



**ESIC PGIMSR AND MODEL HOSPITAL
EMPLOYEES STATE INSURANCE CORPORATION
K.K.NAGAR ASHOK PILLAR ROAD, CHENNAI -78**

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www.esichennai.org

512-U-16-17-20/Equipments/CBE/2013-14

Dated:06.03.2014

RE-TENDER NOTICE

Sealed and superscribed Item wise tenders in Single bid and Double Bid System are re-invited from manufacturers/authorized dealers/distributors for the supply of quality Equipments/Instruments for the departments of Anatomy, Physiology and Biochemistry of ESIC Medical College, Coimbatore, Tamil Nadu.

Detailed information regarding the items, application/tender forms,EMD, specifications,terms & conditions can be downloaded from the websites: www.esipgimsrchennai.org/ www.esic.nic.in/ www.esichennai.org.
Those who have responded to the earlier tender (512-U-16-17-20/Equipments/CBE/2013-14,dated:11.01.2014) need not submit their bids afresh.

The EMD amount & application fee should be enclosed in a separate cover along with the tender documents.

Date and Time for submission of Tender:

Sl.No	GROUP	LAST DATE FOR RECEIPT OF TENDER	DATE AND TIME FOR OPENING OF TENDER
1	A & C	20.03.2014 - 11.00 A.M.	20.03.2014 - 11.30 A.M.
2	B & D	21.03.2014 - 11.00 A.M.	21.03.2014 - 11.30 A.M.

If the date of opening of tender happens to be a holiday, the tender will be opened on the next working day. Tender documents duly completed should be dropped on or before the date and time mentioned above in the tender box kept at the First floor of ESIC Hospital, K.K.Nagar, Chennai -78.

The undersigned reserves the right to accept or reject any or all the bids without assigning any reason at any stage.

MEDICAL SUPERINTENDENT

TENDER DOCUMENT

**Sealed tenders are invited by Medical Superintendent ESIC Hospital K.K.Nagar,
Chennai - 78 for the supply of following items to ESIC Medical College, Coimbatore.**

Sl.No	Name of the Item	Quantity	EMD Amount in Rs.	Cost of Application in Rs.
	DEPARTMENT OF ANATOMY – GROUP- A(SINGLE BID)			
1	Dissection table – SS Standard size: 6”.1”X2”X3”	15	2520	250
2	Dissection table – Half standard size S.S. for dissection	5	Nil	
3	Electrically operated hand drill	1	Nil	
4	HAND SAW (S.S)	3	Nil	
5	X – Ray Viewing lobby	3	3600	
6	Portable LCD Projector with dedicated computer system	1	1100	
7	Distilled water still with stainless steel , wall mountable model analytical (for anatomy, Physiology & Biochemistry)	5	3000	
8	Laboratory refrigerator:(for anatomy & Physiology)	3	1800	

Sl.No	Name of the Item	Quantity	EMD Amount in Rs.	Cost of Application in Rs.
	DEPARTMENT OF PHYSIOLOGY – GROUP- B(SINGLE BID)			
9	Stethography	6	4500	250
10	Spirometry System	6	8100	
11	Recording spirometer/ benedict's roth spirometer /apparatus	3	3150	
12	Compact CPR training mannequins	1	Nil	
13	Mosso's ergograph	6	1800	
14	Mechanical respirator	1	Nil	
15	ECG Single channel	3	1980	
16	ECG Machine –multi channel	3	7650	
17	Clinical Examination couches	8	7200	
18	Apparatus for continuous passive motion.	1	Nil	
19	Bicycle ergometer	1	Nil	
20	Dynamometer	1	Nil	
21	Electronic Muscle stimulator	1	Nil	
22	Experimental physiology set	1	1200	
23	perimeter; student's perimeter	6	3000	
24	Ophthalmoscope cum retinoscope	1	Nil	
25	Phacoscope	1	Nil	
26	colour perception lantern edridge green	1	Nil	
27	Maddox rod	1	Nil	
28	compass aesthesiometer	3	Nil	
29	thermoaesthesiometer	3	Nil	
30	Algometer	3	1260	
31	Olfactometer	1	Nil	

Sl.No	Name of the Item	Quantity	EMD Amount in Rs.	Cost of Application in Rs.
	DEPARTMENT OF BIOCHEMISTRY – GROUP- C (SINGLE BID)			
32	Vacuum pump	2	1500	250
33	Colorimeter	6	2880	
34	Flame photometer	2	3600	
35	Chromatographic chamber	2	Nil	
36	UV lamp with fittings	1	2700	
37	Samplers or auto pipettes	15	2700	
38	Refrigerator	4	Nil	
39	Cork – borer set	1	Nil	
	Group- D (Double Bid System)			
	DEPARTMENT OF ANATOMY			
40	BAND SAW FOR SECTIONING BODY AND LIMBS	1	3600	250
41	Skeletons articulated	5	22500	250
42	bones (disarticulated) sets	25	120000	250
	DEPARTMENT OF PHYSIOLOGY			
43	Computerized PFT with interpretation facilities	1	3600	250
44	EEG Machine Recorder – portable	1	12000	250

ANNEXURES

ANNEXURE- I

TENDER FOR THE SUPPLY OF EQUIPMENTS
REQUIRED FOR USE IN THE ESIC MEDICAL COLLEGE, COIMBATORE, TAMIL NADU.

To

The Medical Superintendent
ESIC Hospital
KK Nagar
Chennai 78.

Sir,

Sub: Forwarding of Tender documents for Equipments -Reg.

We have pleasure in submitting our tender for

We enclose herewith a Demand Draft No.Dt..... for Rs.....drawn in favour of the Medical Superintendent ,ESIC Hospital, K.K.Nagar,Chennai 78 towards Earnest money Deposit.

We bind ourselves to the conditions prescribed in the Tender Notification.

We agree to have the Earnest money forfeited in case of failure in full or part to undertake the contract upon the acceptance of this tender.

OFFICE SEAL:

SIGNATURE:

DESIGNATION:

NAME & ADDRESS:

Annexure II

TERMS AND CONDITIONS FOR THE SUPPLY OF HOSPITAL EQUIPMENTS

1. Sealed tenders will be received up to and including the date stipulated by the Medical Superintendent, ESIC Hospital, K.K.Nagar, Chennai 78 for the purchase of Hospital Equipments.
2. The sealed envelope containing the completed tender super scribed as "TENDER FOR THE SUPPLY OF FOR ESIC MEDICAL COLLEGE, COIMBATORE, TAMIL NADU" should be addressed to The Medical Superintendent, ESIC Hospital, K.K.Nagar, Chennai-78.
3. Postal delays if any, will not be condoned.
4. Tenders will be opened at the office of the Medical Superintendent, ESIC Hospital, K.K.Nagar, Chennai 78. on the stipulated date & time in the presence of the tenderers / representatives who choose to be present.
5. The two part bids i.e. Techno-commercial and Price bid prepared by the Bidder shall comprise the following:

A.. Techno -commercial Bid (Unpriced Bid): This should include the following:

- Bid Security (EMD) should be furnished in accordance with instructions.
- Detailed technical specification of items quoted along with catalogue/literature, make and model of the equipments offered without indicating price.
- Statements of Deviations from tendered Commercial conditions, if any.
- Statements of Deviations Parameter wise from tendered specifications, if any.
- Authority letter from manufacturer in case bid is submitted by agents.
- Bidders have to indicate the name and address of the bankers.
- Documentary evidence that the goods and ancillary to be supplied by the bidder are eligible goods and services and conform to the bidding documents.

B. Price bid :

The information given above should be reproduced with prices indicated. Any deviation in this regard will render the bid liable for rejection. The prices shall be all inclusive of lump sum price (Freight, Insurance, Transit Insurance, Packing forwarding, Charges towards installation and commissioning and including charges for quoted warranty period)

In the two-bid system, the techno -commercial bid (Un- priced bid) will be opened on the date mentioned in the presence of the bidders who choose to be present. The price bid of the firm whose equipment is technically viable fulfilling the specifications and all other conditions alone will be considered for evaluation.

CERTIFICATES

6. The Medical Superintendent, ESIC Hospital may at his/her discretion extend time to tenderer to produce the certificate and declaration mentioned in clauses 7,8,9.

7. Bid Security (EMD)

The tender must be accompanied by EMD as mentioned against the equipment in the form of Demand Draft only drawn in favour of The Medical Superintendent, ESIC Hospital, K.K.Nagar, Chennai-78, payable at Chennai. The tenders not accompanied by EMD is liable for rejection. Advance stamp receipt for the refund of EMD should be enclosed with the tender documents.

8. The tender should be type written and every correction in the tender should invariably be attested by full signature by the tenderer with date before submission of the tenders to the authorities concerned failing which the tender is liable for rejection.

9. The rates quoted should be F.O.R Destination, freight prepaid in full, no Handling, Clearing or transport charges etc. will be paid. While quoting the rates it should be specifically stated that the rates are excluding the sales tax/Central Sales Tax/Customs Duty. The delivery should be at the stores of ESIC MEDICAL COLLEGE , COIMBATORE at the cost of the supplier.
10. The rates quoted in the tender must be both in words and in figures.
11. A Certificate that the quoted rates are not been supplied to any other organization at a rate, lower than quoted here should be enclosed.
12. Copies of purchase order for having supplied to Government Hospitals / reputed institutions (of the quoted equipment) should be enclosed with certificate duly authenticated from any other users of the equipment on satisfactory performance is to be enclosed and **the rate in the copy of purchase order should not be illegible.**
13. The rates quoted should be valid for one year from the date of approval of the tender by the competent authority.
14. Firms should also give a certificate that spares/consumables/reagents of the equipment quoted will be freely available at least for five years after the warranty period.
15. Successful bidder shall not be entitled to any rate revision of price for any reason except that allowed by Government of India.
16. The firm should have its office in Chennai to which correspondence during the Period of finalization of contract, warranty, could be made and accordingly notify the address of the Chennai Office.
17. Undertaking on Guarantee/ Warranty (Comprehensive) for 3 years after purchase has to be mentioned in the Document. **Calibration of equipments if necessary should be undertaken free of cost during the warranty period.**
18. The bidder should be able to demonstrate the product quoted by him to the Technical Evaluation Committee in Chennai **within two weeks** ,when asked for failing which his quotation will not be considered for evaluation.
19. The successful bidder should furnish Performance Security Deposit @ 10% of the value of the contract.
20. The firm should undertake to enter into Annual Maintenance Contract for at least for 5 years after completion of warranty and accordingly quote the rates in the tender document.
21. The rates for AMC (Labour) should not exceed 3% and for CAMC should not exceed 10% of the unit cost. and should remain fixed for five years.
22. The Medical Superintendent, ESIC Hospital, K.K. Nagar, Ch-78, will be at liberty to terminate the tender proceedings without assigning any reasons thereof.
23. The bidder will not be entitled for any compensation for whatsoever in respect of such termination.
24. One copy containing terms and conditions and schedule of this tender should be signed by the tenderer at the bottom of each page with the office seal duly affixed and returned along with the tender .
25. Declaration form and Company profile formats enclosed must be filled in and signed by the tenderers and enclosed along with the tender. Tenders received without the Declaration form shall not be considered.
26. No articles shall be supplied to the Hospital except on requisition in writing signed by the Medical Superintendent or by an officer authorized by him in writing to do so.
27. The contract should not be sublet without the prior written permission of the Medical Superintendent.

28. For imported items Customs duty exemption certificate will be issued by the hospital and the price to be quoted accordingly. The tenderer will assist in opening of Letter of credit for an amount of 90% of the cost of the instruments and undertake all the activities related to release of equipments from customs in the presence of an official of ESI CORPORATION and deliver the same at central stores on the same day of release from the customs. Any demurrages on account of delayed clearance from the customs will be borne by the tenderer. The Hospital will provide all the documents necessary for clearance from the customs and the same should be indicated by the tenderer.

29. BIDDERS ARE FREE TO QUOTE FOR ONE OR MORE EQUIPMENTS BUT SEPARATE ENVELOPE FOR EACH EQUIPMENT SHOULD BE USED AND SEPARATE DEMAND DRAFT TOWARDS EMD/COST OF APPLICATION AS MENTIONED AGAINST EACH EQUIPMENT SHOULD BE ENCLOSED. FAILING WHICH THE QUOTATION FOR THAT EQUIPMENT WILL BE TREATED AS UNRESPONSIVE AND SUMMARILY REJECTED. QUOTATIONS FOR SEPARATE EQUIPMENT BY THE SAME BIDDER SHOULD BE SUBMITTED IN SEPARATE ENVELOPE AND SHOULD NOT BE PUT IN A COMMON COVER.

30. TENDER DOCUMENTS THAT ARE BEING SUBMITTED IN PERSON ARE

TO BE DROPPED IN THE TENDER BOX KEPT IN FIRST FLOOR OF ESIC HOSPITAL ,
K.K.NAGAR, CHENNAI -78.

31. Bidders in their own interest shall ascertain the eligibility of whatsoever concessions and exemptions eligible and applicable to the hospital and shall advise the purchaser and quote accordingly. Bidders shall indicate the actual amount eg. Octroi, Excise duty, normal sales tax etc. which becomes otherwise payable in the extreme event of hospital authorities not in a position to release certificates like octroi exemption certificate, Form D etc..

32. Penalty Clause Supply within six to eight weeks after placement of supply order.

If the successful tenderer fails to execute the supply within the stipulated period 5% of value of order per week or part of a week will be levied. Failure to execute the supply will lead to cancellation of purchase order and the security deposit stand forfeited.

33. Certificate to the effect that the equipment quoted is not a refurbished one should be enclosed in the technical bid.

34. The bidders need not download the entire specifications. They can download only relevant specification of the equipments to which they are participating.

35. Delivery Schedule.

Six to eight weeks after placement of supply order. For imported items an enhanced delivery period, if required, can be agreed and the same should be indicated clearly.

36. The payment towards the supply is subject to receipt of inspection note/ performance certificate to the effect that the items supplied are conforming to the purchase order placed.

MEDICAL SUPERINTENDENT

Annexure III

COMPANY PROFILE

- 1 Name of the firm
2. Full Address:
3. Telegraphic Address:
4. Telephone No.
5. Telex/Fax No.
6. Date of Establishment of firm:
7. Is Your Firm registered under
 - The Indian Factories Act
 - Companies Act
 - Any other Act
8. Name & address of your Bankers.
Stating the name in which the
Account stands
9. Are you on the list of approved
Contractors of any other authority
(if so please give details)
10. Give details of any Govt. contract
Executed during the last 12 months
11. Are you a Manufacturer If so
Please furnish the items you
Manufacture
12. Are you a small scale industry
Registered with the appropriate
Authority.
13. Are your products certified by ISI?
If so furnish details
14. Any other information which you
Consider necessary to furnish

DATE

SIGNATURE:

NAME & ADDRESS:

Annexure IV

DECLARATION FORM

Wehaving our office
at.....do declare that we have
carefully read all the conditions of Tender for the supply of.....
and abide by all the conditions set forth therein by the Medical Superintendent, ESIC Hospital ,
K.K.Nagar,Chennai 78.

We further declare that wepossesses valid licence bearing
No..... valid upto.....

DATE:

SIGNATURE:

SEAL:

NAME & ADDRESS:

Specifications of single bid items - Group - A
Human Anatomy

1. Dissection table – SS Standard size: 6”.1”X2”X3”

Is entirely made of S.S. (steel grade 1.4301), with a frame made of rugged torsion resistant S.S. profiles and 4 S.S. swivel locking castors (125mm dia.). the table top has a depth of approx. 15mm sloping towards the drain. Large radii on all inside corners provided for easy cleaning. A 10 L container with bayonet lock, mounted beneath the down spout, is applied to a rack in the base frame. An air tight compartment mounted beneath the table top serves for an odour free storage of drapes. It features a stainless steel full extension drawer and a removable S.S. tray provided with perforated plate and a removable lid.

2. Dissection table – Half standard size S.S. for dissection

Is entirely made of S.S. (steel grade 1.4301), with a frame made of rugged torsion resistant S.S. profiles and 4 S.S. swivel locking castors (125mm dia.). the table top has a depth of approx. 15mm sloping towards the drain. Large radii on all inside corners provided for easy cleaning. A 10 L container with bayonet lock, mounted beneath the down spout, is applied to a rack in the base frame. An air tight compartment mounted beneath the table top serves for an odour free storage of drapes. It features a stainless steel full extension drawer and a removable S.S. tray provided with perforated plate and a removable lid. with wheels. Size: 3”X2”3”.

3. Electrically operated hand drill

Universal hand drill; comprise saggital saw head piece, mini hand drill, transverse saw, triple drill guide 130 angles as well as open gear hand machine drill with S.S. check and key. These are precision designed in line with defined safety standards and for cadaver use.

4. HAND SAW (S.S)

Hand Saw

Hand saw with high carbon steel blades made at HRD to 52 degrees, hard and durable, anti rust and smoothness, which leads to less friction, blades chrome plated blades.

Specifications :

For HRC, Blade materials reaches 52 degrees and teeth reaches 60 degrees (+ - 3)

Chrome treatment, antirust, smooth resulting in less friction

Elegant Handles, ergonomic

Special Teeth Design, sharp at edges

Versatile assortments

5. X – Ray Viewing lobby

4 panel side by side X – Ray View box illuminator

Standard features: 2 lamps (F15IT8/D) per panel, roller gravity film holding systems, durable steel construction, thin 3” profile, chip

Resistenat hospital white finish, continuous bottom film ledge, even vue reflective system, UL and cUL listed, Centralized cluster on/off switching; FAS – film activated switching, MS – Master Switch, HGP – Hospital Grade Plug Specs: surface wall mount 4 panel side by side 56”X17” viewing area overall Dimensions: 56” L 21” H3 3/8 D. illumination: 2000cd/m2. Approximate weight 84lbs.

6. Portable LCD Projector with dedicated computer system

- Portable LCD Projector
Computer system
- Intel Dual core 2.5Ghz processor with 02 MB cache memory
- Intel chipset G 31 motherboard (make will be gigabyte or asus)
- 1GB DDR2 667 Mhz RAM
- 250GB sata Seagate hard disk (7200RPM)
- 18.5” LCD
- 22X LG Double layer DVD Writer
- ATX Cabinet (Black Silver) or (Red and Black)
- Multimedia Key Board & Optical mouse.
- Sound on board
- AGP on Board
- LAN on Board

7. Distilled water still with stainless steel , wall mountable model

Manesty type water still: made of all stainless steel; output 4Lt./hr approx.; work on 220VAC; the condenser can be opened easily for periodic cleaning., designed to provide pyrogen free distilled water easily. Complete unit made of stainless steel. The lid perfectly rest and get sealed inside the collar on the head of the tank which avoids loss of steam and jumping of lid., easy wall mounting.

8. Laboratory refrigerator:

Specifically designed and are suitable for research laboratories, blood banks applications and across other laboratories working with critical elements. The laboratory refrigerator controls temperature varying from 2deg. C to 8deg. C. the unit shall be vertical model constructed of double walls high quality powder coated exterior mild cabinet. The laboratory refrigerator shall be insulated with high density CFC free Poly urethane foam. The inner chamber is made of S.S. 304 grade. With built in micro controller based temperature indicator cum controller having audio visual alarms. Door locking system for improved security with magnetic door gasket. Air cooled hermetically sealed compressor.

Technical data

Capacity	Internal (cm)	External
265 ltr	58X50X97	70X62X158

Dept. of Human Physiology- Group - B (Single Bid)

9. Stethography

- a.i.1.a. Kymographs
- a.i.1.b. Mary's tambour, Corrugated rubber tube
- a.i.1.c. Connecting rubber tube

10. Spirometry System

Simple spirometer/ students spirometer/vitalograph: – spirometer – packed with features for the expert user; colour touch – screen operation; accurate fleisch pneumatachograph; integral clear, fast printer,; on screen visualization of volume /time and flow/volume curves.

11. Recording spirometer/ benedict's roth spirometer /apparatus

Spirometer has a 4 speed electrical recording unit with gravity writing ink. Valves are easily accessible, soda lime chamber with screw connection in the centrechamber, drainto all the tubes and container. Sampling cock for connecting the patient to spirometer or atmosphere. The unit is fitted on portable frame, complete with valves, tube, mouth piece, nose clip, ink writing well and 50 charts.

12. Compact CPR training mannequins

Economical CPR mannequins constructed of soft realistic vinyl plastic over poly urethane foam for a human feel. Features include: a longer torsofor realistic abdominal thrusts, realistic head tilt and chin lift for opening airway, can easily be manipulated to realistically stimulate airway obstruction or choking situations, and a user friendly lung or airway design that eliminates cleaning. Includes three mouth/nose pieces and three disposable lung/airway systems. Dimensions: 28”X18”X10”. Nylon carry bag and kneeling pads included with warranty.

13. Mosso's ergograph

Mosso's ergograph with metronome and weights. Ergograph containing the advantageous features of both bubios and mossos ergogrpah with weight set.

14. Mechanical respirator

1. Drinker's tank respirator (Iron lung)
2. sahlin's jacket model, Brag – paul pulsator
3. foldable canvas stretcher for Eve's rocking method.

15. ECG Single channel

- a) Digital one channel ECG machine
- b) Simultaneous 12 leads acquisition
- c) Multiple operation mode (Manual/auto/ref. lead)
- d) LCD to display operation status and wave – form
- e) The wave form is displaying synchronously on the LCD with 195X65 dots
- f) AC/DC power, built in rechargeable Ni-MH battery
- g) High resolution thermal printing array system
- h) High frequency response reach to 150Hz
- i) Capable of printing continuous one channel trace and annotations including lead marks and such parameters as sensitivity, paper speed, and filter operation status.
- j) High resolution digital inhibits baseline
- k) One touch operation able to enhance efficiency and relieve operation strain
- l) Concept of floating input circuit meets IEC safety standard
- m) Visual status due to light indicated touch keys
- n) Rechargeable battery supporting more than 50 patient examinations
- o) Under the automatic mode, pressing key mode continuously can keep recording when abnormal lead is found.
- p) Safety level corresponds to class I, type CF

16. ECG Machine –multi channel

High resolution thermal array printer; 12 channel print out format 5 inch 320X240lcd to display setting menu and 12 channel ECG wave form automatic measurement and interpretation of ECG paper size: 210mmX20m (roll type) 210X140mmX20m (z-fold type)

17. Clinical Examination couches

Adjustable head end – hydraulic type. Metal 16Gauge with good insulation. Must have 03 drawers and 03 boxes. The bed should have high quality sponge with rexin cover. Must have stand for BP apparatus.

18. Apparatus for continuous passive motion.

CPM is used to treat joints of the lower limb after an injury, disease or following surgery. Based on a concept originated by SALTER IN 1970, this device has varied applications namely treatment of intra articular fractures, septic arthritis, ligaments tendon healing and also following total joint replacement to ensure a sufficient range of motion.

To prevent stiffening , the joint have to be moved continuously which results in the following.

- Minimize swelling and pain after operation
- Ensures faster recovery and shortened hospital stay
- Prevents extra articular contractures and adhesions.

Ext/Flex Angle indicator at knee position

- Compact and elegant construction
- Electronic controls enable all adjustment of angle to be made on the front panel.
- Smooth and silent movement
- Digital timer with alarm
- Patient safety switch for stopping and reversing the motion.

Specifications

Treatment time	0 – 99 minutes
Reset time	1 to 5 seconds
Angle	Extension 0
Power	230V/AC/50Hz, 75VA

19. Bicycle ergometer

Work Load Range: 10 – 600Watt

Independent Rpm: 20 – 130rpm

Work Load range

Dependent RPM

Lap Time: 9h 59min 59sec

Load Steps : 1 – 99 Watt

Time Steps : 1 – 99 Min

Load Programs: Manual

1 Load/Step

PWC 170, 150, 130

HR Steady State

Safety Protection

Automatic Load: Heart rate

Reduction: Blood pressure

Blood Pressure D

Acoustic signal: ECG Alarm Signal

Manual : By Stop Button

Check: Calibration

Dynamic

Static

Adjustments (Height): 83cm – 110cm

Saddle: 68cm – 108mm

Handle bars: free rotation

Accuracy of load: 2% or 3 Watt

Input/output

External Control: RS - 232

Inputs: Analogue control

Start signal

Heart rate

Blood pressure s

Blood pressure D

ECG Alarm

Outputs: work load

Pedaling Speed

Step Marker

Power supply: 110 – 240V, 50 – 60Hz

Power consumption: 100VA

Safety Standard: class 1, CE

Dimensions (cm): Base plate 79X48

Weight: approx 46Kg

20. Dynamometer

Especially suitable for use in rehabilitation centers/physiology labs;

Real time mode: immediately shows the patients current strength

Peak/Max Mode: shows the maximum strength of a patient's grip

Average Mode: calculates the average strength from two grips

Counting mode: counts the numbers of presses which exceed a previously defined strength limit;

integrated AUTO – OFF function after 1 minute to preserve the batteries; as part of a rehabilitation program, this permits medical staff to monitor the fitness of the patients hands and carry out controlled training exchangeable springs facilitate fast switching of the capacity (Additional spring sets for 20Kg and 40Kg are included with delivery); safe, comfortable use thanks to non slip rubber grips

Stable case for safe, easy transport and for storage of the additional spring sets as standard, WDXH: 350X265X85mm

21. Electronic Muscle stimulator

Research model: Muscle Stimulator

Compact Solid-state Microprocessor Controlled unit, with digital timer and intensity display is useful for functional paralysis resulting from traumatic neurosis, Hysterical of Neuropraxia, Flaccid Paralysis, Spastic Paralysis, Cardio-vascular disorders and Muscle Strain etc. The Therapeutic Muscle Stimulator has Galvanic, Interrupted Galvanic, Faradic and Surge Faradic currents. The unit shall be housed with ABS molded cabinet. Salient Features
Microprocessor controlled Pulse durations: 0.3, 1, 10, 30, 100, 300ms Pulse Repetitive Freq.: 0.3, 1, 3 seconds Intensity variations: 0-130 Volts Technical details
Weight: 1.6Kg. Height: 139.7mm, Width: 266.7mm Depth: 190.5mm Voltage: AC 100-260 Protection Class-I Complies with IEC 601-1 Option for Built-in rechargeable battery.

22. Experimental physiology

Demonstration set including Sherrington startling kymograph (preferably electrically driven) myograph stand, indecorum, simple key short circuiting key, pohl's commutator, vibrating interrupter, muscle through, muscle liver, muscle grip of femor clamp, hook and weight set, heart liver, frog board for dissection, enamel tray for above frog board cork line with boss – head – low voltage unit, for tapping 2 and 4 bolts for stimulation., at each seat-as required.

Note: time makers can also be made available at each seat along with a low voltage unit. Electronic stimulators, a student type can be used instead of low voltage units. This will also dispense with the need for induction coil interrupter

1. central low voltage unit (low volts 3 – 6 volts) – battery or rectifier unit and a step down transformer.
 2. the keys – simple key & short circuiting key
 3. induction coil (Du – Bois Raymond indecorum)
 4. electric kymograph (“ Drum”)/Sherrington startling kymograph
 5. frog muscle chamber (Luca's Moist chamber; muscle through)
 6. writing lever
 7. startling heart liver
 8. isometric lever
 9. vibrating reed
 10. variable interrupter
 11. time marking – tuning fork (100 or 256Hz); spring time marker; electromagnetic time marker.
 12. stimulating electrodes
 13. student stimulator
 14. self ink thermo – paper (like ECG paper)
- other accessories
1. langedorff's apparatus
 2. dales organ bath.

23. Perimeter; student's perimeter

Charting the field of vision; with stand, metal arc; chin rest and chart paper etc

24. Ophthalmoscope cum retinoscope : set of direct ophthalmoscope and retinoscope

25. Phacoscope – an instrument for viewing accommodative changes of the eye lens

26. colour perception lantern edridge green

27. Maddox rod – for screen test; Maddox rod lens; red/white/green rim and amp; handle material: copper handel; length: 70mm,

28. compass aesthesiometer

stainless steel, with well –f formed points and adjusting scre giving movement of app: 01mm per half turn.

29. thermoaesthesiometer

Horse hair carried in a holder; hair length adjustable with graduated tube and protective cap.

30. Algometer

For measuring pain threshold,

Features: digital display of pain pressure threshold; range from 0.5 Kg/cm to 11 kg/cm. very fast and simple to use battery cum mains operation miniature pocket size 7X13X3cm.

31. Olfactometer

4 – choice arena olfactometer (OLFM), complete; 12”X12”X1”, 4 – port/4choice arena olfactometer w/removable lid. Main body and all inlet and outlet ports made from solid UHMW – Poly ethylene (PE) with 3/8” thick clear plexiglas removable lid. System includes an insect inlet adapter (Note: specify inset size at time of order) and all (4) glass, 2 piece combination internal odor source (IOS) adapter and insect isolation traps which collect insects responding to an odor source and prevents them from returning into the arena. Unit also includes a 2-choice adapter insert which allows the olfactometer to be converted to a two choice system by blocking off half of the arena area. Olfactometer is supported by (4) – 6” removable legs.

Dept. of Biochemistry - Group- C (Single bid)

32. Vacuum pump

35 lit. capacity; single stage; oil sealed air cooled V – Belt driven and mounted on a base plate with belt guard etc. with motor 220VAC single phase.

33. Colorimeter

Wavelength Range: 400-700nm with 8 optional filters

Filter's peak: 420nm, 440nm.

Wavelength(Typical): 490nm, 520nm, 540nm, 570nm, 600nm, 700nm

Measuring Modes: % T, ABS, CONC and K Factor

Photometric resolution: 0.1%T, 0.01 ABS up to 1.99 ABS (O.D.)

Display: 3 – Digit LCD

Concentration Setting Limit: absorbance read out (with decimal point removed)

Sample value (Min.): 1ml in 4ml cuvet/test tubes

Director: hermetically sealed photodiode

Power: 230V+/-10%, 50Hz.

34. Flame photometer

- a. Up to four elements should be measurable with single aspiration.
- b. Automatic filter selection (Narrow band interface)
- c. Automatic settings of electronic systems
- d. Curve fittings for non linear range(up to minimum 05 standards)
- e. Calibration should be storable in memory
- f. Provision for re-standardization
- g. Record should be storable pertaining to date and time analysis
- h. Provision for saved set up to minimize operation steps.
- i. Measurement results should be recalled later on with display and print out (330 Max).

Element	Serum	Urine	Bio – Fluids
Na	100-200meq//1: 100dil	0-250meq//1: 100dil	All the four elements up to 250meq// with 1: 200dil
K	0-10meq//1: 100dil	0-100meq//1: 200dil	
LI	0-2meq//1:10dil		
Ca		0-10meq//1:2dil	

- j. Filters (10nm Typical): Na and K (must) Li and Ca (optional)
- k. Reproducibility: should be atleast +/-2%f.s.
- l. Aspiration Time: should be (5 sec + Avg. time) per element + 4 sec.
- m. Air compressor: with built- in air regulator and air filter deliver stable and moisture / oil free air supply
- n. Fuel gas: LPG
- o. Power supply: should be 230VAC+/-10%, 50Hz.

35. Chromatographic chamber

Chromatography – cabinet Rescholar's chromatography cabinets, which are made of teak wood with glass on four sides and on top. The internal surface is coated with wax in order to ensure resistance to solvent and other chemicals.

36. UV lamp with fittings

UV Lamps to meet the requirements of our clients. These lamps are effective in eliminating oxides, micro organisms and other contaminants in water. The lamps are manufactured in advanced production units using quality components. Features: high turbulence; non wetting surface; high reliability low maintenance.

37. Samplers or auto pipettes

Different volume range each 06 nos. the features are as follows: fixed, reduced thumb stress, consistent sample loading, compatible with most types of tips. Soft force tip loading and ejection. One hand tip ejection. Leak free sealing of tip. Manifold can rotate 360° for easy right or left hand operation; Volume: 5µl, 10 µl, 20 µl, 50 µl, 100 µl, 500 µl, 1000 µl.

38. Refrigerator

350 litres with freezer compartment

39. Cork – borer set

Digital – digital stop watch. Digital stop watch is perfect for any laboratory applications. The large LED display, high resolution enhances the functionality in several of situation. These are available in two ranges as per specification. Range 1:99:59:59 Hrs: Min: Sec. Resolution: 1 Sec (for range 1)Min: Sec: Milisec. Range 2:99:59:99 Hrs: Min: Sec. resolution : 10 millisec (for range 2). Display: 6 digit LED display.

Group - D (Double Bid System)

Department of Anatomy

40. BAND SAW FOR SECTIONING BODY AND LIMBS

Manual Band Sawing Machine

Technical Specifications:

- Max. Job Height in mm 200
 - Max. Throat in mm 200
 - Table Size (L x W in mm) 600 x 600
 - Blade Speed in mtr /min. 20 - 100
 - Blade Size (L x W x T in mm) 3505 x 27 x 0.9
 - Saw Motor Capacity in HP 3
 - Coolant Motor Capacity in HP 0.16
 - Overall Size (L x W x H in mm) 900 x 700 x 2100
- Approx Weight in Kg 400

41. Skeletons articulated – real human bones –

42. Bones (disarticulated) sets – real human bones, lose bones;

Department of Physiology(Double Bid)

43. Computerized PFT with interpretation facilities

Pulmonary function test department is equipped with PC based equipment capable of giving data in tabular form for 33 parameters (FVC,SVC, and MVV), pre and post medication option available for comparison

Features: complete digital processing; user friendly alpha numeric LCD display; easy to operate; soft touch key pad; audio indication with each function; elaborate prediction equations; optional interpretation facility; fast and noise free printing; well formatted report; 14 measurement parameters

44. EEG Machine Recorder – portable

EEG 100B amplifier module with CAP 100 EEG electrode cap/with electrodes and cardiac jelly; EEG (Electroencephalograph)

Features: A device being used by neurologists

Light weight and compact amplifier; USB 2.0 interface/Ethernet interface; synchronized high resolution MPEG-4 video; integrated photic stimulator; integrated impedance check for electrode connectivity; unlimited nos. of montages; unlimited continuous recording along with video (optional)