

राजकीय इंजीनियरिंग कालेज बाँदा

(पूर्ववर्ती डा0 भीमराव अम्बेडकर इंजीनियरिंग कालेज आफ इन्फारमेशन टेक्नोलाजी बाँदा)

TENDER NOTICE No : GEC-1/2016 -01

Tender Document

FOR

**Supply & Installation of Equipments/Machines
for Laboratories in the Department of
Mechanical Engineering**

AT



Government Engineering College, Banda

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda Chitrakoot Road

Banda – 210201

(U.P.)

Tender	Supply & Installation of Equipments/Machines for Laboratories in the Department of Mechanical Engineering
Name of the firm with Full Address and Contact Numbers	
Cost of Tender Document	Rs. 2290/- (Non-Refundable with VAT)
Date of Commencement of Sale	02 March 2016 (Wednesday) (Tender document may be downloaded at www.braecit.ac.in)
Last Date of Submission of Tender Documents	17 March 2016 (Thursday) upto 12.00 Noon
Opening of Tender Documents: Date, Time and Place	17 March 2016 (Thursday) at 12.30 PM Conference Hall, Government Engineering College, Atarra, Banda-210201 (U.P.) Bidder/Authorized Representative of Bidders may attend the bid opening proceedings on above mentioned date.
Earnest Money Deposit (EMD)	As per the schedule/package given in the tender document
Bid Shall Contain	<ol style="list-style-type: none"> 1. All documents in support of Terms & Conditions and Eligibility criteria. 2. Bidders Proforma 3. Cost of Tender by way of Demand Draft only. 4. EMD by way of Demand Draft only.

Tender Issued By¹ :

Signature and Seal of Bidder

¹ The Tender Document may be downloaded from web site [http:// www.braecit.ac.in](http://www.braecit.ac.in)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201 (U.P)

A. General Information to Bidders :

- [a] Government Engineering College, Banda (Formerly Dr. B R Ambedkar Engineering College of Information Technology, Banda) was established in the year 2010 by the Government of Uttar Pradesh. The college currently offers four year B.Tech program in three disciplines, namely, Mechanical Engineering, Electrical Engineering and Information Technology with intake of Sixty (60) each.
- [b] The campus of Government Engineering College, Banda is situated on Banda-Chitrakoot Road, approx 25 Km from Banda and 04 Km from town Atarra.
- [c] Various laboratories in the Department of Mechanical Engineering/Central Workshop have already been established. Few new laboratories as per the curriculum of Dr. APJ Abdul Kalam Technical University, Lucknow need to be established soon. A list of these laboratories along-with list of equipments required in each laboratory along with their specifications is given in the tender document.
- [d] ***Tenders are being invited for supply and installation of equipments/machines to establish various laboratories. Each laboratory will be treated as one package/unit. It is expected that a firm selected for the establishment of a laboratory shall supply all equipments of that laboratory. The firm will also complete the work of installation/mounting and commissioning of these equipments/machines. This includes concrete foundation work (in case of heavy machines), electrical safety/electricity wiring in the laboratory premises to make these equipments functional.***
- [e] Location/Halls for these laboratories have been identified within the main building. All rooms/halls are well finished with electric supply and tile floors.

B. Detail of Laboratories (Package)

Sl. No	Package	Name of Laboratory	Department	Earnest Money (in Rs)
1.	Package-1	Workshop	Mechanical Engineering	Rs 15000=00
2.	Package-2	Material Science and Testing Lab	Mechanical Engineering	Rs 10000=00
3.	Package-3	Machine Drawing Lab	Mechanical Engineering	Rs.4000=00
4.	Package-4	Manufacturing Science Lab-I	Mechanical Engineering	Rs 6000=00
5.	Package-5	Manufacturing Science Lab-II	Mechanical Engineering	Rs 40000=00
6.	Package-6	CAD/CAM Lab (CNC Machine)	Mechanical Engineering	Rs 20000=00
7.	Package-7	Fluid Mechanics/Hydraulics Lab	Mechanical Engineering	Rs 30000=00
8.	Package-8	Measurement and Metrology Lab	Mechanical Engineering	Rs 10000=00

C. Submission of the Bid :

1. Sealed and separate tenders in two parts i.e. **Tender Bid-I** and **Tender Bid-II** are invited for **Supply and Installation of Equipments/Machines in the Laboratories of Department of Mechanical Engineering at Government Engineering College, Banda** along with earnest money amounting to the value mentioned with each package in the tender document in form of demand draft only. Both envelopes should be kept in one big envelope. The tenders should reach to the undersigned on or before by **17 March 2016 (Thursday) at 12.00 Noon.**
2. Tenders should be submitted either in person or by post in sealed envelopes on which name of package/unit, tender number and date along with name and address of the firm must be written.
3. **TENDER BID-I** (Technical) shall contain (i) Tender cost (non refundable) (ii) Earnest Money (iii) Proof of PAN and TIN registration document (iv) Standing of the firm (v) Major supplies executed in recent past (vi) Authorized dealer certificate from OEM & Commercial terms and conditions.

4. **TENDER BID-II** (Financial) shall contain rate schedule only. The rates must be quoted in both figures and words. Any overwriting and/or cutting must be duly attested failing which tenders are likely to be rejected.
5. **Tender Cost of Rs 2290=00 (with VAT) and Earnest money** amounting to the **value given in the tender document for each package** in the form of separate Demand Drafts drawn in favour of *Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi*, should also submitted with the tender.
6. Envelopes containing “**TENDER BID-I**” and “**TENDER BID-II**” should be sealed in two separate envelopes by writing “**TENDER BID-I**” and “**TENDER BID-II**” appropriately.
7. Earnest money and Cost of Tender in the form of Bank Drafts must be placed in a separate sealed envelope by writing “**Earnest Money**” on top of the envelope.
8. All the envelopes as above must be kept and sealed in a big envelop. The Package number/ name of package, enquiry/tender no and the opening date should invariably be mentioned on the top of big envelope.
9. Sealed tenders should be sent to the Director, Government Engineering College, Atarra, Banda-210201(U.P.) so as to reach there latest by **17 March 2016 (Thursday) at 12.00 Noon**. The sealed tenders may also be dropped in the box kept at office of Registrar at College campus at Government Engineering College campus at Atarra, Banda.
10. Tender shall be opened in the Conference Room at Government Engineering College, Atarra, Banda-210201 on **17 March 2016 (Thursday) at 12.30 PM**. The firm/supplier may send their authorized representative (letter of authorization is must) for participation during bid opening.
11. The firm/supplier bidding for any package(laboratory) must supply all the equipments listed in that laboratory. The Bid of the firm NOT quoting for supply of ALL equipments of that Laboratory will be rejected.

D. Terms and Conditions for Submission of Tenders

1. Sealed quotations/tenders should be sent to Director, Government Engineering College, Atarra, Banda-210201 so as to reach there latest by **17 March 2016 (Thursday) at 12.00 Noon**
2. Our enquiry/tender no and the opening date should invariably mentioned on the top of envelope alongwith name of user department. Earnest money and cost of tender must be placed in a

- separate sealed envelope by writing "Earnest Money" on top of the envelope.
3. Firms will have to attach the list of customers to whom they have supplied similar items in previous year along with performance reports. Total turnover of the firm must be atleast 30 Lacs per year in the last consecutive years. A certificate to these effects should be issued from the sales tax department.
 4. The descriptive and illustrative literature of the quoted item in original must accompany with the tender.
 5. Tenders received after the closing date and stipulated time shall not be considered and the institute shall not be responsible for any postal delay.
 6. Tender should be valid atleast for a period of 04 months. (04 Months from opening date of tender).
 7. The rates must be quoted in both figures and words. Any overwriting and/or cutting must be duly attested, failing with quotations/tenders are likely to be rejected.
 8. Our terms of payments are strictly after receipt of material and check at our institute regarding the quality and working experience.
 9. The rates should be quoted for store, Government Engineering College, Atarra, Banda-210201 inclusive of all taxes/excise duty/fright/package/forwarding expenses/insurance etc.
 10. Firm shall be solely responsible for defective supplies and losses caused to college on account of defective supply.
 11. Quotation/ Tender brought personally should be dropped into into tender box.
 12. Suppliers must be registered with sales/trade tax department and they should mention state registration no.
 13. Quantity of items may increase or decrease or may be cancelled upto any extent.
 14. No sales tax form "C" or "D" etc for concessional rate shall be provided by the institute.
 15. All tender must be accompanied by Bid security as mentioned in the tender document in the form of demand draft / Bankers Cheque drawn in favour of Director, Dr B R Ambedkar Engineering College of Information Technology payable at Jhansi.
 16. Quotations deviating from above terms and conditions shall be rejected straight way without assigning any reason thereof.
 17. Security bid will be forfeited if the equipment's are not supplied in given time.
 18. If required, the firms have to supply the sample of the items.
 19. If certain equipment/material needs to be checked/tested at site of the firm, all expenditure (including TA/DA) of our expert members shall be borned by the firm concerned.
 20. Penalty : The firm, which is not able to supply the equipment's/materials mentioned in purchase order by the due date , shal be liable to pay a penalty equal to 0.10 % of the value of

- purchase order per day. However this can be waived of by the Director under special circumstances.
21. Ninety percent of contract price shall be paid to the supplier within 30 days after the delivery / commissioning / testing and completion of the work. The remaining 10% of contract price shall be paid to the supplier within 30 days after the date of acceptance certificate issued by purchaser representative for the satisfactory working.
 22. Director has every right to extend the due date if so required but all the quotations/tenders will be opened together.
 23. Deduction of TDS/Trade Tax as per Govt Rules.
 24. The College may reject any or all quotations/tenders without assigning any reasons.
 25. The firm must provide original Guarantee/Warrantee card as issued by the manufacturer, as the case may be.
 26. All tender must be accompanied by EMD and Cost of Tender as mentioned in the tender document in the form of demand draft / Bankers Cheque drawn in favour of Director, Dr B R Ambedkar Engineering College of Information Technology payable at Jhansi.
 27. Quotations deviating from the terms and conditions shall be rejected straight way without assigning any reason thereof.
 28. Director, Government Engineering College, Atarra, Banda-210201 has every right to extend the due date, if so required, but all the quotations/tenders will be opened together.
 29. The Government Engineering College, Atarra, Banda-210201 may reject any or all quotations/tenders without assigning any reasons.

**For
Government Engineering College,
Atarra,Banda-210201**

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201 (U.P)

TENDER BID-I : Package-1

Tender	Supply and Installation of Equipments/Machines in Laboratories in the Department of Mechanical Engineering Workshop
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda. (Located on Banda-Chitrakoot Road, approx 25 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-1

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-1	Workshop					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201 (U.P.)

TENDER BID-I : Package-2

Tender	Supply and Installation of Equipments/Machines Laboratories in the Department of Mechanical Engineering Material Science and Testing Lab
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-2

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-2	Material Science and Testing Lab					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201 (U.P.)

TENDER BID-I : Package-3

Tender	Supply and Installation of Equipments/Machines Laboratories in the Department of Mechanical Engineering Machine Drawing Lab
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-3

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-3	Machine Drawing Lab					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)
Banda – 210201

TENDER BID-I : Package-4

Tender	Supply and Installation of Equipments in Laboratories in the Department of Mechanical Engineering Manufacturing Science Lab-I
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-4

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-4	Manufacturing Science Lab-I					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)
Banda – 210201 (U.P.)

TENDER BID-I : Package-5

Tender	Supply and Installation of Equipments in Laboratories in the Department of Mechanical Engineering Manufacturing Science Lab-II
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-5

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-5	Manufacturing Science Lab-II					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201

TENDER BID-I : Package-6

Tender	Supply and Installation of Equipments in Laboratories in the Department of Mechanical Engineering CAD/CAM Lab (CNC Machine)
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-6

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-6	CAD/CAM Lab (CNC Machine)					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)

Banda – 210201

TENDER BID-I : Package-7

Tender	Supply and Installation of Equipments in Laboratories in the Department of Mechanical Engineering Fluid Mechanics/Hydraulics Lab
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-7

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-7	Fluid Mechanics/Hydraulics Lab					

(Date and Signature of Authorized Signatory with Seal on each page)

Government Engineering College

(Formerly Dr. Bhimrao Ambedkar Engineering College of Information Technology)
Banda – 210201

TENDER BID-I : Package-8

Tender	Supply and Installation of Equipments in Laboratories in the Department of Mechanical Engineering Measurement and Metrology Lab
Name of the firm with Full Address and Contact Numbers	
FOR	Government Engineering College, Atarra, Banda (Located on Banda-Chitrakoot Road, approx 20 Km from Banda and 04 Km from town Atarra)
Cost of Tender Document	DD No : Amount : Bank : Date : (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
Earnest Money Deposit (EMD)	DD No : Amount : Bank : Date (DD must be drawn in favour of Director, Dr. B R Ambedkar Engineering College of Information Technology payable at Jhansi).
PAN/TIN/TAN No	Attach Proof
Original Equipment Manufacturers/Authorization Letter from Manufacturers for sales/service and technical support.	Attach Proof
Turn Over in the last THREE Financial Years (in Rs)	Attach Proof
Details of Similar Work Executed during last THREE years	Attach Proof

(Date and Signature of Authorized Signatory with Seal on each page)

TENDER BID-II : Package-8

Package No	Laboratory Name	Cost of all Equipments	VAT (In Rs)	Cost Of Installation, Mounting, Commissioning of Equipments	VAT (In Rs)	Total Cost (Rs)
Package-8	Measurement and Metrology Lab					

(Date and Signature of Authorized Signatory with Seal on each page)

Annexure

Department of Mechanical Engineering

Specification/ Quantity of Equipments/Machines of Labs (Package Wise)


PACKAGE-1 (Workshop)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
1	LATHE MACHINE 3 Jaw Chuck, 4 Jaw Chuck, Steady Rest, Follow Rest, Face Plate, Coolant Pump, Work Light, Change Gears, Dial Indicator, Dead Center and Center Sleeve, Splash Guard, Chip Pan, Toolbox with Tools	Max Swing Dia. over bed 360mm Max Swing Dia. over gap 491mm Max Swing Dia. over carriage 215mm Bed width 186,	Workshop	01
2	Lathe Machine 5'6" with 1 HP motor, 3 Jaw 200, 4 Jaw 200@ chunk and electrical	5' 6" with 1 Hp motor, 3 jaw 200 Ø, 4 jaw 200 Ø chuck and electrical.	Workshop	01
3	Cutting tools, drill bits 20 set, tap set die etc.	<ol style="list-style-type: none"> 1. Drill bit dia 2, 3, 4, 5mm 10 Nos each and 6, 8, 9, 10mm 5 Nos. each 2. HSS ½" SqX 4" Tool bit -10 Nos. 3. HSS ¼" Sq X 3" Tool bit -5 Nos 4. Diamond Knurling tool- 02 Nos. 5. Plane Knurling tool- 02 Nos 6. Tap set -8,10 mm dia with tap handle – 01 set each. 7. Die set -8, 10 mm dia with die holder – 01 set each. 8. Revolving centers (MT4) – 02 Nos. 9. Parting tool 1/2X1/8X4"- 05Nos. 10. Parting tool holder 1/2X1/8X4"- 02 Nos. 11. Center Drill bit- 03 Nos. 12. Drill chuck with key (MT3) 13. Elan key set – 01 No. (Inch size), 01 No (MM size) 14. Ring spanner 01set 15. D-spanner – 01 Set 16. Screw wrinch 06" and 12 " 01 No. each 	Workshop	01
4	Shearing Machine capable to cut up to 2mm	3"ft, capable to cut up to 2mm	Workshop	01
5	Pedestal Grinder	8" wheel (Double), 2HP, 3 phase motor	Workshop	01
6	Pillar Electric Drill Machine	12 mm capacity, 6 step speed, 2HP 3 phase motor	Workshop	01
7	Power Hacksaw with auto stop,hydraulic	Complete, with a capacity to hold 18" blade, AC motor, 3 phase, 2HP	Workshop	01
8	Gas Welding Machine Unit complete	Oxygen cylinder, acetylene cylinder, pressure regulators, hoses, gas control valve, welding torch and welding tip.	Workshop (Welding Shop)	01

PACKAGE-2 (Material Science & Testing Lab)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
9.	Spring Testing Machine (Tension & Compression)	500 kg force with digital indicator	Material Science& Testing Lab	01
10.	Fatigue Testing Machine	For Pure Bending (Rotatary Bending fatigue)	Material Science& Testing Lab	01
11.	Creep Testing Machine	Load and Temperature Controlled	Material Science& Testing Lab	01
12	Plastic Moulding Machine	With different metallic mould for Small Different Specimen	Material Science& Testing Lab	02
13	Abrasive cut-off Wheel Machine	For Different Metals (18" dia wheel)	Material Science& Testing Lab	02
14	Power Grinder	Electric Bench Type grinder	Material Science& Testing Lab	02
15	Polishing Machine with Polishing cloth and Power of Different grade	For Metal Surface Polishing	Material Science& Testing Lab	02
16	Muffle Furnace	Max Temperature 1200° C with digital temperature indicator PDI control	Material Science& Testing Lab	01

PACKAGE-3 (Machine Drawing Lab)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
17	Drawing Board	<p>Drawing Board with Stand Made of selected and best seasoned pined wood with toung and grove joints strong bations at back, metal washer in slots allowing expension and contraction due to atmospheric hangs. The bation edges are polished and one side inlaid with ebony. Stand with Adjustable type.</p> <div style="text-align: center;"><p><u>DRAWING BOARD WITH STAND</u></p></div>	Machine Drawing	60

PACKAGE-4 (Manufacturing Science Lab-1)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
18	Power Hammer	Head Weight 50 lbs, Overall Weight 1000 lbs Height 5 ft, Foot Print 24 in x 30 in, Air Source 10 cfm at 90 psi, Strokes Per minute (max) 100 Max, bar size 1.5 in x 1.5 in, Air Pressure 50 to 100 Psi, Die size 2" high x 2" wide x 3.5" long Die Material S7	Manufacturing Science-I	01
19	Sieve Shaker	With Different grade Sieve Sheets	Manufacturing Science-I	01
20	Moulding Machine	Cast Iron	Manufacturing Science-I	02
21	Tube Bending Machine	Capable for bending different dia. ½" to 1½" tubes	Manufacturing Science-I	02
22	Press Machine	For Blanking/Piercing /Washer Making - 1Tonne	Manufacturing Science-I	01

PACKAGE-5 (Manufacturing Science Lab-2)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
23	Vertical Milling Machine Standard Accessories:- 4 KW Electric motor with control panel, Coolant System, Longitudinal auto, Machine Lamp, Tools, Manual Optional Accessories (Required) Universal Dividing Head size 135mm, Face Milling cutter size: 125 x 32 Bore dia. With index able carbide inserts, Swivel base Machine vice 160mm	Distance from spindle axis to column 320mm Distance from spindle nose to table 45-445mm Range of spindle speed 58-1710 rpm Table size 1320/320, Arbor size (22, 27 32)mm	Manufacturing Science-II	01
24	Horizontal Milling Machine	Table size 1320x320(52x13) mm, Longitudinal travel of Axis X (manual/auto) 800/750 (31/30)mm, Cross travel of Axis Y (manual/auto) 300 (12)mm, Vertical travel of Axis Z (manual/auto) 400 (16), Spindle speed /step 58-1800/12, Distance from vertical spindle axis to column surface 320 (13)mm, Distance from vertical spindle nose to table surface 0-341 (0-13)mm, Distance from horizontal spindle axis to table surface 0-400 (0-16)mm, Distance from horizontal spindle axis to arm bottom 175 (7)mm, Arm travel 500 (20)mm, Feed speed of Axis X/Y (Longitudinal/cross) 20-360/8 mm/min.	Manufacturing Science-II	01
25	Milling M/C cutters, Arber etc	Involutes gear cutter of module 1.5, 2.0 and 2.5 of 22/27mm bore dia, side and face cutter 100*40*27/22mm, slitting cutter 100*5*27/22mm, angle cutter (Single 45°/ Double90°)	Manufacturing Science-II	01
26	Shaper Machine with electrical motor	18 inch	Manufacturing Science-II	01
27	Arbor press 2No	1 Tonne	Manufacturing Science-II	01
28	Surface Grinder Machine	9'-18" with magnetic chuck 8"x18" with electric motor 1- HP with tool kit	Manufacturing Science-II	01
29	Tool and Cutter Grinding Machine	Max. Grinding diameter 250 mm, Distance between centers 650 mm, Distance between back center and universal center 480mm, The max. swivel angle of the worktable 120°, Working surface of table 940 × 135 mm, Table longitudinal travel 400 mm, Table transverse travel 230 mm Vertical traveling of wheel head 230 mm, Range of wheelhead spindle speeds 2650/3800/5350 / 7600 r/min,	Manufacturing Science-II	01

PACKAGE-6 (CAD/CAM Lab)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
30	CNC Machine Maultispindle, automatic Compact, low vibration portal frame construction with top mounting cam shaft, resulting in wide open tooling area, easy access to tooling and control cams, unrestricted swarf disposal. Bar automats with bar feeding and clamping feature. Chuck automats/ with manual loading and unloading feature.	Bar Capacity 32mm, Max. Dia. Bar Feed Circular 32 mm, Square 22 mm, Hexagon 27 mm , Max. Length Turned 100 mm, No. of Tool Stations 12 rpm, Spindle Speeds Range 260-2400 rpm/342-3080 rpm or similar	CAD/CAM Lab	01

PACKAGE-7 (Fluid Mechanics/Hydraulics Lab)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
31	Impact of jet apparatus	Complete Set-Up	Fluid Mechanics /Hydrolics	01
32	Orifice apparatus	Complete Set-Up	Fluid Mechanics /Hydrolics	01
33	Flow measurement apparatus venturimeter & orifice meter	Complete Set-Up	Fluid Mechanics /Hydrolics	01
34	Bend meter	Complete Set-Up	Fluid Mechanics /Hydrolics	01
35	Reynold apparatus	Complete Set-Up	Fluid Mechanics /Hydrolics	01
36	Pitot static tube apparatus	Complete Set-Up	Fluid Mechanics /Hydrolics	01
37	Pipe friction apparatus	Complete Set-Up	Fluid Mechanics /Hydrolics	01
38	Open circuit sub soni wind tunnel	Complete Set-Up	Fluid Mechanics /Hydrolics	01
39	Metacentric height apparatus	Complete Set-Up	Fluid Mechanics /Hydrolics	02
40	Hydraulic Bench	Complete Set-Up	Fluid Mechanics /Hydrolics	02
41	Tilting Flume	Complete Set-Up	Fluid Mechanics /Hydrolics	01
42	Centrifugal pump test rig	Complete Set-Up	Fluid Mechanics /Hydrolics	01
43	Francis Turbine test rig	Complete Set-Up	Fluid Mechanics /Hydrolics	01
44	Kaplan turbine test rig	Complete Set-Up	Fluid Mechanics /Hydrolics	01
45	Pelton wheel turbine test rig	Complete Set-Up	Fluid Mechanics /Hydrolics	01
46	Rotameter test rig.	Complete Set-Up	Fluid Mechanics /Hydrolics	01
47	Hydraulic ram test rig.	Complete Set-Up	Fluid Mechanics /Hydrolics	01
48	Reciprocating pump test rig	Complete Set-Up	Fluid Mechanics /Hydrolics	01

PACKAGE-8 (Measurement and Metrology Lab)

Sr No	Equipment/ Item Name	Specification	Name of Lab.	Quantity Required
49	Vernier Calipers	300,250mm	Measurement and Metrology Lab	10
50	Micrometer	1 Digital & 6Manual	Measurement and Metrology Lab	1+6
51	Sine bar	0-300mm,0-350mm,250mm	Measurement and Metrology Lab	2 each
52	Tachometer	0-10000 rpm	Measurement and Metrology Lab	2
53	Slip gauges	Set of slip gauges 6 boxes	Measurement and Metrology Lab	5
54	Limit gauges	GO and No Go of different sizes	Measurement and Metrology Lab	10
55	Level protector	For angle measurement	Measurement and Metrology Lab	4
56	Feeler Gauges		Measurement and Metrology Lab	4
57	Dial indicator	Plunger Movement 10 mm	Measurement and Metrology Lab	2
58	Surface Plate	4square feet	Measurement and Metrology Lab	5
59	Strain gauge indicator	With applicator toolkit and different load cells	Measurement and Metrology Lab	3
60	Optical stroboscope		Measurement and Metrology Lab	2
61	Plug gauge	20mm dia.	Measurement and Metrology Lab	10
62	Plug & ring taper gauge	Mt3	Measurement and Metrology Lab	2