscopy/grid control facility (matrix 1024x1024, 10 bits or more). Mention frame rates per second for pulse fluoroscopy for radiation dose reduction for patients. Lower radiation dose would be preferred.
- e) Two No. of x-ray tubes or at least 30 KW on small focus and 80 KW on large focus. The tube should be interchangeable with each other in case of failure of one tube. All parameters of both the tube including anode heat storage, KW rating and focal spot size should be exactly the same.
- f) The anode heat storage capacity of x-ray tube should be 400 KHU or more.

4. 3D stand

Ceiling suspended column with over couch assembly. Tube carriage with telescopic arm with longitudinal and transverse movement.

5. Digital Imaging

- a) High digital system with image acquisition in 1024x1024 matrix. Gray scale of 10 bits or more and multi imaging display.
- b) DSA facility with pixel shift, road mapping and peak specification, digital zoom and panning facility.
- c) Interface to DICOM camera with background filming facility.
- d) Acquisition rate of at least 6 frames per second or more.
- e) Image storage capacity more than 10,000 images in 1024x1024 matrix.
- f) Patient directory, annotation etc.
- g) Two nos. of 19" high resolution LCD/TFT flat monitors, flicker free type on ceiling suspended support system in the examination room. One for live image and one for reference image.
- h) There should be provision for archiving images on CD in DICOM format.
- i) Image evaluation software with angle/length and stenosis measurements.
- j) Pulse fluoroscopy facility at various rates for x-ray dose reduction with frame rate of 25 FPS in 1024x1024 matrix.

- k) Capability of acquisition and display in fluoro, pulse fluoro, spot filming and radiography in 1024x1024 matrix with a minimum 10 bit.
- l) Real-time fluoro recording at 25 fps. Or more.

6. Imaging system:

- a) At least 30 cm image intensifier (under table position) with CCD TV camera with 3 zoom facility. Please quote separately for 40 cm image intensifier.
- b) High resolution high line rate video camera.

7. Control console:

- a) Control console with one number fixcker free high resolution LCD/TFT flat monitor of 10" for displaying live image, post processing and filming.
- b) Anatomical programmer allowing storage and recall acquisition parameters.

8. Accessories

:

- a) Shoulder support, foot rest etc.
- b) Vertical bucky with electromagnetic locks.
- c) Dry view DICOM compatible laser camera (not thermal type dry chemistry) with minimum 600 DPI resolution.
- d) All essential radiation protective devices should be provided i.e. lead gloves, thyroid protection, gonad shield, lead apron of 8 no. each, 5 mm lead, double sided.
- e) Foot switch for radiography in examination room.
- f) 500 nos. of CD-R of reputed make should be supplied alongwith the system.
- g) Suitable UPS for digital system only and room lighting with 30 minutes back up.
- h) Lead glass of 100 cm x 120 for control room.
- i) Radiation dose display on console.
- j) Lead goggles – 2 nos. routine and 2 nos. to be worn over spectacle.
- k) Wall mounted hangers of good quality for multiple aprons.

The system should be DICOM ready and easily incorporable into hospital PACS system at no extra cost. The laser camera should be connected to at least one another nearest camera for standby arrangement.

Please attach list of same/almost similar installation s in reputed government institution, at least three, alongwith performance certificate.

TENDER NO: PGI/MM/ Gastero/189/09-10

C-14 UREA BREATH TEST

IRIS-2 Infrared-¹³C-Stable Isotope Analyser
for ¹³C/¹²C-Determination at CO₂ in Breath,
IRIS-software included. NMC-Code: 9027 1010.
Autosampler with 16 sample ports for breath bags
IRIS software included

IRIS-Double Breath Bags, NMC-Code : 3926 9099

Mouth Piece for Iris breath bags, NMC-Code 3926 9099
Non radioactive stable isotope label
Easy oral substrate admission
Full hygiene Breath sampling
Automated measurement and evaluation

Protocol for patient test result
 Result AD-HOC and at point of interest
 13-Substrate doses
 Ability to evaluate Urea breathe test for H pylori infection gastric emptying of liquid and semisolid,
 liver functions, pancreatic function
 Adequate number of substrates for each of the above tests with the machine.

Consumables to be ordered according to the users preference

Code no.	Description
WT 4010SD75	C-Urea Pharma Grade 75 mg per capsule
WT 4011SD50	C-Sodium Bicarbonate 50mg per capsule
WT 4012SD50	C-Sodium Acetate
WT 4013SD75	C-Methacetin
WT 4015SD25	2-C-Uracil
WT 4023SD100	C-Octanoic Acid (1-C) Sodium Salt
WT 4024SD75	C-Aminopyrin
WT 4026SD150	C-Mixed Triglyceride
WT4037SD25	C-Lactose

TENDER NO: PGI/MM/ Gastero/190/09-10

Modular Electro surgery Workstation with APC for GI endoscopy suit including:

1. Electro surgery unit with forced APC mode.
2. Upgrade endocut
3. Two pedal footswitch, AP and IP x 8 equipments
4. APC 2 unit
5. Argon gas bottle 5 l, 200 bar
6. Pressure reducer with sensor
7. Silicon electrode, conductive area 17.5x29.5 cm=516cm² with rubber strap and ECG connection.
8. Patient plate table ICC, ACC international, for silicon plate, length 9m.
9. Monopolar connecting table ICC, ACC international for cut, coag,MIS instruments,length 4m.
10. Connecting cable for flexible , APC probes, 2.5m long
11. APC probe 2200 A, OD 2.3 m, L 2.2m
12. APC probe 2200 SC,OD 2.3 mm, L 2.2 m

TENDER NO: PGI/MM/ Gastero/191/09-10

ELISA Plate Reader

Absorbance reader for 96-well microplates with 8-12 measuring channels

Wave length selection using filters, with at least 6 selectable filters in the range of 340-750 nm (340, 405, 450, 492, 540, 620 nm), with feasibility to install other filters, band pass of 10 micrometer

Endpoint, kinetic and spectrum reading modes with programmable temperature control (up to 50 degree C) and plate mixing/shaking. Single wavelength/dual wavelength read modes.

Optical density measurement range: 0 to 3.0 or better, with accuracy, precision, linearity and repeatability of <1% each

Ability to read a plate in <12 seconds for single wavelength and <20 seconds for dual wavelength

Temperature control up to 50 degree C, with shaking ability at variable speeds

Ability to program protocols and select previously saved protocols

Ability to store data for the last 25 plates

Ability to transfer data to a computer with import into Excel or a similar spreadsheet software.

A computer with at least 2 GB RAM, 160 GB Hard Disc, 17" LCD monitor, or a laptop, and inkjet or laser printer. Software with facilities for Raw Data, Absorbance, Limit, Matrix, Normalization, Positive Control, and Curve Fit reports. Sophisticated curve fitting transformation facility Interpolation and calculation of sample concentrations based on a standard curve. Easy data export to Microsoft Excel and/or other computational analysis software programs.

230 V, 50 Hz Power supply

Warranty as per institute rules

TENDER NO: PGI/MM/Endo/192/09-10

Specifications for CO₂ INCUBATOR

- Microprocessor controlled CO₂ incubator with infrared sensor.
- Inner volume 150 to 200 litres.
- Display: LCD preferably touch screen panel.
- Temperature set range should be from 5°C to 50°C.
- CO₂ control range should be from 0 to 20% or better.
- Alarm system for temp, water level, filter etc.
- Humidity control system.
- CO₂ cylinder and regulator should be quoted.
- Backup system.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules.
- AMC with spares/without spares after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/193/09-10

Specifications for ELISA READER

- Microprocessor controlled 96 well Microplate Reader.
- Should have single/dual/kinetic wavelength reading capacity.
- Should have capacity to read flat, U-bottom and V-bottom plates.
- The reading system should have 1 reference channel and 12 measurement channels.
- The reading range should be 0 – 4.0 O.D., resolution 0.001 and accuracy of 0.005.
- The source of light should be halogen lamp with a reference wavelength of 340-800 nm and measuring wavelength of 405,450,492, 550 and 620 nm filters.
- System should have automatic calibration and data storage capacity of at least 50 protocols.
- Inbuilt feature for linear shaking.
- Report Types: Raw, absorbance, matrix, limit, cutoff, concentration, curve fit, difference and kinetic.
- System should have inbuilt or attached printer (external) with all standard accessories.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- Spares often required like Halogen Lamp, fuses should be provided extra along with the equipment.
- Preferably touch screen operation and LCD screen for data display.
- System warranty should be 3 years or as per Institute rules.

- AMC with spares (comprehensive) after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification

TENDER NO: PGI/MM/ Endo/194/09-10

Specifications for ELISA WASHER

- 8 or 12 channel manifold.
- Integrated vacuum pump with capacity 8 L/min.
- 2 litres waste bottle.
- Methods: single-cycle and two-cycle washing methods – wash, aspiration, dispensing, bottom washing and aspiration, agitation and in combination with at least 5 repetitions.
- Strip and plate wash modes with program to omit strip.
- Priming sequence of the hydraulic system at change of wash solution.
- Precision $\pm 5\%$ CV
- Wash Volume 50 to 3000 μ l per well and residual volume $< 2 \mu$ l per well.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules.
- AMC with spares (comprehensive) after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/195/09-10

Specifications for Ice Making Machine

- Microprocessor controlled fully automated, self contained S.S. antibacterial Flake ice maker with alarm and output of approx. 110-125 kg/day and 20-30 kg Ice flakes storage capacity.
- The machine must be installed and with local input water temperature and water pressure. In case there are requirements of any specific input water temp or pressure or filter, required accessories must be quoted with the equipment.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules.
- AMC with spares/without spares after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/196/09-10

Specifications for Laboratory Refrigerators

- Upright refrigerators with digital display (control panel) and inner doors with proper insulation.
- Glass doors for proper inventory check.
- Temperature Range: $+2^{\circ}\text{C}$ to $+8^{\circ}\text{C}$.
- Capacity 350 to 400 litres.
- Audible and visual alert alarms like power failure, high temperature, filter check etc.
- S.S. adjustable shelves.

- Refrigerant as per international standard norms.
- Inventory rack, storage racks and boxes.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules and warranty for compressor should be 5 years or more.
- AMC with spares/without spares after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/197/09-10

Specifications for Low Temperature Freezers

- Upright freezers with digital display (control panel) and inner doors with proper insulation.
- Automatic defrost with glass doors.
- Temperature Range: -10°C to -40°C.
- Capacity 350 to 400 litres.
- Audible and visual alert alarms like power failure, high temperature, filter check etc.
- S.S. adjustable shelves.
- Refrigerant as per international standard norms.
- Inventory rack, storage racks and boxes.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules and warranty for compressor should be 5 years or more.
- AMC with spares/without spares after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/198/09-10

Specifications for Semi Auto Analyzer

- Microprocessor controlled programmable semi auto analyzer to perform routine Bio-chemical (including Absorbance, Endpoint, Fixed Time, Differential Mode, Ratiometric Mode, Cut Off and kinetic assays) analysis.
- Range of measurement: 0-3.5 A.
- System should be able to produce calibration curve upto a minimum of 6 Calibration points and 2 replicates per point.
- Peltier controlled reading block and 18µl flowcell with temperature programmable for 25, 30 & 37°C.
- Flowcell with peristaltic pump should be part of the main unit.
- Programmable sipping volume 100 µl to 5000 µl.
- Minimum 8 narrow band static interference filter with wave length selectable from 340-670 nm.
- Standard character/alphanumeric LCD display and in-built or external full graphic printer for printing reaction curves and test results.
- Facility to display the actual temperature on screen for fixed time and kinetic tests.
- The manufacturer should be able to supply kits against order.
- User friendly software.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules.

- AMC with spares (comprehensive) after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/199/09-10

Specifications for Ultra-Low Freezers

- Upright freezers with digital display (control panel) and inner doors with proper insulation.
- Temperature Range: -20°C to -80°C.
- Capacity 350 to 400 litres.
- Audible and visual alert alarms like power failure, high temperature, filter check etc.
- S.S. adjustable shelves.
- Refrigerant as per international standard norms.
- Inventory rack, storage racks and boxes.
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- System warranty should be 3 years or as per Institute rules and warranty for compressor should be 5 years or more.
- AMC with spares/without spares after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/200/09-10

Specifications for Calcium Electrode (Electrolyte Analyzer)

- Microprocessor controlled programmable analyzer with Ionized Calcium Sensor Electrode.
- Ion selective, flow through liquid membrane calcium electrode.
- Should be able to perform measurement in whole blood, serum and plasma.
- Measurement range: 0.2 to 5.0 mmol/L
- Resolution: 0.001 mmol/L
- System should have automatic calibration and program storage capacity.
- Standard character/alphanumeric LCD display and in-built or external full graphic printer for printing reaction curves and test results.
- Calibrators/standards, quality control reagents, consumables (capillary, tubes, cups, syringes, electrode etc) should be quoted.
- The manufacturer should be able to supply kits against order.
- User friendly software.
- Quality and safety certification as per international norms. (Certificates to be enclosed).
- Power supply should be 220-240V with suitable voltage stabilizer/UPS.
- System warranty should be 3 years or as per Institute rules.
- AMC with spares (comprehensive) after warranty should be submitted along with the offer.
- Three appreciation/reference letters from any reputed institutes must be accompanied with the proposal towards its performance and services.
- Literature/manuals need to be provided to support the technical specification.

TENDER NO: PGI/MM/ Endo/201/09-10

Specification of Bone Histomorphometry

A. Upright Fluorescent Microscope

- Research Upright Trinocular bright field fluorescence Microscope,
- Basic stand with Trinocular tube: 12V 100W illumination with stabilized power supply. Entire optics including parts like eyepiece, condensers holder tubes should be of metal base. Optical system infinity corrected with suitable system. Attachment for bright field, fluorescence and integrated modulation contrast with suitable condenser for all the above
- Standard mechanical stage size with X-Y movement and holding slide.
- Eye piece 10X wide field objective.
- Semi apochromatic Objective 40X 60X oil and 100X oil
- Plan achromatic objective 4X, 10X.
- Fluorescence Illuminator unit With range of 6 filters, dichromatic mirror and barrier filter for UV, blue and green excitation (preferably narrow band filter) filter for GFP.
- Universal EPI fluorescence attachment with lamp housing, power supply and lamp.
- Filters: Excitation filter (Blue, Green and UV, Emission barrier filter long-pass and DAPI/FITC/Texas Red.
- High resolution C – mount video adaptor for CCD camera.
- Camera Digital camera set for microscope with approx. 12.0 million pixel cooled CCD (fire wire kind) with online integration, connection cable, with necessary.
- Antifungal agents for protection from fungus.
- Spare bulbs 2 numbers each
- Required capacity UPS

B. Common Imaging Work Station

- Core2Duo processor with speed of more than 3.0 GHZ, 320Gb HDD, 4 GB RAM, DVD Writer, Flat 24” LCD plasma screen, Mouse, Key board, Photo quality printer, 1KV UPS, Windows XP operating system

C. Image analysis and management software

- Dedicated software for bone histomorphometry preferably based on ASBMR nomenclature, interactive, that uses the specialized measurement list to automatically calculate over 150 parameters of bone. Automatic compensation for kinetic labeling method. Sophisticated data handling to integrate independent measurement for serial sections. Data viewer to allow composition from primary or derived data, to automatic collates all the data in a particular folder. Entire system should be menu driven and user friendly for bone specific prompts and options. Spreadsheet based packages which support cut and paste function.

Manufacturer will provide the following documents along with the equipment:

1. One copy each of instruction manual, service manual, circuit diagram
2. Catalogue and price list of spares, as well as list of spares needed.
3. Undertaking that the equipment will not be phased out during next 10 years and that the manufacturer will ensure service and supply spare parts during this period strictly as per time schedule
4. Undertaking that if the Indian agent is changed then it will be the responsibility of the manufacturer to provide the service directly
5. Undertaking that software upgrade will be provided free cost.
6. Installation, demonstration & training
7. Guarantee 2 years (minimum)
8. AMC proposal for 10 years (with & without spares separately)
9. The percentage or amount of Indian agency commission (viz. payable in Indian currency) must be mentioned in all offers of overseas supplier who are offering through their Indian agents. Please attach certificate's photocopy being Indian agent.

TENDER NO: PGI/MM/RT/202/09-10

Name of Equipment: Pinpoint Chamber

Details of Equipment: Pinpoint chamber compatible with the existing BrainLab IMRS phantom and electrometer available in department.

Specification of the Equipment:

- Compatible with the existing BrianLab IMRS phantom
- Should be waterproof and volume less than 0.02 cc
- High spatial resolution and polarizing potential of minimum 250 Volts

TENDER NO: PGI/MM/ RT/203/09-10

Name of Equipment: Quality assurance phantom for IGRT

Details of Equipment: Quality assurance phantom for image guided radiotherapy to be used with the Varian Linac with OBI for kV-kV and CBCT matching.

Specification of the Equipment:

- Preferably acrylic phantom in cube of size < 15cm
- Light field and Laser alignment lines
- Built-in spirit level

Storage and handing container

TENDER NO: PGI/MM/ RT/204/09-10

Name of Equipment: Upgrade / Replacement of the Radiation Field Analyser

Details of Equipment: Upgrade / Replacement with buyback of the Radiation Field Analyser (RFA- 300) with supply of new water phantom with water reservoir and software for carrying out beam data measurements. The system should be compatible with the existing chamber and hardware available in the department. Latest release with technological innovative design have the following features.

Specification of the Equipment:

Hardware:

- Fully computerized phantom with scanning volume of at least 45 x 45 x 40 cm (LxWxH) with floating leveling frame or similar mechanism.
- Integrated with inbuilt servo controlled electrometer.
- Holder accessories for following chambers are required FC65, CC01, ROOPS parallel plate, PFD, EFD, sterotactic Detector, PTW 30001 & PTW Markus 23343 to be used in RFA.
- Water Reservoirs with automatic pump for bi-directional water transport to and from the water phantom.
- Holders for reference detector.
- Positional & Reproducibility accuracy within 1mm
- Magnetostrictive sensor for sensing position to the highest accuracy.
- Control Unit leakage <2 fA

Bias Voltage $\pm 100V$ to $\pm 500V$ in steps of 5 volt or less

Software:

- Advanced software for beam data acquisition

- Software for routine QA of machine and IMRT
- RTPS license for Eclipse and Oncentra treatment planning system

Interface and license for Detector Array, Absolute Dosimetry

TENDER NO: PGI/MM/ RT/205/09-10

Name of Equipment: Radiation Immobilization Accessories
Details of Equipment: Immobilization accessories and devices for various sites as mentioned below are required which needs to be used in the RTP CT Scanner and Linear Accelerator existing in the department. These need to be compatible with the Linear Accelerator and Med Tec accessories available in the department.

01 Set
containing
the following
items

a) Prodigy, CT version, 53cm width	2No.
b) Varian Exact, 1/8" thick, 53cm width	4No.
c) Type-S Head, Neck, Shoulder Cushion	2No.
d) Extended wing board with Arm-up "T" grip	2No.
e) Silverman supports; 6/set; clear	3Set.
f) Bolus; 30x30x0.5cm with skin	1No.
g) Bolus; 30x30x1.0cm with skin	7No.
h) Prone head holder	1No.
i) Prone shell with Vac-Lok cushion	1No.
j) Knee-Lok Low Cushion	1No.
k) Radio-opaque markers :1.0mm mark; 110/box	2No.
l) Radio-opaque markers: 2.0mm mark; 110/box	4No.
m) Thermoplastic pellets, 3 lbs	2Bag.
n) Type-S extension with carbon fiber frame	1No.
o) Prone Lock Cushion	2No.

TENDER NO: PGI/MM/Nephro/206/09-10

Electronic Balance :

High precision digital electronic balance from reputed manufactures. Capacity 1500 gm.
 Readability 0.1 mg. Internal calibration. Weighing mode in grams/milligrams. Easy access door. 200 V, 60 Hz. Soft touch pad.

TENDER NO: PGI/MM/Cardio/207/09-10

Portable Echocardiography System

A compact Laptop based portable echocardiography machine is required with the following technical features

- It should be suitable for Cardiac, Vascular, vascular access applications in adult & pediatric patients.

- The unit must have real time compound imaging for improved contrast resolution and eliminating ultrasound artifacts to achieve optimum image quality on vascular probe.
- System should have both online (Read) as well as offline(Write) zoom facility
- System must have frequency range from 1 – 14 MHz (± 1 MHz)
- Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Continuous wave Doppler, Power Doppler must be available on all cardiac transducers.
- System must have fast start up to scanning in less than 2minutes from off condition, for use in critical and emergency situation in CCU and Emergency with adequate battery back up..
- System should support transducer technologies like, phased array, convex, linear TEE etc.
- Cine memory on all modes.
- The unit must be compact, portable and lightweight.
- Flat LCD/ TFT monitor of at least 10 inches with flicker free image.
- Alphanumeric soft keys keyboard with easy access scans controls.
- System must have upgradeable to inbuilt automated IMT, edge-detection software for assessment of arterial wall disease progression and cardiovascular risk.
- Onboard storage of images & loops, USB port for connectivity to computer.
- The system shall support the all DICOM functionality, Storage, Print, and Work List, also ready to connect to PACS.
- Must be able to operate both on AC and inbuilt battery. Inbuilt battery pack should be self-recharging and should last at least for 2 hours when fully charged.
- **Transducers to be supplied as standard**
 - Phased Array Probe 1-5MHz for cardiac applications + Paediatric Phased Array Probe 4-8MHz for Paediatric cardiac applications.
 - Extra Battery
 - Carry Bag
 - High Frequency Linear transducer 5-10 MHz (± 1 MHz) with less then 40 mm size for vascular Imaging.
 - B/W thermal printer
 - Trolley.

TENDER NO: PGI/MM/ Cardio/208/09-10

EXTERNAL PACEMAKER DUAL CHAMBER

Digital Pulse Generator

Modes :DDD, DDI, DVI, VDD

Basic Pacing Rate : 30-150ppm

Upper Rate : 80-230ppm

Rapid Atrial Pacing Rate : 80-800 ppm

Output Amplitude: Atrial 0.1 – 20mA; Ventricular – 0.1 – 25mA

Pulse Width : Atrial 1.0ms ; Ventricular 1.5ms

Sensitivity : Atrial 0.2-10mV Async; Ventricular 0.8-20mV Async

A-V Interval : 20-300ms
Refractory Period : Atrial:150-500ms; Ventricular ;250ms
Power requirement : 9Volts Alkaline

EXTERNAL PACEMAKER SINGLE CHAMBER

Modes ; VVI,VVO,
Pacing Rate;40-180 ppm continuously adjustable
Rapid Atrial pacing rate ; 80-380 ppm (5 ppm increments)
380 – 540 ppm (10 ppm increments)
540 - 800 ppm (20 ppm increments)
Output Amplitude : 0.1- 20 mA continuously adjustable
Pulse Width ; .9 ms
Sensitivity : 0.5 – 20mV continuously adjustable ASYNC
Refractory : 225- 250 ms
Battery Type : Standard 9V Alkaline/Lithium

TENDER NO: PGI/MM/ Cardio/209/09-10

Syringe Infusion Pump

- Fully Microprocessor controlled which surveys all operating and alarm parameters
- User friendly single knob operation.
- Mains cum Battery operated with built in battery and charger.
- Simple start function by selecting syringe size and entering the flow rate
- Accepts syringe size of 10ml to 60 ml and calibrated for major Indian Brands and also for the imported range like Terumo, Braun, BD, etc.
- Wide range of flow rate from 0.1 to 400 ml/hr (20ml syringes) or 0.1 to 600 ml/hr (50/60 ml syringe), 0.1 to 300 ml/hr(10ml), 0.1 to 400ml/hr(30ml)
- Infusion can be programmed in rate (ml/hr) or time (secs).
- Display of infusion parameters in various units (ml/hr, mg/hr, mg/kg/hr, ug/kg/hr., ug/kg/min)
- Delivery of fluid at quick rate using manual Bolus facility.
- Bolus rate of 600ml/hr using 50 or 60 ml syringe and 400ml/hr using 20 ml.
- Display of Vital parameters like Rate of infusion, cumulative volume infused and time of infusion on the Backlit LCD Display.
- Audio and Visual alarms to indicate occlusion, near end infusion, syringe empty, end of infusion, low battery, insert syringe, mains off, etc.
- Fluid entry proof control panel to avoid damage to interior circuitry and malfunctioning of the pump.
- Automatic Storage of previous infusion parameters
- Volume Limits:
 - - 9999 ml (0.1 - 99.9 ml in 0.1ml steps & 100 - 999 ml in 1 ml step)
- Accuracy:
- Device: +/- 1%
- Infusion : +/- 3% or 0.1 ml/hr (whichever is greater)
- Battery Back-up: : 2-3 hrs

TENDER NO: PGI/MM/ Cardio/210/09-10

ETO STERILIZER

- CHAMBER VOLUME
- 7.5-8.5 CUFT APX (200 – 250 LTRS)
- AERATION EXHAUST HOOD INBUILT
- SHOULD HAVE 4 OR MORE STERILISATION CYCLE WITH HOOD & ALARM
- WARM CYCLE: 220 – 250 MINS AT 55 –60 C
- COOL CYCLE: 300-350 MINS AT 35 – 40 C
- SEALING MACHINE WITH DIFFERENT TIMER
- POLYTHELENE FILM SEALING > 275MM
- POUCH SEALING > 350MM
- MICROCOMPUTER CONTROLLED PROCESS i.e., HEATING, VACUUM, HUMIDIFICATION, GAS INJECTION, STERILISATION TIME & GAS DISCHARGE, etc
- AUTOMATIC AERATION CYCLE
- GAS TREATMENT: SYSTEM SHOULD HAVE SELF CONTAINED / INCLUDE ADDITIONAL EQUIPMENT FOR TREATMENT OF THE GAS AT THE END OF STERILISATION CYCLE TO MAKE IT LESS TOXIC BEFORE DISPOSAL
- AUTOMATIC PROVISION TO DISALLOW ANY GAS FALL OUT WHERE IT IS INSTALLED
- AUTOMATIC ALARM AT THE END OF STERILISATION CYCLE
- BUILT IN PRINTER FOR TEMPERATURE & VACUUM CYCLE NO & AERATION TIME FOR EACH LOAD.
- STERILISATION USES 100% ETHYLENE GAS IN SINGLE DOSE CARTRIDGE
- DISPLAY SYSTEM TO SHOW SELECTED PROCEDURE PARAMETERS
- POWER 220 VOLTS/ 50/60 Hz, PHASE 1
- WATER & COMPRESSED AIR SUPPLY, PREFERENCE WILL BE GIVEN TO THE SYSTEM THAT ARE SELF CONTAINED & DO NOT NEED ANY EXTERNAL WATER OR AIR SUPPLY
- GAS CARTRIDGE: UNIT RATES FOR THE CARTRIDGES ARE TO BE QUOTED.
- EXHAUST PIPE HEIGHT 90-100 FT
- THE EQUIPMENT SHOULD HAVE OPENING LISTING ON MECHANICAL & TECHNICAL SAFETY eg: UL/CSA/TUV& EPA FOR GAS CARTRIDGES
- LOCAL SERVICE PROVIDER
- WARRANTY WITH SPARES FOR 5YRS FROM THE DATE OF INSTALLATION
- CAMC FOR 5YRS AFTER WARRANTY PERIOD

TENDER NO: PGI/MM/CVTS/211/09-10

Specification for Micro Saw for Paediatric Sternotomy

Power CONSOLE, 220 Volts

Electrically operated, Touch Screen controls, Graphic display of the settings of the unit. Capability to recognize the Hand-piece, Digital display of Speed, Preference control of Speed, Breaking & Screen Displays. Capability to accept two hand pieces simultaneously. Upgradeable,

CONNECTING CORD

- Thin Flexible & Flash Autoclavable.

MULTI FUNCTIONAL FOOT SWITCH

- Accelerator type.
- Waterproof.
- Controls for Forward/Reverse & Oscillation mode.

- Options to scroll from one handpiece to another handpiece.

MICRO SAW I

- Maximum Speed of 19000 rpm.
- Maintenance Free DC brushless Motor.
- Options for Hand Control & Foot Control.
- Toolless Autoclavable handpiece.
- Along with suitable blades

MICRO SAW II

- DC Brushless Motor.
- Speed 16000 rpm.
- Toolless blade mounts.
- Flash Autoclavable Handpiece.
- Along with suitable blades

TENDER NO: PGI/MM/ CVTS/212/09-10

Technical specification suction machine

WORKING VOLTAGE :220/240V AC, Single phase, 50 Hz.

TYPE OF VACUUM PUMP: Vane type – mono block

LUBRICATION:Continuous oil re-circulating type.

VACUUM:0 – 700 mm Hg. Max

CAPACITY:35 Litres / min.

VACUUM GAUGE:2 1/2" Dial, 0 to 760 mm Hg. Vertically mounted

VACUUM CONTROL:Needle type vacuum regulator with dust collector. Adjustable from 0 to 660 mm Hg. Negative pressure.

BOTTLE CAPACITY:2 Nos. 3 litre bottle standard.

BOTTLE LID:Made out of moulded poly-propylene.

SAFETY DEVICE:A float valve is provided in the bottle to safe guard against inflow of liquid in the pump.

GENERAL: Confirms to IS norms for Suction Apparatus, & safety requirements.

Needed is IS 302. (Type 2.1.2) Is 4533.

TENDER NO: PGI/MM/ CVTS/213/09-10

GENERAL INSTRUMENTS

1	HARTMAN MOSQ HEMO 4 STR,SERR"	30
2	HARTMAN MOSQ HEMO 3,5 CVD SERR"	30
3	KNIFE HANDLE 7,	10
4	VORSE TUBING CLAMP,6"	15
5	VORSE TUBING CLAMP 7,1/2"	20
6	NDL HLDR RYDER TNG,CAR 7"	6
7	PILLING INTRACARDIAC,NH 7 TC"	8
8	DIETHRICH CLAMP RT,ANG 7"	8
9	DEBAKEY TIS FCPS STR,9 1/2 AG"	10
10	DEBAKEY TIS FCPS STR,9 1/2 AG"	6

11	DEBAKEY TIS FCPS STR,12 AG"	6
12	DEBAKEY NEEDLE,HOLDER 10 TC"	6
13	CARDIAC VALVE,FORCEPS 9 1/2"	6
14	COOLEY ULTIMATE CUT,SCISSORS 7 1/4"	4
15	MAYO NOBLE SCISSORS,CVD 6.5"	16

VALVE SET

16	DEBAKEY TIS FCPS STR,9 1/2 AG"	6
17	OLIVEKR DISSECTOR,HEAVY 7"	4
18	OLIVEKR DISSECTOR,LIGHT 7"	4
19	DEBAKEY NEEDLE,HOLDER 10 TC"	8
20	ULTIMATE CUT SCISSOR,METZ 9 CURVED"	4
21	METZENBAUM SCISSORS,CVD 7"	10
22	MAYO HEGAR NEEDLE,HOLDER 8 TC"	10
23	MAYO HEGAR NEEDLE,HOLDER 7 TC"	10
24	CRILE WOOD NEEDLE,HOLDER 6 TC"	6
25	DEBAKEY DILATOR 1MM,19CM	2
26	DEBAKEY DILATOR 1,5MM 19CM	2
27	DEBAKEY DILATOR 2MM,19CM	2
28	DEBAKEY DILATOR 2,5MM 19CM	2
29	DEBAKEY DILATOR 3MM,19CM	2
30	DEBAKEY DILATOR 4MM,19CM	2
31	DEBAKEY DILATOR 5MM,19CM	2
32	DEBAKEY DILATOR 6MM,19CM	2
33	DEBAKEY DILATOR 7MM,19CM	2
34	DEBAKEY DILATOR 8MM,19CM	2
35	DEBAKEY DILATOR 9MM,19CM	2
36	DEBAKEY DILATOR 10MM,19CM	2
37	GARRETT DILATOR 1MM,,8 1/8"	2
38	GARRETT DILATOR 1,5MM 8 1/4"	2
39	GARRETT DILATOR 2MM,22CM	2
40	GARRETT VAS DIL 2.5,TIP, 8 1/4"	2
41	GARRETT VAS DIL 3.0,TIP, 8 -1/4"	2
42	GARRETT VAS DIL 3.5,TIP, 8 1/4"	2
43	GARRETT VAS SIL 4.0,TIP, 8 1/4"	2
44	GARRETT VAS DIL 4.5,TIP, 8 1/2"	2

45	GARRETT VAS DIL 5.0,TIP, 8 1/4"	2
	<u>MITRAL SET</u>	
46	COOLEY MV RET MEDIUM,RIGHT	2
47	COOLEY MV RET LARGE,RIGHT	2
48	COOLEY MV RETRACTOR,LEFT	2
49	CARDIAC VALVE,FORCEPS 9 1/2"	2
	<u>CORONARY SET</u>	
50	JAMISON METZENBAUM,SCIS CVD 7"	3
51	WOOD BULLDOG ANG,20MM	2
52	DEBAKEY HEPARIN,NEEDLE SMALL	12
53	DEBAKEY TIS FCPS,THIN 7 3/4AG"	9
54	DEBAKEY TIS FCPS ANG,7 3/4 AG"	3
55	YOU-POTTS SCISSORS,120DEG 7"	3
56	YOU-POTTS SCISSORS,45DEG 7"	3
57	YOU-POTTS SCISSORS,90DEG 7"	3
58	CASTROVIEJO Needle Handle H 7, TC" (for 6.0 Needle)	3
59	CORONARY SCISSORS,120DEG 7" (for 7.0 Needle)	3
60	SPENCER CORONARY NH,7 TC"	3
61	MICRO RING TIP FCPS,1.5MM 7"	3
62	BECK CLAMP ACUTE CVD,LARGE AG	3
63	INTERNAL MAMMARY RETRACTOR	2
	<u>VASCULAR SET</u>	
64	DEBAKEY SEMB LIGAT,CARRIER AG	3
65	HARKEN CLAMP #1,CURVE AG	3
66	CARDIAC VALVE,FORCEPS 9 1/2"	3
67	DEBAKEY TIS FCPS STR,12 AG"	3
68	DEBAKEY TIS FCPS STR,7 3/4 AG"	9
69	SPONGE FCPS CVD,SERRATED 9 1/2	2
70	DOYEN RASP ADULT,RIGHT 7"	2
71	SENNING BULLDOG,MEDIUM-LIGHT	2
72	SENNING BULLDOG,LIGHT	2
73	DIETHRICH BULLDOG,ANG 12MM	2
74	BAILEY RONGEUR 25DEG,DOWN	2
75	BAILEY RONGEUR 70DEG,DOWN	1
76	COOLEY STERNUM RET X,LARGE	1

77	ANDERSON ADSON SELF,RETR	4
78	WEITLANER RETRACTOR,BL 4 1/2"	2
79	BONCHEK-CARPENTIER,ATRIAL RET	1

TENDER NO: PGI/MM/CCM/214/09-10

Transport Monitor

1. Ten inch or bigger touch screen with colour display readable even from 10 feet distance
2. Dimensions (H x W x D) not more than 375 x 375 x 375 mm
3. Monitor should operate on dual electrical supply i.e. mains and battery back up
4. Battery to be of NIMH or higher quality
5. Battery backup for minimum 02 hours
6. Basic Configuration:
 - a. Single channel ECG with selectable lead (lead I, II, III)
 - b. SpO2 with a set of reusable adult and pediatric probes
 - c. NIBP with a set of reusable medium and small adult cuff, pediatric cuff and neonatal cuff
 - d. 02 invasive pressure
 - e. 01 temperature (core)
7. Four channel selectable waveform display with other numeric display
8. Individually adjustable alarm limits
9. Regulatory
 - a. Approved by FDA and CE – European Medical Device
 - b. No recall or alerts from FDA
10. Each unit must be supplied with two sets of operating manual, service manual and any circuit diagram
11. Guarantee, warranty, comprehensive maintenance and non-comprehensive maintenance clauses as per the Institute Norms

Optional item: to be quoted separately:

ICG Excretion monitor : for Non-invasive and Invasive monitoring of liver functional assessment, liver graft functional assessment following transplantation, and assessment of immediate profile of actual global liver function and perfusion, and assessment of function of the residual liver volume.

TENDER NO: PGI/MM/ CCM/215/09-10

MRI Compatible Transport Monitor

Specifications:

1. Basic Configuration: ECG, SpO2, NIBP, minimum 01 IBP
 - a. NIBP - with a set of reusable medium and small adult cuff, pediatric cuff and neonatal cuff
 - b. SpO2 - with a set of reusable adult and pediatric probes
 - c. ECG-Leads I, II, III (selectable)
2. Dimensions (H x W x D) not more than 375 x 375 x 375 mm
3. Clear LCD-colour display readable even from 10 feet distance
4. Four channel selectable waveform display with other numeric display
5. Individually adjustable alarm limits

6. Integrated monitoring system suitable for the strength of the magnetic field 3.0 tesla
7. Fiber optic sensors
8. For monitoring of neonates, pediatric and adult patients
9. Interference-free images
10. Mains and Battery operation during the MRI examination
11. Battery operating time minimum 120 min.
12. Regulatory
 - a. Approved by FDA and CE – European Medical Device
 - b. No recall or alerts from FDA
13. Each unit must be supplied with two sets of operating manual, service manual and any circuit diagram
14. Guarantee, warranty, comprehensive maintenance and non-comprehensive maintenance clauses as per the Institute Norms

TENDER NO: PGI/MM/ CCM/216/09-10

Syringe Infusion Pump

1. Power: AC with battery back-up for at least 04 hours for flow rate 5-10 ml/hr with battery indicator and remaining battery life
2. Syringes: Acceptance and auto-detection of all common Indian and imported makes of 5, 10, 20, 50/60 ml syringes
3. Alarms and Pre-alarms
 - a. Main's disconnection
 - b. Occlusion pressure
 - c. PM line disconnection
4. Infusion rate – 0.1 to 999 ml/hr with accuracy as high as +/- 1%
5. Bolus – Manual and programmable with continuous volume display, anti-bolus at occlusion release
6. Changes in flow rate and bolus should be without stopping the pump
7. Display panel: Drug, infused volume, flow rate, occlusion pressure
8. Programming: Display panel, occlusion pressure, dose calculation, anti-bolus, infusion mode display in volume and mass, drug information storage, alarm-sound (desirable)
9. Mounting: Mounting on both horizontal and vertical bars should be possible
10. Information technology enabled
11. Regulatory
 - a. Approved by FDA and CE – European Medical Device
 - b. No recall or alerts from FDA
12. Each unit must be supplied with two sets of operating manual, service manual and any circuit diagram
13. Guarantee, warranty, comprehensive maintenance and non-comprehensive maintenance clauses as per the Institute Norms

TENDER NO: PGI/MM/ CCM/217/09-10

Volumetric Infusion Pump

1. Power: AC with battery back-up for at least 04 hours for flow rate 75-100 ml/hr with battery indicator and remaining battery life indicator
2. Alarms and Pre-alarms with adjustable sound volume
 - a. Main's disconnection
 - b. Upstream and downstream line occlusion and disconnection

- c. Pressure rise and pressure drop
 - d. Air inline
- 3. Infusion rate – Minimum range of 0.1 to 999 ml/hr with micro and macro modes with accuracy as high as +/- 5%
- 4. Bolus – With continuous volume display, anti-bolus at occlusion release
- 5. Display panel: Visibility from 4-5 meter distance, Drug/Fluid, infused volume, flow rate, inline pressure
- 6. Optional drop detector
- 7. Event log and time display for preventive maintenance is desirable
- 8. Changes in flow rate and bolus should be without stopping the pump
- 9. Preferably light weight (less than 3.5 kg)
- 10. Information technology enabled by RS 232
- 11. Programming: Display panel, occlusion pressure, drug information storage
- 12. Mounting: Mounting on both horizontal and vertical bars should be possible
- 13. Regulatory
 - a. Approved by FDA and CE – European Medical Device
 - b. No recall or alerts from FDA
- 14. Each unit must be supplied with two sets of operating manual, service manual and any circuit diagram
- 15. Guarantee, warranty, comprehensive maintenance and non-comprehensive maintenance clauses as per the Institute Norms

TENDER NO: PGI/MM/ CCM/218/09-10

Bi-level Positive Airway Pressure (Non-Invasive) Machine

- 1. Electrically operated microprocessor based operation
- 2. Pressure relief at the end of inhalation and at the beginning of exhalation
- 3. Auto adjustment of the cycle between inspiratory and expiratory pressures
- 4. Mask leak compensation
- 5. Mask off alarm
- 6. Ventilation modes:
 - a. CPAP
 - b. CPAP and Pressure Assisted/Support Ventilation
 - c. Pressure Controlled Ventilation
- 7. CPAP: 3 to 20 mbar
- 8. IPAP: 5 – 30 mbar
- 9. EPAP: 2 – 20 mbar
- 10. Frequency:
 - a. CPAP and Pressure Assisted/Support Ventilation: 6 - 40 /min
 - b. PCV : 6 - 60 /min
- 11. Maximum pressure limit 40 mbar (on patient)
- 12. Max inspiratory and expiratory resistance: 6 mbar at 60 L/min
- 13. Airway pressure measurement display
- 14. Oxygen Concentration: 21 to 100%
- 15. In-built Humidifier
- 16. Easy disinfection of all parts where in re-breathing takes place
- 17. Full face mask (large size 1, medium size 2, and small size 2)
- 18. Nasal face mask (large size 1, medium size 2, and small size 2)
- 19. Nasal pillow CPAP/BiPAP masks each with 03 pillows (large size 1, medium size 2, and small size 2)
- 20. Regulatory
 - a. Approved by FDA and CE – European Medical Device
 - b. No recall or alerts from FDA

21. Each unit must be supplied with two sets of operating manual, service manual and any circuit diagram
22. Guarantee, warranty, comprehensive maintenance and non-comprehensive maintenance clauses as per the Institute Norms

PGI/MM/Micro/219/09-10
ANOXOMATE MARK II CTS AN2CTS

MART ANOXOMAT SYSTEM

AN2CTS ANOXOMAT MARK II CTS

Operation by color touch screen

Including Vacuum pump, Connection for 1 Jar, Connection of 1 Jar,

Quality assurance consisting of:

Gas input test , Jar leak test, Seal leak test(5 levels),

Catalyst activity test (5 levels), On-screen failure indication

Accessories:

AN2GC-One additional gas connection (including software update)

AN2UPF User Programming function (User can program O2 level, Gas Mixture and evacuation level

PGI/MM/Micro/220/09-10

1D & 2D IEF CELL

IEF system:

- Integrated peltier cooling platform (10-25°C) and programmable high voltage power supply
- Voltage: 0-10,000 volts, Current: 0-2.5 mA
- Capability to accommodate Immobilized pH gradient (IPG) strip chamber for 7,11,17 and 18 cm length strips and 1-12 strips per tray
- Capability for total number of strips at one time: preferably 24 (7cm) 12 (11cm) and 12 (17cm)
- Ceramic/ non metallic trays with fixed electrodes for running 7cm and 17 cm strips for uniform thermal characteristics for most stringent applications and better resolution/reproducibility
- With cup loading tray for all the three sizes.
- With 2 forceps, 500 electrodes wicks, 1 L mineral oil
- With starter kit for at least 15 gels of 7 cm size
- Programmable parameters including: rehydration and focusing time, platform temperature, current limit per strip, voltage and voltage ramping type for each step.
- Should be able to control time or volt hours in each step
- Choice of three voltage ramping profiles: Rapid, Linear, Slow
- Strips of 7 cm & 17 cm should be there (pH 3-10 and 4-7) as optional

SDS Page System:

- Mini Electrophoresis system with 7x8 cm gel size with capacity of 2-4 gels simultaneously (preferably 4 gels)
- Should have integrated spacers with glass plates for ease of casting
- Should be a modular system to support blotting and electro-elutions also in the same system.
- Should come all standard accessories like 10 well, 0.75 mm comb, 5 sets of glass plates- both spacer plates and short plates.
- Should come with sample loading guide

Large Protein electrophoresis:

- Completely modular system for gel size: 16x18 cm
- Should come with gel caster for leak proof, tape free gel casting
- Spacers of 1.0 mm thickness
- System should be able to run two or four gel at one time
- System should come with 10 & 15 well combs
- Should have central cooling facility for keeping the temp of gels low
- Should be upgradeable to larger size

Blotting Apparatus:

- Gel size 16x20 cm
- Buffer requirements: 2.5 L
- Capacity: upto 3 large gels, 12 mini gels
- Electrode: durable platinum coated titanium anode & stainless steel cathode

Power Supply: for Running and transfer of large gels

- Programmable power supply should be capable to operate four electrophoresis units simultaneously for four identical runs with graphic LED display
- The output range should be up to 500 V, 2000-2500 mA in 1 m steps, 1-400 W in 1 Watt steps
- Constant voltage, current or power or Constant Temperature
- Memory storage: 9 programs, 9 steps, timer control: 99 hr, 59 min
- 4 recessed sets in parallel
- Temperature control with the help of temp probe
- Data achieving facility: yes
- Automatic power up after power failure, safety features: No-load detection; Sudden load change detection

2 D Analysis software:

- Easy to use wizard directed user interface
- Automated spot detection and matching
- Sophisticated quantitation
- Statistical analysis tools by Boolean method
- Flexible visualization tools
- Sample classification for comparative analysis
- Integration with spot cutting and protein identification

Can do identification up to 15 gels per experiments

PGI/MM/Micro/221/09-10

Liquid Nitrogen Container:

Static holding time days 19,
 working time days 12,
 Evaporation rate liter/days 2.5,
 Liquid Nitrogen capacity liters 48,
 Weight Empty lbs 42, kg 19.1,
 Weight full lbs 125, kg 56.7
 Neck diameter in 14, mm 356
 Overall Height in 29.7, mm 754
 Overall dimension in 15.4, mm 391
 Usable height internal in 19.2, mm 391
 Internal diameter in 14.0, mm 356
 Capacity:
 2 ml plastic vials 3024
 Box size shape Triangle, size in 6.75x6.87, size mm 171x175, vials per box 56
 Roller base

PGI/MM/Micro/222/09-10

Gel Documentation Systems:

CCD Camera	
CCD resolution (HxV)	: 1,360x1,024 pixels
Pixel density	: 12 bit (4,096 gray levels)
Pixel size (HxV)	: 4.6 x 4.6 um
Dynamic range	: 03 orders of magnitude
Camera cooling systems	: No
Camera cooling temperature	: NA
Motorized zoom lens	: C-mount, f/1.2, 8.5-51 mm
Illumination modes	: Trans-UV, white, epi-white

Excitation source : 254, 302,365nm and white light
 Filter positions : Fluorescence;2
 Emission filters : 1 included (amber), 4 optional
 Transillumination area : 25 x 26 cm
 Dynamic flat fielding : No
 Software compatibility : Windows

1. Gel Doc System, PC with all analytical software
 The discovery series™ quantity one 1-D Analysis software
 With sony UPD895 printer and sony UPD895 printer paper
 Transilluminator – movable with spare tube light 4

2. **Accessories:**

White light transilluminator
 White light conversion screen
 Filter, 520DF30 62 mm, SYBR Green/Green Fluorescent Protein/ SYBR
 Gold/Fluorescence , Filter 560DF50 62 mm, Cy3/rhodamine
 Filter 630BP30 62 mm, SYPRO Ruby/Texas Red
 Filter 480BP70 62 mm, Hoechst/coumarin
 254 nm UV lamps-06
 365 nm UV lamps-06
 Standard 302 nm UV lamps-06

PGI/MM/Micro/223/09-10

Technical Specifications: Horizontal Autoclave

Horizontal Stabilizers	
Specification	150 Liters
Chamber Dimensions	400 x 1200 mm
Construction	SS 316
Power Consumption	9 Kw
Operating Pressure	15 PSI
Operating Temperature	121 C
Voltage	440V
Control	Pressure Switch
Gross Weight	510 Kg
Shipping Size (mm)	925 x 1900 x 1850

PGI/MM/Micro/224/09-10

PULSE FIELD GEL ELECTROPHORESIS SYSTEM

Specification

1. Protocol optimization through embedded auto algorithm
2. Interactive algorithm program disk
3. Cell for electrophoresis
4. Should have cooling module
5. Should have variable speed pump with tygon tubing

6. Casting stand of 14 cm x 13 cm
 7. 15 well 1.5 mm thick comb and comb holder
- Disposable plug molds

PGI/MM/Gsurg/225/09-10
LAPROSCOPY SURGICAL INSTRUMENTS

Instrument	Quantity	
Trocar 11mm	12	working length 10.5cm with multifunctional valve, pyramidal tip
Trocar 11mm	6	working length 10.5cm with multifunctional valve, conical tip
Trocar 06mm	12	working length 10.5cm with multifunctional valve, pyramidal tip
Trocar 15 mm	6	working length 12 cm with multifunctional valve, pyramidal tip
Trocar 15 mm	8	working length 15 cm, pyramidal tip, multifunctional valve
Trocar 06 mm	4	working length 15 cm, pyramidal tip, multifunctional valve
Trocar 06mm	6	working length 10.5cm with multifunctional valve, conical tip
Veress 10 cm	4	spring-mounted blunt inner cannula, Luer-lock, diameter 2.1 mm
Veress 15 cm	4	spring-mounted blunt inner cannula, Luer-lock, diameter 2.1 mm
Veress 13 cm	6	spring-mounted blunt inner cannula, Luer-lock, diameter 2.1 mm
Reduction Sleeve	6	15 mm to 5 mm
Reduction Sleeve	10	11mm to 5 mm
Sealing Cap 6mm	10	
Sealing Cap 10mm	10	
Dissecting and Grasping Forceps 5mm	4	size 5mm, 36 cm length, Reddick olsen, rotating, dismantling, insulated with connector pin for uniporal coagulation
	4	size 5mm, 36 cm length, alligator jaw, rotating, dismantling, insulated with connector pin for uniporal coagulation
	4	size 5mm, 36 cm length, Kelly, rotating, dismantling, insulated with connector pin for uniporal coagulation
	4	size 5mm, 36 cm length, Kelly, long jaw, rotating, dismantling, insulated with connector pin for uniporal coagulation
	4	size 5mm, 36 cm length, alligator jaw with Manhes ratchet, rotating, dismantling, insulated with connector pin for uniporal coagulation
	4	size 5mm, 36 cm length, atraumatic, rotating, dismantling, insulated with connector pin for uniporal coagulation
	2	size 5mm, 36 cm length, Reddick olsen Dolphin nose, rotating, dismantling, insulated with connector pin for uniporal coagulation
	4	size 5mm, 36 cm length, Fenestrated with fine atraumatic serration, rotating, dismantling, insulated with connector pin for uniporal coagulation

- 4 size 5mm, 36 cm length, atraumatic with hollow jaws, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 4 size 5mm, 36 cm length, atraumatic with hollow jaws with Manhes ratchet, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 4 size 5mm, 36 cm length, Croce-Olmi, atraumatic, fenestrated and curved, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 4 size 5mm, 36 cm length, right angled, short and curved, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 4 size 5mm, 36 cm length, Babcock, long with Manhes ratchet, rotating, dismantling, insulated with connector pin for unipolar coagulation

- 2 size 5mm, 36 cm length, Manhes forcep with multiple teeth, width of jaw 4.8 mm, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 2 size 5mm, 36 cm length, Manhes forcep with multiple teeth with tiger jaw, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 2 size 5mm, 36 cm length, Schneider forcep, atraumatic, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 2 size 5mm, 36 cm length, DeBakey forcep with Manhes ratchet, rotating, dismantling, insulated with connector pin for unipolar coagulation

- 3 size 5mm, 36 cm length, Babcock, fenestrated, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 2 size 5mm, 36 cm length, Grasping forcep, atraumatic with double spoon, fenestrated, multiple teeth, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 2 size 5mm, 36 cm length, small atraumatic grasping forcep, fenestrated, rotating, dismantling, insulated with connector pin for unipolar coagulation
- 2 size 5mm, 36 cm length, Babcock, fenestrated, atraumatic, rotating, dismantling, insulated with connector pin for unipolar coagulation

- 2 size 5mm, 36 cm length, Bowel grasper, long, fenestrated, rotating, dismantling, insulated with connector pin for unipolar coagulation

- 2 size 5mm, 36 cm length, Allis forcep, long, with Manhes ratchet, rotating, dismantling, insulated with connector pin for unipolar coagulation

- 2 size 5mm, 43 cm length, Manhes forcep, duck-bill jaw, blunt with Ratchet, jaw 15mm, rotating, dismantling, insulated with connector pin for unipolar coagulation

dissecting and
Grasping
Forceps 10mm

- 4 size 5mm, 43 cm length, Swolin, atraumatic, blunt with Ratchet, jaw 15mm, rotating, dismantling, insulated with connector pin for unipolar coagulation
 - 2 size 5mm, 43 cm length, bowel forcep, fenestrated, short rotating, dismantling, insulated with connector pin for unipolar coagulation
 - 2 size 5mm, 43 cm length, Fanous grasping forcep with integrated scissor, rotating, dismantling, insulated with connector pin for unipolar coagulation
 - 2 size 5mm, 43 cm length, Right angled, rotating, dismantling, insulated with connector pin for unipolar coagulation
 - 4 size 5mm, 43 cm length, Manhes forcep, duck-bill jaw, blunt with Ratchet, jaw 15mm, rotating, dismantling, insulated with connector pin for unipolar coagulation
 - 2 size 5mm, 43 cm length, Maryland forceps, long jaw, rotating, dismantling, insulated with connector pin for unipolar coagulation
 - 2 size 5mm, 43 cm length, Mouret dissecting forceps, atraumatic, fenestrated, rotating, dismantling, insulated with connector pin for unipolar coagulation
- Scissors 5mm
- 4 size 5 mm, length 36 cm, rotating, Manhes scissor, dismantling, with connector pin for unipolar coagulation
 - 2 size 5 mm, length 36 cm, rotating, Hook scissor, dismantling, with connector pin for unipolar coagulation
 - 1 size 5 mm, length 36 cm, rotating, Manhes Micro scissor with long jaw, self-sharpening, dismantling, with connector pin for unipolar coagulation
 - 2 size 5 mm, length 36 cm, Metzenbaum scissor with 12mm long jaw, self-sharpening, rotating, dismantling, with connector pin for unipolar coagulation
 - 2 size 5 mm, length 36 cm, Serrated curved scissor with 17mm long jaw, self-sharpening, rotating, dismantling, with connector pin for unipolar coagulation
 - 2 size 5 mm, length 36 cm, Serrated curved, conical scissor with long jaw, self-sharpening, rotating, dismantling, with connector pin for unipolar coagulation
 - 2 size 5 mm, length 43 cm, Metzenbaum scissor with 17mm long jaw, self-sharpening, rotating, dismantling, with connector pin for unipolar coagulation
- Biopsy and punch forcep 5mm
- 2 size 5 mm, length 36 cm, Manhes biopsy forcep, with rotating, dismantling, with connector pin for unipolar coagulation
 - 2 size 5 mm, length 36 cm, Blakesley dissecting and biopsy forcep, with rotating, dismantling, with connector pin for unipolar coagulation

Irrigation and suction tube 5mm	3 size 5mm, length 36 cm, suction and irrigation tube with lateral holes
	3 size 5mm, length 36 cm, suction and irrigation tube with lateral holes with 2 way stopclock for single hand use
	1 size 5mm, length 43 cm, suction and irrigation tube with lateral holes with 2 way stopclock for single hand use
Irrigation and suction tube 10mm	2 size 10 mm, length 36 cm, suction and irrigation tube with lateral holes with 2 way stopclock for single hand use
Modular handle for I & S tube	3 straight handle with trumpet valve, autoclavable, for use with suction - coagulation cannula of 5 and 10mm tube
Cagulation and dissecting electrodes 5mm	3 size 5 mm, length 36 cm, coagulating and dissecting electrode L type
	3 size 5 mm, length 36 cm, Cadiere coagulating and dissecting electrode L type with cm marking
	3 size 5 mm, length 36 cm, coagulating and dissecting electrode U type
	2 size 5 mm, length 36 cm, Remorgida coagulating and dissecting electrode L type, can be distally angled upto 15 degrees
	2 size 5 mm, length 43cm, coagulating and dissecting electrode L type
Fascial closure instrument	4 Berci fascial closure, size 2.8mm, length 17 cm,
Knot tier 5mm	2 size 5 mm, length 33cm, Cuschieri integral knt pusher and thread catcher
Needle holder 5mm	4 Koh macro needle holder with tungston carbide insert, straight handle with disengagable ratchet, straight jaw, size 5 mm, lenht 33cm, for use of 0/0 to 7/ sutures
	2 Koh macro needle holder with tungston carbide insert, straight handle with disengagable ratchet, straight jaw, size 5 mm, lenht 43 cm, for use of 0/0 to 7/ sutures
Retractors 5mm	3 Size 5mm, length 36 cm, Fan retractor, dismantling, distendable
	3 Cuschieri retractor, size 5 mm, length 36cm
Retractors 10mm	2 size 12 mm, length 36 cm, Deflecting Fan retractor
	2 Cuschieri retractor, size 10 mm, length 36cm, large contact surface
Clip applicator 10mm	3 Insert for Ethicon clips, medium large for use with other handles
	3 Clip applicator, dismantaling and rotating with ratchet to lock the jaw, for medium large clip
	3 Clip applicator, dismantaling and rotating with ratchet to lock the jaw, for medium clip

PGI/MM/G surg/226/09-10

OPEN SURGICAL INSTRUMENTS FOR GASTRO SURGERY sets as:

General laparotomy sets: 6—2 for each OT

Vascular instruments: 3 sets

Thoracotomy: 2 sets

Pelvic surgery: 2 sets

Sl no	Instrument	Specifications	Quantity	
Scissors				
1	Stevens tenotomy scissors	Tapering, fine, blunt tip. Curved. 12.5 cms, 5”	2	
2.	Weller scissors	Dissecting scissors-heavy 280 mm	6	
3.	Metzenbaum scissors	Tungten carbide cutting edge, gold plated rings 14.5cms. Curved 16 cms, curved 23 cms curved 18 cms. straight	6 6 6 6	
4.	Potts scissors Potts-De Martel Potts-Smith	Fine, pointed, curved 180 mm 45 ⁰ 185 mm 190 mm	3 3 3	
5.	De Bakey	Vascular scissors 220mm/8 ¾”	3	
6.		Wire cutting scissors	2	
Tissue holding forceps:				
7	Tissue holding forceps, non-toothed, fine tip	145 mm 180 mm 200 mm	12 12 12	
8	Toothed tissue holding forceps	14.5 cms, straight 145mm-heavy	6 6	
9	Waugh toothed tissue holding forceps	20 cms, straight	6	
10	Mc Indoe tissue holding forceps, non toothed	6”, 15 cm	6	
11	Cushing’s tissue holding forceps, non toothed.	18 cms, serrated tips, non-toothed 20 cms 25 cms	12 12 4	

12	DeBakey's atraumatic vascular forceps	Vascular forceps, atraumatic jaws, 1.0 mm wide tip 15 cm 19.5 cm 24 cm 200 mm	6 4 4 4	
13	Micro tissue forceps	Round handles, soft spring tension, platform tip, straight. 18 cms. Straight tip 21 cms. Straight tip	2 2	
14	Allis forceps	155 mm	24	
Needle holders				
15	Needle holder-Crile Wood	Delicate pattern 15 cms	6	
16	Jameson needle holder	23 cms	12	
17	De Bakey's needle holder	Tungsten-carbide inserts, gold plated ring handles, slender pattern 18 cms 23 cms 25cms	12 12 12	
18	Ryder (very delicate, suture size 5/0 & smaller)	1 mm jaw, diamond dust coating /tungsten carbide inserts on the inside of jaws, gold plated ring handles, serrated jaws 14 cms, 18 cms, 22 cms, 25 cms	2 2 2 2	
19	Castroviejo needle holder	Straight, diamond dust coating/tungsten carbide inserts on the inside of jaws, gold plated ends	2 2	
19 b	Castroviejo needle holder (micro) with round handles	14.5 cms 18.0 cms	02 02	
19 c	without catch- Straight -Curved	15.0 cms 15.0 cms	02 02	
20	Micro-needle holder	Round handle, straight tip, with ratchet, diamond dust coating/tungsten carbide inserts on the inside of jaws. 23 cm	2	

Vascular clamps:				
21	Bull dog clamp-Dieffenbach	Curved 38 mm total length, 12 mm length of jaw serrations 48 mm total length, 16 mm length of jaw serrations	2 2	
22	Bull dog clamp, Diethrich	Curved, 48 mm total length, 10 mm length of jaw serrations	2	
23	Mini Bull dog clamp CVD 35mm	CVD 35mm	2	
24	Mini Bull Dog Clamp CVD 45 mm	CVD 45 mm	2	
25	Bull dog clamp-De Bakey	Curved 78 mm, 18 mm length of jaw serrations 86mm, 26 mm length of jaw serrations	1 1	
26	Cooley vascular clamp (coarctation ,patent ductus clamp)	Gentle curve of the jaw, Total length : 18cms Length of serrated jaws:63mm	2	
27	Debakeys vascular clamp (patent ductus clamp)	Gentle curve of the jaw Total length: 20 cms Length of serrated jaws: 92.5 mm	2	
28	Debakey vascular clamp (Ring handle bull dog clamp)	length 12.5cms 45 degree angle (single angle jaw curve	1	
29	Cooley vascular anastomosis clamp (single angle curve of jaw)	16.5 cms length, 30 degree jaw angle	1	
30	Cooley vascular clamp (ring handle bull dog clamp)	Double angled curved jaw, length 11.5 cms	1	
31	Baby-Satinsky vascular anastomosis clamp	Double angle curve jaw, length 150mm	2	
32	Cooley vascular anastomosis clamp (double angle curve jaw)	double angle curved atraumatic jaws, Length 16 cms, jaw width: 24 mm	4	
33	Cooley vascular anastomosis clamp	Double angle curved jaw, Length: 17.5 cms, jaw width: 20mm	2	
34	De- Bakey –Satinsky tangential occlusion clamp	Double angle curved jaw Total length: 23.5 cms Jaw length: 68 mm Width of jaw: 32mm	1	
35	DeBakey tangential occlusion	Total Length 22 cms,	2	

	vascular clamp (double angle curve jaws)	jaw width 38mm		
36	DeBakeys dissecting & ligature forceps, profunda clamps	Atraumatic jaws, smooth rounded curve. Total length 19 cms Length of serrated jaws: 77 mm	1	
37	Micro-Halstead-mosquito	12.5 cms. Straight 12.5 cms. curved	72 72	
38	Roberts artery forceps	22.5 cm-curved	16	
39	Spencer Wells artery forceps	150 mm straight 150 mm curved	36 36	
Dissecting and ligature forceps				
40	Mixer right angle dissecting & ligature forceps	Right angle dissecting and clamping forceps, very delicate jaws with longitudinal serrations, cross serrated tips 18 cms 22 cms 25 cms	12 9 6	
41	Lahey dissecting & ligature Forceps	Fully curved jaws with longitudinal serrations 20 cm 23 cm	12 2	
42	Micro-Adson dissecting & ligature forceps	14 cms.	4	
43	Desjardins gall duct & cystic forceps	22 cms	6	
Intestine and tissue holding forceps				
44	DeBakey atraumatic Intestinal & tissue holding forceps	Intestinal & tissue holding forceps , jaws with atraumatic serrations Jaws 20 mm wide, 25 cms	6	
Towel clamps				
45 a	Backhaus Towel clamp	8.0 cms 11 cms	24 16	
45 b	Towel Clamps for paper	5 1/2"	16	
45 c	cloth Towel clamps for paper cloth	4 1/2"	24	
Tubing clamp				
46	"Simplex" tubing clamp	12 mm width	4	
Sponge holding-dressing forceps				
47	GROSS" dressing and sponge forceps with catch	Atraumatic, serrated jaws with slender oval fenestration, with catch	12	

		14.5 cms, curved 18 cms, curved	12	
48	“Foerster-ballenger” Sponge holding forceps	Small loop jaws, serrated 18 cms-straight 24.5 cms-curved	12 12	
Tissue grasping forceps:				
49	Boys-Allis	15.5 cms length, 5x6 teeth	16	
50	Allis	19 cms length	4	
51	Babcock organ & tissue holding forceps	15.5 cms. Length 20 cms length	10 2	
52	Kochers atraumatic intestinal clamps	Curved, 21 cms	2	
53	Blake gall stone holding forceps	Curved, 20.5 cms	1	
Retractors				
54	Kocher-Langenback retractor Czerny retractor	Length: 21.5 cm Blade:6 mm wide-25 mm deep Blade: 11 mm wide-41 mm deep Blade: 15 mm wide-35 mm deep 17m mm; 38x22mm	4 8 8 12	
55	Masing vein retractor	Blade 6x12 mm, length 14 cms	2	
56	Cushing Vein retractor	Length 17.5 cms, blade 10X10 mm	2	
57	Adson dura and nerve hook	Right angled end, blunt tip Length: 19 cms, blunt tip	2	
58	Malleable retractors (abdominal & intestinal spatulas)	Ribbon retractors, malleable, stainless steel Ribbon retractors, malleable, stainless steel 50, 40 mm width, 305 mms. length 33 cms. Length, 50mm, 40mm	6 6 6	
59	Harrington retractor	123x45 mm 123x64 mm	2 6	
60	Allison lung spatula	40 mm blade width, 255 mm length 54 mm blade width, 320 mm length	2 2	
61	Morris retractor	Total length: 24.5 cms Blade: 70 x 50 mm Blade: 70 x 65	8 2	
62	Doyen retractors for deep pelvic surgery	Length 24 cms Blades:35 mm wide, 90 mm	2	

		deep Blade:45 mm wide, 120 mm deep Blade:60 mm wide, 160 mm deep	2 2	
63	Doyen bladder retractor	Length: 26 cms Blade:78mm depthx82mm width	3	
64	Deaver retractors	Standard pattern, flexible 30 cms. long, 25 mm wide 30 cms long, 38 mm wide 31 cms long, 38 mm wide	4 6 8	
65	“MIKULICZ” abdominal retractors for deep abdominal surgery , 26 cms	Blade:35 mm wide x 91 mm deep, length: 24 cms Blade:55 mm wide x 86 mm deep, length: 25.5 cms Blade:50 mm wide x 121 mm deep, length: 25.0cm	8 2 2	
66	St. Marks pelvic retractor	Blade: 174x60mm, length: 330mm	2	
67	Rochard table mounted self retaining abdominal retractor	Mounted frame for fastening to the lateral bars (both sides)of the operating table Blade sizes: 48 x 90mm 48 x 120mm	2 2	
68	Balfour self retaining abdominal retractor	Lateral blade: 60mm deep, central blade:47 x 80mm Lateral blade: 60 mm deep, central blade: 80 x 80 mm Lateral blade: 1050 mm deep, central blade: 107x59 mm	3 3 3	
69	Munster “One for all” self retaining retraction system	Closed frame	1	
70	Finechietto rib retractor	Shaft length:180 mm,blades:28 x 32 Shaft length:200mm, blades:36x45 Shaft length: 260mm, blades:65 x65	1 1 1	
71	Omnitract retractor system		1	
72	Costal Margin Retractor Set Self retaining Thompson type / Indian make Multittract / KENT (Takasago Japan type) 04			
Suction instruments				

73	Pool sump suction tip	Suction canula with outer tube to be screwed off. Length: 22.5 cms	12	
74	De Bakey suction canula	With finger cut off & stylet Olive diameter: 9 mm Length: 160mm	6	
75	Adson suction canula	With finger cut off & stylet Olive diameter: 8mm Tip diameter: 3 mm Length: 16.5 cm	6	
76	Barron suction cannula	With finger cut off & stylet, Tip Diameter:2mm Length: 16cms	2	

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Technical Specification for Portable Color Doppler Ultrasound Unit & Transducers

- I. Fully digital, compact portable Color Doppler Ultrasound machine is required with following technical features
20. The unit should be compact, lightweight and portable.. Weight should not exceed 5kg ($\pm 10\%$) excluding cart and accessories.
 21. It should be suitable for abdominal, Ob/Gyn, FAST exam, cardiac, breast, and small parts applications
 22. The unit must have real time compound imaging.
 23. The unit must have automatic gain adjustment for B mode.
 24. Scanning depth must be available up to 30 cm or more.
 25. System should support broad band / wide band Transducer Technology. System should have Linear Array, Curved Array, Phased Array, Multiplane TEE transducer, **Intraoperative transducer and laparoscopic transducer**; attach detail of all the transducer.
 26. System must have frequency range from 1 – 14 MHz (± 1 MHz)
 27. Imaging modes of Real time 2D, Color Doppler, Pulsed wave Doppler, Continuous wave Doppler, PW-TDI, Power (energy) Doppler should be available.
 28. Should have a minimum Doppler gate of 1.0 mm.
 29. Controls for 2D mode: Total gain, depth, dynamic range, auto gain
 30. System must have fast start up to scanning in less than 30 seconds as essential in critical and emergency situation in ICU, emergency, OT.
 31. Unit must be sturdy, resistant to breakage & damage on fall/ hit against the wall or hard surface.
 32. Cine memory on all modes.

33. System should be DICOM ready system with print, save, modality work list. Ready to connect to PACS.
34. Inbuilt Flat LCD/ TFT monitor of 10" or more.
35. Alphanumeric soft keys keyboard with easy access scans controls, system must have **sealed keyboard for sanitization**. This must be possible to **avoid cross contamination**
36. Onboard storage of at least 10000 images.
37. **USB port for connectivity to computer**.
38. System should have extensive calculation package for cardiac, Ob/Gyn, Vascular measurement and calculation provision for distance, area, volume and circumference.
39. Must be able to operate both on AC and inbuilt battery. Inbuilt battery pack should be self-recharging and should last at least for 2 hours when fully charged.

II. Transducers

4. Convex transducer 2-5 MHz for abdominal applications
5. High Frequency Linear transducer 5-10 MHz for Vascular Imaging, small parts. Higher frequency will be preferred, with biopsy attachment
6. Intraoperative Transducer and Laparoscopic transducers should be quoted as options.

III. ESSENTIAL REQUIREMENT: The firm must have minimum number of 50 installations of the same model in India, attach list of installations, and also provide performance certificates.

IV. WARRANTY: The unit, transducers and all accessories should be covered with comprehensive onsite warranty for five years commencing from the date of issue of installation certificate

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LAPROSCOPIC EQUIPMENTS:

High Definition Laparoscopic System

Specifications for Full High Definition Digital Camera

Qty-2

The system should have following features:

- It should have Pure digital signal with high definition video of 1920 x 1080p (min) native resolution and progressive scan technology both on camera head and console
- It should be compatible with Aspect ratio of 4:3 and 16:9
- The system should have Digital Zoom to enhance the quality of Image size & cross specialty standardization of the camera system, regardless of the telescope used.
- Digital zoom, white balance control and two peripheral controls on camera Head
- Integrated Gain/Shutter/Enhancement with automatic brightness control
- Video Outputs: two DVI, one SVHS, direct fiber optic output
- The system should automatically optimize all settings and be ready- to- use as soon as it is connected to the camera control unit.
- Should be touch screen Menu driven.
- The system should have multiple surgical specialty settings.

Technical Specifications:

Image System:	1/3" Progressive Scan CCD, PAL
Pixels	1920 X 1080 pixels per chip (min)
Camera Head Weight	< 100 gms.
AGC:	Microprocessor controlled
Signal-to-noise ratio	65-75 dB
Video output:	S-video signal Digital Video Interface
Power Supply	100-240 VAC, 50/60HZ

High Resolution Monitor (HD)

Qty-2

The system should have:

- Hi Definition Colored Monitor 26" Flat Panel Monitor
- PAL system compatible.
- Composite, S-Video and DVI inputs.
- Compact & Lightweight design.
- Resolution more than 1100 lines

LED Light Source

Qty-1

The system should have:

Electrical specification

- Primary: 100 - 240 VAC, 50/60 Hz, 400 W
- Fuses (2): 5.0A 250V

Light Engine

- Type: Red, Green, Blue LEDs (for light emission)
- Light outlets: 1
- Light intensity adjustment: continuously adjustable from 0 to 100% manually
- It should have Standby mode which will reduce light output to a minimum, preventing the light cable from generating excessive heat
- It should have Electronic Scope Sensing Technology (ESST), a special safety feature that helps prevent accidental burns caused by a light cable that is not connected to the scope.
- Intuitive simple user Interface with LCD touch screen
- Universal Jaw Assembly to adapt any make of Fiber Optic Cable
- **Light source should have a life of at least 3000 hours, and if it is non-LED source (Xenon 300W), cost of six bulbs should be quoted alongwith the bulb life.**

Specifications for High Definition Recording System

Qty-1

- Real time, MPEG 2 HD, 1 or 2 compression engine with full IBP encoding
- Video inputs minimum 2 nos. S-Video, 2 nos. Composite, 1 XGA (1024 X 768) and 1 High-Definition (1280 X 1024).

- Video outputs S-Video, Composite, DVI & XGA (1024 X 768, 1280 X 1024, and 1600 X 1200)
- Capable of Progressive scan image capture: Analog (640 x 480), Hi-Res (1024 X 768), and Hi-Def (1280 X 1024)
- Stereo audio Input
- Disc Capacity of 250 GB
- Touch screen (min 10") control panel interface
- Multi session disc recording capability
- Supports file formats for Images: Bitmap (BMP), JPEG, JPEG2K, Tagged Image File Format (TIFF) Videos: MPEG-1, MPEG-2, and MPEG-4
- CD-R, DVD-R, DVD+R (single session), DVD+RW Disc Recording Formats

Specifications for 45ltr Insufflator

Qty-1

- 45 liter of high flow & having LCD Display
- Microprocessor controlled & Software driven for real time pressure measurement.
- Soft approach pressure control for safe recovery of abdominal pressure
- Should have four mode & visual and audible alarms with min 0.1 L flow rate
- Internal leakage detection capability
- Integrated Gas heating
- Having internal venting system for safety
- Should have video on screen display
- Unit should include heated tubing, hose & yoke
- Unit should have inbuilt setting for pediatric/neonatal mode.

Laparoscopes: 10mm & 5mm

**Qty-10mm 0° 01
10mm 30° 02
05mm 30° 01**

- Should be high definition scopes.
- Should be Fully Autoclavable
- Should be in both 0 and 30 degree
- Should be Wide Angled distortion free view
- Must be equipped with Universal Adaptor for other Light Sources
- Should have Yellow Sapphire Glass Tip Index

Fiber Optic Cable

Qty-2

- Should be at least 4mm diameter and it should be compatible to transmit the best picture quality from HD camera system.
- It should have the technology to ensures that the light source goes to standby mode when it is detached from the scope