

INVITATION FOR QUOTATION ON LINE

HSCC/PUR/PALI/ Physiology/ Quot/01

Dated: 24/10/2017

To

All Bidders

Subject: Invitation **on line** for Quotations for supply of Low Equipment for **Physiology** 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	Dept. of Physiology	List attached	3 rd Nov. 2017 at 14:00 Hrs	3 rd Nov. 2017 at 14:30 Hrs

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
Medical Education, Jaipur, Rajasthan

Section -I

LIST OF ITEMS & QUANTITIES

Sr. No	Name of Equipment	Qty	Warranty from date of acceptance
1	3 Channels Student Digital Physiograph with accessories	2	1years
2	Demonstration Eye Piece	3	
3	Double Demonstration Eye Piece	3	
4	Incubator	1	
5	Wastergen's Pipettes for E.S.R. on Stand (with space pipettes)	20	
6	Heamoglobinometer, Sahil or Hellige (with speces)	50	
7	Haemocytometer	50	
8	Stethoscope, Demonstration, with multipleear Pieces	2	
9	Venous Pressure apparatus	1	
10	Spirometer	15	
11	Gas Analysis Apparatus Haldane's Student Type	1	
12	Van Slyko's Appar. Manometric	1	
13	Douglas Bag, Complete	1	
14	Basal Metabolism Apparatus	1	
15	Erogograph Moss's	8	
16	Compas	20	
17	Phakoscope	1	
18	Algometer	15	
19	Knee hammer	30	
20	Colour Perception Lantern edridge green	1	
21	Maddox Rod	1	
22	Newtons Colour Wheel	1	
23	Tunning Forks to test hearing 32-10,000 cps (sets)	15	
24	Dynamometrer	1	
25	Otornolaryango Scope	1	
26	Sterilizer Electric	1	
27	Instrument Trolley	1	
28	Stop watch	15	
29	Calorimeter, Photoelectric	1	
30	Olfactometer	1	
31	Ophthalmoscope	1	
32	Schematic eye	1	
33	Thermoanesthesiometer Digital	20	
34	ECG Single Channel	2	
35	Perimeter Priestly Smith	10	

Section II

Technical Specification of Equipments

1. 3 channels student digital physiograph with accessories.

1. The software should have step by step instructions, protocol and experimental design for performing various experiments in physiology teaching applications. It should have sample data for animal experiments for demonstrating to the students.
2. The System should include hardware software and other related accessories for Pulse transducer, respiration , Blood pressure, Grip force, ECG,HRV, GSR, Temp etc.
3. Individually selectable input sensitivities, analog output for stimulation or pulse generation, high speed USB, built-in isolated stimulator, built-in dual bio-amplifier and a powerful internal processor along with low- and high-pass filters.
4. ECG (Lead I, II, III, aVL, aVF, aVR etc for real time cardiac axis & vector analysis.
5. ADC Configuration: Resolution: 16 bit, each channel has its own ADC.
6. Maximum sampling rates: 400 KHz (aggregate)
7. Filter – Low Pass: 1, 2, 5, 10, 20, 50, 100, 200, 500, 1000, 2000 Hz and anti-alias, high-pass filters, Band Pass Notch, Mains & Digital.
8. Bio-Amplifier: - 3 Channels, Range:- $\pm 20\text{mV}$ to $100\mu\text{V}$.
9. It should have various automatic analysis modules for ECG, HRV, Blood Pressure. Shall be supplied with all transducers.
10. Online & offline analysis with various export options like MATLAB, Excel, QuickTime, Text etc.
11. Isolated Stimulator Output.
12. Pulse duration: 50–200 μs (software-selectable) & Output current: 0–20 mA.
13. Pulse rate: Software-selectable, to a maximum of 20 Hz and 200 μs for safety.
14. Shall be provided with computer with following configuration.: i 5 /7th generation Windows 10 ,Professional 64 bit, Processor: Core2Duo of higher, RAM: 4GB or higher, 250 GB hard disk or HDD, CD/DVD Optical Drive, Screen Resolution 1024x768 or higher.
15. Power input to be 220-240VAC, 50Hz.
16. ISO and CE certification shall be provided.
17. Shall have service back up in Rajasthan.

2. Multi channel digital Polygraph system

1. The system should be able to record and analyse.
2. Pulse, respiration, blood pressure, Heart Rate Variability [HRV]
3. ECG recording with multi-leads, phono cardiogram to record heart sounds and correlate the sound with the electrical events of the cardiac cycle. Dynamometer to study handgrip strength profile with balance board for of static posturography studies.
4. Stimulating electrodes, ECG & EEG electrodes, cream and paste.

Specifications:

5. Number of channel : 16 channels Data Acquisition system
6. Range: - +2 mV to +10 V and Sampling rate of 400 KHz (aggregate speed),
7. Upgradable to 32 or more channels
8. ADC resolution = 12 bits on all gain ranges and variable sampling speed on each channels.
9. **Transducers:-** Pulse, Blood Pressure, Respiration, Pulse, Biopotentials- ECG, EEG, EMG, EOG, Hand dynamometer and other accessories for the measurement of the above parameters.
10. The software should have step by step instructions, protocol and experimental design for performing various experiments in physiology teaching applications. Also should have sample data for animal experiments for demonstrating to the students.
11. It should have various automatic analysis modules for ECG, HRV, Blood Pressure, Metabolic studies, Cardiac output, Peak analysis, spike histogram etc.
12. Online & offline analysis with various export options like, MATLAB, Excel, QuickTime, Text etc.
13. The software should provide an easy file sharing option to a distant user with-out involving any cost with a 5 year of free updates and upgrade.
14. Shall be provided with computer with following configuration: i 5 /7th generation Windows 10 ,Professional 64 bit, Processor: Core2Duo of higher, RAM: 4GB or higher, 250 GB hard disk or HDD, CD/DVD Optical Drive, Screen Resolution 1024x768 or higher
15. **Mandatory Items:-** Non Invasive beat to beat Blood Pressure Monitor, compatible with data acquisition system & Software for analysis to be quoted separately.
16. **Documentations:-** CE, ISO and other safety certificates must be provided.
17. Proper Demonstrations to be carried out before finalizing.
18. Shall have service back up in Rajasthan.
19. Bidder shall enclose user list with contact number and address.
20. The system shall have integrated facility for posturalography of cardiac autonomic analysis system.

2. Demonstration Eye piece

1. 23 mm dia. eye piece, making it possible for two persons to see the same object at the same time.
2. Should be fitted with a pointer.
3. Instrument should be supplied with top class quality optical components.
4. This instrument should have a Beam Splitting Prism to optical Glass Pointer.
5. Should cover the entire field and should enable clear vision to the observer and sub observer.
6. It should have 360° rotation.
7. It should be held in the desired viewing position by a knurled headed pinch screw.

3. Double Demonstration eye piece

1. 23 mm dia. eye piece, making it possible for two persons to see the same object at the same time.
2. Should be fitted with a pointer.
3. Instrument should be supplied with top class quality optical components.
4. This instrument should have a Beam Splitting Prism to optical Glass Pointer.
5. Should cover the entire field and should enable clear vision to the observer and sub observer.
6. It should have 360° rotation.

7. It should be held in the desired viewing position by a knurled headed pinch screw.

4. Incubator

1. Shall have temperature range from room temp. to 90°C. Shall be double walled and double door with glass window
2. Inner chamber shall be of stainless steel sheet.
3. Shall have heating elements at three sides.
4. Shall have power indicator bulb.
5. Shall have ON/OFF switch & power cord
6. The approximate size shall be 450x450x450mm (18"x18"x18")
7. ISO certified.

5. Wastergen's Pipettes for E.S.R. on Stand (with space pipettes).

1. Standard calibrated glass tubing
2. Shall be ISO certified.

6. Haemoglobinometer, Sahli or Hellige (with spaces)

1. Consists of comparator, hemoglobin tube, hemoglobin pipette, stirrer, Pasteur pipette etc.,
2. Technical specifications: Measuring range – 40 – 360g/litre.
3. As a photometer the device measures optical density of a solution with precision not worse than 1%.
4. The total error of definition of concentration of a hemoglobin (In view of an error of a method, and also errors of dosing of a blood and solutions), obtained at comparative medical tests, does not exceed 2% The volume of liquid for photometry must be not less than 1ml.
5. Optical length of a cuvette or cylindric test tube – 10+/-0.1mm. dimensions: 178x127x43mm.
6. Shall be ISO certified.

7. Haemocytometer.

1. Should be able to determine the number of cells per unit volume of blood under microscope.
2. Should have improved neubauer chamber with thick cover slips, RBC & WBC pipettes.
3. Should be of high precision with minimum error (Tolerance ± 0.001 %) Platinum coated Documentation
4. Manufacturer should have ISO certification for quality standards.

8. Stethoscope, Demonstration with multiple ear pieces.

1. To listen the lung and heart sounds.
2. Should be Dual Headed Should have high quality sound transmission.
3. Length should be 27" to 29" Should be light weight Chest piece-adult, & paediatric Preferable colour -black
4. Should have tight and soft sealing ear tips System Configuration
5. Accessories, spares and consumables:
 - a. Diaphragms,
 - b. Eartips,
 - c. Binaurals rims

6. Documentation: Manufacturer should have ISO certification for quality standards.

9. Venous Pressure apparatus.

10. Spirometer.

1. Simple spirometer/ students spirometer or vitalograph:
2. 6 liter capacities for vital capacity, or used as a gasometer with chain compensate counter balance to float through pulley,
3. Calibrated to denote volume,
4. Inlet and outlet tubes.
5. Stainless steel chamber, complete with corrugated rubber tube and mouth piece.
6. Shall be ISO certified.

11. Gas Analysis Apparatus Haldane's Students Type.

12. Van Slyko's Appar. Manometric,

13. Douglas Bag, complete.

14. Basal Metabolism Apparatus.

15. Erogograph Mosse's.

16. Compas

1. stainless steel, with well –f formed points
2. Adjusting screw giving movement of app: 0.1mm per half turn.

17. Phakoscope.

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.

18. Algometer.

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.

19. Knee Hammer.

20. Colour perception Lantern edridge green

1. Circular metal device on a base containing five moveable discs and a light bulb inside.
2. Black metal cylinder with attached revolving lens disc featuring five coloured lenses and one aperture
3. Sliding bar behind the lens disc contained a further three apertures
4. Internal bulb holder with 15 watt pigmy bulb with the whole unit plugged to a lamp bracket

21. Maddox rod

1. Should be able to measure heterophoria by placing it in front of one eye of a subject viewing a spot of light binocularly.
2. For screen test; Maddox Rod Lens; Red / White / Green Rim & Should have a copper handle.
3. Length should be 70mm.

22. Newtons colour wheel

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.

23. Tuning forks to test hearing 32-10,000 cps (sets)

1. Should be made up of stainless steel with frequency marked
2. 5 each of 128 Hz, 256 Hz, 512 Hz.

24. Dynamometer.

1. Especially suitable for use in rehabilitation centers/physiology labs;
2. Real time mode: immediately shows the patients current strength Peak/Max
3. Mode: shows the maximum strength of a patient's grip.
4. 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 ,non slip rubber grips.
5. Stable case for safe, easy transport and for storage of the additional spring sets as standard, WDXH: 350X265X85mm/.

25. Otorinolaryngo scope

1. Battery operated instrument with good illumination to visualize the ear tympanic membrane.

26. Sterilizer Electric

2. Volume : 5 L Temp range : approx. 30 to 200° C .
3. Automatic thermostat cut off Thermostatic control desirable Stainless steel construction Perforated stainless steel plate which can be lifted.

27. Instrument trolley

1. SS; frame work of SS tubes mounted on four 50mm dia swiveling castors.
2. There are two stainless steel shelves with three side railings on top shelf only in these instrument trolleys.
3. Pre treated and epoxy powder coated. Overall approximate size : 680mm (L)X450mm (W)X820mm (H).

28. Stop watch

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.

29. Calorimeter, photoelectric

1. Photoelectric calorimeter with 8 filter digital
2. Digital calorimeter – highly stable and accurate ideal clinical instruments for blood and chemical analysis.
3. Shall have battery option. Range: 400nm to 700nm filters 5 high standard filters,
4. Accuracy: +/-0.02O.D.,
5. Out Put Optional, Density 0 to 1.99,
6. Display 2.5 digit LED display,
7. Detector selenium photo cell,
8. Light source 6.2V 0.3 Amp.
9. Tungsten filament Lamp,

10. Min. volume 1ml.,
11. Power 230V+/- 10% 50Hz Ac.,
12. Size (LXBXH) 225X230X150mm,
13. Weight: 4Kg.(Approx),
14. Accessories Test Tubes 5 Nos, Light Source Bulb, Dust Cover, Instruction Manual.

30. Olfactometer

1. Discrete dilution ratios: 2, 4, 7, 15, 30, 60 Dilution/Threshold ratio
2. Response time: Up to 3 Sec.
3. Accuracy: $\pm 10\%$ of D/T
4. Repeatability: $\pm 2\%$
5. Inhalation rate: 16 – 20 liters/minute
6. Operating Range: 32 – 104°F
7. Power requirement: 9 volt alkaline battery
8. Nasal mask with odour filled cartridge.

31. Ophthalmoscope

1. Recessed, multi coated viewing window, avoid stray light, high performance with corrective lenses for panoramic view of the fundus for an undilated pupil with anti-glare and anti-reflection system and should fit the orbit (with soft orbital support) comfortably in any position.
2. Focusing wheel should be dynamic and able to adjust focus in a continuous, smooth action for more precise control and the optimum view with an extensive optimum focusing range in diopters.
3. It should have neutral filters to avoid unwanted reflex. Provision for opacity settings should be incorporated to make the students aware of the physiological optics in media opacities.
4. Variable aperture dial should have micro, small, and large spot sizes, a slit aperture, fixation star suitable for large or small pupils, and red free filter, and cobalt blue filter with add – on corneal magnifying lens.
5. Red-free filter for improved contrast. It should be ergonomically designed to provide maximum comfort, balance, and access to controls.
6. Dust proof housing with zero maintenance should be essential for the equipment.

32. Schematic eye.

33. Thermoanesthesiometer.

1. Shall be manual
2. Company shall be ISO certified.

34. ECG single channel

Description of Function

1.1 ECG Machine is primary equipment to record ECG Signal in various configurations

2 Operational Requirements

2.1 The ECG Machine should be able to acquire all 12 Leads ECG signals

2.2 Should print all the 12 leads in a single channel mode

3 Technical Specifications

3.1 Should acquire 12 lead ECG for both adult and pediatric patients .

3.2 Should have Artifact, AC, and low and high pass frequency filters.

3.3 Should have an integrated-high resolution, thermal array printer for print of ECGs

3.4 Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge

4 System Configuration Accessories, spares and consumables

4.1 System as specified-

4.2 Patient cable -02

4.3 Chest Electrodes Adult-(set of six) -2 sets.

4.4 Chest Electrodes Pediatric-(set of six) -2 sets

4.5 Limb Electrodes (set of 4)- 02 sets for Adult and 02 sets for Pediatrics.

4.6 Thermal print paper: 10 Rolls/Z Fold

5 STANDARDS The product should be CE or FDA or BIS Certified.

35. Perimeter Priestly Smith

1. Should have a calibrated arc, revolving chart holder.

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

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

4. Adjustable chin rest.

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

6. Should be supplied with 20 packets each containing consist of 100 charts

7. Accessories – Objects should be of minimum 2 sizes, round and square shaped and of 5 different colors.

8. ISO certified.

Section -III

Price Bid

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.

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.

3. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail

**Final Acceptance 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 :