

**PTU**

ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ

# ਆਈ. ਕੇ. ਗੁਜਰਾਲ. ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

## I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR

### Department of Civil Engineering

Ref. No. IKGPTU/CE/1309Dated 15/2/19

To

Deputy Registrar ITS  
I.K. Gujral Punjab Technical University

**Subject: Quotation for the Environment Lab Equipments for Department of Civil Engineering, Main Campus IKGPTU.**

You are requested to kindly send us the sealed quotation for the below mentioned Environment Lab Equipments. The specification of the Lab Equipment is as below: -

| Sr. No | Name of equipment         | Specifications                                                                                                                                                                                                                                                                                                                                                      | Quantity |
|--------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1      | COD Digester              | COD Digester<br>Programmable Temperature Range:35- 160°C<br>Operating Temperature:10 to 45 °C<br>Programmable required<br>Heating Rate: 20 to 150°C<br>Temperature Stability: ± 1°C<br>Fixed Temperature: up to 160°C<br>Power Requirements: VAC<br>The instrument should be equipped with stored digestion programs for COD & TOC<br>Number of vial wells: 5 to 10 | 01       |
| 2      | BOD Incubator             | Temperature range up to 70 deg C<br>Internal: w323*d310mm height 315mm<br>Internal transparent door<br>External: w425*d420*h610mm<br>Digital temperature Pid controller<br>2 X adjustable shelves                                                                                                                                                                   | 01       |
| 3      | Dissolved Oxygen Analyser | Accuracy Dissolved Oxygen: ± 2% reading or 0.1 µg/L, whichever is greater<br>Temperature: ± 0.1 °C<br>Precision Dissolved Oxygen: ± 2% reading or 2 digits<br>Temperature: ± 0.1 °C<br>Sample Conditions Flow: 50 mL/min to 200 mL/min<br>Temperature: 2 °C to 45 °C (35.0 °F to 113 °F) w/<br>sPraensdsaurrde: D <04 00 kPa (60 psi, 4 bar)<br>Drain: Atmospheric  | 01       |

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## I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR

### Department of Civil Engineering

Ref. No. JKGPTU/CE/1309Dated 10/2/19

|   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |    |
|---|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 4 | pH meter           | Measurement Range: 0.01 µg/L to 9,999 µg/L<br>Two-channel pH/conductivity meter for routine use in the laboratory and on the road – version for connection of intelligent pH electrodes. pH (or mV) and conductivity (or TDS, salinity) and temperatures can be measured in parallel and output to a large colour display with the 914<br>pH/Conduct meter. Important information such as charge state, user, IDs can be clearly seen at a glance. A PIN-protected expert mode protects against unintentional changes of different parameters.<br>The meter is furnished with an accumulator for mobile use that can be charged<br>Practically anywhere. It naturally also satisfies the requirements of IP67 | 02 |
| 5 | Conductivity meter | Two-channel pH/conductivity meter for routine use in the laboratory and on the road – version for connection of intelligent pH electrodes. pH (or mV) and conductivity (or TDS, salinity) and temperatures can be measured in parallel and output to a large color display with the 914 pH/Conduct meter. Important information such as charge state, user, IDs can be clearly seen at a glance. A PIN-protected expert mode protects against unintentional changes of different parameters.<br>The meter is furnished with an accumulator for mobile use that can be charged practically anywhere. It naturally also satisfies the requirements of IP67.                                                     | 02 |
| 6 | Nephelometer       | Measurement method : Light Scatter<br>Range: 0.1 – 10,000 µg/m <sup>3</sup><br>Sample Options: 1 minute, Continuous, or 15 min STEL<br>Resolution: 1 µg/m <sup>3</sup><br>Data logging: 4000 records of STEL, Max, Min and average reading and k-factor<br>Temperature Ranges<br>Operating (0°C to 50 °C)                                                                                                                                                                                                                                                                                                                                                                                                     | 02 |
| 7 | Hot air oven       | Double wall chambers inner made of SS and outer of Mild Steel sheet duly powder coated with 2½" thick glass wool insulation. Temperature is controlled by an imported thermostat with an accuracy of +/-1°C and working temperature of above 50°C to 250°C and without thermometer.                                                                                                                                                                                                                                                                                                                                                                                                                           | 01 |
| 8 | MUFFLE FURNACE     | Rectangular electric furnace with light weight and fast heating system, the body made of thick mild steel sheet duly powder coated with iron angles. The maximum temperature of 1000°C and working                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 01 |

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**ਆਈ. ਕੇ. ਗੁਜਰਾਲ. ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ**  
**I. K. GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR**  
**Department of Civil Engineering**

Ref. No. IKGPTU/CE/1309Dated 12/2/19

|    |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |
|----|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|    |                                 | temperature of 900°C, controlled by Energy Regulator, fitted with Pyrometer and thermocouple with ceramic wool insulation.<br>Chamber<br>Size Watts<br>2.5"X5"X10" 2.5K.W<br>Including Micro Processor based Digital Temperature Controller.                                                                                                                                                                                       |    |
| 9  | Floculator : (Jar Testing App.) | It is used in water treatment plants to estimate the dosing of alum and such other coagulation. All these stirrers are connected to the gear chain assembly by collect check arrangement, regular speed 25 to 300 RPM<br>Size : 1/8HP, 0-300RPM, 6nos Multi Spindle                                                                                                                                                                | 01 |
| 10 | Digital Spectrophotometer       | Wavelength range 190 to 1100nm<br>Spectral bandwidth 1nm (190 to 1100nm) Wavelength display 0.1-nm increments Wavelength accuracy $\pm 0.1$ nm at 656.1nm D2 $\pm 0.3$ nm (190 to 1100nm)<br>Photometric system Double Beam<br>Baseline stability less than 0.0003 Abs/H at 700nm (one hour after light source turned ON)<br>Dimensions (WxDxH) 450(W) x 490(D) x 270(H)<br>Memory USB memory (option) Saved as text and UVPC file | 01 |
| 11 | Double distillation unit        | Quartz double distillation units with 5.0 ltr/ hrs capacity.<br>Vertical type Conductivity: $<1 \times 10^{-6}$ S/cm<br>Temp. 750degree Complete unit with stand & electrical connection & water level sensor.<br>Power requirement: 230-250 Volts .                                                                                                                                                                               | 01 |

**Terms and Conditions:**

1. The vendor should have the experience of at least 3 years.
2. The vendor should have supplied equipment at IIT's / NIT's and the copy of supply order to be send along with quotation.
3. The quotations to be sent in the sealed envelope as per the given specifications.
4. The quotation to be reached at the IKGPTU till 28.02.2019.
5. FOR at Department of Civil Engineering, I.K. Gujral Punjab Technical University (Main Campus), Jalandhar-Kapurthala Highway, Kapurthala-144603, Punjab, India.

**Dr. Rajiv Chauhan**  
**HOD, Civil Engg.**

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