KERALA UNIVERSITY OF FISHERIES & OCEAN STUDIES
കേരള ഫിഷറീസ്-സമുദ്രപഠന സർവ്വകലാശാല
PANANGAD P.O., KOCHI 682 506, KERALA, INDIA
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No.GA7/186/2020	Panangad, Dated: . 01.2020

QUOTATION NOTICE

Sealed quotations are invited for the supply of equipments for the School of Ocean Engineering and Under Water Technology, KUFOS, Panangad as per the document/Specification attached:

1. **Pressure Measurement Trainer**
2. **Level Measurement Trainer**
3. **Capacitance Trainer**

The rates quoted should be for supply of equipments at the School of Ocean Engineering and Under Water Technology, KUFOS, Panangad.

The envelope containing the quotation should bear the superscription "**Quotation for supply of equipments for the School of Ocean Engineering and Under Water Technology, KUFOS, Panangad [GA7/186/2020]"** and should be sent to the Registrar, Kerala University of Fisheries and Ocean Studies, Panangad., Kochi – 682 506, Ernakulam District. Intending quotationers may submit their quotations on their own papers with detailed specification.

The rate quoted should be firm and inclusive of all taxes. Period of firmness during which the rates would be firm is 60 days from the date of work orders.

Late quotations will not be accepted. The Quotations will be opened in the presence of the quotationers or their authorized representative who may be present at the venue.

Last date and time for receipt of quotation	15.2.2020,3pm
Date and time of opening of quotation	15.2.2020,3.30pm

All the terms and conditions applicable to University/Government quotations are applicable to this quotation also. Right to accept the quotation in full or in part or to reject without assigning any reason is reserved with the Registrar, KUFOS, Panangad, Kochi.

REGISTRAR

To : Firms
Copy to : Director, SOEUT

Specifications:-

Sl.No.	Item Description	Qty
1	**Pressure Measurement Trainer** The setup comprises of air pump (Foot pump) to build pressure. A bourdon tube dial gauge will be fixed to the pressure chamber parallel to the pressure transducer. Pressure transducer is of diaphragm type on which strain gauges will be bonded. Pressure source:Foot operated air pressure pump to build Pressure max. 7Kg/cm2 Dial gauge:Bourdontube pressure guage of 10 Kg/cm2 Pressure Transducer:Diaphragm type strain gauge based sensor Range 10Kg/cm2 Strain gauges:350 ohms resistance, gauge factor 2-2.1. Disply:31/2 Digit 7 segment LED	1 No
2	**Level Measurement Trainer** To demonstrate the method and application of Load Cell to measure water level in a tank. The system comprises of a acrylic tank of capacity 10 liters fitted with a scale to measure the Level of water. The tank is provided with a drain valve to release the water to the source tank. The beam type load cell of capacity 1 Kg is mounted on the acrylic cover on top of the measuring tank. A metallic tube is suspended from the load cell till the bottom of the measuring tank. The Load Cell is connected to digital load indictor. The instrument is calibrated to read the level in terms of centimeter. In the front panel of the instrument zero pot is provided by which the display can be made zero level. **Specification:** Sensor: Load cell with road suspended. Measuring tank: Acrylic tank of 60 cms length. Measuring range: 50 cms. Water pump: FHP vertical pump. Source tank: Metallic tank with EPI coating. Display: 3.5 digit seven segment LED display. Excitation: 10V DC. Tare:Front panel Zero adjustment through Potentiometer. Calibration:Front panel cal adjustment through Potentiometer. Power supply:230 V +/-10% 50Hz. Cabinet:Power coated metal cabinet with inbuilt source tank of dimension 500 x 500x 450 (LxBxH)	1 No
3	**Capacitance Trainer** To demonstrate the use of capacitance as a transducer. Two plates (A1), one fixed to the base and the other moving over the fixed plate parallel with a small gap between the two. The over lapping of the plate will act as a capacitor with air as dielectric media. The parallel plate capacitor is used as a displacement sensor, which measure the displacement. The other Capacitance transducer is used for measurement of angular displacement. Gang condenser is used to measure the angular displacement. Here the thin aluminum plates are fixed to one pole between these plate thin aluminum plates of same dimension overlap as the other pole on which the plates are mounted. The front panel of the instrument is designed in such a way that the schematic circuit diagram of the capacitance indicator is shown. All test points are brought outside to enable the student to understand the working of the instrument properly. The system is self-explanatory and all necessary accessories will be supplied along with the kit. Sensor: Parallel plate capacitor/Angular Plate capacitance. Sensor Material: Aluminum plates Dielectric Medium:Air Displacement:0 to 50mm/0-900 Accuracy:5 to 10% Display:3.5 digit LED display to read +/- 1999 counts For +/-20mv FSD Power:230V+/-10%	

	50 HZ	