Quotation Notice

OPTO/P-16A/2012

Quotations are invited for the following items in the Department of Optoelectronics, University of Kerala, Kariavattom, Thiruvananthapuram.

**Impedance analyzer**

Impedance/gain-phase Analyzer with in-built Generator which can work both in voltage and current modes for thin film/ceramics/bio samples with ZPlot software package with Lap top computer with latest configuration.

**Specification**

- Frequency resolution: 1 in 65 million (0.015ppm)
- 0.1%, 0.1° accuracy
- Resolution to 0.001dB, 0.01° - with detailed capturing facility
- Measures impedances >100MΩ
- 2-, 3- and 4-terminal measurement
- Provision to measure ac and dc conductivity measurement
- Frequency range 10μHz to 100MHz
- Polarization voltage up to ±40.95V
- Ability to differentiate effects due to electrodes, diffusion, mass/charge transfer by analysis over different frequency ranges
- Equivalent circuit/modeling techniques for detailed analysis of results
- Generator should have the following features:
  - ac Amplitude ≤10MHz in voltage mode (VM)-0 to 3V rms and in current mode (CM)-0 to 60mA rms
  - Resolution 5mV in VM and 100μA in CM
  - dc bias range ±40.95V in VM and ±100mA in CM
  - Maximum dc resolution 10mV in VM and 200μA in CM
  - Output impedance 50Ω±1% in VM and >200kΩ at <1kHz in CM

The firms who wish to supply the items are requested to submit the quotation in sealed cover to the undersigned on or before 28.02.2013.

Kariavattom,


[Signature]

Professor & Head
Quotation Notice

OPTO/P-16C/2012

Quotations are invited for the following items in the Department of Optoelectronics, University of Kerala, Kariavattom, Thiruvananthapuram.

DIGITAL STORAGE OSCILLOSCOPE

- 200MHz / 100MHz / 60MHz Bandwidth on all Four Channels
- 1GS/S Real Time and 25GS/s Equivalent Time Sampling
- 25K Points Memory Length
- Large 5.6" TFT Colour LCD Display for Comfortable view of Signals
- U USB Printer and Flash Drive Support
- RS-232 Interface
- Battery Operation (Optional)
- Auto Set for Comfortable View of Unknown Signal
- Save Setup for 20 Measurement Setup and24 Sets of Waveform
- Sweep Time 1ns to 10sec/divSB Host / Device Interface

The firms who wish to supply the items are requested to submit the quotation in sealed cover to the undersigned on or before 28.02.2013.

Kariavattom,

Quotation Notice

OPTO/P-16B/2012

Quotations are invited for the following items in the Department of Optoelectronics, University of Kerala, Kariavattom, Thiruvananthapuram.

Electric Cell Impedance Analyzer (ECIA)

Specifications:

- Electric Cell Impedance Analyzer with Z Theta station controller
- Elevated Field Module for electroporation studies
- Software for data gathering and analysis,
- Including model calculations
- With laptop.

The firms who wish to supply the items are requested to submit the quotation in sealed cover to the undersigned on or before 28.02.2013.

Kariavattom,