FORM OF SHORT TENDER NOTICE

D2/2152/22/GECTCR (I) Government Engineering College Thrissur

Sealed tenders are invited for **purchase of equipment** for Electronics And Communication Engineering Department

Approximate cost Rs 2,35,000/-

Specification separately attached

The envelopes containing the tender should bear the superscription "Tender. No. **D2/01/22-23 due on 28/04/2022** and should be addressed to the Principal, Government. Engineering. College, Thrissur, Kerala..

Last date for receipt of tenders will be **28/04/2022 2.00 pm** Late tenders will not be accepted. The tenders will be opened at Government Engineering College Thrissur on **29/04/2022 3.00 PM** in the presence of such of the tenderers or their authorized representatives who may be present at that time. Intending tenderers may, on application to the Principal, Govt. Engineering. College, Thrissur, obtain the requisite tender forms on which tenders should be submitted. Application for the tender form should be accompanied by a cash remittance of **Rs.590/- (500+18%GST) + postal charge** which is the price fixed for a form/set of forms and which is not refundable under any circumstances. The tender forms are not transferable. Sale of tender forms will be closed at **12 pm on 28/04/2022** Cheques, postage stamps, etc., will not be accepted towards the cost of forms, nor will the forms be sent per V.P.P.

Tenders should be accompanied by EMD of 1%, subject to a minimum of Rs. 1500/- , of the amount by DD drawn in favour of the Principal, Government.Engineering College, Thrissur with an agreement in Kerala Stamp Paper worth Rs.220/-. Details can be had from the Govt.Engineering College Office working hours.

Place:Thrissur

Dr Ranjini Bhattathiripad T

PRINCIPAL
GOVT.ENGG. COLLEGE
THRISSUR.

05.04.2022
Principal

Copy to
1. Notice Board
2. HOD,ECE

Item Description

Sl. No.	Item	Specifications	Quantity
1	KlystronBasedMicrowaveBench	Detailed Specifications Attached	1
2	Gunn Diode BasedMicrowaveBench	Detailed Specifications Attached	1

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Klystron Based Microwave Bench

Specifications:

Klystron Mount
Freq. Range: 8.2 to 12.4 GHz; Waveguide: RG-52/U; Flange type : UG- 39/U;

Klystron Tube X-band
Freq. range: 8.2 – 12.4 GHz Model: 2k25 Or equivalent

Isolator (8.2 to 12.4 GHz)
Freq. Range: 8.2 to 12.4 GHz; Waveguide type: WR90; Flange type : UG/U 39;
Max VSWR: 1.15;
Min Isolation: 25 dB; Min insertion loss: 0.4 dB

Frequency Meter DRF Freq. Range: 8.2-12.4 GHz;

Variable Attenuator
Freq. Range: 8.2 to 12.4 GHz; Waveguide type: WR90; Flange type : UG/U 39;

Slotted Section (8.2-12.4 GHz)
Freq. Range: 8.2-12.4 GHz; Residual VSWR: 1.01; Slope: ±0.2dB; Waveguide: RG-52AJ; Flange: UG-39/U

Tunable Probe
Freq. Range: 8.2 to 12.4 GHz; Detector: IN-23; Output Connector: BNC(F);

Detector Mount (8.2-12.4 GHz)
Freq. Range: 8.2-12.4 GHz; Crystal: shotkee diode/23 Output Connector: BNC/SMA (F);
Waveguide: RG-52/U; Flange: UG-39/U

Sal aider Matched Termination (8.2-12.4 GHz) Freq. Range: 8.2-12.4 GHz; Max VSWR: 1.02;
Avg Power: 2W; Type: Fixed; Waveguide: RG-52/U; Flange: UG-39/U

Movable Short
Freq. Range: 8.2 to 12.4 GHz; Waveguide: RG-52/U; Flange type : UG-39/U; Reflection Coefficient: 0.98;

Rotary such (8.2-12.4 GHz)
Freq. Range: 8.2-12.4 GHz; Max VSWR: 1.02;
Avg Power: 2W; Type: Fixed; Waveguide: RG-52/U; Flange: UG-39/U

Slide Screw Tuner
Freq. Range: 8.2 to 12.4 GHz; Waveguide: RG-52/U; Flange type: UG- 39/U;
Maximum VSWR: 20:1.02;

Waveguide Stands X-band

VSWR Meter
Freq. Range: 8.2 to 12.4 GHz;
Sensitivity: 0.2µV at a 200 ohms input for full scale deflection Noise Level: At least 5 dB below full scale at rated sensitivity and
maximum band width input terminated in 100 ohms and 500 ohms for crystal low and high respectively.
Calibration: Square law, meter indicates SWR, dB Range: 70 dB, input attenuator provides 60 dB in 10 dB steps, accuracy + 0.2 dB per 10 dB steps Maximum commutative error + 0.5 dB
Scale selector: Normal Expand and – 5dB
Meter Scale: SWR1-4,SWR 3-10 , expand SWR 1.1.3, dB 0-10, expand dB0.2
Gain Control: Adjust the reference level, variable range 0-10 dB approx. Input: "Bolo" bias provided for 4.3 mA low current bolo meters
Recorder output: Socket provided for recording having 1 V for full scale deflection, internal

resistance of 1000 ohms or less
A/C Output: BNC connector for amplified output Input connector: BNC (F)
Frequency: 1000Hz + 10%
Power: 230 volts A.C + 50 Hz, mains supply

Solid State Klystron Power Supply Beam Supply
Voltage Range: 195-400 V continuously variable Current: 45mA Max. Regulation: Better than 0.5% for + variation in Mains Supply Voltage Ripple: Less than 5 mV rms Repeller Supply
Voltage Range: -10 V to -300 DC continuously variable with respect to Klystron cathode
Regulation: 0-25% for + variation in Mains supply voltage Heater Supply
6.3V DC (regulated) Modulation
Square Wave: Freq. 500 Hz-1.7 KHz Max Amp. +110 Volt peak to peak Temperature 30 dirge & 750hz to 1kh Square wave
Amplitude and frequency continuously variable
Saw tooth: Freq. 50Hz-196 Hz Amplitude -60 V max peak to peak Amplitude and frequency continuously variable Operating Voltage 230V + 10%, 50 Hz, A.C

Cooling Fan with Stand X-band

Co-axial Cable (BNC) X-band

Brass Screw nuts One PKT

Gun Diode Based Microwave Bench

Specifications:

Gunn oscillators
Freq. Range: 8.2 to 12.4 GHz; Waveguide: RG-52/U; Flange type : UG- 39/U;
Micro micromitar 0 to 25mm

Pin modulator X-band
Freq. range: 8.2 – 12.4 GHz50 mw

Isolator
Freq. Range: 8.2 to 12.4
GHz; Waveguide type: WR90; Flange type : UG/U 39; Max VSWR: 1.15;
Min Isolation: 25 dB; Min insertion loss: 0.4 dB

Frequency Meter DRF Freq. Range: 8.2-12.4 GHz;

Variable Attenuator
Freq. Range: 8.2 to 12.4 GHz; Waveguide type: WR90; Flange type: UG/U 39
Flange type : UG-39/U; Reflection Coefficient: 0.98;

Slotted Section (8.2-12.4 GHz)
Freq. Range: 8.2-12.4 GHz; Residual VSWR: 1.01; Slope: ±0.2dB; Waveguide: RG-52AJ; Flange: UG-39/U

Tunable Probe
Freq. Range: 8.2 to 12.4 GHz; Detector: IN-23; Output Connector: BNC(F);

Detector Mount (8.2-12.4 GHz)
Freq. Range: 8.2-12.4 GHz; Crystal: shotkee diode/23 Output Connector: BNC/SMA (F);
Waveguide: RG-52/U; Flange: UG-39/U

Sal aider Matched Termination (8.2-12.4 GHz) Freq. Range: 8.2-12.4 GHz; Max VSWR: 1.02;
Avg Power: 2W; Type: Fixed; Waveguide: RG-52/U; Flange: UG-39/U

Movable Short
Freq. Range: 8.2 to 12.4 GHz; Waveguide: RG-52/U;

Cooling Fan with Stand X-band

Co-axial Cable (BNC) X-band

Brass Screw nuts One PKT

Rotary such (8.2-12.4 GHz)
Freq. Range: 8.2-12.4 GHz; Max VSWR: 1.02;
Avg Power: 2W; Type: Fixed; Waveguide: RG-52/U; Flange: UG-39/U

Slide Screw Tuner
Freq. Range: 8.2 to 12.4 GHz; Waveguide: RG-52/U; Flange type: UG- 39/U;
Maximum VSWR: 20:1.02;

Gunn power supply
Gunn Bias Voltage: 1 to 12 V Current: 0 to 1.0 A
Regulation: 0.2% for ± 10 mains variation Modulation Selector Switch: CW & INT.
Modulation Frequency: 850 to 1150 Hz squarewave Output Connector: BNC (F) for Gunn Bias
Digital Panel Meter: Read Gunn bias voltage & current drawn
Mains: 230 V, 50 Hz 35 Watts
Accessories: Mains Cable, Coax. Cable BNC to BNC, Gunn power supply

VSWR meter
Freq. Range: 8.2 to 12.4 GHz;
Sensitivity: 0.2µV at a 200 ohms input for full scale deflection Noise Level: At least 5 dB below full scale at rated sensitivity and
maximum band width input terminated in 100 ohms and 500 ohms for crystal low and high respectively.
Calibration: Square law, meter indicates SWR, dB Range: 70 dB, input attenuator provides 60 dB in 10 dB steps, accuracy + 0.2 dB per 10 dB steps Maximum commutative error + 0.5 dB
Scale selector: Normal Expand and – 5dB
Meter Scale: SWR1-4,SWR 3-10 , expand SWR 1.1.3, dB 0-10, expand dB0.2
Gain Control: Adjust the reference level, variable range 0-10 dB approx. Input: "Bolo" bias provided for 4.3 mA low current bolo meters
Recorder output: Socket provided for recording having 1 V for full scale deflection, internal resistance of 1000 ohms or less
A/C Output: BNC connector for amplified output Input connector: BNC (F)
Frequency: 1000Hz + 10%
Power: 230 volts A.C + 50 Hz, mains supply

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