

INVITATION FOR QUOTATION ONLINE

HSCC/PUR/PALI/ Quot/03

Dated: 31st Jan 2018

To

All Bidders

Subject: Invitation **on line** for Quotations for supply of Low Equipment for Anatomy, **Physiology, Bio-Chemistry & Community Medicine** for Medical College, at Pali, Rajasthan.

Dear Sirs,

1. HSCC (India) Ltd. for and on behalf of Medical College, at Pali, Rajasthan. invites your **on line** most competitive quotation for the following goods of the respective departments quantity mentioned the **section I** and technical specification mentioned in the **section II**.
2. Quotation:
 - 2.1 The contract shall be for the full quantity as described above.
 - 2.2 Corrections, if any, shall be made by crossing out, initialling, dating and rewriting.
 - 2.3 The **on line** prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - 2.4 The unit price/ rate of the item should be clearly indicated in the quotation. Rates/Prices quoted shall be including of forwarding, and insurance & transportation, warranty, but **excluding GST** up to the consignee **Medical College, at Pali, Rajasthan**.
3. Each bidder may quote one item or more than one item as per **section III (Price format) with equipment technical literature**.
4. Evaluation of Quotations:

The Purchaser shall evaluate and compare the quotations determined to be substantially responsive i.e. which;

 - 4.1 are properly signed; and
 - 4.2 confirm to the terms and conditions, and specifications.
 - 4.3 final considerations of equipments shall be based on the quality of equipments during demonstration / inspection.
 - 4.4 The quotation will be evaluated and compared separately for each item.
 - 4.5 The Purchaser reserves the right to ask for a free demonstration/ sample approval of the quoted equipment at a pre determined place acceptable to the purchaser for technical acceptability as per the tender specifications, failing which bid may not be consider.
5. The Quotations would be evaluated item wise.
6. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest rate for the item subject to quality of the items during demonstration / inspection.

 - 6.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and cancel the bidding process and reject all quotations at any time prior to the issue of Purchase Order/contract, without assigning any reason.
 - 6.2 At the time of awarding the contract, the purchaser reserves the right to increase or decrease by up to twenty five (25) per cent, the quantity of goods and services mentioned in the schedule (s) in the "List of Requirements" (rounded of to next whole number) without any change in the unit price and other terms & conditions quoted by the tenderer.
7. Delivery period shall be within **10 days** from date of placement of order at Consignee i.e. **Medical College, at Pali, Rajasthan**.

8. Payment shall be made only in Indian Rupees as follows:

Satisfactory Acceptance and delivery - 100% of total cost

100% Payment on submission of following documents (Duly signed & stamped at your end):-

- Copy of Purchase order.
- Final acceptance certificate issued by Client/HSCC
- Invoice in favour of consignee/MEDICAL COLLEGE, AT PALI, RAJASTHAN through HSCC (I) Ltd
- Warranty Certificate in original.

9. All supplied items shall be under **one year warranty** from the date of successful acceptance by **MEDICAL COLLEGE, AT PALI, RAJASTHAN.**

10. You are requested to provide your lowest offer as follows:

Sr. No.	Item no	Name of items	Closing date & time for submission	Date and time of Opening of Techno
1	Department of Physiology, Biochemistry & Community Medicine	List attached	9 th Feb. 2018 at 14:00	9 th Feb. 2018 at 14:30

NOTE: (Under any unforeseen circumstances if the due date for submission of Tender is declared as holiday then the tender shall be submitted & opened on the next working day at the scheduled time).

The quotations will be opened in HSCC office, NOIDA as mentioned above in the presence of bidders or their authorized agents as they may choose to attend

11. Information brochures/ Product catalogue, if any, must be accompanied with the quotation clearly indicating the model quoted for.
12. Sealed quotation to be submitted/ delivered at the address mentioned below:

On line submission: Quotation Form duly signed & filled and Technical compliance sheet with technical leaflets and Price Bid /Financial Bid

**General Manager (Projects) HSCC
(India) Ltd.
E- 6 (A), Sector -1.NOIDA -201 301.**

13. Quoted amount should be in Indian Rupees only and as per **section -III** price schedule.
14. For all items, the Technical Evaluation Committee may opt for Demonstration of the items. The Committee may also ask for Demonstration / Inspection before supply / delivery of the items for quality assurance.

Note: Please indicate the quotation reference no. (given at the top of page 1 of this letter) and Serial No of the Items on your offer.

The details of various medical equipments shall be also made available at www.hsccltd.co.in, and modification/amendments etc, if any, shall only be notified on website only.

We look forward to receiving your quotation and thank you for your interest in this project.

General Manager (Projects) on
behalf of Additional Director

Section -I

COMMUNITY MEDICINE

Sr. No.	Equipment	Quantity	Warranty from date of Acceptance
1	Museum jars	25	1 Year
2	Baby weighing machine	2	
3	Refrigerator 9 Cu. Ft.	3+ Additional one each at RHTC and UHTC	
4	Ice Lined Refrigerator (I.L.R.) (at Health Centre)	1	
5	Public Address system (2 portable for field based activities and one each for RHTC & UHTC)	4Sets	
6	MUAC tapes	10	
7	GlobeThermometer	3	
8	Anemometer	3	
9	Sound level meter	3	
10	Soil testing kit	1	
11	Water sampling bottle from any depth	1	
12	Needle Shredder	3	
13	Vaccine carrier	5	
14	Craft water testing kit	1	
15	Protective devices for occupational safety	3sets	
16	Ear muffs	3sets	
17	Ear plugs	3sets	
18	Safety helmet	3sets	
19	Goggles	3sets	
20	Safety boots	3sets	
21	Swine flu kit	3sets	
22	Gloves	3sets	
23	Triple layer surgical mask	3sets	
24	High efficiency mask	3sets	
25	Long sleeved cuffed gown	3sets	
26	Protective eye wear	3sets	
27	Cap	3sets	
28	Disposable delivery kit	3sets	
29	Treatment kits as per national health programs	3each	
30	Iodine testing kit	10	
31	Glucometer	10	

32	Slide set for entomology	5
33	Mosquito catching kit	3
34	Clinical Thermometer	10
35	Solar radiation thermometer	3
36	Treatment kits as per National Health Programs	3each
37	Iodine testing kit	10
38	Glucometer	10
39	Slide set for entomology	5
40	First Aid Kit	1
41	Spirometer	3
42	Audiometry	1
43	Otoscope	1
44	Ophthalmoscope	1
45	Department of PSM Models and (51) & Specimen (25) Price to be quoted separately for the Models & Specimens	As per Technical Specifications

SectionII

TECHNICAL SPECIFICATION OF COMMUNITY MEDICINE

1	Museum jars	25
2	Baby weighing machine	2
3	Refrigerator 9 Cu. Ft.	3+ Additional one each at RHTC and UHTC
4	Ice Lined Refrigerator (I.L.R.) (at Health Centre)	1

1. Description of Function:

- 1.1 Ice lined refrigerators maintain temperature of +2°C to + 8°C. Not more than 8 h' S continues or intermittent power should be sufficient per 24 hrs to maintain vaccine temperature below 8°C.
- 1.2 Ice-lined refrigerators are required at district and regional levels, since electricity suppliers are rarely perfect and standby electricity suppliers may not be available.

2. Operational Requirements:

- 2.1 Designed for tropical climates.
- 2.2 Target holdover time should be 20 h' or more in a continues external temperature of 43°C.
- 2.3 Hot and Cold compressor starting at 172 Volts (22% below rated voltage).
- 2.4 Manufacturing process of the product should not use or produce hazardous chemical gases.
- 2.5 Provision for drainage for the waste water.
- 2.6 Should have legs in the base with rotating screw type height adjustments to balance the weight all uneven floor.

2.7 The unit should have ground clearance of minimum 100 mm.

3. Technical Specifications:

3.1 Net Storage Capacity: 250-300 liters within basket in place.

3.2 Construction:

(a) Internal-Stainless 304 grade steel/Pre Painted Galvanized.

(b) An additional special ice lining consisting of ice packs covered by strong plastic shell.

3.3 External: Corrosion Resistance.

3.4 Chest type with CFC-free insulation.

3.5 Should have horizontal water cool pack covering the top of the basket.

3.6 Solid door with lock and handle

3.7 Type: Compression Cycled, CFC free (both for refrigeration and insulation). All system tubing (suction tube, freezer tube and condensing tube) should be of minimum 99.97% of copper coil.

3.8 Temperature of a full vaccine and medicine to remain +2 deg C to +8deg C during continuous availability. of energy at ambient temperature +5deg C to +45 deg C with intermittent! continues electricity supply 8 hrs in a 24 hrs cycle. The temperature difference between any two points in the cabinet should not be more than +2 deg C once stabilized.

3.9 Inlet of Capillary should be outside the PUF body.

3.10 ON/OFF Switch and power indicator should be available.

3.11 A Micro Processor based control unit should be provided for setting of temperature and display following features:

3.11.1 3 digit digital display (to one decimal point) of cabinet temperature. The sensor should be placed 25 to 50 mm above base of storage chamber.

3.11.2 Power on LED/LCD indicator

3.11.3 Audio (minimum 65 dBA) and visual alarm against the violation of temperature ranger (less than +2 and more than +8 degree C)

3.11.4 Min. & max. cabinet temperature digital display of 24 hrs. and breaches during last 24 hrs.

3.11.5 The unit should be sealed/protected from dust, moisture or condensed water falling over it.

3.12 Accuracy for digital controller +0.5 degree centigrade.

4 System Configuration

4.2 Programmable Micro-processor control unit child lock facility.

4.2 .Should have provision to set minimum and maximum temperature at 0.1 degree Centigrade to programme the unit for continuous operation.

4.3 Should have provision for defrosting program.

5. Accessories and spares

5.1 Food Storage Basket allowing free circulation of air, having the size to be able to accommodate 4 to 6 of them in them in the unit and suitable to match the net volume requirement. It should be minimum 5 wire basket.

5.2 Stem.Alcohol.thermometer (specification and standard as per MOHFW approved Annexure-I) - one piece per unit range of -30 to+ 50 degree.centigrade.

5.3 The supplier is required to maintain the entire spare throughout the guarantee period.

6. Environmental factors:

6.1 The unit shall be capable of being stored continuously in ambient temperature of 0 to 50deg C and relative humidity of 95%

6.2 The unit shall be capable of operating continuously in ambient temperature of 5 to 45 deg C and relative humidity of 90% ..

6.3 The plug should be flexible and unbreakable sealed rubber type.

7. Power Supply

7.1 Power input to be 220-240 V AC , 50 Hz as appropriate fitted with Indian Plug.

7.2 Suitable capacity Voltage Stabilizer as per requirement of IIR.

8. Standards & Safety

8.1 Product Should be CE Approved

9. Documentation:

(i) A paper copy of user/operator manuals to be supplied in English.

(ii) A paper copy of technical/wiring diagram/maintenance manuals to be supplied in English.

(iii) Certificate of Testing should be submitted at the time of supply from NABL certified lab / ILAC/ STQC Labs.

10. Packing of the equipment during shipment:

(i) The supplier should provide strong and sufficient packing to ensure safe arrival of goods at the destination free from loss or damage.

(ii) Vertical arrow should be marked at all sides of packages to ensure

Terms & Conditions

1. Guarantee: Two years on equipment from the date of installation.
2. CMC: CMC will be given @5% (of net rate-inclusive of Excise Duty & exclusive of VAT/CST etc.) plus service tax (as applicable) and yearly escalation of 5% on last year's CMC price. The CMC may be awarded for three years (on yearly basis) after completion of guarantee period of two years.
3. Installation and Training will be done by the supplier free of cost.
4. The service engineer should be based in Rajasthan.
5. The company should mention the make and model name/number of the quoted equipment and submit the technical brochure of the quoted model in the technical compliance sheet as per technical specifications.

5	Public Address system (2 portable for field based activities and one each for RHTC & UHTC)	4Sets
6	MUAC tapes	10
7	Globe Thermometer	3
8	Anemometer	3
9	Sound level meter	3
10	Soil testing kit	1
11	Water sampling bottle from any depth	1
12	Needle Shredder	3
13	Vaccine carrier	5
14	Craft water testing kit	1
15	Protective devices for occupational safety	3sets
16	Ear muffs	3sets
17	Ear plugs	3sets
18	Safety helmet	3sets
19	Goggles	3sets
20	Safety boots	3sets
21	Swine flu kit	3sets
22	Gloves	3sets
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24	High efficiency mask	3sets
25	Long sleeved cuffed gown	3sets
26	Protective eye wear	3sets
27	Cap	3sets
28	Disposable delivery kit	3sets
29	Treatment kits as per national health programs	3each
30	Iodine testing kit	10
31	Glucometer	10
32	Slide set for entomology	5
33	Mosquito catching kit	3
34	Clinical Thermometer	10
35	Solar radiation thermometer	3
36	Treatment kits as per National Health Programs	3each
37	Iodine testing kit	10

38	Glucometer	10
39	Slide set for entomology	5
40	First Aid Kit	1
41	Spirometer	3
42	Audiometry	1
43	Otoscope	1
44	Ophthalmoscope	1
45	Band Saw	1 for dept. of Anatomy
46.	<p>Department of PSM Models and (51) & Specimen (25) Models of standard size as Per MCI guidelines Company shall be ISO certified</p> <ol style="list-style-type: none"> 1. Protected sanitary well 2. Insanitary well 3. Step well 4. Boring of tube well 5. Model of slow sand Filter 6. Model of rapid sand filter 7. Bio Gas Plant 8. A bore hole latrine 9. Septic tank Latrine C.S. <ol style="list-style-type: none"> 10. Soakage pit 11. section of Septic tank installation 12. Wuchereria bancrofti on stand 13. Itchmite 14. Mosquito collecting Device 15. Spread of typhoid Fever 16. Leishmani Donovanani 17. Pneumoniac lague 18. Small pox & Chikenpox comparison 19. Xeropthalamia 20. Bitots Spots 21. Atrophic Beriberi 22. Angular stomatitis 23. Pallegeras 24. Rickets 25. Scurvy 26. Kwashiorkar 27. Measels 28. Marasmus 	<p>As per below Specification Price to be separately for all Models</p>

29. Strengyloides stercoralis
30. Tania solium (The pork tape worm)
31. Tanea saginata
32. Scolex & ripe proglottid
33. Echynococcus Granulosus (Dog tapeworm)
34. Life Cycle of Entamoeba histolytica.
35. Life cycle of anopheles
36. Life cycle of Culex
37. Life cycle of an ades (stegomyia)
38. Life cycle of Louse
39. Life cycle of Housefly
40. Life cycle of Sandfly
41. Life cycle of Itchmite
42. Life cycle of rat flea
43. Hard tick
44. Causes of Hookworm infection
45. Marphology of L.Donovani
46. Trichuri Trichuries
47. Hookworm
48. Neactor americanes
49. Facsida Hepetica
50. Rain water harvesting
51. Rainwater recharging

Specimens of Standard size as per MCI Guidelines

1. Echinococcus
2. Fasciola (Liver Fluke)
3. Schistosoma Mansoni
4. Tapeworm
5. Cysticercus (Bladder Worm)
6. Ascaris lumbricoid
7. Taenia solium
8. Taenia saginata
9. Anophelese male
10. Anophelese femal
11. Cockroach
12. Culex
13. House fly
14. Honey Bee
15. Guinea worm
16. Trichinella spirallis
17. Vermicularis
18. Oxuria
19. Starfish
20. Bat
21. Gunia pig
22. Cholera

- | | |
|---|--|
| 23. Malaria | |
| 24. AIDS | |
| 25. Tuberculosis | |
| 26. Leprosy | |
| 27. Influenza | |
| 28. Jaundice | |
| 29. Cancer | |
| 30. Typhoid | |
| 31. Cough & cold | |
| 32. Virus diseases | |
| 33. O R T | |
| 34. Set of Indian Food Articles | |
| 23. Blood Pressure Measuring Instrument | |
| 24. Sthethoscope | |
| 25. Clinical Thermometer | |

PHYSIOLOGY

Sr · N	Name of Equipment	Qty	Warrant y from date of
1	Balance Analytical	1	1year
2	Clinical Thermometer	20	
3	pH Meter	1	
4	Stethoscope	25	
5	Centrifuge	1	
6	Water Distillation Still	1	
7	All Glass Distillation Apparatus	1	
8	Sherrington Starling kymograph	2	
9	Inductarium	2	
10	Simple key	2	
11	Short circuiting key	2	
12	Pohl's commutator	2	
13	Vibrating interrupter	2	
14	Muscle trough	2	
15	Muscle lever	2	
16	Muscle grip offemur clamp	2	
17	Hook and Weight set	2	
18	Heart lever (simple & Starling)	2	
19	Frog board for dissection	2	
20	Enamel tray	2	
21	Frog board cork lined with boss head	2	
22	Low voltage unit for tapping 2 and 4 volts for stimulation	2	
23	Electro magnetic time marker	2	
24	Tuning fork time marker 100/sec	2	
25	Electrodes	2	
26	X-blocks	2	
27	Spirit lamps	2	
28	Marey's tambour	2	
29	Microscopes, oil immersion	50 Monocular +	
30	Wintrobe's pipette for ESR and PCV with stand	20	
31	Sphygmomano meter (digital) (Mercury based instruments to be replaced with	5+20	
32	Apparatus for passive movement	1	

33	Stetho graph	15
34	Perimeter with charts (Lister's)	2
35	Refrigerator	1
36	Oxygen cylinder with trolley	1
37	CO2cylinderwithtrolley	1
38	Electronic stimulator	1
39	Digital Physiograph	1
40	Models and Charts	1
41	Gas Analysis Apparatus Haldane's Student Type	1
42	Phakoscope	1
43	Algometer	15
44	Newtons Colour Wheel	1
45	Tunning Forks to test hearing 32-10,000 cps (sets)	15
46	Stop watch	15
47	Thermoanesthesiometer Digital	20
48	ECG Single Channel	2

TECHNICAL SPECIFICATION - PHYSIOLOGY

S. No.	Instrument Name	Specifications
AMPHIBIAN & MAMMALIAN EXPERIMENTS		
1	Analytical Balance	Electronic, digital balance from 0.1 mg to 250 gm, dust cover
2	Clinical Thermometer	Digital & Mercury models both
3	pH Meter (Electric)	Advanced Microcontroller based design. Display of pH, mv, temp on backlite LCD. GLP compliant. (Optional) Entry of buffer value, machine ID through keyboard for the GLP print out. 3 point Automatic pH Calibration with buffer standards 4.0, 7.0 & 9.2 pH 3 point manual pH calibration using with known buffer standards. Automatic temperature compensation. Entry of temperature through keyboard in the absence of temperature sensor Storage upto 50 test results
4	Stethoscope	Lightweight dual head with aluminium chest-piece and one piece moulded PVC 'Y' tubing.
5	Centrifuge	high speed with technometer, 10,000 rpm, digital, dust cover and glass wares.
6	Water Distillation Steel	Steel Distillation plant, with spare heating elements
7	All Glass Distillation Apparatus	Automatic Electrically Heated All Glass Distillation Apparatus Complete with metallic stande, Plug, board etc. Double Distillation Single Stage Having Flask of cap. 5 Liter
8	Sherrington Starling Kymograph	electrically driven, Separable strikers, Variable Speed, Attached with 15 x 15 cm Drum, 100 Glazed Papers, Smoking assembly and fixative solutions.
9	Induction Coil	DuboiseReymond Induction coil with Primary and Secondary coils, Neef's Hammer, Insulated Copper Wire (10 mts)
10	Simple Key	--
11	Short Circulating Key	--
12	Pohl's Commutator	--
13	Vibrating Interrupter	Mercury Interrupter with Surplus Mercury 50 ml
14	Muscle Trough	--
15	Muscle Liver	--
16	Muscle grip of femur clamp	--

17	Hook and weight set	--
18	Heart liver	--
19	Frog board for dissection	--
20	enamel tray	--
21	Frog board cork-lined with boss-head	--
22	Low voltage units, for tapping 2 and 4 volts for stimulation, at each seat-as required	--
23	Electro-magnetic time makers,	100/sec.
24	Tuning fork, time marker	100/sec.
25	Electrodes	Secondary Electrodes for stimulating GM Preparation
26	X-blocks,	--
27	Spirit lamps,	--
28	Marey's Tambour	--
29	Microscopes, Oil immersion	Quadruple revolving nose piece with objective: 5x, 10x, 45x and 100x oil immersion, Eye pieces: 5x, 10x, 15 x (Paired), Co-axial controls for easy 22slide manipulation on both axis with graduation and Verniers. Range of movement 80x50 mm Condenser unit is having Rack and Pinion movement with Abbecondenser NA 1.20 with iris-diaphragm and filter holder, The Electronic built in base illumination system fitted with a Halogen lamp of 6V, 20W, Average life of the bulb is 2000 hours. Built in transformer, controlled by solid state electronic control knob. A Plano concave reflector attachment can be easily replaced with sub stage illuminator assembly
30	Wintrobe's Tubes with stand	--
31	Sphygmomanometer	(i) LED Sphygmo-manometer (ii) Autoinflatable with Digital BP & pulse rate display
32	Apparatus for passive movement	--
33	Stethograph	The corrugated rubber tubing is 200mm (8 inch) long and 35mm (13/8 inch) diameter. A nickel-plated chain 850 mm (34 inch) long, is secured at one end of the Stethograph, and may be secured at any point to a hook at the opposite end. At one end of the Stethograph is rifled tube with an inside diameter of 3mm (1/8 inch), for connection to the tambour or the recording device. The rubber diaphragm of this tambour is 40mm (1 1/2) in diameter. The mounting has been considerably improved. Formerly, the diaphragm had to be tied in place. Now a rubber O-ring (supplied) simply slips on and beds itself in a groove locking the rubber diaphragm securely in place. The writing lever has amplitude adjustment, since it can be moved along the 6mm (1/4 inch) mounting stem
34	Perimeters, with charts	Lister Perimeter
35	Refrigerator,	Refrigerator, 300 lt, 9-10c ft.
36	Oxygen Cylinder with trolley	--
37	CO2 cylinder with trolley	--
38	Electronic stimulator	--

39	Digital Physiograph	<p>For measuring biosignals – ECG, EMG, EEG, EOG, Pressure, Force, PPG, EDR, Sound etc through different amplifier modules Connectable to PC USB ports.</p> <p>Utilize and analyze data through PC Monitor.</p> <p>Should be able to measure and analyze -</p> <ul style="list-style-type: none"> - Measuring heart rates, PTT, and HRV using ECG - Evaluation activity of heart using vector ECG (2D or 3D) - Analyzing correlation between EMG and muscle contractility - Evaluating recognition and reaction times using the EMG - Measuring eye movement using the EOG (applied to man-machine interface) - Sensory evaluation using EDR - Observe auscultatory sound by amplifying minute heart sound/bowel sound measured from the auscultatory sensor
40	Model & Charts	--
41	. Gas Analysis Apparatus Haldane's Students Type.	

42	Phakoscope.	<ol style="list-style-type: none"> 1. Instrument supported by weighted and turned wooden stand and column 2. Adjustable height using a thumb screw 3. Trapezoid shaped instrument 4. Front: Oval – shaped cut – out 5. Back – Side: Large Rectangular window in front of which can slide cut – out pieces (the one in there is a square with a small needle in its centre) 6. On one side is a circular opening. On the other side are two square openings, in front of which cut – out pieces can slide (one has a small piece of glass). 7. There would have been at least one prism inside the instrument.
43	Algometer.	<ol style="list-style-type: none"> 1. Accuracy should be $\pm 3\%$ of reading 2. Display should be 5 digit, 0.5" LCD 3. Display Update should be 8 per second 4. Power : 110 or 220 VAC charger 5. Should have rechargeable battery 6. Battery backup should be up to 50 hours 7. Tip Size should be 1 cm² 8. Should have Bi-Directional RS232 (include RS232-USB convertor) communication with the computer 9. Should have auto calibration facility 10. Should have internal memory of 500 data 11. Should have USB patient response unit to record patient response during stimulation 12. Computer Database Software for Data analysis 13. The supplier should be ISO certified for quality standards.
44	Newtons colour wheel	<ol style="list-style-type: none"> 1. The seven colours in Newton's optical spectrum (red, orange, yellow, green, blue, indigo and violet). 2. Should be recombined in a number of ways, including the seven-mirror device and the oscillating prism 3. Newton's Colour Wheel should have a multi-coloured disc mounted on wooden stand rotated by a hand wheel.
45	Tuning forks to test hearing 32-10,000 cps (sets)	<ol style="list-style-type: none"> 1. Should be made up of stainless steel with frequency marked 2. 5 each of 128 Hz, 256 Hz, 512 Hz.
46	Stop watch	<ol style="list-style-type: none"> 1. 10-hour timing range clock with timer, 2. Should Include alarm, count-up, time-out function, and four-mode stopwatch, 3. Should have one-inch digital display for easy visibility, 4. Should run on battery.

47.	Thermoanesthesiometer.	<ol style="list-style-type: none"> 1. Shall be manual 2. Company shall be ISO certified.
48.	ECG single channel	<p>Description of Function</p> <p>1.1 ECG Machine is primary equipment to record ECG Signal in various configurations</p> <p>2 Operational Requirements</p> <p>.1 The ECG Machine should be able to acquire all 12 Leads ECG signals</p> <p>2.2 Should print all the 12 leads in a single channel mode</p> <p>3 Technical Specifications</p> <p>3.1 Should acquire 12 lead ECG for both adult and pediatric patients .</p> <p>3.2 Should have Artifact, AC, and low and high pass frequency filters.</p> <p>3.3 Should have an integrated-high resolution, thermal array printer for print of ECGs</p> <p>3.4 Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge</p> <p>4 System Configuration Accessories, spares and consumables</p> <p>4.1 System as specified-</p> <p>4.2 Patient cable -02</p> <p>4.3 Chest Electrodes Adult-(set of six) -2 sets.</p> <p>4.4 Chest Electrodes Pediatric-(set of six) -2 sets</p> <p>4.5 Limb Electrodes (set of 4)- 02 sets for Adult and 02 sets for Pediatrics.</p> <p>4.6 Thermal print paper: 10 Rolls/Z Fold</p> <p>5 STANDARDS The product should be CE or FDA or BIS Certified.</p>

LIST OF ITEMS & QUANTITIES

Sr. No.	Equipment	Quantity	Warranty from date of acceptance
1	Analytical balance: upto 200g/ 1g increment,	2	1 Year
2	Glucometer with strips (For POCT)	2	
3	Laboratory reagent refrigerators, Capacity > 200L	2	
4	Complete chromatographic unit for paper and TLC	2	
5	Bottle dispensers	25/10	
6	Variable & fixed volume microautopipettes	4 sets of each volume, both for fixed and variable pipette	
7	Digital Analytical Balance	1	
8	Balance micro	1	

SectionII

Technical Specification of Equipments

1.	Analytical balance: upto 200g/ 1g increment, qtt =2	Electronic Analytical Balance Should have transparent case LCD Display Readability 0.1mg Capacity 200- 220gm Should have internal calibration (automatic) Should have taring facility Linearity \pm 0.2 mg Levelling bubble Minimum warm up time 5yrs warranty & 5 year CMC	2
2.	Glucometer with strips (For POCT)	Arterial, Venous and capillary whole blood specimen capability. Sampling volume should be less than 2.5 μ L. Hct Range should be 20% ~ 60%. Measuring range should be 20 ~ 600 mg/dL (1.1 ~ 33.3 mmol/L). Measuring unit should be mg/dL or mmol/L. Measuring time should be 10 Seconds. Memory capacity should be 180 blood glucose results. System Operating Temperature should be 10 to 40 $^{\circ}$ C. System Operating Humidity should be <85%. Meter Storage Temperature should be 0 to 50 $^{\circ}$ C. Power supply Two 1.50 Volt (AAA) batteries. Battery life should be minimum 1500 tests Sampling methodology should be electrochemical. Should have LCD display. Should have automatic shut off. Should be supplied along with QC and calibration kits. Should be supplied with 4 packets of test strips for each glucometer. Manufacturer Should have the ISO certification and the copy of the same should be enclosed along with the technical bid. Test Strip Storage Time 1.Should be able to store an unopened vial of test strips for 24 months under room temperature 2. Should be able to store an opened vial of test strips for 3 months under room temperature Warranty 5 Years for Glucometer & 2 Years for Test Strips	2

		<p>Display Must be large and easy to read. The quoted model should have FDA and CE certification and copy of the same should be enclosed along with the technical bid.</p>	
3.	Laboratory reagent refrigerators, Capacity > 200L	<p>1.Storage Capacity: Should be at least 200 Liters capacity</p> <p>2.Set temperature 4°C with temperature range 2°C to 6°C and adjustable with setting accuracy of ±0.5°C</p> <p>3.Refrigeration: Non- CFC cooled refrigeration</p> <p>4.Should have good insulation to maintain required temperature</p> <p>5.Should have good metallic door</p> <p>6. Microprocessor based temperature controller with integrated audiovisual temperature and power alarm function with digital monitoring display.</p> <p>7. Safety features: Audio alarm for all the following parameters should be there: temperature fluctuation & power failure, set point alarm, low alarm point, Door opening audio and visual display alarm.</p> <p>8. Safety thermostat to avoid negative temperatures.</p> <p>9. Should have battery back up for temperature display and power alarm.</p> <p>10. "Hold over time" in case of power failure should be at least 1.5 hours.</p> <p>11. Should have castor wheels with locking facility</p> <p>12. Original literature of equipment should be submitted.</p> <p>13. European CE/ US-FDA certification specific for the product should be submitted.</p> <p>14. Should be ISO 13485 approved product.</p> <p>15. Should supply the relevant calibration</p>	2

		<p>certificate for the equipment from NABL accredited Lab.</p> <p>16. User's list should be provided with satisfactory report for the last years from three Licensed Blood Banks with contact details.</p> <p>17. Should supply the stabilizer if required along with the equipment free of cost.</p> <p>18. Demonstration of performance of equipment is compulsory in nearby area failing to which will be disqualification.</p> <p>19. Electrical: The equipment should be able to run on the existing electrical provision</p>	
4.	Complete chromatographic unit for paper and TLC	<p>Complete chromatographic unit for paper and TLC.</p> <p>Paper chromatographic module should have/be:</p> <p>Vapour-tight chamber.</p> <p>The chamber constructed preferably of glass, stainless steel, or porcelain.</p> <p>Provided with inlets for the addition of solvent or for releasing internal pressure,</p> <p>Designed to permit observation of the progress of the chromatographic run without being opened.</p> <p>Supporting rack as a support for the solvent troughs and antisiphoning rods:</p> <p>Constructed of a corrosion-resistant material about 5 cm shorter than the inside height of the chamber.</p> <p>Solvent troughs made of glass, designed to be longer than the width of the chromatographic sheets and to contain a volume of solvent greater than that required for one chromatographic run.</p>	2

		<p>Antisiphoning rods constructed of heavy glass</p> <p>A set of more than 100 quality chromatographic sheet at least 2.5 cm wide but not wider than the length of the trough to be provided</p> <p>TLC module should include:</p> <p>A set of Flat glass plates of uniform thickness throughout their areas provided in sizes 20 x 20 cm and 5 x 20 cm.</p> <p>A set of Aluminum plates.</p> <p>Aligning tray: An aligning tray or other suitable flat surface to align and hold plates during application of the adsorbent.</p> <p>The adsorbent may consist of finely divided adsorbent materials for chromatography</p> <p>A set of pretreated chromatographic plates.</p> <p>Spreader: A suitable spreading device that when moved over the glass plate applies a uniform layer of adsorbent of desired thickness over the entire surface of the plate.</p> <p>Storage rack: A rack of convenient size to hold the prepared plates during drying and transportation.</p> <p>Developing chamber: A glass chamber that can accommodate one or more plates and can be properly closed and sealed and fitted with a plate-support rack that can support the plates when the lid of the chamber is in place.</p> <p>UV Chamber: A UV viewing chamber with eye protection fitted with ultraviolet light source of short (around 254 nm) and long (around 360 nm) ultraviolet wavelengths suitable for</p>	
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		<p>observations.</p> <p>Should be FDA , CE,UL or BIS approved product</p> <p>Manufacturer/Supplier should have ISO certification for quality standards.</p> <p>Comprehensive warranty for 2 years and 5 years AMC after warranty</p> <p>User/Technical/Maintenance manuals to be supplied in English.</p> <p>Certificate of calibration and inspection.</p> <p>List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.</p> <p>List of important spare parts and accessories with their part number and costing.</p> <p>Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.</p>	
5.	Fixed volume pipettes -- 1ml,0.5ml,0.2ml,0.1ml and 0.02ml	<ol style="list-style-type: none"> 1. At least accuracy of 0.5%, CV 0.2% 2. Fully autoclavable 3. With calibration and accuracy certificate 4. ISO Certified 5. Easy to handle, grip and dispense and aspirate fluids 6. Should not cause repeated stress injury to the user. 	5 (of each volume)
6.	Densitometer with computer	<ol style="list-style-type: none"> 1. GLP compliant fully automated microprocessor based computer controlled documentation and imaging system for gels and western blots 2. Scientific Grade CCD Camera should have: <ol style="list-style-type: none"> a. Zero Defect with antireflective coating b. At least 4 Mega pixels and 16-Bit True Optical resolution c. Fast refresh rate for live 	1

		<p>imaging</p> <ul style="list-style-type: none"> d. Exposure control of wide range upto 180 minutes by 1 millisecond increment e. Ability to acquire images in 4 unique resolution/sensitivity modes for maximized flexibility f. Flat field calibration for uniformity of light acquisition across the sensor g. Regulated cooling to at-least - 20°C below ambient <p>3. Dark room unit should be:</p> <ul style="list-style-type: none"> a. Chemiluminiscent imaging ready with touch panel as well as software controls for turning off/on all light sources b. Light source should automatically switch off after image acquisition/ UV-autopower cut off on opening hatch <p>4. Motorized Filter wheel with Minimum of 4-Positions</p> <p>5. Transilluminator should have</p> <ul style="list-style-type: none"> a. Pull-Out Tray for easy placement of gels and membranes: Dual Broad Band UV at 302 & 365 nm, Dual intensity, Imaging area of atleast 21 x 26 cm b. Epi white, epi blue and epi UV light c. Current Noise correction for increased image acquisition speed and reduced background noise <p>6. Software application requisites:</p> <ul style="list-style-type: none"> a. Data acquisition, enhancement, editing, annotation, archiving & analysis including features like 1-D multilane densitometry, 2-D spot densitometry, Mass calculation b. Capacity to compare lanes/bands across multiple gels (database), performing 	
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		<p>phylogenetic analysis of banding pattern data</p> <p>c. At-least two stand alone copies of analysis software should be provided</p> <p>7. System should have:</p> <p>a. Facility to operate without Computer and with computer</p> <p>b. At-least 2 USB slots</p> <p>8. Branded stabilizer and online UPS 2KVA capable of running the machine with at-least one hour backup at full capacity</p> <p>9. Branded computer (core 2 duo processor with 4GB Ram, 350 GB HDD, CD/DVD writer , UPS ports (4), 17" TFT screen with original Windows XP professional, laser printer and antivirus</p> <p>10. Power supply 220-240 V, 50 HZ</p> <p>11. The instrument should have all the fixtures, cables/accessories required to run the equipment and use all features.</p>	
7.	Bottle dispensers	Should be autoclavable with smooth effortless plunger movement With bubble free dispensing 0.25 to 2.5 mL : 5 no; 0.5 to 5 mL : 5 no; 1 to 10 mL : 5 no; 5 to 60 mL : 5 no; 10 to 100 mL : 3 no; 50 to 400 mL : 2 no	25/10
8.	Variable & fixed volume microautopipettes	<p>Micropipettes constructed from anti corrosive material tubing.</p> <p>Required in various sizes and compatible with all brands of tips.</p> <p>Fixed volume sizes needed are 10 ul, 20 ul, 50ul, 100ul, 200 ul, 1000ul</p> <p>Micro pipettes required in following sizes:1-10 ul, 2-20 ul, 10-100 ul, 10-200 ul,100-1000 ul, 0.1-2.5ul; 2.0-20ul; 20-200ul; 200-1000ul; 1000-5000ul.</p> <p>Adjustable for variable volume.</p> <p>Offer high accuracy and precision variations in volume acceptable as permissible in calibration requirements.</p>	4 sets of each volume, both for fixed and variable pipette

		<p>With tip ejector mechanism.</p> <p>Made of corrosion proof material.</p> <p>Should be autoclavable.</p> <p>Shall meet IEC-60601-1-2 :200(Or Equivalent BIS) General Requirements of Safety for Electromagnetic compatibility.</p> <p>Should be capable of being stored and operable at ambient temperature.</p> <p>Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001applicable to manufacturers and service providers that perform their own design activities.</p> <p>User/Technical/Maintenance manuals to be supplied in English.</p> <p>Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.</p> <p>Certificate of Calibration conforming to ISO 8655 and certificate of inspection from the factory</p> <p>List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.</p> <p>List of important spare parts and accessories with their part number and cost</p>	
9.	Digital Analytical Balance	<p>Electronic Balance (High End Analytical) for precision weighing of Lab samples.</p> <p>Microprocessor based single pan Analytical Balance with High accuracy & precision is required.</p> <p>Reading of the weight by digital display.</p> <p>Electronic top loading balances with</p>	1

	<p>transparent case</p> <p>The balance should have functions of piece counting, percent weighing, formulation, dynamic weighing with automatic and manual start and' provision for data interface</p> <p>Weigh accurately up to 4th decimal place</p> <p>Auto self-calibration facility</p> <p>Auto zero Setting</p> <p>One touch calibration</p> <p>Weighing capacity upto 200 gms.</p> <p>Repeatability and resolution: 0.1 mg</p> <p>Linearity : + 0.2mg</p> <p>Stabilization time < 5 second</p> <p>Adjustment weight (Int. wt.) 200g</p> <p>Adjustment weight (Ex. Wt.) : 500 mg,1 gm,10gm, 50gm,100 gm,200gm</p> <p>Balance should have the following features:-</p> <p>LCD 7 Segment Backlit display.</p> <p>Balance to be calibrated with external wt. within a frequently use partial range.</p> <p>Vibration adapter for damps influence due to vibration & minor shocks.</p> <p>Chemical resistance housing</p> <p>Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.</p> <p>The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%</p> <p>Power input to be 220-240VAC, 50Hz fitted</p>	
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		<p>with Indian plug</p> <p>UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.</p> <p>Resettable over-current breaker shall be fitted for protection</p> <p>Should comply with ISO/GLP with auto validation with ink jet printer</p> <p>Should be FDA , CE,UL or BIS approved product</p> <p>Manufacturer/Supplier should have ISO certification for quality standards.</p> <p>User/Technical/Maintenance manuals to be supplied in English.</p> <p>Certificate of calibration and inspection.</p> <p>List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.</p> <p>List of important spare parts and accessories with their part number and costing.</p> <p>Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.</p>	
10.	Balance micro	<p>Electronic Micro Balance with antivibration table and Calibration weight1. Capacity: 3.1 g2. Readability: 1 µg3. Repeatability: 3 µg4. Linearity: 4/6µg5. Stabilization Time: 5 Sec6. Weighing Pan Size: 30mm Diameter/ 40 x 40 mm 7. Tare Range: 3.1 g8. Typical Stabilization Time: ≤5s9. Typical measurement time:≤8s10. TFT/LCD display (Removable) easy to access with keys with alphanumeric keypad11. Adjustment procedure and applications directly on display 12. Monolithic weight cell OR Equivalent 13. USB Inter face with the weighing module, RS -232 Interface & 25 pininterface14. Mass Unit Conversion, ISO</p>	1

		<p>Cal/Profact or Equivalent- Automatic, Net total formulation, weighing in percent, counting15. The Advanced Pharma Compliance with general standards, such as GLP, USP etc.16. Audit Trail function logs important changes to the equipment.17. Errors to be quickly traced.18. Alert messages and reminder functions with user- definable action hierarchy for leveling, minimum sample weight, calibration andadjustment.19. Should have a facility to prevent build up of static electricity.20. Calibration weight: 1mg to 500mg OIML E2 Class standard weight set for microbalance and analytical balance 21. Antivibration table: 4 feet x 2 feet x 85 cm with drawer attached, rested on rubber mat with adjustable legs. 22. Should have a USB Printer</p>	
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Section-III

PriceBid

Sr no.	Name of item	Qty	Unit cost (Rs.)	GST/ Sales Tax /service tax		Unit cost included GST/ Sales Tax /service tax (Rs.)	Total cost included GST/ Sales Tax /service tax (Rs.)
				%	Amount (Rs.)		
				a	b		
1							
2							

Note:

1. Total cost of all items shall be included of all packing & forwarding, freight charges & insurance from ware house to consignee at **Medical College Pali**, local tax, entry tax, duties, **one year warranty**, VAT/ taxes /GST and other levies payable by the supplier under the contract.
2. Bidder shall fill all cost i.e. a.b,c... failing which it will presumed that the same is inclusive in the total price and nothing will be paid on this account extra.
3. Bidder shall mention present rate of GST, failing which it will be presumed that the same is inclusive in the total price and nothing will be paid on this account extra.
4. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail

**FinalAcceptance Certificate Handing
over]**
**(To be given by consignee's authorized
representative)**

The following store (s) has/have been installed & commissioned in good working satisfactory condition:

1. Contract No. & date :
2. Supplier's Name :
3. Consignee's Name & Address :
4. Name of the item supplied :
5. Date of Handed over to consignee :
6. Name consignee /HSCC Representative :
7. Signature of consignee/HSCC Representative :
8. Seal of the Consignee :