मौलाना आज़ाद नेशनल उर्दू यूनिवर्सिटी مولانا آزاد نیشنل اُردو یونیورسٹی

MAULANA AZAD NATIONAL URDU UNIVERSITY

(A Central University established by an Act of Parliament in 1998)

PURCHASE & STORES SECTION

INVITATION FOR ONLINE TENDER (TWO BIDS SYSTEM)

(Tender No:08 MANUU-2018-F.88-School of Science, dt: 31st January, 2018)

Sub: ***MANUU - Purchase & Stores Sections – Supply and installation of Physical Sciences Equipments at various departments under School of Sciences – Online (through CPPP) Tender Enquiry – Reg.***

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The Maulana Azad National Urdu University (MANUU), Hyderabad (Central University established by an Act of Parliament in 1998) intends to supply and install the physical sciences equipments at various departments under School of Sciences, MANUU from the prospective bidders (registered firms/Original Equipment Manufacturer/authorized dealers/distributors). The intended bidders may furnish their quotations (as per the specifications mentioned below) online through Central Public Procurement Portal (CPPP) @https://eprocure.gov.in/eprocure. The online bids along with **EMD for Rs. 57,000/-** drawn in favour of MANUU, Hyderabad (Exemption for registration with MSME, NSIC, NCCF, Kendriya Bhandar etc as per GoI norms will only be considered on production of documentary proof, failing which the bid will be rejected) shall be furnished as per the proforma prescribed (Annexure-2). The bid documents (both Technical bid and financial bid) along with the EMD proof may have to be upload online to CPP Portal on or before 15th **February, 2018** by **3.00 pm.**

Specification of equipment/item & quantity required:

Sl.	Item Specifications	Quantity
1.	1st order High pass filter using Op-amp	04
2.	1st Order Low pass filter using op-amp	04
3.	2nd order High filter using Op-amp	04
4.	2nd order Low pass filter using Op-amp	04
5.	4-Bit comparator using 74LS85	04
6.	4-Bit D/A Converter (R-2R Method)	04
7.	4-Bit D/A Converters (Weighted Resist Method)	04
8.	8 Bit A/D Converter using ADC 0808	04
9.	A to D Converter Trainer	02
10.	A to D converter Trainer with digital meter	04
11.	Adders and Subtractors Trainer	04
12.	Basic Logic Gates using Discrete components	02
13.	Bench top Digital meter DC 20 mA	04
14.	Bench top Digital meter DC 20V	04
15.	BJT Characteristics	04
16.	BJT Characteristics with three meters	04
17.	Cathode Ray Oscilloscope (CRO) – 20MHz Dual Trace	02
18.	CE Amplifier	04
19.	CE Transistor Amplifier Trainer	02
20.	Colpitts Oscillator	06
21.	Common Emitter Amplifier Trainer	04
22.	D to A Converter Trainer	02
23.	D to A Converter Trainer using R-2R ladder network	04
24.	De Morgan's law, Half & Full Adder and Subtractor Trainer	02

25.	Differential Amplifier using op-amp. In Inverting & Non-inverting amplifiers	02
26.	e/m Apparatus C.R.T. mounted on a wooden stand, stand for magnets & Magnetometer box power supply to energies with working manual	02
27.	Energy Band Gap of a Semi conductor with builtin power supply, Thermo-Meter, oven and two digital meters	02
28.	Energy band gap of Junction diode/Thermistor characteristics	04
29.	Experiments with Fiber-Optic kit	04
30.	Figure of Merit of a moving Coil Galvanometer: Ballistic Galvanometer	02
31.	Function Generator (0.1 Hz to 1 MHz)	04
32.	Half and Full adder and subtractor Trainer	04
33.	Hysteresis Loop using CRO – Hysteresis curve Trainer Board with Transformer core	02
34.	Hysteresis Loop using Solenoids – Complete Set	02
35.	Integrator & Differentiator using 741	04
36.	Integrator/Differentiator using op-amp Trainer	04
37.	Inverting & Non-Inverting Amplifier	04
38.	Inverting Amplifier Trainer	04
39.	Inverting Amplifier using Operational Amplifier	02
40.	Junction Diode Characteristics with two digital meters	10
41.	Kirchoffs laws Trainer	06
42.	Lamp & Scale outfit- All metal work on mains through step down Transformer fitted in the base, rack and pinion focus Perspex scale	02
43.	Light Emitting diode characteristics Trainer kit	04
44.	Light Emitting Diode Characteristics with two digital meters	02
45.	Lissajous Figures Trainer Board	02
46.	Logic Gates using Discrete components	04
47.	Logic Gates using ICs	06
48.	Measurement of Numerical Aperture only	02
49.	Measurement of Numerical Aperture Trainer	04
50.	Non-inverting Amplifier using Operational Amplifier	02
51.	Ohm's Law & Kirchoff's Laws	04
52.	Operational Amplifier as Differentiator	02
53.	Operational Amplifier as Integrator	02
54.	Operational Amplifier Trainer	04
55.	Phase Shift Oscillator using op-amp.	04
56.	Planks constant Apparatus (Photo Cell complete set with meters, Power supply and variable source 2 filters	02
57.	PN Junction Diode and Light Emitting Diode	04
58.	Power Factor of an Inductive Circuit	02
59.	RC Coupled Amplifier (Two stage)	04
60.	RC Phase Shift Oscillator	02
61.	RC Phase Shift Oscillator (using transistor)	04
62.	Rectifiers & Ripple Factors	02
63.	Rectifiers and Filters Trainer	04
64.	Semiconductor Devices Trainer	04
65.	Series & Parallel Resonance (LCR) Trainer with one meter	02
66.	Series and Parallel Resonance (LCR) Trainer	04
67.	Series and Parallel Resonance Kit	04
68.	Single Stage RC coupled Amplifier Trainer	02
69.	Solar Cell Characteristics with two digital meters	04
70.	Solar Cell characteristics with two digital meters & with variable light source	02
71.	Stefan's constant by Electrical Method (Trainer Board)	02

72.	Study of Logic Gates and Applications	04
73.	Study of Logic Gates using discrete components	04
74.	Summing Amplifier using Op-Amp. In Inverting & Non-inverting amplifiers	02
75.	Battery Eliminator – output 2,4,6,8,10 & 12 V DC with a rotator Switch in sheet metal box cap. 2 amps	02
76.	Commutator – round four plug key	02
77.	Plug Key – one way plug, brass plugs and lugs fitted on Bakelite Base on wooden block	02
78.	Resistance Boxes: Plug in types, brass plug & lugs, wire wound Resistance adjusted to high accuracies range 1-100 ohm constant coil	02
79.	Thermister Characteristics with oven	06
80.	Lissajous figures using Cathode Ray Oscilloscope	04
81.	Transistor (BJT) Characteristics in CE with four digital meters	02
82.	Transistor (BJT) trainer as various biasing with four digital meters	02
83.	Twin-T Network Trainer	02
84.	Two Port Network parameters	04
85.	Two Stage RC coupled Amplifier	04
86.	Two-Port Network Trainer	02
87.	Wein Bridge Oscillator using 741	04
88.	Wein Bridge Oscillator using op-amp.	06
89.	Zener Diode as Voltage Regulator with two digital meters	02
90.	Zener Diode Characteristics with Meters	04
91.	Zener Diode Characteristics with two digital meters	02
92.	Zener Diode Characteristics with two meters	04
93.	Zener Diode Regulated Power Supply with two meters	04
94.	Zero-crossing detector and comparator	02

Terms & Conditions:

1. Online Bids are invited to supply and install the physical sciences equipments at various departments under School of Science in two bid systems. The online bid (both Technical bid and financial bid) should be uploaded by the bidder before due date and time.

2. The documents may be downloaded free of cost from CPPP site https://eprocure.gov.in and also from the University website www.manuu.ac.in.

3. The technical bid should be duly filled online as per CPPP process along with requisite supporting documents. (Non Receipt / Incomplete details will lead to rejection of Tender).

4. The Technical and Financial bids should be uploaded as per e-procurement method, otherwise it will be rejected.

5. This Request for Proposal (RFP) is issued with no financial commitment and the Buyer (MANUU) reserves the right to change or vary any part thereof or foreclose the procurement process at any stage. The Buyer also reserves the right to disqualify any vendor, should it be necessary, at any stage.

6. **Procedure for submission of Bids:**
   a) As per standard online e-procure system through NIC's CPP Portal.
   b) Furnishing of Bids: Bids should be submitted by bidders through online only, furnishing details as indicated in the tender.

7. Bids will be opened online only

8. **Modification and Withdrawal of Bids**: The bidder may modify or withdraw his bid through online before the last date for submission of the Bids.

9. The Tender Document should be signed by the tenderer on each page, affix the office stamp and to be uploaded along with the bid online, otherwise the bid will be rejected. No tender will be accepted after the date of opening and time as specified in the tender enquiry for any other reasons.

10. Prices are to be quoted both in figures and in words. In case of a discrepancy, that quoted amount in words/lowest amount will be taken as valid. The quotation should be valid for a minimum period of 60 days from the closing date of tender.

11. The bidders shall have to ascertain the exact percentage of GST applicable on each of the items while quoting the rates in the financial bid (Annexure-2). In case of discrepancy/difference of opinion on GST rates, the University shall decide the lowest quotation on verification of the relevant rules of the GST Act vis-à-vis supporting documents provided by the bidders in respect of the claim for the GST. The decision of the University shall be final and binding in this regard.

12. The bids should be submitted as per **Annexure-1(Technical Bid)** to fulfil the eligibility criteria and **Annexure – 2 (Financial Bid)** for evaluation of price quoted for the items as per the specifications mentioned.

13. The Technical bid will be opened first to ascertain the **pre-qualification criteria**. The following is the eligibility criteria for the Financial bid.

    A) The bidder must have achieved the minimum average annual turnover of Rs.**3,45,000/-** on supply of the similar items during the last three financial years.

    B) In addition to the above, the bidder must have supplied the;

        i. Similar items on three Purchase Orders worth Rs. **4,60,000/-** each (or)
        ii. Similar items on two Purchase Orders worth Rs.**5,75,000/-** each (or)
        iii. Similar items on one Purchase Order worth Rs.**9,20,000/-**

    During the last 7 years period between 01.01.2010 to 31.12.2017

14. The financial bids of the qualified technical bidders shall only be opened by the authorised officers of the University.

15. The quantity included in the bid can be increased or decreased at the discretion of the Competent Authority, Maulana Azad National Urdu University Hyderabad, while issuing the purchase order. The University reserves the right to issue supplementary purchase order upto 25% of the bid value within three months from the date of Award of Contract on the same price and terms & conditions.

16. The supply of said items has to be made within a period of **four weeks** from the date of award of contract (AOC).

    i) Failure to supply the material within the stipulated period shall entitle the Procuring Entity (MANUU) for imposition of penalty @ 1/2% (half percent) per day on the total value of the item covered in the purchase order, subject to a maximum of 5% (five percent) after expiry of the stipulated time period of the supply unless extension is obtained in writing from the office on valid ground before expiry of delivery period.

    ii) If the deliveries are not maintained and due to that account Procuring Entity is forced to buy the material at your risk and cost from elsewhere, the loss or damage that may be sustained thereby would be recovered from the defaulting supplier.

17. Conditional and incomplete bids will be rejected summarily.

18. The University reserves all the rights to place the Award of Contract **items wise** with the firm quoting L-1 rates. In case, if two or more number of firms quotes the same rate, the decision of the University in this regards will be final and abiding.

19. The firm should upload the scanned copy of the EMD of Rs. 57,000/- in the form of DD/ Fixed Deposit Receipt / Bank Guarantee in favour of MANUU payable at Hyderabad and furnish the original instrument of EMD (DD/FDR/BG) in an envelope superscribing the Tender No:08 MANUU-2018-F.88-School of Science. dt. 31st January, 2018 which shall be addressed to The Asst. Registrar, Purchase & Store Section, Admin Building, Maulana Azad National Urdu University, Gachibowli, Hyderabad-32 on or before closing date & time of the tender. Exemption from submission of EMD will be considered as per GoI norms on production/ uploading of documentary proof, failing which the bid will be rejected, along with the Technical bid. The EMD of the unsuccessful bidders will be returned within 60 days after closing date of the bid or 30 days after finalizing the bid. The EMD of the successful bidder will be returned on submission of Performance Security.

20. The selected firms should submit 10% value of Award of Contract (AOC) as Performance Security in the form of D.D/ Fixed Deposit Receipt / Bank Guarantee in favour of MANUU payable at Hyderabad which would be released (without interest) after supply of material as per specifications and after fulfilling of all tender obligations. In case, the goods supplied are under warranty, the 10% Performance Security will be released after 60 days after completion of Warranty period without any Interest.

21. **Payment:** 100% payment after receipt of the goods, inspection, installation (if any) at concerned office site in good condition and acceptance by the consignee, within 30 (thirty) days provided the successful bidder should have been furnished the 10% Performance Guarantee.

22. **MANU University GSTIN**: 36ACAPA0112H1ZL.

23. The items procured are exclusively for the Academic purpose only.

24. In case of any dispute, Hyderabad will be the Jurisdiction. The Registrar, Maulana Azad National Urdu University, Hyderabad shall decide the issue and his decision will be final and shall be binding on the both parties.

31/1/2016

Registrar
Maulana Azad National Urdu University
Gachibowli, Hyderabad- 500032

Annexure-1 (Technical Bid)

1.	Name of Firm	M/s.
	Postal Address	
	Contact No (s)	
	E-mail ID	
	Account Number	
	Name of the Account Holder / Firm / Agency	
	Bank Name	
	Branch Name & Details	
	IFSC Code	
2.	Details of EMD of Rs. 57,000/- (Exemption for registering with MSME NSIC, N.C.C.F, Kendriya Bhandar etc as per GoI norms will only be considered on production of documentary proof, failing which the bid will be rejected) The EMD shall be submited at Purchase & Stores Section before closing date.	D.D. No._____ dated: _____ Bank _____ (upload documentary proof if exemption is claimed)
3.	GST Registration No.	(upload GST registration certificate)
4.	Firm Registration No.	(upload firm registration certificate)
5.	Fulfilling Pre-qualification criteria	(Yes / No) (upload Documentary proof)
6.	Signed copy of the tender document	(Yes / No) (upload signed & stamped tender document)

Declaration: i) that we have not been debarred by any Government Department/Under taking.

ii) It is hereby declared that the firm have carefully read and understood the tender document and **agreed with all the terms and conditions** of the tender, Hyderabad jurisdiction etc., and agreed that the decision of the University shall be final in all respect.

Place : .....
Date : 2018

Signature of the authorized
Dealer/signatory of the firm with stamp

Annexure-2 (Financial Bid)

(To be filled Online only as per the CPPP format)

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

(DOMESTIC TENDERS - RATES ARE TO GIVEN IN RUPEES (INR) ONLY)

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	GST Amount on Item Qty x Basic Rate in INR Rs. P	TOTAL AMOUNT Without Taxes col (13) = (4) x (7) in Rs. P	TOTAL AMOUNT With Taxes col (14) = sum (8) to (13) in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	7	9	13	14	15
1	***Physical Sciences Equipments***							
1.1	1st order High pass filter using Op-amp	04	Nos			0.00	0.00	INR Zero Only
1.2	1st Order Low pass filter using op-amp	04	Nos			0.00	0.00	INR Zero Only
1.3	2nd order High filter using Op-amp	04	Nos			0.00	0.00	INR Zero Only
1.4	2nd order Low pass filter using Op-amp	04	Nos			0.00	0.00	INR Zero Only
1.5	4-Bit comparator using 74LS85	04	Nos			0.00	0.00	INR Zero Only
1.6	4-Bit D/A Converter (R-2R Method)	04	Nos			0.00	0.00	INR Zero Only
1.7	4-Bit D/A Converters (Weighted Resist Method)	04	Nos			0.00	0.00	INR Zero Only
1.8	8 Bit A/D Converter using ADC 0808	04	Nos			0.00	0.00	INR Zero Only
1.9	A to D Converter Trainer	02	Nos			0.00	0.00	INR Zero Only
1.10	A to D converter Trainer with digital meter	04	Nos			0.00	0.00	INR Zero Only
1.11	Adders and Subtractors Trainer	04	Nos			0.00	0.00	INR Zero Only
1.12	Basic Logic Gates using Discrete components	02	Nos			0.00	0.00	INR Zero Only
1.13	Bench top Digital meter DC 20 mA	04	Nos			0.00	0.00	INR Zero Only
1.14	Bench top Digital meter DC 20V	04	Nos			0.00	0.00	INR Zero Only

1.15	BJT Characteristics	04	Nos			0.00	0.00	INR Zero Only
1.16	BJT Characteristics with three meters	04	Nos			0.00	0.00	INR Zero Only
1.17	Cathode Ray Oscilloscope (CRO) – 20MHz Dual Trace	02	Nos			0.00	0.00	INR Zero Only
1.18	CE Amplifier	04	Nos			0.00	0.00	INR Zero Only
1.19	CE Transistor Amplifier Trainer	02	Nos			0.00	0.00	INR Zero Only
1.20	Colpitts Oscillator	06	Nos			0.00	0.00	INR Zero Only
1.21	Common Emitter Amplifier Trainer	04	Nos			0.00	0.00	INR Zero Only
1.22	D to A Converter Trainer	02	Nos			0.00	0.00	INR Zero Only
1.23	D to A Converter Trainer using R-2R ladder network	04	Nos			0.00	0.00	INR Zero Only
1.24	De Morgan's law, Half & Full Adder and Subtractor Trainer	02	Nos			0.00	0.00	INR Zero Only
1.25	Differential Amplifier using op-amp. In Inverting & Non-inverting amplifiers	02	Nos			0.00	0.00	INR Zero Only
1.26	e/m Apparatus C.R.T. mounted on a wooden stand, stand for magnets & Magnetometer box power supply to energies with working manual	02	Nos			0.00	0.00	INR Zero Only
1.27	Energy Band Gap of a Semi conductor with builtin power supply, Thermo-Meter, oven and two digital meters	02	Nos			0.00	0.00	INR Zero Only
1.28	Energy band gap of Junction diode/Thermistor characteristics	04	Nos			0.00	0.00	INR Zero Only
1.29	Experiments with Fiber-Optic kit	04	Nos			0.00	0.00	INR Zero Only
1.30	Figure of Merit of a moving Coil Galvanometer: Ballistic Galvanometer	02	Nos			0.00	0.00	INR Zero Only
1.31	Function Generator (0.1 Hz to 1 MHz)	04	Nos			0.00	0.00	INR Zero Only
1.32	Half and Full adder and subtractor Trainer	04	Nos			0.00	0.00	INR Zero Only
1.33	Hysteresis Loop using CRO – Hysteresis curve Trainer Board with Transformer core	02	Nos			0.00	0.00	INR Zero Only
1.34	Hysteresis Loop using Solenoids – Complete Set	02	Nos			0.00	0.00	INR Zero Only
1.35	Integrator & Differentiator using 741	04	Nos			0.00	0.00	INR Zero Only

1.36	Integrator/Differentiator using op-amp Trainer	04	Nos			0.00	0.00	INR Zero Only
1.37	Inverting & Non-Inverting Amplifier	04	Nos			0.00	0.00	INR Zero Only
1.38	Inverting Amplifier Trainer	04	Nos			0.00	0.00	INR Zero Only
1.39	Inverting Amplifier using Operational Amplifier	02	Nos			0.00	0.00	INR Zero Only
1.40	Junction Diode Characteristics with two digital meters	10	Nos			0.00	0.00	INR Zero Only
1.41	Kirchoffs laws Trainer	06	Nos			0.00	0.00	INR Zero Only
1.42	Lamp & Scale outfit- All metal work on mains through step down Transformer fitted in the base, rack and pinion focus Perspex scale	02	Nos			0.00	0.00	INR Zero Only
1.43	Light Emitting diode characteristics Trainer kit	04	Nos			0.00	0.00	INR Zero Only
1.44	Light Emitting Diode Characteristics with two digital meters	02	Nos			0.00	0.00	INR Zero Only
1.45	Lissajous Figures Trainer Board	02	Nos			0.00	0.00	INR Zero Only
1.46	Logic Gates using Discrete components	04	Nos			0.00	0.00	INR Zero Only
1.47	Logic Gates using ICs	06	Nos			0.00	0.00	INR Zero Only
1.48	Measurement of Numerical Aperture only	02	Nos			0.00	0.00	INR Zero Only
1.49	Measurement of Numerical Aperture Trainer	04	Nos			0.00	0.00	INR Zero Only
1.50	Non-inverting Amplifier using Operational Amplifier	02	Nos			0.00	0.00	INR Zero Only
1.51	Ohm's Law & Kirchoff's Laws	04	Nos			0.00	0.00	INR Zero Only
1.52	Operational Amplifier as Differentiator	02	Nos			0.00	0.00	INR Zero Only
1.53	Operational Amplifier as Integrator	02	Nos			0.00	0.00	INR Zero Only
1.54	Operational Amplifier Trainer	04	Nos			0.00	0.00	INR Zero Only
1.55	Phase Shift Oscillator using op-amp.	04	Nos			0.00	0.00	INR Zero Only
1.56	Planks constant Apparatus (Photo Cell complete set with meters, Power supply and variable source 2 filters	02	Nos			0.00	0.00	INR Zero Only
1.57	PN Junction Diode and Light Emitting Diode	04	Nos			0.00	0.00	INR Zero Only
1.58	Power Factor of an	02	Nos			0.00	0.00	INR Zero Only

	Inductive Circuit							
1.59	RC Coupled Amplifier (Two stage)	04	Nos			0.00	0.00	INR Zero Only
1.60	RC Phase Shift Oscillator	02	Nos			0.00	0.00	INR Zero Only
1.61	RC Phase Shift Oscillator (using transistor)	04	Nos			0.00	0.00	INR Zero Only
1.62	Rectifiers & Ripple Factors	02	Nos			0.00	0.00	INR Zero Only
1.63	Rectifiers and Filters Trainer	04	Nos			0.00	0.00	INR Zero Only
1.64	Semiconductor Devices Trainer	04	Nos			0.00	0.00	INR Zero Only
1.65	Series & Parallel Resonance (LCR) Trainer with one meter	02	Nos			0.00	0.00	INR Zero Only
1.66	Series and Parallel Resonance (LCR) Trainer	04	Nos			0.00	0.00	INR Zero Only
1.67	Series and Parallel Resonance Kit	04	Nos			0.00	0.00	INR Zero Only
1.68	Single Stage RC coupled Amplifier Trainer	02	Nos			0.00	0.00	INR Zero Only
1.69	Solar Cell Characteristics with two digital meters	04	Nos			0.00	0.00	INR Zero Only
1.70	Solar Cell characteristics with two digital meters & with variable light source	02	Nos			0.00	0.00	INR Zero Only
1.71	Stefan's constant by Electrical Method (Trainer Board)	02	Nos			0.00	0.00	INR Zero Only
1.72	Study of Logic Gates and Applications	04	Nos			0.00	0.00	INR Zero Only
1.73	Study of Logic Gates using discrete components	04	Nos			0.00	0.00	INR Zero Only
1.74	Summing Amplifier using Op-Amp. In Inverting & Non-inverting amplifiers	02	Nos			0.00	0.00	INR Zero Only
1.75	Battery Eliminator – output 2,4,6,8,10 & 12 V DC with a rotator Switch in sheet metal box cap. 2 amps	02	Nos			0.00	0.00	INR Zero Only
1.76	Commutator – round four plug key	02	Nos			0.00	0.00	INR Zero Only
1.77	Plug Key – one way plug, brass plugs and lugs fitted on Bakelite Base on wooden block	02	Nos			0.00	0.00	INR Zero Only
1.78	Resistance Boxes: Plug in types, brass plug & lugs, wire wound Resistance adjusted to high accuracies range 1-100 ohm constant coil	02	Nos			0.00	0.00	INR Zero Only

1.79	Thermister Characteristics with oven	06	Nos			0.00	0.00	INR Zero Only
1.80	Lissajous figures using Cathode Ray Oscilloscope	04	Nos			0.00	0.00	INR Zero Only
1.81	Transistor (BJT) Characteristics in CE with four digital meters	02	Nos			0.00	0.00	INR Zero Only
1.82	Transistor (BJT) trainer as various biasing with four digital meters	02	Nos			0.00	0.00	INR Zero Only
1.83	Twin-T Network Trainer	02	Nos			0.00	0.00	INR Zero Only
1.84	Two Port Network parameters	04	Nos			0.00	0.00	INR Zero Only
1.85	Two Stage RC coupled Amplifier	04	Nos			0.00	0.00	INR Zero Only
1.86	Two-Port Network Trainer	02	Nos			0.00	0.00	INR Zero Only
1.87	Wein Bridge Oscillator using 741	04	Nos			0.00	0.00	INR Zero Only
1.88	Wein Bridge Oscillator using op-amp.	06	Nos			0.00	0.00	INR Zero Only
1.89	Zener Diode as Voltage Regulator with two digital meters	02	Nos			0.00	0.00	INR Zero Only
1.90	Zener Diode Characteristics with Meters	04	Nos			0.00	0.00	INR Zero Only
1.91	Zener Diode Characteristics with two digital meters	02	Nos			0.00	0.00	INR Zero Only
1.92	Zener Diode Characteristics with two meters	04	Nos			0.00	0.00	INR Zero Only
1.93	Zener Diode Regulated Power Supply with two meters	04	Nos			0.00	0.00	INR Zero Only
1.94	Zero-crossing detector and comparator	02	Nos			0.00	0.00	INR Zero Only
Total in Figures						0.00	0.00	INR Zero Only
Quoted Rate in Words								