

MODEL ENGINEERING COLLEGE
THRIKKAKA, COCHIN-21
PH:2577379,2575370

Ref no.A2/687/21/MEC
Tender No.3/2020-21/MEC

dtd 22.3.2021

TENDER shedule

Sealed tenders in the prescribed format are invited for the purchase of “Equipments for Electronics Department of the institution ” under Plan fund 2020-21.

- 1.Last date and time of sale of tender form: 25/3/2021 10 am
- 2.Last Date & Time of Reciept of Tender: 30/4/2021 10 am
- 3.Date & Time of Opening of Tender: 30/4/2021 11 am

Cost of Tender Form:

Original : 400 + 18% GST + 1% VAT

Duplicate :200 + 18% GST+ 1% VAT

Tender form and details can be had from Model Engineering College,Thrikkakara. Mode of remittance by Cash payment at College Office.Those who apply for tender form by post should remit additional amount of Rs.50/- as postal charges.Agreement in stamp paper worth Rs.200/- to accompany tender.EMD 1% of quoted amount. Further details available at www.mec.ac.in/ Tenders.



PRINCIPAL

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Sl. No	Item	Specification	Qty
1	Function Generator	<p>*Frequency Range0.1Hz ~ 5MHz with in 0.1Hz Resolution *Stability<= ±20 ppm *Amplitude 1mVpp to 10Vpp (into 50Ω load Impedance),Resolution 0.1 mV *Waveforms: DDS based Sine, Square, Ramp, Noise and arbitrary wave form, Sample Rate >=20 Msa/s, Waveform Length>=4k point, Amplitude Resolution >= 10 bit.</p> <p>*SQUAREWAVE:Rise/Fall Time<= 25ns at maximum output (into 50Ωload),Variable Duty Cycle1%~99% at 100kHz</p> <p>*RAMP: Linearity<=0.1% of peak output, Symmetry 0%~100%(0.1% Resolution)</p> <p>*AM/FM/FSK Modulation, Sweep, and Frequency Counter functions. AM MODULATION DEPTH 0% to 120.0% FM MODULATION DEVIATION DC to Max Frequency SWEEP Type- Linear or Logarithmic FREQUENCY COUNTER Range upto 150 Mhz. * Provision for Waveform Parameter Setting *DISPLAY – 3.5” LCD *USB Device Interface for Waveform Editing</p>	2
2	Digital Storage Oscilloscope	<p>Bandwidth : DC to 50MHz or better No.of channels : 2+Ext trig or better Memory depth : 20K points Sampling rate : 1GSa/s on all channels or better Vertical Resolution : 8 bits or better Input sensitivity range : from 1mV to 5V/div or better Input impedance : 1 MΩ in parallel with 14 pF or better Measurements : >30 Automated Measurements, cursor measurements and FFT Analysis Dedicated keys : Quick Pan and zooming, math, FFT, Reference. FFT : Should have simultaneous display of both time and FFT waveforms in same window DC gain accuracy : ±3% Maximum Input Voltage : 300 VRMS with peaks ≤ ±450 V Acquisition modes : Peak detect(up to 4ns glitch), Sample, Average(256), Single sequence, roll, High resolution Couplings : AC,DC, LF-HFreject, Noise reject Trigger View : Required Time Base Range : 2ns to 100s/div Time Base Accuracy : 20 ppm Feature required:Integrated course ware support in Oscilloscope with memeory, should provide free Software to prepare and load exercises in Oscilloscope Display : 7 in. (180 mm) Widescreen TFT-LCD Color Display Resolution : 480 horizontal × 800 (WVGA) Active TFT LCD Display system: vectors, variable and infinite Persistence, Format YT and XY No of Horizontal Divn : Greater than 14 nos to view more cycles on screen Connectivity : USB Host and Device ports SOFTWARE : Should provide Desktop software for data logging measurements, quick CSV and image saving and full control of DSO</p>	3

		<p>Regulatory : ECCouncil Directive 2014/30/ EU UL61010-1, UL61010-2-030, CAN/CSA-C22.2 No. 61010.1, CAN/CSA-C22.2 No. 61010-2:030; EN61010-1, EN61010-2-030</p> <p>Safety : Complies with the Low Voltage Directive 2014/35/EU for Product Safety Power Source Voltage : 100 to 240V (+/- 10%), 50/60 Hz. Power Consumption : less than 35 Watts. Warranty : 5 Years standard</p> <p><u>Specification of probe</u> 10X Attenuation, 100 MHz Bandwidth, 1.3 m Length, should have certified Regulatory - UL61010-031; 2007, CAN/CSA C22.2 No. 61010-031-07, IEC61010-031; IEC 61010-031/A1:2008 Rise time <3.5 ns (typical), Compensation range - 8 pF to 18 pF Input resistance 10 MΩ, Maximum input voltage 300 VRMS CAT II</p> <p><u>Accessories to be supplied</u> <u>along with the instrument</u> : One 10X Passive Probe per channel, Installation and Safety Manual, Documentation CD, Applicable Desktop Software & PC Courseware software, Calibration Certificates traceable to NIST/NIM, Power Cord, and a five-year warranty statement.</p>	
3	Digital Multimeter	<ul style="list-style-type: none"> • True RMS measurement • Basic Accuracy 0.25% of measured value • LCD Display 3 ¾ or above • AC and DC Current measurement – AC current Resolution-1 uA, or less DC current Resolution .1uA or less • DC volatage Resolution- 10uV or less • Ac voltage Resolution- 1 mV or less • DC Voltage – 1000V – Over voltage up to 1200V continuous • Capacitance Measurement up to 30 Micro Farad • Frequency Measurement up to 100kHz • Resistance - 30 M Ohms • Resistance Resolution-10 milli ohm • Temperature measurement • Diode and Continuity Testing. • Auto/ Manual range selection. • Digital & Analog Indication • Automatic Terminal Blocking system for protection of DMM • Voltage protection up to 500 Volts continuous in Resistance, Diode, Continuity and Temperature measuring range. • Continuous storage and updation of MIN/MAX values. • Indication of Negative and Positive values on Analog Scale • Lead resistance compensation for resistance and temperature • Fast Acting Fuses for over current and short circuit protection. • Blown fuse indication • Power Economizing Circuit. Auto Off for battery saving • “Continuous ON” feature in long duration measurement. • Free Test Certificate traceable to National Standards 	1