

HIMACHAL PRADESH  
I&PH DEPARTMENT.

**NOTICE INVITING QUOTATIONS**

Sealed quotations on item rate basis are invited by the Assistant Engineer IPH Sub Division, Theog on behalf of Governor of Himachal Pradesh for the under mentioned items from the manufacturers/authorized dealers.

Sr. No.	Name of Work	Quantity	Time	Earnest Money
1.	Supply of laboratory instruments as per detail given below:- 1. UV- Visible Spectrophotometer 2. pH Meter (Digital) 3. TDS/Conductivity Meter (Digital) 4. Digital Turbidity Meter(Nephelometer) 5. Autoclave. 6. Vacuum pump with Filtration Assembly 7. Double distillation unit.	1 No. 1 No. 1 No. 1 No. 1 No. 1 No. 1 No.	1 Month	5000/-

The quotations shall be opened by the undersigned on 14.11.2018 at 11:30AM in the presence of the bidders or their authorized representatives. The detailed terms and conditions can be obtained from the website [www.hpiph.org](http://www.hpiph.org).

**TERMS AND CONDITIONS:-**

1. The firm shall supply the manufacturer's manuals for the operation and maintenance of the Spectrophotometer and other lab instruments.
2. Each bidder shall deposit Earnest Money in the shape of NSC/saving account on any of the Post offices in Himachal Pradesh/Time Deposit Receipt of any nationalized bank, demand draft duly pledged in the name of Assistant Engineer, I&PH Sub Division, Theog OR certificate of exemption of Earnest Money Deposit.
3. The firm shall arrange operation and maintenance training to the operating staff for the Spectrophotometer and other instruments without extra cost for a period of 3 days i.e. during the testing period.
4. Prices of all the items shall be FOR site of work/ destination at Sub Division Laboratory Theog, Distt. Shimla, H.P. respectively inclusive of all leads and lifts and shall be inclusive of all charges of transportation, insurance, packing, taxes and duties such as GST etc.
5. All the equipment/material shall conform to the relevant BIS specifications wherever applicable, and in its absence to any accepted National/International standards.
6. The general specifications of work shall conform to Punjab P.W.D/HPPWD specifications as per direction of the Engineer-in-charge.
7. All the equipment shall be guaranteed against any manufacturing defect including metallurgy/electronic and its performance for a period of 12 (twelve) months from the date of operationalization. Any defect if noticed within the stipulated period shall be

rectified by the firm at its own cost within 3 days of bringing the same to its notice. The guarantee clause shall be substantiated by a guarantee bond of a Nationalized Bank for an amount equal to 10% of total tendered amount pledged in the name of the Executive Engineer in charge, at the time of signing contract agreement. The guarantee bond shall be released after the expiry of the guarantee period.

8. The test certificate from the prime manufacturing unit will be supplied before release of payment.
9. GST and other legitimate taxes will be deducted as per applicable rates as they are statutory.
10. The copy of PAN card and GST No. should be attached with schedule of quantity at the time of opening of tender, otherwise non availability of PAN card and GST No. the tender form cannot be issued.
11. Payment shall be 90% against physical delivery of the material of laboratory in good condition and balance after testing of the equipment. Statutory deduction as per departmental procedure shall be deducted from the bill. The rates shall be inclusive of all taxes and freight packing F.O.R destination. Nothing extra shall be paid on this account. The packing slip indicating the detail of material in packing duly signed by the third party inspecting officer as well as department officer.
12. The Security shall release after successful running of the equipment upto six months.

**Assistant Engineer,  
I&PH Sub Division,  
Theog**

**Detailed specifications for procurement of laboratory equipments for Sub Divisional Laboratory Theog.**

Sr.No.	Description of Item
1	<p><b>UV-Visible Spectrophotometer</b></p> <p>Brief description: Computer controlled Spectrophotometer which can be used with, rectangular cells of up to at least 10mm thickness, and sipper flow through cell, having following specification</p> <p>Optical system: Double beam grating based detector</p> <p>Wave range : 190 to 1100 nm</p> <p>Wave length readability: Better than or equal to 2.0 nm</p> <p>Accuracy: Better than or equal to +- 0.5 nm</p> <p>Wavelength Readability: Better than equal to +- 0.5nm</p> <p>Photometric read out: Digital LCD selectable for transmittance T, Absorbance A and concentration C</p> <p>Spectral band width: Provision should include at least 2.0 nm silt band width</p> <p>Scan speed: should be wide range and should provide a maximum limit of at least up to 800nm/minute (variable)</p> <p>Photometric range: Should cover -0.500A to +3.0A range</p> <p>Photometric Accuracy: Better than 0.5% T or 0.005A</p> <p>Noise: Better than 0.0005A at 500nm</p> <p>Drift: 0.0004A/ hour after warm up</p> <p>Cell Holder: For holding up to 50 nm path length rectangular cuvette</p> <p>Power supply : 230+- 10V/ HZ AC</p> <p>Accessories: Two pairs of square glass cuvettes (10mm path length) operation and maintenance manual (English), Dust cover, Power cable with plug to suit Indian socket, Printer(Internal), Rectangular Cuvettes ( 50mm &amp; 25mm path length) other accessories needed for calibration</p> <p>Consumables: For two years of operation, printer ribbons etc.</p> <p>Additional Features: The system should provide facility for the storage of spectra/ methods, multi wavelength mode, baseline correction, peak area and statistical calculations. Software should be provided for water &amp; environmental analysis ( fixed programmer along with user free programmer)</p>

2	<p><b>Turbidity Meter( Nephelometer)</b>  Range: 0 to 1000 NTU  Accuracy: +- 3% of full scale in 0-1000 NTU  Test Tube System: 30mm clear glass test tube  Light Source: 6V, 300mA, tungsten lamp  Display: 3.5 digit bright red LED display  Detector: Photocell / Photodiode  Calibration: with formzine solution  Power supply: 230V AC +-10%, 50 HZ with built in voltage stabilizer  Dimensions: 275L X 175W X 115H mm  Standard Accessories  Test Tube (Matched): 1 set  Instruction Manual: 1 No.  Dust Cover: 1 No.  Main Lead: 1 No.</p>
3	<p><b>pH Meter (Digital)</b>  pH Range- 0 to 14.00pH  Mill volt range- 0 to +- 199+mV  Slope correction- 85% to 115%  Resolution- 0.01pH, 1mV in mV mode  Repeatability- +-0.01pH +- digit for pH, +-mV +-1 digit for mV  Standardization: +- 1 pH  Temp compensation- 0 to 100'C display manual  Display: 3.5 digit red LED seven segment with automatic polarity &amp; decimal point 10 Ua  Power supply: 220V AC +-25%, 47 to 53 HZ  Weight: 1.25 Kg  Dust Cover: 1 No.</p>
4	<p><b>TDS/ Conductivity Meter (Digital)</b>  Parameter: TDS/Conductivity  Display: 3 ½ Digit bright red LED Display  Range Selection: Automatic  Accuracy: +- 0.5 % FS +- 1 digit  Cell Constant: Adjustable in digital display  Auto cell constant measurement: Available using any standard solution  Measuring cell: Platinum DIP type  Power: 12V DC using adapter 110 to 250V AC,50 HZ  Dimensions: 270 x202 x80mm (L x B x H approx.)  Weight: 0.8 Kg approx.  Accessories: TDS/Conductivity cell, operation manual, cell stand, Dust Cover, 12V adapter.</p>

5	<p><b>Vacuum Pump With Filtration Assembly</b></p> <p>Product: Vacuum pump  Automation Grade: Automatic  Condition : New  Material : Cast Iron  Voltage: 220 V  Filtration assembly: 1 No.  100 % borosilicate glass with fritted glass filter base. Base design has integral vacuum connection located above filtrate drip to prevent contamination of vacuum line with droplets</p> <ul style="list-style-type: none"> <li>Anodized Aluminum spring clamp</li> </ul> <p>Filter Size: 47mm  Funnel capacity : 300ml  Flask capacity: 500ml/ 1 lit.  Instruction manual: 1 No.</p>
6	<p><b>Autoclave</b></p> <p>Product name: Laboratory Autoclave  Capacity: 350x 550 mm: 50ltr.  Material: Stainless steel  Type: Radial type lid locking system with pedal lifting arrangement  Basket: Stainless Steel sheet  Heaters specially designed water heaters (ISI marked) of suitable wattage to ensure optimum performance and long life  Working temperature &amp; pressure: 121*C &amp; 15 PSI  Pressure controller piezostat a semi automatic electro mechanical device also know as pressure control switch. Pressure range is 5 to 20 PSI though the autoclave is hydraulically tested at 40 PSI  Valves: precision shut off valves for water drainage &amp; Steam release.  Indicators: Water level indicator &amp; Pressure Gauges. Digital temperature &amp; pressure indicators.  Safety: Spring loaded safety valve &amp; one extra safety valve to discharge the steam, if the pressure exceeds the allowed limit. The safety valves will discharge the low water protection device to give protection to the heaters against the low water scenario under prolonged usages.  Gasket: joint less Neoprin rubber gasket / Silicon Gasket  Electric supply: 220V +- 10, 1 phase.  Instruction manual: 1 No.</p>

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**Double Distillation Unit**

1. Capacity to produce 1.5 L/hr
2. Made of high quality heat resistant glass cylinders and tubes and also resistant to minor damages
3. Boiler portion made of high purity and good quality borosilicate material along with water level indicator
4. Borosilicate condenser
5. Heater is of high purity electronic grade transparent quartz type. Should avoid contact of embedded boiler with water
6. Provision for easy cleaning and general maintenance of boiler
7. The resultant distillate obtained should be of high quality ultra pure water that is suitable for laboratory use
8. Distillation stand should be of high quality rust free metal with embedded clamps for perfect holding.
9. Apparatus compatible with single phase electrical supply within 250 volts range.
10. Energy efficient
11. Provided with safety cutoff device.
12. Parts should be replaceable
13. ISO accredited
14. User manual should be provided along with the equipment

Assistant Engineer,  
IPH.Sub.Division,  
Theog.