#### **Department of Physics**



Dated: 02.11.2017

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No. 01/IIEST/Phy/Web.Not./Lab.Equip/2017-18

### **Notice Inviting Quotation**

Sealed quotations are invited for supply of the following items/equipments (research grade equipment only) or to carry out works listed below as per mentioned specifications. The relevant bidding document can be downloaded from the website. The document can be also obtained from the Department of Physics (contact: Dr. Manish Pal Chowdhury) between 12.00 a.m. and 5.00 p.m. on all working days. The quotation should include all kinds of taxes/duties and delivery charges of the items and to be sent to the Office of the Head, Department of Physics, IIEST, Shibpur, Howrah-711103. Last date of submission of sealed quotation is 7 working days from the date of publication in the Website of the Institute and tenders will be opened on the next working day at 12 noon.

Dr. Amit Kundu H.O.D, Physics IIEST,Shibpur, Howrah – 711103.

# **List of Items:**

### 1. Digital Storage Oscilloscope:

Sr.No	Parameters	Specifications
а	Bandwidth	70MHz (Upgradeable up-to 100 MHz)
b	Sampling rate	2G Sa/sec
С	Memory depth	1 Mpts points per channel
d	Waveform Update rate	50,000 waveforms/sec
е	Vertical sensitivity	500uV to 10V/div
f	Horizontal Time base	5ns to 50 s/div
g	Triggering	Edge,Pulse,Video,Rise/Fall time,Setup & Hold,Pattern/state
h	Automatic measurements	14 different voltage & 14 different Time measurements & 10 different MATH measurement alongwith snapshot feature.
i	Segmented memory	Standard upto 50 segments
j	Signal Acquisition	Normal, Average, Peak detect, High Resolution (12 bits vertical resolution is obtained)
k	Display modes	Main,Zoom,XY,Roll mode
I	Digital Voltmeter	Standard 3 digit
m	Frequency counter	Standard 5 digit dual channel counter
n	Math functions	Add,Subtract,Multiply,Divide, LPF
0	Mask Limit Testing	Pass/Fail mask limit test is standard
р	Display	7 " WVGA LCD Display
q	PC connectivity	USB 2.0
r	Passive probes(2 nos)	1:1 & 10:1 switchable probes supplied(200MHz BW)
S	Free Educator's Learning Kit	Tutorial material

## 2. Programmable(PID) External Substrate Heater:

Sr.No	Parameters	Specifications
а	Туре	PID programmable external substrate heater
b	Continuous max. operating temperature	250°C
С	Heater size	100 mm and made by NICHROTAL heating element
d	Power supply details	PID programmable temperature controller with minimum 4 programs (with at least 64 segments) and communication port for remote operations with phase angle control thyristor power drive(Output 4-20mA).
е	Power Supply	AC 230V / 50 HZ, upto 0.5kW
f	Safety	Heater must be closed operation and over temperature safety for precision work
g	Design	External Heater and control panel place vertically table top type with powder coated/Stainless steel finished.