

**OFFICE OF THE DEAN & PRINCIPAL,
MKCG MEDICAL COLLEGE, BERHAMPUR, GANJAM, 760004**

NO.6401/MCB-11/Welfare/ Berhampur dated the

24th October,2011

-:ADVERTISEMENT:-

Sealed Tender in plain paper are invited from the Registered, DGS&D Rate contract firm having valid OST CC & VAT Clearance certificate towards supply of **Instrument/Equipment** for MKCG Medical College, Berhampur at a cost of Rs.95 Lakhs. The Tender are to be submitted by Speed post// Regd. post so as to reach in the office of the Dean & Principal MKCG Medical college Berhampur ten days from the date of publication of advertisement. The sealed tenders should be super scribed in bold capital letter as Tender for **“Instrument/Equipment**. The tenders received beyond the scheduled time and date will not be considered under any circumstances The detailed Tender paper, terms & conditions along with list of items required to be procured can be obtained from the office of the Dean & Principal in any working day on payment of Rs.500/- in shape of cash (non-refundable) to the Accounts section. The detailed of requirement, terms & conditions are also available in the website, www.ganjam.nic.in. The tenderer must submit the money receipt in support of purchase of tender form during submission of the sealed tender The Dean & Principal MKCG Medical College Berhampur being the authority reserves the rights to reject any tender or all tender in part or full without assigning any reason thereof.

E.O.M

Sd/-
Dean & Principal,
MKCG Medical College,
Berhampur

TENDER PAPER
TERMS AND CONDITIONS.

1.The sealed tenders should be super scribed as Tender for “**Instrument/Equipment.**” are to be submitted by Regd. Post/Speed Post/Courier service only so as to reach in the Office of the Dean & Principal, M.K.C.G. Medical College, Berhampur-4 from Ten days from the date of publication in the news paper. The tenders received beyond the scheduled time and date will not be considered under any circumstances & will be returned in original sealed cover. The Tender should be of double bid system i) **Technical Bid & ii) Price Bid in two sealed covers duly super scribed as Technical Bid & Price Bid and be submitted with one sealed cover.**

2. The tenderers should demonstrate the Instrument/Equipment before the purchase committee for approval of the item.

3. The sealed tenders submitted by the tenderers shall be opened by the Purchase Committee of, office of the Dean & Principal, M.K.C.G. Medical College, Berhampur in the Office Room at 4 P.M. of **09-11-2011** (If the day becomes a holiday on, the next working day) in the presence of either the tenderers or his /their authorized representatives who should remain present at the scheduled place and time. If any tenderer or his / their authorized representatives fails to turn. up to be present at the time of opening of the tenders .that will not bar the authority from opening the tenders or carrying on subsequent tendering procedures.

4. The tender should be clearly typed without any correction, interpolation and over-writing etc. and each page of the tender should bear the dated signature of the tenderer. Correction/over writing or interpolation of any entry should not be entertained at any cost.

5. The quoted rates should be given in Indian Currency both in words and figures against each item of the enclosed format / Tender proforma.

6.The rates quoted against each item should be F.O.R/CIF M.K.C.G. Medical College, Berhampur, Dist-Ganjam, Odisha.

7.The rates should be inclusive of all taxes, transportation & installation charges duties and statutory levies except the V.A.T. The CST if any payable on the transaction should be shown separately in the proforma appended to the tender paper.

8.The tender should be valid for the current financial year 2011-12.

9.The prices quoted should be final and shall not be subject to any escalation during the validity period of the tender/till the purchase is over.

10.The tenderer should submit/furnish a certificate in the tender to the effect that price quoted by him/them is not more than the Educational Institution Prices or Open Market Price or also not more than the rate contract rates of D.G.S & D., New-Delhi where such rates exist.

11.The tenderer will arrange the documents like authenticated paper regarding Industrial License, N.M.I.C., C.D.E.C. and Letter of Authorisation of the Principal Firm at his/their risk, responsibility and cost if any.

12.The tenderer should submit/furnish detailed specification, literatures, and details of the Instrument/Equipment along with the tender.

13.The tenderer should mention the brand name of the Quoted item, country of origin, country of shipment and name of address of the Principal Firm in their tender along with year of manufacturing.

14.The tender should furnish Photostat copies of the up to date sales tax, Income tax and VAT clearance certificates duly attested by a Gazetted Officer under his seal and signature along with money receipt in original relating to his/their firm along with the tender.

15.If the manufacturing firm will directly submitting the tender, they shall not authorize any agent to quote their products.

16.The tenderer should furnish the Earnest Money Deposit for **Rs.25,000/-(Rupees twenty five thousand) only in shape of Bank Draft only in favor of the Dean & Principal, M.K.C.G.Medical College, Berhampur payable at M.C.C Branch Berhampur**, in the Technical Bid along with the tender. The EMD will be forfeited in case, the successful tenderer fails to execute the order within the stipulated period in supply of the same.

17.The successful tenderer shall have to furnish the security deposit @ 2.5% of the accepted value of the purchase order with the Dean & Principal, MKCG Medical College, Berhampur after receipt of purchase order within a fortnight. Such security deposit shall be in shape of fixed term deposit of SBI MCC Branch duly pledged in favour of the Principal, MKCG Medical; College, Berhampur. The security deposits furnished by the successful tenderer shall be refunded after successful execution of the supplies and shall be forfeited on failure to comply with conditions of the work order.

18.Purchase order shall be placed with the successful tenderer by Regd.Post with A.D **after approval in the Purchase Committee Meeting**. It is obligatory on the part of the selected firm to acknowledge receipt of the purchase order within fifteen days.

19. The tenderer shall clearly mention about the guarantee period of the Quoted item i.e 24 months from the date of installation and satisfactory functioning and should provide free service during the guarantee period.

20. The successful tenderer shall replace any part in the event of whole system as may be necessary, if found damaged on arrival at site or during installation of the system or if found not confirming to the specification at his/their cost.

21. The tenderer shall furnish copies of users certificate regarding satisfactory performance of the Instrument/Equipment wherever necessary.

22. The Dean & Principal MKCG Medical College Berhampur as the Authority reserves the rights to reject any tender or all tenders in part or full without assigning any reason thereof.

23. Any item out of the list approved by the **State Level Purchase Committee** if found in the tender with price quoted to be higher by the tenderer the same shall not be accepted by the Dean & Principal, MKCG Medical College, Berhampur.

24. On receipt of the order for supply of the Instrument/Equipment, the tenderer should execute an agreement after which supply is to be effected within the stipulated date mentioned in the supply/purchase order.

25. The tenderer should furnish an undertaking to the effect that they should take responsibility after sales service of the Instrument/Equipment to be supplied by them and to provide spare parts for up keeping the Instrument/Equipment.

26. The authorized dealers of any company / manufacturing firm having service centers with sufficient technical knowledge in Odisha can be given preference to submit tender for supply of Quoted item.

27. Documents, misleading are liable for rejection/cancellation of tender/purchase order and also action under Penal Provisions.

28. The tenders of the defaulting suppliers will not be taken into consideration.

29. Supply of sub-standard items or non-performance of tender terms & conditions will disqualify a firm to participate in the tender process in future.

30. The Tenderer should submit the proof of turnover Rs.2 Crores or more in each financial year for preceding three (3) financial year.

31. All legal disputes, if any relating to purchase. Installation and functioning of the system shall subject to jurisdiction of the Court situated in Berhampur, Ganjam, Odisha.

32. The payment to the firm shall be made after proper installation of the Instrument/Equipment on receipt of satisfactory report from the concerned committee.

N.B.:- (1) The tenderers are requested to go through the terms and conditions thoroughly and carefully and furnish their tenders fulfilling all the requirements to avoid rejection of their tender(s).

(2) Each page of the tender should be numbered serially and chronologically and a certificate to this effect indicating the total number of pages of the tender should be furnished by the tenderer.

TENDER PROFORMA FOR TECHNICAL BID

Sl.No	Name of the Equipment	Details specification as per tender catalogue, Brochures, etc	Mfg name Brand name	Authorization
1	2	3	4	5

TENDER PROFORMA FOR PRICE BID

Item No. Dept Wise	Specification of the item with make i.e Mfg,s Name and Brand name.	Unit pack with Basic Price	Rate inclusive of all taxes i.e F.O.R MKCG Medical College Berhampur, Excepting V.A.T	V.A.T	Cost of Total (4+5)	Cost of A.M.C for four years Year-wise	Remarks.
1	2	3	4	5	6	7	8

Sd/-

**NAME & SPECIFICATION OF THE EQUIPMENT/INSTRUMENT
REQUIRED TO BE PURCHASED**

Name of the Department	Name of the Equipment/Instrument	Specification
1	2	3
Anesthesiology	1) Work Station	<p><u>Flow management</u></p> <ol style="list-style-type: none"> 1. Should be Compact, ergonomic & easy to use 2. Machine should provide electronic gas mixing. 3. Multi-color TFT display of at least 12" size, with virtual flow meters for O₂, N₂O or Air 4. Dual flow sensing capability at inhalation and exhalation ports. 5. Should have back-up O₂ control which provides an independent fresh gas source and flow meter Control in case of electronic failure. 6. Gas regulators shall be of modular design/ graphic display 7. One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen , Nitrous Oxide and Air 8. Hypoxic Guard to ensure minimum 25% O₂ across all O₂-N₂O mixtures and Oxygen Failure Warning <p><u>Breathing system</u></p> <ol style="list-style-type: none"> 1. Latex free fully autoclavable. 2. Flow sensing capability at inhalation and exhalation ports, sensor connections shall be internal to help prevent disconnect. 3. Sensor should not require daily maintenance. 4. Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position. 5. Adjustable pressure limiting valve shall be flow and pressure compensated. <p><u>Vaporizers</u></p> <ol style="list-style-type: none"> 1. New generation Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer. 2. Vaporizer should mount to a Selectatec manifold of 2 vaporizers, which allows easy exchange between agents. Temperature, pressure and flow compensated vaporizers and Maintenance free - for Isoflurane, Halothane, and Sevoflurane <p><u>Ventilation</u></p> <ol style="list-style-type: none"> 1. The workstation should have integrated Anesthesia Ventilator system. 2. Ventilator should have Volume Control and Pressure Controlled and SIMV modes. 3. Ventilator should have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks; and compensation for fresh gas flow. 4. The workstation should be capable of delivery of low flow anesthesia. 5. Ventilator should be capable of at least 120-150 L/min peak flow to facilitate rapid movement through physiologic "dead space" in the Pressure Control mode <p><u>1. Anesthesia Monitoring Specifications:</u></p> <ol style="list-style-type: none"> a) Monitoring of vital parameters: ECG, NIBP, SPO₂ and Invasive Blood Pressure. b) Twin temperature measurement with skin and rectal probes- Two sets with each monitor c) Automatic identification and measurement of anesthetic agents, EtCO₂, O₂ and N₂O and MAC value. FiO₂ measurement d) Depth of Anesthesia Monitoring module - one per monitor with 50 sensors with each monitor e) Neuromuscular Transmission Monitoring with all accessories. One set with each monitor f) 24hrs of graphical and numerical trending g) Should have Hemodynamic, Oxygenation and Ventilation calculation package h) Should include inbuilt Anaesthesia record keeping software facility in all OT monitor to document anesthesia event using standardized menu based entries. i) Facility to store snapshots during critical events for waveform review at a later stage j) Audio visual and graded alarming system <p><u>2. Display of Ventilator:</u></p> <ol style="list-style-type: none"> a) Tidal volume (VT), b) Inspiratory/expiratory ratio (I:E) c) Inspiratory pressure

		(Pinspired) d)Pressure limit (Plimit) e)Positive End Expiratory Pressure (PEEP)
1	2	3
Anesthesiology	2) Anaesthesia Machine	<p>1. Should be completely integrated system, with all components like Anesthesia machine, Ventilator, Circle absorber, and Vaporiser should be from a single source.</p> <p>2. Should have provision for delivery of oxygen, nitrous oxide and medical air with pressure gauges.</p> <p>3. Should have independent attachments for connecting central gas supply and pin indexed cylinders.</p> <p>4. Should have analog display of cylinder and pipeline gas pressures</p> <p>5. Should have provision to attach 2 cylinders for Oxygen and one for Nitrous Oxide (Total 3 cylinders).</p> <p>6. Flow meter – cascade flowmeter: 2 each for Oxygen, Medical Air and Nitrous oxide.</p> <p>7. Oxygen and Nitrous oxide should be linked to ensure a minimum of 25% oxygen delivery at all times to avoid delivery of hypoxic mixture. Lever based anti hypoxic device is not acceptable.</p> <p>8. Should have back bar with ISO pin type to attach vaporiser easily.</p> <p>9. Should have top shelf and a table top to keep drugs and equipments.</p> <p>10. Castor wheel should be durable and moisture resistant.</p> <p>11. Unlockable oxygen flush to deliver oxygen flow of approximately 40l/min.</p> <p>12. Should have two deep drawers.</p> <p>13. Should have Anesthetic Gas Scavenging System (AGSS)</p> <p><u>Standard Circle Absorber System</u></p> <p>1. Should have adjustable pressure limiting valve, breathing circuit pressure measuring device.</p> <p>2. Should have bag / vent selecting valve integrated onto the absorber and should automatically turn on the ventilator when positioned to vent mode.</p> <p>3. Should be suitable to use low flow techniques.</p> <p>4. Should have facility to attach oxygen sensor.</p> <p>5. Should have fully autoclavable Co2 absorbent canisters and bellows.</p> <p><u>Vaporiser</u></p> <p>1. Temperature, pressure and flow compensated.</p> <p>2. Should provide keyed filler based Isoflurane and Fluothane vaporisers.</p> <p>3. Should be easy to mount and dismount from the back bar.</p> <p>4. Should have ISO pin type (Selectatec) back bar mount.</p> <p>5. Vaporiser should be maintenance free for ten years.</p>
	3) Multipara Monitors	<p>It should Ultra-slim measuring 7cm(2.8") thin, fit easily into the most crowded beside environment.</p> <p>2. It should have more than 10.2" widescreen LCD touch screen display.</p> <p>3. It should be more than 4 waveforms display.</p> <p>4. It should have light weight less than 3kg.</p> <p>5. Monitoring parameter - 3/5 lead ECG,NIBP, SpO2, Respiration & 2X Temperaturer , 21 IBP, ET002, (gas analyser can be upgradable)</p> <p>6. It should have Graphical and tabular trends for 120 Hours.</p> <p>7. It should for adult & pediatric applications</p> <p>8. It built in rechargeable battery with backup for 5 hours</p> <p>9. It should have Networking capability for connectivity to central monitoring system.</p> <p>10. Upgradeable to 2 channel external thermal recorder.</p> <p>11. Product</p>

		should be CE or USFDA certified.
	4) Biphasic Defibrillator with ECG & Recorder	<p>Monitor:- 4,5 or 10 lead patient cable, paddles or multifunction disposable electrodes. Sensitivity:- .5-1-2-4 cm/mV, Heart Rate 0 to 300 ppm. Configuration alarms Bandwith: .5-40 Hz or .5-150 Hz (Diagnostic) Common Mode rejection: 90 dB at 50/60 Hz. Screen: Size- 115x86 mm, (1/4 VGA) Resolution – 320x240 points, Sweep rate 25 mm/sec, Display time-4.5secx2</p> <p>Difibrillator: Waveform-Biphasic truncated exponential adapted to the patients impedance, Manual energy:- 1-2-3-5-7-9-10-15-20-30-50-70-100-125-150-200 J (normal at a residence of 50 ohms) + AED, Synchronised:- Discharge after 30 ms of the R wave. Paddle option:- Resuable external adult paddles (paediatric paddles integrated) Multifunction disposable electorodes, Resuable internal paddles (optional) Refractory period:- 240 ms from 30 to 80 ppm, 340 ms from 85 to 180 ppm.</p> <p>Recorder: Paper 50 mm thermal, speed:- 10,25, & 50 mm/sec, Operating mode:- Manual, automatic, 8 second delay.</p> <p>Monitoring: SPO2 & pulse rate.</p> <p>Power Supply: NiMH battery (rechargeable), Autonomy: More than 130 discharge at 200 J Monitoring:- More than 150 min. Charge status & low battery indicator charging time:- 3 hours, AC:- 90-264 VAC, 47-63 Hz, DC:- 10-16 VDC.</p>
1	2	3
Anesthesiology	5) F.O. Laryngoscope with C mac	<p>Electronic Module for CMOS endscopes, suitable for manual and mechanical disinfection upto 60° C, Steris®; Sterrad ®; High Level Disinfection (HLD) acc to Us standards. 4. Multifunctional clamp with VESA75 mounting standard. Application once for the mounting rods with an max, outer diameter of 30mm and twice of rails with a max height of 25mm. 5. Protective Bag, for C-MAC system, amde for water-resistant, washable, separate compartments for teh monitor and two C-MAC videolaryngoscopes with electronics-module. 6. IV-Stand, for C-MAC monitor, height 120cm, rollable with five legs and antistatic castors, crossbar 25cm x diameter 25 mm, for positioning the monitor, with tray for laryngoscopes, dimensions (w x d x h): 30 x 20 x 10 cm.7. Crossbar for Stands 8401 YA, 50 cm x diameter 25mm, for positioning C-MAC Monitor 8401 ZX.8. Crossbar for Stands 8401 YA, 70cm x diameter 25mm, for positioning C-MAC Monitor 8401 ZX. 9. Wire basket for cleaning, sterilization and storage of two C-MAC videolaryngoscope-blades incl one electronicmodule, with holder to fix and seal the connector plugs external dimensions fw x d x h) :260 x 120 x 170mm10. Intubation Fibrescope 3.7 x 65 with suction valve working channel : 1.5 mm Direction of view: 0° Angle of view 90° Working length : 65 cm Dist.O.D:3.7 mm Angulation : 140/140 degree consist of 27677 A case 27651. AL- All Celaning Brush 11025 E pressure compenscession cap 13242 XL- Leckage Tester 11301 CF LIPP Tuebe- Adoptor 11301 CD Irrigation Adoptor 11301 CE Suction Valve 10309 E Broncho Scope Airways size 4 use with LED Battery Light Source (11301D1-D4,DE,DF) 20212030 Telecam (PAL) 20212130 Telecam(NTSC Fibre Optic Light Cable).</p>
Anesthesiology	6) Nerve simulator/Locator	
Anesthesiology	7) Syringe Pump - 38000 to 40000	<p>Flow rate programmable from 0.1 to 200 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF.</p> <p>2 Bolus rate should be programmable to 400 – 500 ml/hr or more with infused volume display. Reminder audio after every 0.5 ml delivered bolus. SAVE last Bolus rate even when the AC power is switched OFF.</p> <p>3 Display of Drug Name with a provision of memorizing 10~15 names by the operator</p> <p>4 Keep Vein Open (KVO) must be available 1.0 ml/hr or set rate if lower than 1.0 ml. User should have choice to disable KVO whenever desired.</p> <p>5 Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg</p> <p>6 Must Work on commonly available ISI/CE/FDA APPROAVED/CERTIFIED 20, 50/60 ml Syringes with accuracy of minimum of +/-2% or better.</p> <p>7 Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.</p> <p>8 Anti bolus system to reduce pressure on sudden release of occlusion</p> <p>9 Should have comprehensive alarm package including;Occlusion limit exceed alarm ,Near end of infusion pre-alarm & alarm,Volume limit pre-alarm</p>

		<p>& alarm, KVO rate flow, Low battery pre-alarm and alarm, AC power failure, Drive disengaged and preventive maintenance.</p> <p>10 Rechargeable Battery having at least 5-6 hour backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.</p>
Anesthesiology	8) Volume Pump-50000 to 60000	<p>INFUSION: +/- 5% with assigned I.V set excluding set tolerance, Setting Mode:- Flow rate only, flow rate + volume target, time+volume target, Flow rate ranges:- 1.0-999.9 ml/hr, Infusion volume limits .1-1000 ml. Bolus rate 100-1000 ml/hr, adjustable in sets of 100 ml/hr. Occlusion pressure limit :- Programmable three levels, Low:- .4+/-0.08 kg/msqr (bar), Medium:- .9+/-0.20 kg/msqr (bar) High:- 1.2+/-0.25 kg/msqr (bar).</p> <p>Mechanical: Pumping Mechanism :- Linear peristaltic, Drop Sensor:- External, Ultrasonic Air Bubble Detector:- Detectable bubble size adjustable from 50-150ul. Set type:- Facility to add two customized sets as per users choice.</p> <p>INDICATOR: Alarm: Run & Mains, No Mains, very low battery, low battery, flow error, Door open, Near end, End of infusion, KVO, Air in line, System error, pump stopped Down stream Occlusion, Upstream occlusion, Empty Container.</p> <p>POWER: AC input range 190-270VAC, frequency 50-60 hz, 12 Volts, 3AMP DC output supply. Power Consumption:- 25 Wats maximum. Built in Battery:- 8.4v, 2.5 AHr Ni MH battery for increased durability, Battery life:- Continuous operation for about 3.5 hrs at an operating rate of 25 ml/hr with assign I.V set under standard condition.</p> <p>CLASSIFICATION: Class II, IPXI (Drip proof) Ambient Temperature:- 05 to 40 degree C, Relative Humidity:- 20 to 90% (no condensation) Atmospheric pressure:- 70 to 106 kpa.</p>
1	2	3
Anesthesiology	9) Ventilator Portable	<p>Should have turbine/venturi/jet mixing- technology for supplying air-oxygen mixture</p> <p>Should have following modes of ventilation: CMV, Assist-control, SIMV, PS-PEEP</p> <p>Audio-visual alarms for</p> <ol style="list-style-type: none"> Low supply pressure High/low airway pressure Leakage/disconnection Power failure Apnea Low battery <p>Should have following settings</p> <ol style="list-style-type: none"> TV 50 – 1500ml PEEP/CPAP & PS RR up to 40bpm I: E ratio 1:3 to 2:1 FiO2 40 – 100% <p>Battery back up for minimum 1 hour</p> <p>Should fix, on rails of transport trolley and on stand with wheels.</p>
Anesthesiology	10) Proseal	4 LMA
	11) Intubating LMA	<p>Electronic Module for CMOS endoscopes, suitable for manual and mechanical disinfection upto 60° C, Steris®; Sterrad®; High Level Disinfection (HLD) acc to US standards. 4. Multifunctional clamp with VESA75 mounting standard. Application once for the mounting rods with an max, outer diameter of 30mm and twice of rails with a max height of 25mm. 5. Protective Bag, for C-MAC system, made for water-resistant, washable, separate compartments for the monitor and two C-MAC videolaryngoscopes with electronics-module. 6. IV- Stand, for C-MAC monitor, height 120cm, rollable with five legs and antistatic castors, crossbar 25cm x diameter 25 mm, for positioning the monitor, with tray for laryngoscopes, dimensions (w x d x h): 30 x 20 x 10 cm. 7. Crossbar for Stands 8401 YA, 50 cm x diameter 25mm, for positioning C-MAC Monitor 8401 ZX. 8. Crossbar for Stands 8401 YA, 70cm x diameter 25mm, for positioning C-MAC Monitor 8401 ZX. 9. Wire basket for cleaning, sterilization and storage of two C-MAC videolaryngoscope-blades incl one electronic module, with holder to fix and seal the connector plugs external dimensions (w x d x h) : 260 x 120 x 170mm 10. Intubation Fibrescope 3.7 x 65 with suction valve working channel : 1.5 mm Direction of view: 0° Angle of</p>

		view 90° Working length : 65 cm Dist.O.D:3.7 mm Angulation : 140/140 degree consist of 27677 A case 27651. AL- All Celaning Brush 11025 E pressure compenscession cap 13242 XL-Leckage Tester 11301 CF LIPP Tuebe- Adoptor 11301 CD Irrigation Adoptor 11301 CE Suction Valve 10309 E Broncho Scope Airways size 4 use with LED Battery Light Source (11301D1-D4,DE,DF) 20212030 Telecam (PAL) 20212130 Telecam(NTSC Fibre Optic Light Cable).
Anesthesiology	12) Double Lumen Tube	25 to 29 Fg
Anesthesiology	13) Laryngeal Tube	All sizes
Anesthesiology	14) Combi Tube	All sizes
Anesthesiology	15) Percutaneous Tracheotomy	
Anesthesiology	16) Neoromuscular Monitor	

1	2	3
Anatomy	1) Fluorescent Microscope with photographic unit and image analysis software	<p>Microscope frame with trinacular tube, a pair of eye piece 10x (FN20), quadruple revolving nosepiece, mechanical stage (right handle), abbe condensor, Plan objective 4x,10x,40x, AS, Blue filter, 30W illuminator, 6V30W halogen bulb. Plan achromat objective 100x/1.25, WD .13 (spring, oil) Immersion oil in 8cc bottle. Power cord, Dust cover, Lamp housing for 50w mercury, Power supply for mercury, Neutral density filter, Filter cube for fluorescence microscopy, Blue exitation, Filter cube for fluorescence microscopy, Green exitation, reflected light fluorescence illuminator, 50W Mercury burner, Power cord.</p> <p>Photomicrography Attachment with Image analysis Software: High Quality 1/2" 3.3 mega pixel color cooled camera, Pixel pitch: 3.45 x 3.45um, Resolution up to 2048x1536 pixel. Binning modes 2x2, 3x3 ,4x4 in full color. 1.6 us to 17.9 min in 1us increments exposure/integration control 10 bits digital output. 30 fps full filed of view. IEEE 1394 Firewire digital interface. real time image preview & capture' independent control of preview and capture provides maximum flexibility. Advanced color management; built-in ICC color profiling for Superior color imaging; color correction algorithms ensure accurate, true color imaging. Background and dark field correction, Time-lapse sequences Auto expouser, auto white balance, auto contrast (dynamic and manual controls) Full Control over all calera features, including Binning for increased sensitivity , ROI for increased image capture speed & image cropping. External triggering, Exposure, gain and E.M gain controls, Image annotation. Calibrate images to perform linear measurement. Create and edit image sequences, Gamma correction, Live histogram. Line, circle or free-form histogram profiles, Filters for image enhancement. Color merging for fluorescence imaging, Line profiles; surface plots, measurement capabilites, image processing.</p>

	2) Rotary Microtome	Feed adjustment 1-50 microns (in step of 1 micron each) Opening of object clamp (Ball & flange type) 37x27mm, total feed excursion, overall size, 16"x10"x9" and approx weight 27 kg. In cardboard box or 60 kg in wooden case with standard accessories.
	3) Laminar Flow	Exhaust Model These vertical laminar flow cabinets are provided with 100% exhaust system, suitable for exhaust duct upto 6ft, to throw the contaminated air from the work area into the atmosphere outside the room. A plenum is provided under the S.S perforated working table, with exhaust system. The exhaust system works in tandem with the main air flow system. This vertical flow exhaust model is very useful for such applications where environment & personal protection is required. HEPA filter & virus burn out can also be provided at the exhaust. The exhaust ducting & the exhaust system for exhaust duct above 6ft. are also available. Optional Accessories: 1. Transparent front door 2. Static Pressure, Inclined Manometer 3. Built in U.V. Germicidal light 4. Cock for gas, air or vacuum line 5. Exhaust system suitable for duct above 6ft. 6. Exhaust ducting 7. Cold rolled M.S. Sheet body duly powder coated, available at extra cost. 8. Stainless steel body duly polished, available at extra cost. 9. Particle dust count validation at site after installation at extra cost. Spare Accessories: 1. HEPA Filter 2. Pre Filter
1	2	3
Anatomy	4) Portable B/W USG Machine	256 level gray scale, 10" High resolution CRT monitor, dual active probe monitor, backlit key board, one touch application & user key, 365 frames cine memory, USB port, full measurement package (OB/Gyn. ABDOMEN, Cardiac, small parts & urology, 6 nos. TGC slide nob, Quad (4) view imaging, minimum 50 image storing capacity, folding key board, top handle-easy to carry, multi frequency convex (2-5mhz), micro convex (2-5 mhz), Trans vaginal (4-9 MHz) Electronic Transducers, Zoom facility in real time, 2 nos probe hanger (holder), Track ball for cursor movement.
	5) PORTABLE COLOUR DOPPLER	High resolution & fast colour flow with spectral dopler, 15" LCD monitor, Dual active probe connector, minimum 1152 channel digital beam forming, full spectrum imaging, B, dual B,M, C,D Mode, Tissue Harmonic imaging, Pulse inverse harmonic imaging, Trapezoidal imaging, 511 frames cine memory, quick scan, free hand 3D imaging, Quick scan, Application: Abdomen, OB/GYN, Cardiac, Vascular, small parts, urology, musculoskeletal, fetal heart, dicom compatible, backlit key board, image storage in hard disc, High resolution zoom read & write, frame rate upto 280 frame per second, 2-8 convex, 4-9 transvaginal, 5-12 linear, 2-4 Micro Convex probe, 6 sliding TGC knob, USB port, depth selection 2-30 cm, Annotation, Body mark.
	6) Electric bone decalifier	Basket & motor with plug in.
	7) Complete serial section of mammalian embryos & fetuses arrangement for graphic & other reconstruction.	
	8) A set of gross & histological sections of various organs and tissue.	

	9) Electric saw & body cutting machine	
	10) Calibrated Micrometer Eyepiece	
	11) Full Articulated Skeleton	
	12) Models on Gross Anatomy, Embryology, Neuroanatomy and special senses	
	13) Histology Slide sets, General and systemic Histology -	General and systemic Histology -
	14) Embryology Slide sets (General & systemic; Chick & Pigs Embryology)	(General & systemic; Chick & Pigs Embryology)
	15) Goniometer	
	16) Diophotograph	
	17) Paralleliograph	high sensitivity, varied sweep speed with filter, IBM compatible system, minimum 32 MB RAM. High speed resolution with printer & other standard accessories.

1	2	3
COMMUNITY MEDICINE	1) white board, Integrated	Digital Interactive
COMMUNITY MEDICINE	2) Models/ Charts/Video Cassette	
COMMUNITY MEDICINE	3) Incubator	<p>1) Construction:- Double walled construction.</p> <p>2) Insulation:- 3" thick PUF insulation ensure stable temperature & reduced energy consumption.</p> <p>3) Heating system: High quality SS tubular heaters are used for better heating condition.</p> <p>4) Observation door: Full view glass/acryhe door with gasket to view samples inside the chamber.</p> <p>5) Trays: Specially designed stainless steel rod trays ensure uniform temperature distribution.</p> <p>6) Safety:- Additional safety cum stand by thermostat to cut of heater supply in case of temperature of overshoot.</p> <p>7) Supply: 230V AC, single phase 50 HZ.</p> <p>Specification: Statnadr Model: Inside SS 304 mirror finish & outermild steel (CRCA) sheet with powder coated. Temprature Range: 5 degree above ambient to 60 degree C. Temprature accuracy: + or – 0.5 degree C. Control System: Imported microprocessor based auto tuned PID controller with CE mark & dual display of set value & process value for precise control of temperature.</p>
COMMUNITY MEDICINE	4) Laboratory Centrifuge	<ul style="list-style-type: none"> • Stepless speed regulator. • Safety lid interlock to prevent cover opening during centrifugation. • Digital speed meter & 0-60 minutes digital countdown timer.

		Technical Data Max speed: 5250 rpm, Max, RCF: 3600'g', Max. capacity: 400 ml, WxDxH: 365x415x350 mm.
COMMUNITY MEDICINE	4) Weighing Machine	Digital for adult
COMMUNITY MEDICINE	6) Deep Freezer	minus 20 degree C
COMMUNITY MEDICINE	7) ILR	minus 20 degree C
COMMUNITY MEDICINE	8) Micropipette	<ul style="list-style-type: none"> • Light weight ergonomic design. • Easy calibration & maintenance, low number of parts. • Volume setting by a click stop. • Full documentation, warranties & certificates. • Colour-coded caps & ID-stickers included with each pipettor. • Range:- .5-10ul, 10-100ul & 100-1000ul.
COMMUNITY MEDICINE	9) Haemoglobinometer	
COMMUNITY MEDICINE	10) Digital Camera	20 mega pixels
COMMUNITY MEDICINE	11) Video Camera	
COMMUNITY MEDICINE	12) Double Door refrigerator	225 to 265 Ltrs
COMMUNITY MEDICINE	13) LCD Projector	Latest Model
COMMUNITY MEDICINE	14) LED TV	75"

1	2	3
Physiology	1) Computerized exercise Physiology (Windows based) full set-up	<p>a) Record & Display at Real time measurement of ECG, EMG continious Airflow, O2,CO2 concentration, temprature etc, ML870 powerlab, Lab Chart, Scope ML132 Bio AMP, Gas analyser including metabolic module with computer based data acquisition system and all relevent transduces & accessories.</p> <p>B) Telemetry Excercise Physiology system (wireles) running with lab-chart software with small, medium & large chaest straps.</p>
PHYSIOLOGY	2) Autonomic Function Test Analysis set up- Windows based	Window based Cardiac AutonomicNeuropathy Analysis system, Oscillometric BP range 0-240 mmhg, continious ECG, Easy recall of previous tests, 32 MB ram, 12 bit resolution with standard accessories for parasympathetic and cardiac autonomic Neuropathy test.

PHARMACOLOGY	1) Digital Plethysmograph (For Rats) with all accessories	a) High accurate & stable volume measurements b) Easy to use pedal switch c) Evaluation of small volume differences d) Comfortable reading on LCD graphic display e) Connectivity to PC f) High resolution volume measurement resolution 0.01ml g) Data entry panel h) Provided with digital pocket conductivity meter, microliter syringe, calibration probes & retort stands.
PHARMACOLOGY	2) Single pan micro balance	1 microgram to 5 milligram)
PHARMACOLOGY	3) Non-invasive Blood Pressure monitor for rat (Columbus)	Pressure cuff for rats and mice each. Pulse pick up for rats and mice each. Graphic printer and display system Rat and mice holder each. Battery operated and portable system Output available for data acquisition.
PHARMACOLOGY	4) Polypropylene cages for Rat & Mice	24x14cm (mice) 35.5x21cm (rats)
1	2	3
PATHOLOGY	1)TRINOCULARMICROSCOPE WITH PENTA HEAD ATTACHMENT: [AS PER AIIMS]	<ul style="list-style-type: none"> • Magnification: 40x-1000x • Optical System: Infinity Optical System • Eyepiece: Wide field, 10x pair with diopter adjustment, F.O.V. 22 mm, Anti-fungal. • Nosepiece: Sextuple revolving Nosepiece. • Objective: Infinite Plan Achromat objective. 4x / 10x / 40x and 100x oil. (antifungus) • Focusing System: High sensitivity co-axial coarse and fine focusing knob with tension adjustment knob on coarse focusing. • Stage: Ceramic/A coated rectangular 160 x 191 mm surface stage with travel range 60 x 50 mm with double slide holder. • Illumination: 12V-100W Halogen lamp with world wide voltage (100-240V) pre-centred and pre-focussed. • Photo Switch: Built-in Auto photo preset switch. • Condenser: Achromat swing out ABBE condenser 0.9/1.25NA. • Teaching Attachment: for five persons (including main observer), Binocular tube of teaching attachment should also be Anti-fungal type & should give similar viewing as main observer along with Green LED pointer, brightness adjustable pointer unit (moveable in any direction).
PATHOLOGY	2) CELL COUNTER (5 PART DIFFERENTIAL AUTOMATED HAEMATOLOGY ANALYZER) WITH RETIC COUNT & IRF:	<ul style="list-style-type: none"> • Fully Automated hematology analyzer should include 33 parameters WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, NEUT %, LYMPH %, MONO%, EOS %, BASO %, NEUT #, LYMPH #, MONO #, EOS #, BASO #, RET %, RET #, RDW-SD, RDW-CV, PDW, MPV, PCT, P-LCR, HFR, MFR, LFR, IRF, PLT.SPECIAL RESEARCH PARAMETERS – IG%, IG#. TWO HISTOGRAMS – RBC, PLT.FIVE SCATTERGRAMS - DIFF, WBC-BASO, RET, PLT, RET-EXT.

		<ul style="list-style-type: none"> • Should have flow cytometry method using a semi conductor laser principle for counting and photometer for hemoglobin. • It should read at least 80 samples per hour or more. • Should have dual channel measurement. • Double dilution chamber. • Sample volume less than 20 micro litres in whole blood and pre –dilute mode. • It should have various types of discrete mode and real time random access analysis to save reagent consumption and analysis time. • Sampling needle should have automatic wash from inside and outside. • LCD with graphical user interface (GUI) for easy operation. • Large illuminated colored VGA LCD should display the result of all parameters and histogram together. • Should have sample manual and capillary mode. • Should have capacity to store at least 20000 numeric patient results and 5000 graphics. • Should have inbuilt graphic printer. • Should have RS232 serial and parallel port can be connected with LAN and laser printer. • Should have a membrane keyboard for routine operations and maintenance with option to attach external key board for patient demographic entry at instrument operation. • Should have three dimensional technology for differential analysis to maximize resolution, specificity and efficiency. • Should have extended analysis time for cytopenic sample. • Should be able to integrate with optional automated slide maker and stainer. • Should have zero routine maintenance with automatic electronic aperture cleaning and back flush after each sample. • Instrument should accept all types of vacutainer tubes. • The instrument should have option for auto sampler, bar code reader. • Reagent cost per cycle including start up and shutdown if 200 & 500 samples are processed at a time should be submitted separately in the financial bid. <p>There should be automatic storage of calibration data and extensive quality control programme with LJ plot for at least 8 control lots and at least 25 runs per lot.</p> <ul style="list-style-type: none"> • Basic common necessities: • Input Voltage 230 volts 50 Hz as per Indian standard. • Service manual and technical data with all necessary passwords without any obligation. • Instruction and operational manuals without any obligation. • UPS preferably sine wave based with maintenance free batteries with duration two hours. <p>To demonstrate the instrument with all the parameters.</p>
<p>PATHOLOGY</p>	<p><u>3) CRYOSTAT:</u></p>	<ul style="list-style-type: none"> • 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.

		<ul style="list-style-type: none"> • 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. • Motorized 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 • Essential Accessories should be quoted separately: <ol style="list-style-type: none"> 1. Microtome knife 160 mm. – 4 Nos. 2. Voltage stabilizer, block holder. 3. UPS for the above machine 4. Two bottle of low temperature oil. 5. High and Low profile blades – 5 packets each. 6. Specimen holder of appropriate size – 20 Nos. 7. Freezing compound at least 10 bottles. 8. Glass ant- role device for knives and blades.
1	2	3
PATHOLOGY	<u>4) Grossing Station</u>	<ul style="list-style-type: none"> • Back Draft Fume Removal • Stainless Steel Construction • Elevating or Fixed-height Work Surfaces • Hands-free Controls, efficient lighting, • Efficient Ventilation System options as applicable at installation • Hands-free foot pedal controls for cold/hot water faucet, • Formalin dispensing system, • Dictation system. • Magnetic instrument bar. <p>GROSS SPECIMEN PHOTOGRAPHY UNIT with camera</p> <ul style="list-style-type: none"> • Comprising of Digital camera, connected with computer along with appropriate software and mountable • with photography stand • Digital Camera • Atleast 10 megapixel, High quality optics, • With at least 4X optical zoom • Macro mode photography • Foot control device shall be preferable • Softwares to integrate camera with computer • Dedicated software for Image annotation, editing and archiving software. Easily intefacable with • Laboratory/ Hospital/ Information System • Stand: Photogaraphic stand with water resistant base and easily /freely movable camera holder for height • adjustment with both side day light even and powerful illumination.

<p>PATHOLOGY</p>	<p>5) CYTOCENTRIFUGE:</p>	<ul style="list-style-type: none"> • A cytocentrifuge, which operates at a speed of between 500 and 2,000 rpms, forces the cells from a suspension onto a microscope slide and a blotter simultaneously, absorbs the suspension medium. Cyto evaluation is evaluation of cells under microscope. • Latest Model Microprocessor controlled compact Centrifuge with sealed rotor head for separation of cells found in body fluids. Cells are directly attached in a monolayer to a microscope slide by means of centrifugal force and a slide and funnel device. • Technical Specifications :• Speed range at least :500-2000rpm • Time range at least : 1-60 minutes • Number of specimen-can handle up to 12 samples in one cycle. • Memory to store 20 preset procedures. • There should be a membrane keypad with bright LCD/LED for display of Time, Speed and program protocols. • Audiovisual alarm for out of balance, outside speed tolerance or if the lid is not properly locked. The system will not run if the lid is not locked properly. • System Configuration Accessories, spares and consumables: • It should be supplied with reusable and auto-clavable specimen chamber capable of handling low volumes and high volumes. • Standard accessories to be supplied (1 case each) consisting of: <ol style="list-style-type: none"> 1. 1 ml fluid chamber – 50 Nos. 2. 1ml base holder – 50 Nos. 3. 1 ml chamber cap- 50 Nos. 4. 6 ml fluid chamber-50 Nos. 5. 6ml gasket –50 Nos. 6. 6/12 ml base holder - 50 Nos. 7. 6/12 ml chamber cap-50 Nos. 8. 12 ml fluid chamber –50 Nos. 9. 12ml gasket –50 Nos. 10. SS Cyto Clips – 2 packs each containing 6 nos. 11. Filter cards – 50 boxes each containing 200 nos. • The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%. • The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%. • Power Supply: • Power input to be 220-240VAC, 50Hz fitted with Indian plug • Reset table over current breaker shall be fitted for protection • Suitable voltage corrector/stabilizer • Standards and Safety:• Should be compliant to ISO 13485: Quality systems - • Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use. • Should be FDA or CE or ISI approved product.
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Dean & Principal,
MKCG Medical College,
Berhampur.