



चौधरी रणबीर सिंह विश्वविद्यालय, जीन्द
Chaudhary Ranbir Singh University, Jind
(Established by the State Legislature Act 28 of 2014
recognized by UGC Act 1956 u/s 12-B & 2 (f))



Invitations for sealed quotation(s) to supply equipments for Department of Physics, CRSU

No. CRSU/PHY/ 1341

Date 03-10-2025

To

All Interested Bidders/firms

Subject : Invitation of quotation(s) to supply of Equipments for Department of Physics, CRSU.

Dear Sir/Madam,

You are invited to submit your most competitive quotation for the following items with following terms and conditions.

Sr. No	Name of Experiments	Detailed Specifications.	Quantity	Quoted Rates for each item including FOR
1	To design a power supply of ± 12 V using regulator ICs.	Specification:-Step-down transformer, a rectifier Circuit (can be used as a half-wave or a full-wave rectifier), a filter circuit (an inductance and two capacitors) - the arrangement can be used for the study of various configuration of filters and a regulator circuit. Output: ± 12 volts Max. Current: 200 mA Regulation: 1% Metering: Output Voltage on the DPM, Complete in all respect with manual. etc. Regulator use 7812, 7912.	2	
2	To design a voltage regulator circuit using Zener diode.	An Electronics unit consist of DC Regulated Power supply 0-15VDC/150mA, two round meters for voltage & current measurement, 1 Zener Diodes mounted behind the panel, connections of Supplies, meters & Zener Diode brought out at 4mm Sockets. Variable Load Resistance for load regulation.	2	
3	To design and study of clipping and clamping circuits.	In built signal generator 1 KHz up to 10 Vpp, clipping and clamping of diode circuits, IC regulated power supply, etc.	2	
4	To design common emitter amplifier and study its frequency response	An Electronics unit with following features: - • Analog frequency oscillator up to 200 KHz with variable amplitude decade dials • Mounted Two Voltmeter Frequency Based up to range 199.99 mV & 19.99 V AC • Mounted circuit with supporting resistance, capacitors & transistors. • Two Load Resistance R1 & R2. • 4 mm patch cords and banana sockets	2	

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5	To design and implement the following LOGIC GATES using different discrete components: OR, AND, NAND and NOR.	Specification:-An Electronics unit with in built fixed 5VDC , mounted analog round meter 0-5 V, mounted circuit for AND, OR, NOT Gates Circuit on panel using diode and transistor . ,Also Mounted IC's with I/P & O/P Terminals 7408, 7432,7404,7486, Suitable 4 mm patch cords for connections & detailed manual.	2	
6	To study and validate Network theorems.	Specification:-Verification of Superposition Theorem, Maximum Power Transfer Theorem, Norton's Theorem and Thevenin's Theorem. Complete with built-in Three D.C. Power Supply 0-15V, 100mA continuously variable Power supply, 9V and 5V, 100mA. fixed power supply, Multi range Digital Voltmeter, Ammeter and wide range of selected resistances. etc. Complete in all respect with manual	2	
7	To study the output and transfer characteristics of a JFET and find its drain resistance, trans-conductance and amplification factor.	Specification:-An Electronics device with in built of Two DC Regulated Power Supplies 0-15VDC/150mA & 0- 3VDC/150mA, three round meters for voltage & current measurement, FET BFW10 mounted behind the panel. For Study as amplifier :- : Instrument comprises of DC Regulated Power Supply, Circuit diagram is printed, components mounted on the front panel. Using FET BFW10 with supporting different resistances & capacitance, Suitable Patch cords for connection.	2	
8	To study rectifier and filter circuits and draw wave shapes.	Specifications:- Instrument comprises of AC . Power Supply, 2 meters to measure Output Voltage & Output current, 4 PN Junction Diodes, Filter Circuit Kit, load Resistances selectable using band switch. With Filter Combination Pi, L & LC, 4 mm suitable patch cords for connection, 1 AC Special Dual Range Voltmeter for measure ripple AC value.	2	
9	To study frequency response of RC coupled Amplifier.	An Electronics unit with following features:- • Analog frequency oscillator up to 200 KHz with variable amplitude decade dials. • Mounted Two Voltmeter Frequency Based up to range 199.99 mV & 19.99 V AC • Mounted circuit with supporting resistance, capacitors & transistors. • With feedback & with out feedback both mode study. • 4 mm patch cords and banana sockets.	2	

10	To study the frequency response of a single stage, negative feedback amplifier for voltage series and shunt feedback.	An Electronics unit with following features:- • Analog frequency oscillator up to 200 KHz with variable amplitude decade dials. • Mounted Two Voltmeter Frequency Based up to range 199.99 mV & 19.99 V AC. • Mounted circuit with supporting resistance, capacitors & transistors. • With feedback & with out feedback both mode study. • 4 mm patch cords and banana sockets.	2	
11	To study the frequency variation in RC phase shift, Colpitt and Hartley Oscillators	Features : Instrument comprises of 12V DC Regulated Power Supply, circuit diagram printed & components mounted on front panel.	2	
12.	To study the applications of operational amplifier as summer, astable multivibrator, Schmitt trigger, integrator and differentiator.	Specifications:- Unit consists of 3 DC Regulated Power Supplies of 0-1.5V/150mA 0-10V/150mA, $\pm 15V$ DC & two Dual Range moving coil meters, Circuit diagram is Printed, different Resistances & Capacitors, diodes are provided on the front panel which can be connected for various experiments., Two Op-Amp using IC741 mounted with all pin 4 mm I/P or O/P terminals.	2	
13.	To study the frequency/amplitude modulation and demodulation	Specifications:- • P.S.: $\pm 12V$ D.C. at 100 mA, IC Regulated Power Supply. • Carrier generator circuit which generates the carrier signal. • Audio frequency modulating signal. • Variable D.C. to see the deviation in carrier frequency. • Frequency Modulation circuit with buffer stage at the output. Demodulating circuit. • Adequate no. of other electronic components. Operative on 230V $\pm 10\%$ at 50Hz A.C. Mains ON/OFF switch, Fuse and Jewel light. Adequate no. of patch cords length $\frac{1}{2}$ metre stackable from rear both ends 4mm or better, spring loaded plug.	2	
14	To study the analog to digital conversion and digital to analog conversion circuits.	Specifications:- DC Regulated Power Supply 5VDC/150mA, 0-10 VDC/150mA, $\pm 15V$ DC/150mA, 1 Voltmeter, 4 SPDT switches provided for selecting logic 1 & logic 0, one output indicators, Circuit printed on the front panel. Two Op-Amp using IC 741 with output terminals.	2	
15	To study analog comparator circuit.	Instrument comprises of fixed output DC Regulated power supply of $\pm 15V$ DC, one digital voltmeter, Combination of Resistances, Zener Diode & IC 741 connected inside & connections brought out at sockets on front panel.	2	
16	To study the binary module-6 and 8	The board consists of the following built-in parts :	2	

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	decade decoder and shift register	1. 5V D.C. at 100mA, IC regulated power supply. 2. 10 Nos. Input Switches for data input. 3. IC For Universal Shift Register 74194 is provided on board with Combinational Circuit. 4. IC For Parallel Shift register 7495 is provided on board with Combinational Circuit. 5. IC For Parallel-Serial Shift Register Using 7494 is provided with circuit diagram 6. 5. Nos. Output LEDs with driver circuit to observe the Output. 7. One Mono Pulse is provided on board: 8. Adequate no. of other Electronic Components. 9. Mains ON/OFF switch, Fuse and Jewel light. For Study Decoder :- Instrument comprises of DC regulated power supply 5VDC/150mA, 4 SPDT switches provided for selecting logic 1 & logic 0, 1HZ monoshot clock pulse, 4 output indicators, circuit diagram for IC 7490, IC7447 & 7-segment display printed & connections for various inputs & outputs brought out at the sockets on the front panel.		
17	To study the BCD to seven segment display.	Instrument comprises of DC regulated power supply 5VDC/150mA, 4 SPDT switches provided for selecting logic 1 & logic 0, 1HZ monoshot clock pulse, 4 output indicators, circuit diagram for IC 7490, IC7447 & 7-segment display printed & connections for various inputs & outputs brought out at the sockets on the front panel.	2	
18	To study the I-V characteristics of uni-junction transistor and its application as saw tooth wave generator.	Specifications:- An Electronics unit with in built Two DC Regulated Power supplies 0-15VDC/ 150mA & 0-30VDC/150mA, three round meters for voltage & current measurement, one UJT 2N2646 mounted behind the panel, connections of Supplies, Meters & UJT brought out at 4mm Sockets.	2	
19	To study the I-V characteristics of silicon-controlled rectifier and its applications	Specification : An Electronics Devices with in built of two DC Regulated Power Supplies 0-30VDC/150mA & 0-1VDC/150mA, three round meters for voltage & current measurement, SCR 2P4M mounted behind the panel, connections of Supplies, Meters, & SCR brought out at 4mm Sockets.	2	
Terms & Conditions				
1. Prices are FOR Including GST , Freight to the Physics Department CRSU, Jind				
2. Warranty of all instruments contains 5 Years form the date of installation.				
3. Bidder need to provide complete training, workshop to Professor & Students for 2 to 3 Days.				

Signature

Bidder (Past Experience report for last 3 years with similar instruments PO or Installation Copies). (Attached executed reference single order copy upto 80% of Tender Value)	
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1. **QUOTATION SIGNING:-** The quotations must be signed by authorized signatory of the bidding firm/company on each page, along **with seal of the firm/company, as the case may be.**
2. **Conditional Quotation:-** Conditional quotations are not acceptable. Hence, the supplier is advised neither to alter the specifications nor to mention anything on the quotation form, except cost, signature with seal, otherwise quotation will not be considered.
3. **Delivery Destination:-** The quotations should be quoted as FOR REGISTRAR, CHAUDHARY RANBIR SINGH UNIVERSITY, JIND. The transit insurance and freight charges etc, if any, needs to be mentioned separately of the basic/ex-works price of the quoted item.
4. **Delivery Acceptance:-** The delivery of the material will be handed over to the Lab Technician, Department of Physics, CRSU, Jind. However, the goods will be deemed accepted subject to the approval by the inspection committee of CRSU, Jind in case of rejection of the consignment, the supplier should immediately remove the consignment from the university premises, failing which it will remain there at the risk and responsibility of the supplier and University will not be responsible for any kind of liability in this regard.
5. **Delivery Period:-** The supply is to be made within 15 days of the date of dispatch of the supply order. However, in case of imported goods this time limit will be 30 days.
6. **Delivery Period Extension:-** The supply order(s) shall be executed within the time specified in this regard. However, in case of force Majure/reasons beyond control of the supplier, he may make a written request to the Vice Chancellor for grant of extension for delivery period. The written request in this regard should clearly spell out such reason. The Vice Chancellor, if he is satisfied with such reasons and further that he requested extension will not be detrimental to the interests of the university, may grant extension for a reasonable period for delivery of the goods. The supplier would be required to indemnify the University against any loss on account of downfall of the price during the extended period.
7. **Penalty for delayed supply:-**
In the event of the delayed supply, if accepted, the Registrar will be competent to impose penalty @ 1% per day of the purchase order, provided that the entire amount of penalty shall not exceed 10% of the total amount of purchase order. The supply will be deemed to be completed on the day when 100 % supply is handed over to the indenter (in case of supply in installments) and its installation is done. An appeal against these orders shall, however, lie to the Vice Chancellor whose decision shall be final.
8. **Rejection of incomplete Quotations:-**
Incomplete quotations such as unsigned quotations, late submitted quotation, conditional quotation, quotation not confirming to the eligibility criteria and Technical specification or with any vague term such as 'Extra as applicable', will be considered as rejected.
9. **Quantity Variation:-** The quantity shall be subject to increase or decrease as the case may be.
10. **Taxation:-** The firms on the quotation have to clearly mention that GST included or excluded.
11. **Right to Bid rejection:-** The University reserves the right to reject any or all offers at any stage without assigning any reason.
12. **Packaging of Consignment:-** The material should be packed in a strong case so as to avoid any damage, theft or pilferage in the transit, in which case the responsibility shall be that of the supplier.



13. **Payment:-** The payment will be made within 30 working days of the successful delivery and its inspection.

14. **Currency:-** The rates be quoted in Indian Rupee (INR). However, in case of imported item it may be quoted in foreign currency where in the date of opening of quotation will be taken as the conversion date for bid evaluation and comparison purpose.

15. **Schedule:-** The quotation floating date is **03-10-2025**. The sealed quotation should reach in the office of Registrar, Chaudhary Ranbir Singh University, Jind-126102 on or before **23-10-2025 up to 5:00 P.M.** The Interested bidder/firm may write clearly in big letters on envelope **"QUOTATION FOR DEPARTMENT OF PHYSICS, CRSU, JIND.**

The quotation will be opened on **24-10-2025 at 11:00 A.M.** in the office of the Chairperson, Department of Physics, Chaudhary Ranbir Singh University, Jind in the presence of the Purchase Committee. Interested bidder/firms and his/her authorized representatives can present during opening of quotations. Quotation received after last date shall not be considered. Any type of delay like postage delay etc shall be considered by the University.

16. **Arbitration:-** In case of any dispute both the parties will be bounded by the decision of the Vice Chancellor, CRSU, Jind as the arbitrator.

17. **Jurisdiction:-** All disputes shall be subject to Jind jurisdiction.

18. **Warranty :** The supplier/vendor is bound to submit the warranty period & all the required conditions and payment after warranty period i.e. AMC.


Chairperson,
Department of Physics,
CRSU, Jind

The terms & conditions of quotation have been read and I/We certify that I/We clearly understand the same and undertake for its compliance

Place: _____

Dated: _____

Signature of authorized representative of the
bidding firm/company with seal.
(Affix Rubber Stamp of the firm)