



सत्यमेव जयते



**MSME-TECHNOLOGY DEVELOPMENT CENTRE
(PROCESS AND PRODUCT DEVELOPMENT CENTRE, AGRA)**
Ministry of MSME, Govt. of India
Foundry Nagar, Agra
Ph: 0562-2344006, 2344673, Fax: - 0562-2344381
Email: info@ppdcagra.in

TENDER NOTICE (E-Tender)

The tenders are invited under double bids system from interested manufacturer/Suppliers/Dealers for procurement of machinery/ equipment for the Institute.

The details of specifications, tender document, EMD etc, can be downloaded from central Public Procurement Portal (www.eprocure.gov.in/eprocure/app) & www.ppdcagra.dcmsme.gov.in. The last date of submission is 26.07.2021 by 12:00 P.M and to be opened on 27.07.2021 at 2:00 P.M at PPDC-Agra.

PRINCIPAL DIRECTOR

MSME-TECHNOLOGY DEVELOPMENT CENTRE
(Process & Product Development Centre)
Govt. of India Organization
Under
Ministry of Micro Small and Medium Enterprises
Foundry Nagar, Agra - 282006

NOTICE INVITING e-TENDER

MSME - Technology Development Centre, Ministry of MSME, Government of India, invites online bids under two bid systems (i.e. Technical e-Bid and Financial e-Bid) for supply of Machinery Items. The e-Bid shall be submitted online on www.eprocure.gov.in. The Tender is available on www.ppdcagra.dcmsme.gov.in. No hard copy of Bids shall be accepted in the office. All prospective Bidders may visit www.eprocure.gov.in. (Bidder's manual kit) before online submission of e-Bid.

TERMS AND CONDITIONS:

1. GENERAL

MSME- Technology Development Centre (PPDC), Agra, invites e-bids under Two Bid systems (Technical and Financial Bid) from Reputed Machinery Suppliers.

2. DETAILS OF e-BID:

Sr. No.	Particulars	Details
1.	Bid Reference	E-Tender No. PPDC/Machinery Items/2021-22
2.	Last Date and Time of receipt of Bid	26 th Jul 2021 by 12:00 PM
3.	Date and Time for opening of Technical Bid	27 th Jul 2021 by 2:00 PM
4.	Place of receiving the bid / communication	MSME-Technology Development Centre, (PPDC) Foundry Nagar, Agra-282006
5.	EMD	Rs 50,000/- for ITI Electrician Course Items. (Account Payee Demand Draft / Bankers Cheque) in favour of "Principal Director", PPDC, Agra
6.	Financial bid opening	Will be opened on same day on 27 th Jul 2021, after evaluation of Technical Bids.
7.	Tender Fee	Rs. 1000/- Non-Refundable (Account Payee Demand Draft / Bankers Cheque) in favour of "Principal Director", PPDC, Agra

3. SUBMISSION OF e-BIDS:

- a) E-Bids are invited in two Bid System. (1) Technical and (2) Financial and shall be submitted electronically (online) on www.eprocure.gov.in for supply of Machinery Items.
- b) E-Bids shall be submitted on or before last date 26th Jul 2021. **No Hard Copy of Bids will be accepted.**
- c) EMD of each Machinery Item given in the list of Machinery with Specification. in form of account Payee Demand Draft, Bankers Cheque in favor of “Principal Director”, PPDC, Agra, payable at Agra, shall be submitted in the office **before last date and time of submission**. The e-bids will be opened only those who have submitted EMD's on or before the schedule date and time. Technical e-Bids of all the received tender will be opened on pre scheduled date, time & venue.

4. ELIGIBILITY / QUALIFICATION CRITERIA FOR TECHNICAL BID

1. The Bidders shall have supplied similar type of goods/instrument/machines to any Govt. / Autonomous/reputed organizations. Recent Purchase orders are to be enclosed.
2. Tender fees & EMD as stated above shall be submitted. If those claim for Exemption should be provide Valid MSME / NSIC Certificate Relevant to Product to be apply.
3. All the bids will be evaluated purely on the basis of technical ground/ technical compliance statement by bidder, acceptance of payment terms, delivery terms, PBG clause, guarantee/ warranty clause, Training, Installation, calibration certification/ documentation, Inspection clauses check list & any Govt. policies/guidelines as & when applicable. The price/financial bids of only technically qualified/accepted bidders will be opened.
4. Bidders should supply necessary Testing and Calibration report for Measuring Equipments. If fail to submit the necessary reports bid not be qualified for further evaluation.
5. Country of Origin of Product apart from India, decision of acceptance of bid will be taken as per GFR guideline. Bidders should enclose the country of Origin certificate along with Tender documents.

GENERAL CONDITIONS/INSTRUCTIONS:

1. Bidders are advised to read & study the complete Tender documents carefully. Submission of Tender shall be deemed that bidder has read and understood all the terms & conditions of the tender and its implications and agrees and binds himself/themselves to the same. All pages of tenders should be signed by bidder and return with Technical Bid.
2. The bid should be submitted in three envelopes i.e (i)Tender Fees, EMD & Checklist as per Annexure II, (ii) Technical Bid with all terms & conditions, documents & catalogs etc (iii) Price/Financial bid
3. Tender/Offer/Bids should be in English language only and it should be valid as per Bid validity from the date of opening of tender and will be binding on you for specifications offered & the rate quoted. Rate must be quoted correctly & precisely in words as well as in figure along with currency.
4. Tender should be submitted only by the Original Equipment Manufacturers (OEM) / authorized dealers/representatives.
5. Technical Bid should contain of Technical compliance statement, catalogs, details technical literature, authority letter given by OEM, Letter of Bid etc with Tender number, name of item.
6. All other charges should be clearly mentioned otherwise offer will be deemed as Inclusive of all other charges. No hidden charges will be accepted after opening of financial bid.
7. The technical compliance statement as per Annexure I shall be duly filled signed & stamped by manufacturer or his authorised and responsible person of bidding firm as a noting and acceptance & shall be binding on you during the course of supply and upto completion of contract.
8. Technical Literature / Catalogues / Brochures, technical data sheet etc. for the particular quoted models should be enclosed to technical bid.
9. All tenders pages/Quotations should be properly typed and free from over-writing. Erasing, correction or additions etc. must be attested by authorized signatory.
10. Bidders should furnish their Bankers details, GST Registration number, HSN / SAC code, PAN no. etc.
11. Bidder should furnish the valid authority letter issued by OEM for quoting on his principal behalf.
12. Incomplete offer not in line with the terms & conditions, instructions of the Tender documents and offer received by fax or after due date & time will not be considered and liable to be rejected.

13. List of standard Accessories associated with the basic machine / instruments / goods should be properly described along with technical bid and cost of all standard and associated accessories should be included in basic machine cost.
14. Bidder shall specify whether the basic items quoted are capable to meeting the required specifications as per PPDC's technical requirement or any additional/optional & essential accessories are required. If required, then bidder should specify list of standard/essential/additional/optional accessories and list should be enclosed with technical bid for proper evaluation & prices should be indicated separately in Price Bid.
15. All the clauses governing the Tender documents and the Important Notice attached should be duly filled in & stamped & signed by authorised person of bidding firm.
16. PPDC, Agra reserve the right to seek clarification/ justification from the bidders on the offered technical specifications & the bid price in case the PPDC, Agra deems it necessary based as the justification provided by the bidder, if the PPDC, Agra feels that the price is unrealistic/infeasible in order to. PPDC, Agra reserves the right to reject the said bid. The bidders shall be governed by the decision of the client.
17. PPDC, Agra reserves the right to reject any or all offers without assigning any reason whatsoever. PPDC also reserves the right to accept any tender in whole or in part without assigning any reason whatsoever. Opening of tender is no commitment whatsoever and does not prejudice the aforesaid rights of the PPDC to reject any or all offers without assigning any reason or accept any tender in whole or in part without assigning any reason whatsoever.

Payment terms:

18. Advance payment terms are not acceptable, Payment will be provided after successful installation.
19. Mere participation in the tender and offering of lowest rates does not confer any right on any party for placing order on them.
20. All the disputes arising out of the contract shall be subject to Agra (UP) India Jurisdiction only.
21. Parties are required to affect supplies, commission and install the machinery/equipment/items at various locations and extend/maintain warranty/guaranty commences from the date of completion of installation/commissioning and training.
22. All the matters concerned to and not covered herein above, the decision of Principal Director, PPDC, Agra shall be final and binding on the parties.
23. The equipment offered shall be strictly conforming to specification or better and for complete unit correct accuracies and standard.
24. The Principal Director, PPDC, Agra reserves the option of inspecting the goods by our own representative at suppliers works prior to Packing and Dispatch or by third party appointed by us. However the supplier should furnish the inspection report of the

equipment prior to inspection by PPDC representative. Supplier shall provide all facilities for carrying out the inspection. However the final inspection will be carried at PPDC, Agra. Inspection Charts and guarantee certificate of quality should be provided along with the material.

25. Training either at suppliers work or at any other place shall be to the suppliers account.
26. Supplier must enclose in technical bid their offer list of customer (with their full address and their purchase reference no.) to whom they have made similar supplies in the past five years. The date of supply should also be indicated.
27. The supplier should also mention the nearest service Centre of the equipment/machines for servicing/repairing after commissioning.
28. The equipment should be complete in all respect.

Guarantee:

1. The supplier shall furnish guarantee in respect of material and manufacturing defect in machine/equipment, performance at least for period of 12 months (one year) from the date of commissioning and installation, Any defect notified during this period shall be rectified free of cost which include replacement of part or in full as needed.

Bid Validity:

Bids should be valid for minimum 90 days from the date of opening of tender and will be binding on you for specifications offered & the rate quoted. Rate must be quoted correctly & precisely in words as well as in figure along with currency.

Late delivery charges:

1% per month to a maximum of 5% of the order value for any delay beyond agreed delivery schedule from the date of Purchase Order. PPDC reserve the right to cancel the order or a part thereof in case of delay beyond the 3 months forfeiting the EMD.

Termination of Contract:

On acceptance of tender, if the successful bidders is failure to deliver the goods within the accepted delivery period or as extended or at any time repudiates the contract before the expiry of such period the purchaser may without prejudice to their other rights may cancelled the contract.

Purchase Preference Policy Linked with Local Content (PP-LC) As per Revised Order 2017 Dates 04.06.2019.

Under the purchase Preference Policy linked with Local Content (PP-LC), the bidder or service providers are allowed to avail the purchase preference linked with attaining stipulated Local Content.

Tender Inviting Authority reserves the right to allow the bidders or manufacturers or service providers, purchase preference as admissible under the Public procurement (Preference to make in India), Order 2017-Revision policy, subject to their complying with the requirements/conditions defined herein and submitting documents required to support the same.

Local Content: Local content means the amount of value Added in India which shall unless otherwise prescribed by the nodal ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

The bidder claiming the PP-LC benefit shall be required to furnish a self-certification on bidder's letter head indicating percentage of local content and confirming that the item offered meets the local content requirement for "class I local bidder /Class II local bidder" as the case may be and this undertaking shall be certified by the authorized signatory of the bidder signing the bid giving the details of the locations at which the local value addition is made.

The onus of submission of appropriately certified documents lies with the bidder and the purchaser shall not have any liability to verify the content and will not be responsible for the same.

However, in case the procuring authority has any reason to doubt the authenticity of the local content, it reserves the right to obtain the complete back up calculations before award of order failing which the bid shall be rejected.

False declarations will be in breach of the code of Integrity under Rule 175(1)(i)(h) of the General Finance Rules for which a bidder or its successors can be debarred for up to two years as per rule 151(iii) of the General Finance Rules along with such other actions as may be permissible under law.

CALCULATION OF LOCAL CONTENT-GOODS (Below Calculation is indicative only) for detail rule, order no P-45021/2/2017-PP (BE-II) dated 04.06.2020 issued by Ministry of Commerce and Internal Trade (public procurement section) may please be referred.

Total Basic Cost of Goods/Machine (W.O. Tax) = a.

Total value of all the imported content used in construction of above Machinery/Goods (Including custom duty) = b

% Local Content= $((a-b)/a) \times 100$

(OFFICE SEAL)

(SIGNATURE OF AUTHORIZED PERSON)

NAME :

DESIGNATION :

DATED :

PART – II

ANNEXURE-II

(To be submitted by Bidder on Letter head along with Technical Bid)

Declaration of Local Content by Bidder

Name of Bidder :

Name of Machine / Model :

Manufacturer of Machine :

I/ We hereby declare that in above quoted Machine / Goods, Local Content is-----

% as per order no P-45021 /2/2017-PP (BE-II) dated 04.06.2020 issued by Ministry of Commerce and Internal Trade (public procurement section) Govt. of India.

(Signature of the Bidder, with Official Seal)

PART-I

ANNEXURE-II

(To be submitted by Bidder on Letter head along with Technical Bid)

Certificate regarding Compliance of GFR Rule 144(xi)

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India. I certify that This/My/Our firm is not from such country or, from such country, has been registered with the Competent Authority. I hereby certify that this firm fulfills all requirements in this regard (GFR rule No. 144-xi) and is eligible to be considered. (Where applicable valid registration certificate by the Competent Authority to be attached)

(Signature of the Bidder, with Official

Seal) Name of Firm :

(Letter of Bid)

(To be print on bidders letter head)

To,

The Principal Director,

MSME Technology Development Centre (PPDC) Agra,

Foundry Nagar, Agra – 282 006.

Dear Sir,

I / We agree, on acceptance of the tender in whole or in part, to supply to MSME TECHNOLOGY DEVELOPMENT CENTRE, AGRA (Process and Product Development Centre), Agra 282 006, India the machine / equipment / goods and accessories, detailed in Technical Bid (Part-I) of the Tender enclosed herewith at prices quoted by me / us in Price Bid (Part-II) of the Tender which is also enclosed herewith in a sealed cover marked Price Bid (Part- II)'. I / We agree to hold the offer open for 90 days from the due date. I / We have read and understood the terms and conditions of the tender documents which shall become Contract on acceptance of tender, and agree to be governed by the same. I / we specifically undertake that I / We will not resile from my /our offer or modify the terms and conditions thereof

Authorized Signature & Seal of Tenderer

Place :

Name :

Date :.....

Designation :.....

WITNESS Name & Address of the

firm : Signature :

Name :

Designation:

Name & Address of the firm:

ANNEXURE-III

BIDS FROM DEALERS/AGENTS WITHOUT LETTER OF AUTHORITY FROM THE ORIGINAL EQUIPMENT MANUFACTURERS ARE LIABLE TO BE SUMMERILY REJECTED.BIDS NOT ACCOMPANIED BY EMD SHALL BE REJECTED.

CHECK LIST

(to be duly filled by bidder & to be submitted along with Technical Bid)

S.No.	Particulars	Answer Ref.Page
1.	Have you submitted Earnest Money Deposit (EMD)	Yes/No
2.	Have you furnished a authority letter from OEM	Yes/No
3.	Have you returned/submitted tender documents duly filled, Yes/No signed stamped by authorized person of bidding firm	Yes/No
4.	Have you furnished catalogues/ Boucher of quoted items	Yes/No
5.	Have you furnished bankers details/ GST/HSA/SAC/PAN no. etc	Yes/No
6.	Have you furnished technical specifications compliance statement	Yes/No
7.	Have you quoted delivery period correctly and precisely	Yes/No
8.	Have you kept your offer valid for 90 days	Yes/No
9.	Have you quoted your rates in figure and words (in price bid)	Yes/No
10.	Have you agreed for PBG clause	Yes/No
11.	Have you agreed for payment clause	Yes/No
12.	Have you agreed for warranty/Inspection/Training clause	Yes/No
13.	Have you agreed for calibration certification/documentation clause	Yes/No
14.	Have you provided list of customers alongwith purchase order to whom Model/Items have been supplied. (Pl. Encl. P.O. copy to Tech. Bid.)	Yes/No
15.	Have you agreed for arbitration clause	Yes/No
16.	Have you provide details of country of origin of item, Yes/No Gross/Nett weight of shipment, Dimensions of shipment (LxHxW), Name & complete address of firm for order placement etc	Yes/No

Technical Specification of ITI Electrician Course Items:

Sl No	PPDC Requirements			Supplier Specification
	Equipment Name	Specification	Qty Required	
1	Measuring Steel Tape	5 meter	21 nos	
2	Combination Plier Insulated	200 mm	21 nos	
3	Screwdriver Insulated	4mm X 150 mm, Diamond Head	21 nos	
4	Screwdriver Insulated	6mm X 150 mm	21 nos	
5	Electrician screwdriver thin stem insulated handle	4mm X 100 mm	21 nos	
6	Heavy Duty Screwdriver insulated	5mm X 200 mm	21 nos	
7	Electrician Screwdriver thin stem insulated handle	4mm X 250 mm	21 nos	
8	Punch Centre	9mm X 150 mm	21 nos	
9	Knife Double Bladed Electrician	100 mm	21 nos	
10	Neon Tester	500 V	21 nos	
11	Steel Rule Graduated both in Metric and English Unit	300 mm with precision of 1/4th mm	21 nos	
12	Hammer, cross peen with handle	250 grams	21 nos	
13	Hammer, ball peen With handle	500 grams	4 nos	
14	Pincer	150 mm	4 nos	
15	C- Clamp	200 mm and 100 mm	2 Nos. each	
16	Spanner Adjustable drop forged, SS	150 mm & 300mm	2 Nos. each	
17	Blow lamp brass	0.5 ltr	1 no	
18	Chisel Cold	25 mm X 200 mm	2 nos	
19	Chisel firmer with wooden Handle	6 mm X 200 mm	2 nos	
20	Allen Key alloy steel	1.5-10 mm (set of 9)	1 set	
21	Grease Gun	0.5 ltr. Capacity	1 no	
22	Bradawl		2 nos	
23	Pully Puller with 3 legs	150 mm & 300mm	1 no each	
24	Bearing Puller (inside and outside)	200 mm	1 no each	
25	Pipe vice Cast Iron with hardened jaw open type	100 mm	2 nos	
26	Scissors blade, SS	200mm	4 nos	
27	Scissors blade, SS	150 mm	2 nos	
28	Crimping Tool	1.5 sq mm to 16 sq mm	2 nos	
		16 sq mm to 95 sq mm	2 nos	
29	Wire Cutter and Stripper	150 mm	4 nos	

30	Mallet hard wood	0.50 kg	4 nos	
31	Hammer Extractor type	250 grams	4 Nos.	
32	Hacksaw frame	Adjustable 300 mm Fixed 150 mm	2 Nos. each	
33	Try Square	150 mm blade	4 nos	
34	Outside Calliper	150 mm spring type	2 nos	
35	Inside Calliper	150 mm spring type	2 nos	
36	Divider	150 mm spring type	2 Nos.	
37	Pliers long nose insulated	150 mm	4 Nos.	
38	Pliers flat nose insulated	200 mm	4 Nos.	
39	Pliers round nose insulated	100 mm	4 Nos.	
40	Tweezers	150 mm	4 Nos.	
41	Snip Straight and Bent heavy duty	250 mm	2 Nos. each	
42	D.E. metric Spanner Double Ended	6 - 32 mm	2 Set	
43	Drill hand brace	0-100mm	4 Nos.	
44	Drill S.S. Twist block	2 mm, 5 mm and 6 mm set of 3	4 Set	
45	Plane cutters	50 mm X 200mm	2 Nos.	
46	Smoothing cutters	50 mm X 200mm	2 Nos.	
47	Gauge, wire imperial stainlees steel marked in SWG & mm	Wire Gauge - Metric	4 Nos.	
48	File flat	200 mm 2nd cut with handle	8 Nos.	
49	File half round	200 mm 2nd cut with handle	4 Nos.	
50	File round	200 mm 2nd cut with handle	4 Nos.	
51	File flat rough	150 mm with handle	4 Nos.	
52	File flat bastard	250 mm with handle	4 Nos.	
53	File flat smooth	250 mm with handle	4 Nos.	
54	File Rasp, half round	200 mm bastard with handle	4 Nos.	
55	Copper bit soldering iron.	0.25 kg	2 Nos.	
56	De soldering Gun	Heat proof nozzle, PVC type, 250mm	4 Nos.	

57	Hand Vice	50 mm jaw	4 Nos.	
58	Table Vice	100 mm jaw	8 Nos.	
59	Oil Can	250 ml	2 Nos.	
60	Contactors & auxiliary contacts	3 phase, 415 Volt, 25 Amp with 2 NO and 2 NC	2 Nos. each	
61	Contactors & auxiliary contacts.	3 phase, 415 volt, 32 Amp with 2 NO and 2 NC	2 Nos. each	
62	Limit Switch	Limit Switch, Lever operated 2A 500v, 2-contacts	2 Nos.	
63	Rotary Switch	16 A/440v	2 Nos.	
64	Relay- a. Cut out Relays b. Reverse current c. Over current d. Under voltage	a. 16A, 440V b. 16A, 440V c. 16A, 440V d. 360V-440V	2 No. each	
65	Pin Type, shackle type, egg type & suspension type insulators including hardware fitting		2 Nos. each	
66	Hydrometer		2 Nos.	
67	Hand Drill Machine	0-6 mm capacity	2 Nos.	
68	Portable Electric Drill Machine	0-12 mm capacity 750w, 240v with chuck and key	1 No.	
69	Load Bank (Lamp / heater Type)	6 KW, 3Ph	1 No.	
70	Brake Test arrangement with two spring balance rating	0 to 25 kg	1 No.	
71	Laboratory Type Induction Coil	1000 W	2 Nos.	
72	Out Side Micrometer	0 - 25 mm least count 0.01mm	2 Nos.	
73	Thermometer Digital	0° C - 150° C	1 No.	
74	Series Test Lamp	230V, 60W	4 Nos.	

75	Knife Switch DPDT fitted with fuse terminals	16 Amp	4 Nos.	
76	Knife Switch TPDT fitted with fuse terminals	16 Amp/ 440 V	4 Nos.	
77	Miniature Breaker	16 amp	2 Nos.	
78	Earth Plate	60cm X 60cm X 3.15mm Copper Plate 60cm X 60cm X 6mm GI Plate	1 Each	
79	Earth Electrode	Primary Electrode 2100x28x3.25mm Secondary Cu Strip 20x5mm	1 No.	
80	MCCB	100Amps, Triple pole	1 No.	
81	ELCB and RCCB	25Amps, double pole and 25Amps, double pole, I Δ n 30 mA	1 Each	
82	Fuses	HRC Glass Rewire Type	4 Each	
83	Rheostat (Sliding type)	0 - 25 Ohm, 2 Amp 0 - 300 Ohm, 2 Amp 0 - 1 Ohm, 10Amp 0 - 10 Ohm, 5 Amp	1 No. each	
84	Capacitors	Electrolytic Ceramic Polyester film Variable Dual run	2 Each	
85	Various Electronic components	Resistors, Diode, Transistor, UJT, FET, SCR, DIAC, TRAIC, IGBT, Small transformer etc.	5 nos each	
86	Various Lamps	Halogen Incandescent Lamp Fluorescent tube HP mercury vapor Lamp High- pressure sodium Lamp Low- pressure sodium Lamp LED	1 Each	
87	Plug socket Piano Switch Lamp Holder	230 V, 5 A	2 Each	
88	Cables: Twisted Pair Non-Metallic Sheathed Cable Underground Feeder	1 mtr each	1 Each	

	Cable Ribbon Cable Metallic Sheathed Cable Multi-Conductor Cable Coaxial Cable Direct-Buried Cable			
89	Bus bar with brackets	1 mtr each	3 Nos.	
90	Rubber mat	2' x 4' x 1"	2 Nos.	
91	Electrician Helmet	Yellow Colour	2 Nos.	
92	RCC Pole with accessories (MS angle iron, 'C' clamp, stay insulator etc.) and materials	6 Mtr	1 No.	
93	Safety Belt	Standard quality	2 Nos.	
94	Ohm Meter; Series Type & Shunt Type, portable box type	50/2000-ohm analog	2 Nos. each	
95	Digital Multi Meter	DC 200mv -1000v,0 – 10A & AC 200mv- 750v , 0-10A, resistance 0-20 M Ω and 3 1/2 digit	12 Nos.	
96	A.C. Voltmeter M.I. analog, portable box type housed in Bakelite case	Multi range 75 V - 150V - 300V - 600V	3 Nos.	
97	Milli Voltmeter centre zero analog, portable box type housed in Bakelite case	100 – 0 – 100 mV	2 Nos.	
98	Ammeter MC analog, portable box type housed in Bakelite case	0 - 500 mA, 0-5 A, 0-25 A	2 Nos. each	
99	AC Ammeter MI, analog, portable box type housed in Bakelite case	0 - 1 A, 0-5 A, 0-25 A	2 Nos. each	
100	Kilo Wattmeter Analog	0-1.5-3KW, pressure coil rating- 240v/440v, current rating- 5A/10A Analoge, portable type Housed in Bakelite case	2 Nos.	
101	Digital Wattmeter	230 V, 1 KW, 50 Hz	2 Nos.	
102	A.C. Energy Meter	Single Phase, 10 A, 240 V induction type	2 Nos.	

103	A.C. Energy Meter	Three Phase, 15 A , 440 V induction type	2 Nos.	
104	Power Factor Meter Digital	440 V, 20 A, Three Phase portable box type	2 Nos.	
105	Frequency Meter	45 to 55 Hz	2 Nos.	
106	Magnetic Flux Meter	0-500 tesla	2 Nos.	
107	Lux meter	lux meter LCD read out 0.05 to 7000 lumens with battery.	2 Nos.	
108	Tachometer	Analog Type - 10000 RPM	1 No.	
109	Tachometer	Digital Photo Sensor Type - 10000 RPM	1 No.	
110	Tong Tester / Clamp Meter	0 - 100 A (Digital Type)	2 Nos.	
111	Megger	Analog - 500 V	2 Nos.	
112	3- point D.C. Starter	For 2.5 KW DC motor	1 No.	
113	4- point D.C. Starter	For 2.5 KW DC motor	1 No.	
114	Wheat Stone Bridge with galvanometer and battery		2 Nos.	
115	Single Phase Variable Auto Transformer	0 - 270 V, 10Amp (Air cooled)	2 Nos.	
116	Phase Sequence Indicator	3 Phase, 415 V	2 Nos.	
117	Growler	230 V, 50 Hz, Single Phase, Adjustable jaws, Testing armature with ampere meter and testing probes.	1 No.	
118	AC Starters: - a. Resistance type starter b. Direct online Starter c. Star Delta Starter- Manual d. Star Delta Starter – Semi automatic e. Star Delta Starter – Fully automatic f. Star Delta Starter - Soft starter g. Auto Transformer type	For A.C Motors of 2 to 5 H.P.		

119	Oscilloscope Dual Trace	20 MHz	1 No.	
120	Function Generator	2 to 200 KHz, Sine, Square, Triangular 220 V, 50 Hz, Single Phase	1 No.	
121	Soldering Iron	25-Watt, 65 Watt and 120-Watt, 230 Volt	2 Nos. each	
122	Temperature controlled Soldering Iron	50-Watt, 230 Volt	2 Nos.	
123	Discrete Component Trainer	Discrete Component (for diode and transistor circuit) with regulated power supply +5,0- 5 V,+12 ,0-12 V	2 Nos.	
124	Linear I.C. Trainer	Linear I.C. Trainer with regulated power supply 1.2V to 15V PIC socket 16pin and 20 pins with bread board	1 No.	
125	Digital I.C. Trainer	Digital I.C. Trainer 7 segment display and bread board	1 No.	
	Domestic Appliances –			
126	a. Electric Induction plate	a. 1500 Watt, 240V	1 No	
127	b. Electric Kettle	b. 1500 Watts, 240V	1 No	
128	c. Electric Iron	c. Automatic - 750 W, 240 V	1 No	
129	d. Immersion Heater e. A.C. Ceiling Fan and AC Table Fan	d. 1500 Watt, 240V e. 68-Watt, 230 V	1 No	
130	f. Geyser (Storage type)	f. 10 litre	1 No	
131	g. Mixture & Grinder	g. 750 W, 240 V	1 No	
132	h. Washing Machine Semi-Automatic	h. 5 Kg,	1 No	
133	i. Motor Pump set	i. 1 HP, 1 Phase, 240 V	1 No	
134	Oil Testing Kit	Oil Testing Kit 230 V, single phase 50 Hz 60 VA output 0-60 KV Variable	1 No.	

135	Inverter with Battery	1 KVA with 12 V Battery Input- 12 volt DC, Output- 220 volt AC	1 No.	
136	Voltage Stabilizer	AC Input - 150 - 250 V, 600 VA AC Output - 240 V, 10 A	1 No.	
137	DC Power Supply	0 - 30 V, 5 A	2 Nos.	
138	Battery Charger	0 - 6 - 9 - 12 - 24 - 48 V, 30amp	1 No.	
139	Current Transformer	415 V, 50Hz, CT Ratio 25 / 5 A, 5VA	2 Nos.	
140	Potential Transformer	415 V, 50Hz, PT Ratio, 440V/110V, 10VA	2 Nos.	
141	Solar panel with Battery	18 Watt	1 Set	
142	Pentium IV Computer or latest	2.8 GHz & above, 1 GB RAM, 80 GB HDD, DVD Combo Drive, 19/21" Monitor, optical scroll mouse, multimedia keyboard, 32 bit LAN card with UPP port, necessary Drivers, etc. OR (Latest Version)	2 Nos.	
143	Ink jet/ laser printer		1 No.	
144	D.C. Shunt Generator with control panel	D.C. Shunt Generator with control panel, 2.5 KW, 220V & 3phase Squirrel cage Induction Motor, 5HP, 440V with control panel & star delta starter	1 No.	
145	Motor-Generator (AC to DC)	Squirrel Cage Induction Motor with star delta starter and directly coupled to DC shunt generator and switch board mounted with regulator, air breaker, ammeter, voltmeter, knife blade switches and fuses, set complete with case iron and plate, fixing bolts, foundation bolts and flexible coupling. Induction Motor rating: 7.5 HP, 415V, 50 cycles, 3 phases. DC Shunt Generator rating: 5 KW, 440V (Output voltage varies 110-440v)	1 No.	
146	D.C. Compound Generator with control panel including fitted rheostat,	D.C. Compound Generator with control panel including fitted rheostat, voltmeter, ammeter and	1 No.	

	voltmeter, ammeter and breaker	breaker, 2.5 KW, 220V & 3-phase Squirrel cage Induction Motor, 5HP, 440V, with control panel & star delta starter		
147	DC Series Motor coupled with spring balance load	2.5 KW, 220 Volts	1 No.	
148	DC Shunt Motor	2.5 KW, 220 V	1 No.	
149	DC compound Motor with starter and switch	2.5 KW, 220 volts	1 No.	
150	Motor Generator (DC to AC) set consisting of - Shunt Motor with starting compensator and switch directly coupled to AC generator with exciter and switch board mounted with regulator, breaker, ammeter, voltmeter frequency meter, knife blade switch and fuses etc. Set complete with cast iron bed plate, fixing bolts, foundation bolts and flexible coupling.	Shunt Motor rating: 5 HP, 440V AC Generator rating : 3-Phase, 4 wire, 3.5 KVA, 400/230 Volts, 0.8 pf, 50cycles	1 No.	
151	AC Squirrel Cage Motor with star delta starter and triple pole iron clad switch fuse with Mechanical Load.	5 HP, 3-Phase, 415 V, 50 Hz	1 No.	
152	AC phase-wound slip ring Motor with starter switch	5 HP, 440 V, 3 Phase, 50 Hz	1 No.	
153	Universal Motor with starter/switch	240 V, 50 Hz, 1 HP	1 No.	
154	Synchronous motor with accessories like starter, excitation arrangements.	3 Phase, 3 HP, 440V, 50Hz, 4 Pole	1 No.	
155	Thyristor /IGBT controlled D.C. motor drive with tacho-generator feedback arrangement	1 HP	1 No.	
156	Thyristor/IGBT controlled A.C. motor drive with	VVVF control 3 Phase, 2 HP	1 No.	
157	Single phase Transformer,	1 KVA, 240/415 V, 50 Hz	3 Nos.	

	core type, air cooled			
158	Three phase transformer, shell type oil cooled with Delta/ Star	3 KVA , 415/240 V, 50 Hz	2 Nos.	
159	Electrical Machine Trainer –	Suitable for demonstrating the construction and functioning of different types of DC machines and AC machines (single phase and three phase). Should be fitted with friction brake arrangement, dynamo meter, instrument panel and power supply unit	8 units	
160	Diesel Generator Set with changeover switch, over current breaker and water/ air-cooled with armature, star-delta connections AC 3 phase	7.5 KVA, 415 volt or higher rating	1 No	
161	Used DC Generators- series, shunt and compound type for overhauling practice		1 No. Each	
162	Pillar Electric Drill Machine Motorized	12-20 mm Capacity, 1HP, 440V, 3 phase, Induction Motor with DOL starter, Bench Type	1 No.	
163	Motorised Bench Grinder	1 HP. 3 phase, 440V with DOL starter, Double side with smooth and rough wheel with Tool Base	1 No.	
164	A.C. Series type Motor	1 HP, 240 V, 50 Hz	1 No.	
165	Single Phase Capacitor Motor with starter switch	1 HP, 240 V, 50 Hz	1 No.	
166	Manual Motor coil Winding Machine	With step arbor	1 No.	
167	Ceiling fan coil Winding Machine	250V, 50 Hz, 1- Φ , with speed control	1 No.	
168	Primary current injection set	220V, 50 Hz, 1- Φ , output current - 200 A (min) with timer	1 No.	
169	Stepper Motor with Digital		1 No.	

	Controller			
170	Shaded Pole Motor	Fractional HP, 240 V, 50 Hz	1 No.	
171	Working Bench	2.5 m x 1.20 m x 0.75 m	4 Nos.	
172	Wiring Board	3-meter x1 meter with 0.5 meter projection on the top	1 No.	
173	Instructor's table		1 No.	
174	Instructor's chair		2 Nos.	
175	Metal Rack	100cm x 150cm x 45cm	4 Nos.	
176	Lockers with drawers		20 nos	
177	Almirah	2.5 m x 1.20 m x 0.5 m	1 No.	
178	Black board/white board	(minimum 4X6 feet)	1 No.	
179	Fire Extinguisher CO2	2 KG	2 Nos.	
180	Fire Buckets	Standard size	2 Nos.	