

File: D1/6387/19/GECSKP

QUOTATION NOTICE

Quotation Number	20/24-25
Due date and time for receipt of quotations	25/11/2024, 02.00 PM
Date and time for opening of quotations	26/11/2024, 03.00 PM
Date up to which the rates are to remain firm for acceptance	31/03/2025
Designation and address of officer to whom the quotation is to be addressed	Principal, Govt.Engineering College, Sreekrishnapuram
Superscription: Quotation for the Supply of Equipments to Physics Lab	

Sealed quotations are invited for the supply of the materials specified in the schedule attached below/overleaf. The rates quoted should be for delivery of the articles at the place mentioned below the schedule. The necessary superscription, due date for the receipt of quotations, the date up to which the rates will have to remain firm for acceptance and the name and address of officer to whom the quotation is to be sent are noted above. Any quotation received after the time fixed on the due date is liable to be rejected. The maximum period required for delivery of the articles should also be mentioned. Quotations not stipulating period of firmness and with price variation clause and/or 'subject to prior sale condition are liable to be rejected.

The acceptance of the quotations will be subject to the following conditions:

1. Acceptance of the quotation constitutes a concluded contract. Nevertheless, the successful tenderer must within a fortnight/a month after the acceptance of his quotation furnish 5 per cent of the amount of the contract as security deposit and execute an agreement at his own cost for the satisfactory fulfillment of the contract, if so required.
2. Withdrawal from the quotation after it is accepted or failure to supply within a specified time or according to specifications will entail cancellation of the order and purchases being made at the offerers expenses from elsewhere, any loss incurred thereby being payable by the defaulting party. In such an event the Government reserves also the right to remove the defaulter's name from the list of Government suppliers permanently or for a specified number of years.
3. Samples, duly listed, should be forwarded if called for under separate cover and the unapproved samples got back as early as possible by the offerers at their own expenses and the Government will in no case be liable for any expenses on account of the value of the samples or their transport charges, etc. In case, the samples are sent by railway;the railway receipt should be sent separately, and not along with the quotation since the quotation will be opened only on the appointed day and demurrage will have to be paid if the railway parcels are not cleared in time. Quotations for the supply of materials are liable to be rejected unless samples, if called for of the materials tendered for are forwarded. The approved samples may or may not be returned at the discretion of the undersigned. Samples sent by V.P. Post or "freight to pay" will not be accepted.
4. No representation for enhancement of price once accepted will be considered during the currency of the

contract.

5. Any attempt on the part of tenderers or their agents to influence the Officers concerned in their favour by personal canvassing will disqualify the tenderers.

6. If any license or permit is required, tenderers must specify in their quotation and also state the authority to whom application is to be made.

7. The quotation may be for the entire or part supplies. But the tenderers should be prepared to carry out such portion of the supplies included in their quotation as may be allotted to them.

8. (a) In cases where a successful tenderer, after having made partial supplies fails to fulfill the contracts in full, all or any of the materials not supplied may, at the discretion of the Purchasing Officer be purchased by means of another tender/quotation or by negotiation or from the next higher tenderer who had offered to supply already and the loss, if any, caused to the Government shall thereby together with such sums as may be fixed by the Government towards damages be recovered from the defaulting tenderer.

(b) Even in cases where no alternate purchases are arranged for the materials not supplied, the proportionate portion of the security deposit based on the cost of the materials not supplied at the rate shown in the tender of the defaulter shall be forfeited and balance alone shall be refunded.

(c) Any sum of money due and payable to the contractor (including Security Deposit returnable to him) under this contract may be appropriated by the Purchasing Officer or Government or any other person authorized by Government and set-off against any claim of the Purchasing Officer or Government for the payment of a sum of money arising out of or under any other contract made by the contractor with the Purchasing Officer or Government or any other person authorized by Government.

9. The prices quoted should be inclusive of all taxes, duties, cesses, etc., which are or may become payable by the contractor under existing or future laws or rules of the country of origin/supply or delivery during the course of execution of the contract.

10. (a) Ordinarily payments will be made only after the supplies are actually verified and taken to stock but in exceptional cases, payments against satisfactory shipping documents including certificates of Insurance will be made up to 90 per cent of the value of the materials at the discretion of Government. Bank charges incurred in connection with payment against documents through bank will be to the account of the contractor. The firms will produce stamped pre-receipted invoices in all cases where payments (advance/final) for release of railway receipts/shipping documents are made through Banks. In exceptional cases where the stamped receipts of the firms are not received for the payments (in advance) the unstamped receipt of the Bank (i.e. counterfoils of pay-in-slips issued by the Bank) alone may be accepted as a valid proof for the payment made.

(b) The tenderers shall quote also the percentage of rebate (discount) offered by them in case the payment is made promptly within fifteen days/within one month of taking delivery of stores.

11. Any sum of money due and payable to the successful tenderer or contractor from Government shall be adjusted against any sum of money due to Government from him under any other contracts.

12. Special conditions, if any, printed on the quotation sheets of the tenderer or attached with the tender will not be applicable to the contract unless they are expressly accepted in writing by the purchaser..

Details of Item to be purchased

Sl No.	Item with specification	Qty
1	<p>p-n junction Diode V-I characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 10mA/100μA DC. ▪ Voltmeter 3V/30V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-3/30V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Silicon Diode (1N4007) ▪ Germanium Diode (OA79) ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed ▪ circuits and symbols. <ul style="list-style-type: none"> ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. 	1 set
2	<p>Zener diode V-I characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 15mA/150μA DC. ▪ Voltmeter 15V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-15V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p>	1 set

	<ul style="list-style-type: none"> ▪ Zener Diode 5.1V ▪ Zener Diode 6.2V ▪ Zener Diode 8.2V ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed ▪ Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
3	<p>Tunnel diode V-I characteristics trainer kit:</p> <p><u>Specifications</u></p> <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply +5V DC, 150mA ▪ Operated on Mains power 230V, 50Hz $\pm 10\%$ <p>Digital Meters:</p> <ul style="list-style-type: none"> ▪ V: Voltmeter ▪ I: Ammeter <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Tunnel Diode 1N3717 ▪ Potentiometer :Current control <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed circuits and symbols. ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	1 set
4	<p>Half wave and full wave rectifier trainer kit</p>	2 set

	<p><u>Specifications:</u> Analog Meters:</p> <ul style="list-style-type: none"> ▪ Voltmeter 30V AC. ▪ Ammeter 250mA DC. ▪ Voltmeter 30V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ AC Isolated Power Supply 12-0-12 VAC,150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Diode 1N4007 ▪ Capacitors 1000uF and 100uF Controlled By Switches. ▪ Inductor 200mH ▪ Load Resistor through Rotary Switch <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
<p>5</p>	<p>LED characteristics trainer kit: <u>Specifications:</u> Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 20mA DC. ▪ Voltmeter 5V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-5V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Four Different Colors LED ▪ Voltage Control through Potentiometer. <p>Additional features:</p>	<p>1set</p>

	<ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
6	<p>Solar cell V-I and intensity Characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Volt meter 10V DC. ▪ Ammeter 200mA DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ Operated on Mains power 230V, 50Hz $\pm 10\%$ ▪ DC Power Supply 0-+3V, 100mA <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Solar Cell Unit (Mounted on Stand) ▪ Light Source (100W Bulb) Lamp ▪ Lamp Intensity Control inbuilt in Trainer ▪ Load Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. <p>ACCESSORIES:</p> <ul style="list-style-type: none"> ▪ Trainer Unit ▪ Solar Cell Unit ▪ Light Source 	1 set

	<ul style="list-style-type: none"> ▪ Wooden Optical Bench ▪ Wooden Optical Bench 	
7	<p>Photo diode characteristics Trainer kit</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Volt meter 6V DC. ▪ Ammeter 10Ma/100μA DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-10V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz \pm10% ▪ Components are mounted on the panels are: ▪ Photo Diode Unit ▪ Light Source (100W Bulb) ▪ Voltage Control through Potentiometer. ▪ Wooden Optical Bench With Scale Engraved <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated PrintedCircuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	1 set
8	<p>Energy band gap of pn junction diode trainer kit:</p> <p><u>Specifications:</u></p> <p>Digital Meters:</p> <ul style="list-style-type: none"> ▪ Digital Milli Voltmeter 20V ▪ Digital Milli Ammeter 200μA <p>Power Supply:</p> <ul style="list-style-type: none"> ▪ DC Power Supply 0-6V, 150mA <p>The experiment consists of the following:</p> <ul style="list-style-type: none"> ▪ Band Gap Arrangement ▪ Oven (up to 110$^{\circ}$C) 	1 set

- Sample : Ge Diode mounted
- Thermometer (0-110°C)
- Band Gap Setup
- Output Brought Out Through 4mm Banana Plugs.
- Four Probe Setup :
 - Voltmeter Display : 3² digit, 7 segment LED,
 - Voltage Range : (0-20.00V DC),
 - Current Display: 3^{1/2} digit, 7segment LED,
 - Current Range : 0-200μA DC,
 - Oven Supply : 45V Ac (Switch position LOW), 60V AC (Switch position HIGH),
 - Oven Connector : 4 pin, DIN type
 - Input Voltage : 220V, 50Hz AC
 - Fuse : 1A, 250V
- Oven:
 - Heating Element : 35ohm, 75watt,
 - Oven Supply : 45V/60V AC
 - Oven Connector : 5 pin, DIN type,
 - Ambient Temperature: 110°C
 - Fuse: 2A
- Thermometer:
 - Type : Mercury
 - Temperature Range: 0-110°C
 - Least Count : 1°C
 - Length : 300mm approx.
- Band Gap Arrangement:
 - Diode : Ge, 1N60

Additional features:

- Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.
- Instruction manual.
- Connections are brought out through 4mm BT15 Terminals.
- The trainer is housed in Metal cabinet.

PACKING LIST:

- Band Gap Experiment Setup 1Nos.

	<ul style="list-style-type: none"> ◦ Oven 1Nos. ◦ Band Gap Arrangement 1Nos. ◦ Thermometer 1Nos. 	
9	<p>Dielectric constant trainer kit</p> <p><u>Specifications:</u></p> <ul style="list-style-type: none"> ▪ R.F. Generator (Range: 9-10MHz approx.). ▪ Micro ammeter (Range : 0-50μA) ▪ Potentiometer for Sensitivity selection. ▪ Fixed Capacitor (Metal). ▪ Variable Gang Capacitor. ▪ Sockets for test capacitor and variable capacitor brought out at front panel. ▪ One Solid Bakelite plate to be insert in rap of test capacitor <p>PACKING LIST:</p> <ul style="list-style-type: none"> ◦ Dielectric Constant Apparatus. ◦ Variable Gang Condenser. ◦ Test Capacitor (Solid Gang Condenser) ◦ Three type of Bakelite sheets for Dielectricmaterial. ◦ Two sets of Leads 	1set

Place: Sreekrishnapuram

Date: 07/11/2024

PRINCIPAL

Signed by
K R Remesh Babu
Date: 07-11-2024 12:39:51

ഡി11971/24/ജി.ഇ.സി.എസ്.കെ.പി

ലഘു ക്വട്ടേഷൻ പരസ്യം

ക്വട്ടേഷൻ നമ്പർ : 20/24-25

സർക്കാർ എഞ്ചിനീയറിംഗ് കോളേജ്, ശ്രീകൃഷ്ണപുരം

ഈ സ്ഥാപനത്തിലെ ഫിസിക്സ് ലാബിലേക്ക് ആവശ്യമായ ഉപകരണങ്ങൾ വിതരണം ചെയ്യാൻ താൽപര്യമുള്ള സ്ഥാപനങ്ങളിൽ നിന്നും മുദ്രവച്ച ക്വട്ടേഷനുകൾ ക്ഷണിച്ചുകൊള്ളുന്നു.

പുരിപ്പിച്ച ക്വട്ടേഷനുകൾ സമർപ്പിക്കുന്ന കവറിനു മുകളിൽ "ഫിസിക്സ് ലാബിലേക്ക് ആവശ്യമായ ഉപകരണങ്ങളുടെ വിതരണം" എന്നു പ്രത്യേകം രേഖപ്പെടുത്തി, **പ്രിൻസിപ്പാൾ, സർക്കാർ എഞ്ചിനീയറിംഗ് കോളേജ്, മണ്ണമ്പറ്റ (പി.ഒ) ശ്രീകൃഷ്ണപുരം, പാലക്കാട് - 678 633**, എന്ന മേൽവിലാസത്തിൽ അയക്കേണ്ടതാണ്.

പുരിപ്പിച്ച ക്വട്ടേഷനുകൾ സമർപ്പിക്കേണ്ട അവസാന തീയതി **25/11/2024, 02.00 പി.എം.** അവസാന തീയതിയും സമയവും കഴിഞ്ഞു ലഭിക്കുന്ന ക്വട്ടേഷനുകൾ യാതൊരു കാരണവശാലും സ്വീകരിക്കുന്നതല്ല. ക്വട്ടേഷനുകൾ തുറക്കുന്ന സമയം **26/11/2024, 03.00 പി.എം.** ക്വട്ടേഷനുകൾ തുറക്കുന്ന സമയത്ത് ക്വട്ടേഷൻ സമർപ്പിച്ച ആൾക്കോ അവർ നിയോഗിക്കുന്ന വ്യക്തികൾക്കോ ഹാജരാകാവുന്നതാണ്. സാധനങ്ങളുടെ വിതരണത്തിന് ആവശ്യമായ സമയം പരാമർശിക്കേണ്ടതാണ്

ആവശ്യകതകളുടെ വിശദാംശങ്ങളും അവയുടെ വിതരണത്തെക്കുറിച്ചുള്ള വ്യവസ്ഥകളും www.gecskp.ac.in എന്ന വെബ്ബ് സൈറ്റ് സന്ദർശിക്കുക.

Details of Item to be purchased

Sl No.	Item with specification	Qty
1	<p>p-n junction Diode V-I characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 10mA/100µA DC. ▪ Voltmeter 3V/30V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-3/30V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Silicon Diode (1N4007) ▪ Germanium Diode (OA79) ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed ▪ circuits and symbols. 	1 set

	<ul style="list-style-type: none"> ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. 	
2	<p>Zener diode V-I characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 15mA/150μA DC. ▪ Voltmeter 15V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-15V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz \pm10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Zener Diode 5.1V ▪ Zener Diode 6.2V ▪ Zener Diode 8.2V ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed ▪ Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	1 set
3	<p>Tunnel diode V-I characteristics trainer kit:</p> <p><u>Specifications</u></p> <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply +5V DC, 150mA ▪ Operated on Mains power 230V, 50Hz \pm10% <p>Digital Meters:</p> <ul style="list-style-type: none"> ▪ V: Voltmeter ▪ I: Ammeter <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Tunnel Diode 1N3717 ▪ Potentiometer :Current control <p>Additional features:</p>	1 set

	<ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed circuits and symbols. ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
4	<p>Half wave and full wave rectifier trainer kit</p> <p><u>Specifications:</u> Analog Meters:</p> <ul style="list-style-type: none"> ▪ Voltmeter 30V AC. ▪ Ammeter 250mA DC. ▪ Voltmeter 30V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ AC Isolated Power Supply 12-0-12 VAC, 150mA. ▪ Operated on Mains power 230V, 50Hz $\pm 10\%$ <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Diode 1N4007 ▪ Capacitors 1000uF and 100uF Controlled By Switches. ▪ Inductor 200mH ▪ Load Resistor through Rotary Switch <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	2 set
5	<p>LED characteristics trainer kit:</p> <p><u>Specifications:</u> Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 20mA DC. ▪ Voltmeter 5V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-5V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz $\pm 10\%$ <p>Components mounted on the panels:</p>	1 set

	<ul style="list-style-type: none"> ▪ Four Different Colors LED ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. 	
6	<p>▪ The trainer is housed in ABS Plastic cabinet.</p> <p>Solar cell V-I and intensity Characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Volt meter 10V DC. ▪ Ammeter 200mA DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ Operated on Mains power 230V, 50Hz $\pm 10\%$ ▪ DC Power Supply 0-+3V,100mA <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Solar Cell Unit (Mounted on Stand) ▪ Light Source (100W Bulb) Lamp ▪ Lamp Intensity Control inbuilt in Trainer ▪ Load Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. <p>ACCESSORIES:</p> <ul style="list-style-type: none"> ▪ Trainer Unit ▪ Solar Cell Unit ▪ Light Source ▪ Wooden Optical Bench ▪ Wooden Optical Bench 	1 set
7	<p>Photo diode characteristics Trainer kit</p> <p><u>Specifications:</u></p>	1 set

	<p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Volt meter 6V DC. ▪ Ammeter 10Ma/100μA DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-10V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz \pm10% ▪ Components are mounted on the panels are: ▪ Photo Diode Unit ▪ Light Source (100W Bulb) ▪ Voltage Control through Potentiometer. ▪ Wooden Optical Bench With Scale Engraved <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated PrintedCircuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
8	<p>Energy band gap of pn junction diode trainer kit:</p> <p><u>Specifications:</u></p> <p>Digital Meters:</p> <ul style="list-style-type: none"> ▪ Digital Milli Voltmeter 20V ▪ Digital Milli Ammeter 200μA <p>Power Supply:</p> <ul style="list-style-type: none"> ▪ DC Power Supply 0-6V, 150mA <p>The experiment consists of the following:</p> <ul style="list-style-type: none"> ▪ Band Gap Arrangement ▪ Oven (up to 110°C) ▪ Sample : Ge Diode mounted ▪ Thermometer (0-110°C) ▪ Band Gap Setup ▪ Output Brought Out Through 4mm Banana Plugs. ▪ Four Probe Setup : <ul style="list-style-type: none"> ◦ Voltmeter Display : 3[^]2 digit, 7 segment LED, ◦ Voltage Range : (0-20.00V DC), ◦ Current Display: 3[^]1/2 digit, 7segment LED, ◦ Current Range : 0-200μA DC, 	1 set

	<ul style="list-style-type: none"> ◦ Oven Supply : 45V Ac (Switch position LOW), 60V AC (Switch position HIGH), ◦ Oven Connector : 4 pin, DIN type ◦ Input Voltage : 220V, 50Hz AC ◦ Fuse : 1A, 250V ▪ Oven: <ul style="list-style-type: none"> ◦ Heating Element : 35ohm, 75watt, ◦ Oven Supply : 45V/60V AC ◦ Oven Connector : 5 pin, DIN type, ◦ Ambient Temperature: 110°C ◦ Fuse: 2A ▪ Thermometer: <ul style="list-style-type: none"> ◦ Type : Mercury ◦ Temperature Range: 0-110°C ◦ Least Count : 1°C ◦ Length : 300mm approx. ▪ Band Gap Arrangement: <ul style="list-style-type: none"> ◦ Diode : Ge, 1N60 <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Instruction manual. ▪ Connections are brought out through 4mm BT15 Terminals. ▪ The trainer is housed in Metal cabinet. <p>PACKING LIST:</p> <ul style="list-style-type: none"> ◦ Band Gap Experiment Setup 1Nos. ◦ Oven 1Nos. ◦ Band Gap Arrangement 1Nos. ◦ Thermometer 1Nos. 	
9	<p>Dielectric constant trainer kit</p> <p><u>Specifications:</u></p> <ul style="list-style-type: none"> ▪ R.F. Generator (Range: 9-10MHz approx.). ▪ Micro ammeter (Range : 0-50μA) ▪ Potentiometer for Sensitivity selection. ▪ Fixed Capacitor (Metal). ▪ Variable Gang Capacitor. ▪ Sockets for test capacitor and variable capacitor brought out at front panel. 	1set

- One Solid Bakelite plate to be insert in rap of
- test capacitor

PACKING LIST:

- Dielectric Constant Apparatus.
- Variable Gang Condenser.
- Test Capacitor (Solid Gang Condenser)
- Three type of Bakelite sheets for Dielectricmaterial.
- Two sets of Leads

സ്ഥലം: ശ്രീകൃഷ്ണപുരം

തീയതി: 07/11/2024

പ്രിൻസിപ്പാൾ

Signed by

K R Remesh Babu

Date: 08-11-2024 10:43:56

D1/1971/24/GECSKP

SHORT QUOTATION NOTICE

Quotation No: 20/24-25

Government Engineering College, Sreekrishnapuram

Sealed quotations are invited for the supply of Equipments to Physics Lab

The envelopes containing the quotation should bear the superscription "**Quotation for the supply of Equipments to Physics Lab**" and should be addressed to **Principal, Government Engineering College, Sreekrishnapuram, Mannampatta- P.O, Palakkad - 678 633**. Intending tenderers may submit the quotations on their own papers.

Last date for receipt of quotations is **25/11/2024, 2.00 PM**. Late quotations will not be accepted. The quotations will be opened at **03.00 PM** on **26/11/2019** in the presence of such of the tenderers or their authorized representatives who may be present at that time. The maximum period required for delivery of the articles should also be mentioned.

Details of the requirements and the conditions governing their supply can be obtained from **www.gecscp.ac.in**

Details of Item to be purchased

Sl No.	Item with specification	Qty
1	<p>p-n junction Diode V-I characteristics trainer kit: <u>Specifications:</u> Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 10mA/100μA DC. ▪ Voltmeter 3V/30V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-3/30V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Silicon Diode (1N4007) 	1 set

	<ul style="list-style-type: none"> ▪ Germanium Diode (OA79) ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed ▪ circuits and symbols. <ul style="list-style-type: none"> ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. 	
2	<p>Zener diode V-I characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 15mA/150μA DC. ▪ Voltmeter 15V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-15V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz \pm10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Zener Diode 5.1V ▪ Zener Diode 6.2V ▪ Zener Diode 8.2V ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed ▪ Circuit Board sheet with well printed circuits ▪ andsymbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	1 set
3	<p>Tunnel diode V-I characteristics trainer kit:</p>	1 set

	<p><u>Specifications</u> Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply +5V DC, 150mA ▪ Operated on Mains power 230V, 50Hz ±10% <p>Digital Meters:</p> <ul style="list-style-type: none"> ▪ V: Voltmeter ▪ I: Ammeter <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Tunnel Diode 1N3717 ▪ Potentiometer :Current control <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed circuits and symbols. ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
<p>4</p>	<p>Half wave and full wave rectifier trainer kit <u>Specifications:</u> Analog Meters:</p> <ul style="list-style-type: none"> ▪ Voltmeter 30V AC. ▪ Ammeter 250mA DC. ▪ Voltmeter 30V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ AC Isolated Power Supply 12-0-12 VAC,150mA. ▪ Operated on Mains power 230V, 50Hz ±10% <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Diode 1N4007 ▪ Capacitors 1000uF and 100uF Controlled By Switches. ▪ Inductor 200mH ▪ Load Resistor through Rotary Switch <p>Additional features:</p>	<p>2 set</p>

	<ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	
5	<p>LED characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Ammeter 20mA DC. ▪ Voltmeter 5V DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-5V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz $\pm 10\%$ <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Four Different Colors LED ▪ Voltage Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. 	1 set
6	<p>Solar cell V-I and intensity Characteristics trainer kit:</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Volt meter 10V DC. ▪ Ammeter 200mA DC. <p>Power Supplies:</p>	1 set

	<ul style="list-style-type: none"> ▪ Operated on Mains power 230V, 50Hz \pm10% ▪ DC Power Supply 0-+3V,100mA <p>Components mounted on the panels:</p> <ul style="list-style-type: none"> ▪ Solar Cell Unit (Mounted on Stand) ▪ Light Source (100W Bulb) Lamp ▪ Lamp Intensity Control inbuilt in Trainer ▪ Load Control through Potentiometer. <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated ▪ Printed Circuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. ▪ The trainer is housed in ABS Plastic cabinet. <p>ACCESSORIES:</p> <ul style="list-style-type: none"> ▪ Trainer Unit ▪ Solar Cell Unit ▪ Light Source ▪ Wooden Optical Bench ▪ Wooden Optical Bench 	
<p>7</p>	<p>Photo diode characteristics Trainer kit</p> <p><u>Specifications:</u></p> <p>Analog Meters:</p> <ul style="list-style-type: none"> ▪ Volt meter 6V DC. ▪ Ammeter 10Ma/100μA DC. <p>Power Supplies:</p> <ul style="list-style-type: none"> ▪ DC Supply IC Regulated 0-10V DC, 150mA. ▪ Operated on Mains power 230V, 50Hz \pm10% ▪ Components are mounted on the panels are: ▪ Photo Diode Unit ▪ Light Source (100W Bulb) 	<p>1 set</p>

	<ul style="list-style-type: none"> ▪ Voltage Control through Potentiometer. ▪ Wooden Optical Bench With Scale Engraved <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated PrintedCircuit Board sheet with well printed circuits and symbols. ▪ Fuse for Short Circuit protection ▪ Instruction manual. ▪ Connections are brought out through 4mm Colored Sockets. ▪ Patch Cords 4mm. 	
8	<p>Energy band gap of pn junction diode trainer kit: The trainer is housed in ABS Plastic cabinet.</p> <p><u>Specifications:</u></p> <p>Digital Meters:</p> <ul style="list-style-type: none"> ▪ Digital Milli Voltmeter 20V ▪ Digital Milli Ammeter 200μA <p>Power Supply:</p> <ul style="list-style-type: none"> ▪ DC Power Supply 0-6V, 150mA <p>The experiment consists of the following:</p> <ul style="list-style-type: none"> ▪ Band Gap Arrangement ▪ Oven (up to 110°C) ▪ Sample : Ge Diode mounted ▪ Thermometer (0-110°C) ▪ Band Gap Setup ▪ Output Brought Out Through 4mm Banana Plugs. ▪ Four Probe Setup : <ul style="list-style-type: none"> ◦ Voltmeter Display : 3² digit, 7 segment LED, ◦ Voltage Range : (0-20.00V DC), ◦ Current Display: 3^{1/2} digit, 7segment LED, ◦ Current Range : 0-200μA DC, ◦ Oven Supply : 45V Ac (Switch position LOW), 60V AC (Switch position HIGH), ◦ Oven Connector : 4 pin, DIN type ◦ Input Voltage : 220V, 50Hz AC ◦ Fuse : 1A, 250V ▪ Oven: 	1 set

	<ul style="list-style-type: none"> ◦ Heating Element : 35ohm, 75watt, ◦ Oven Supply : 45V/60V AC ◦ Oven Connector : 5 pin, DIN type, ◦ Ambient Temperature: 110°C ◦ Fuse: 2A ▪ Thermometer: <ul style="list-style-type: none"> ◦ Type : Mercury ◦ Temperature Range: 0-110°C ◦ Least Count : 1°C ◦ Length : 300mm approx. ▪ Band Gap Arrangement: <ul style="list-style-type: none"> ◦ Diode : Ge, 1N60 <p>Additional features:</p> <ul style="list-style-type: none"> ▪ Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols. ▪ Instruction manual. ▪ Connections are brought out through 4mm BT15 Terminals. ▪ The trainer is housed in Metal cabinet. <p>PACKING LIST:</p> <ul style="list-style-type: none"> ◦ Band Gap Experiment Setup 1Nos. ◦ Oven 1Nos. ◦ Band Gap Arrangement 1Nos. ◦ Thermometer 1Nos. 	
9	<p>Dielectric constant trainer kit</p> <p><u>Specifications:</u></p> <ul style="list-style-type: none"> ▪ R.F. Generator (Range: 9-10MHz approx.). ▪ Micro ammeter (Range : 0-50μA) ▪ Potentiometer for Sensitivity selection. ▪ Fixed Capacitor (Metal). ▪ Variable Gang Capacitor. ▪ Sockets for test capacitor and variable capacitor brought out at front panel. ▪ One Solid Bakelite plate to be insert in rap of test capacitor 	1set

PACKING LIST:

- Dielectric Constant Apparatus.
- Variable Gang Condenser.
- Test Capacitor (Solid Gang Condenser)
- Three type of Bakelite sheets for Dielectricmaterial.
- Two sets of Leads

Place: Sreekrishnapuram

Date: 07/11/24

PRINCIPAL

Signed by
K R Remesh Babu
Date: 08-11-2024 10:43:30