

OFFICE OF THE PRINCIPAL
GOVERNMENT POLYTECHNIC, BALODABAZAR, DISITT – BALODABAZAR-BHATAPARA
(C.G.) 493228

e-mail Address:- gpbalodabazar@gmail.com
Contact No.: 8986892089 / 8602289885 / 9827972266



**TENDER - DOCUMENT
FOR**

PURCHASE OF MACHINE & EQUIPMENTS

**FIRST YEAR (C/M/E) LAB
(2020- 2021)**

निविदासूचनाक्रमांक / शा0पॉ0बबा0 / स्टोर / 2021 / 129

बलौदाबाजार, दिनांक:-15/01/2021

- | | |
|------------------------------|---|
| 1. Value of work | Approx Rs 877475/- (Rs. Eight Lacs
Seventy Seven Thousand Four Hundred
Seventy Five only) |
| 2. Tender document issued to | M/s-----
----- |
| 3. Cost of Tender | Rs 500-00 (Rs Five Hundred only) |
| 4. Money receipt & Date | ----- |
| 5. Date of issue of tender | ----- |

Issued by

Principal,
Government Polytechnic Balodabazar
Disitt – Balodabazar-Bhatapara,CG

OFFICE OF THE PRINCIPAL
GOVERNMENT POLYTECHNIC, BALODABAZAR, DISITT – BALODABAZAR-BHATAPARA
(C.G.) 493228
e-mail Address:- gpbalodabazar@gmail.com

TERMS AND CONDITIONS

Terms and conditions for supply of Machines & Equipments are as per following list:

1. For participation in tender process following signed and stamped documents must be furnished in envelope A – super scribed as “**Technical Bid envelope A**”.
 - a. Income Tax returns of the last three years and Commercial Tax clearance certificate as well as PAN/TAN/TIN/GST registration No. with documental proof.
 - b. Registration of firm/company.
 - c. Sales tax/GST clearing certificate.
 - d. GST certificate from commercial tax department for the related business. GST Registration certificate must be valid and live.
 - e. ISO/BIS certificate for firm/product.
 - f. Manufacturer/dealer/distributor certificate.
 - g. Balance sheet /Turnover of firm/company of last three years duly signed by CA.
 - h. **Demand Draft for Tender fee (if downloaded from website) and Demand Draft for EMD.**
 - i. Item specifications/Literature /Brochure / leaflet regarding quoted items.
 - j. Acceptance of terms and condition (signed and stamped copy of tender document).
 - k. Any other document which you consider as necessary.
 - l. The bid shall be accompanied by Proforma for Technical bid in Annexure-I.
 - m. The bid shall be accompanied by Proforma for DECLARATION FOR NOT BLACK LISTED in Annexure-III.
 - n. The bid shall be accompanied by affidavit in prescribed format as given in Annexure-IV on non-judicial stamp paper or Rs 50 certified by Notary.
 - o. Properly filled vendor information form given in Annexure-V(Valid Email-id should be furnished in so that order can be placed via email id)
2. Envelope B should contain Financial bid in Proforma as given in Annexure-II along with taxes and discount if any and super scribed as “**Financial Bid envelope B**”.
3. Both envelope A & B should be put in a third big envelope and Super scribed as “**Tender for supply and installation of machine & equipments**” –**First Year (C/M/E) Laboratory** on the top of the envelope. All envelope should be signed and should be sealed on all joints.
4. All Sealed envelope for the tender should be super scribed as **Tender Notice No. GPBB/STORE/2021/129, Balodabazar, dated- 15/01/2021** should be addressed to Principal, Government Polytechnic, Balodabazar Vill.-Sakari, District – Balodabazar-Bhatapara(CG) Pin No. 493228.
5. Envelope-A of Technical bid and documents will be opened first and if it is found worth

- consideration then only the Financial bid Envelope –B will be opened.
6. The tender is liable to be rejected if not submitted as per the prescribed conditions and in the prescribed format in envelope A and B .as given in point 1 & 2 .No further clarification will be entertained.
 7. The suppliers should quote their offer/ rate in clear terms without any ambiguity. Discount if any must be clearly specified.
 8. The tender will be opened on the date and time given above in the presence of tenderer(s) or their representative who desire to be present.
 9. Tender received after due date and time will not be entertained.
 10. Tender form is nontransferable.
 11. The tender document is also available on the website <http://gpbalodabazar.com>tenderer can download the document from the website, in that case he has to deposit DD of Rs 500=00 in favor of **Principal, Government Polytechnic, Balodabazar Distt – Balodabazar-bhatapara (C.G.)** at the time of submission of tender in Envelope-A. Otherwise his tender will not be entertained.
 12. A soft copy of the tender should be submitted along with the tender document.
 13. Item no. and page no of the tender form should be strictly in chronological order. Make/model, name of the manufacturer with complete address should be mentioned against each item and equipment.
 14. The tender should be sent in firms own letter pad along with terms and conditions. Printed condition on the back of the tender will not be binding unless separately mentioned.
 15. The tenderer must furnish complete and detailed technical specification supported by printed literature/catalogue/leaflet of the equipment offered. Item no.and page no. of the equipment should be mentioned in it. Incomplete specifications/ absence of printed literature support may result in to the rejection of the tender.
 16. The rate should be FOR destination(**Govt. Polytechnic, Balodabazar, Village– Sakri& P.O. –Amera, Tehsil - Pallari, Distt–Balodabazar-Bhatapara (C.G)**) including all taxes, packing forwarding, transportation etc.Warranty/Guarantee installation if any on any item it should also be stated clearly.
 17. Taxes, (whichever is applicable state clearly item wise) if leviable extra, should be clearly indicated, failing which the rate quoted in the tender will be considered as inclusive of all taxes.
 18. There should be no alterations / corrections made in the Tender. The tenderer may quote the rate of any or all the items listed in the tender form. Rates should be quoted separately for individual item and not in lump-sum for all taken together.
 19. An Earnest Money Deposit (EMD) of amount Rs 3% in form of Demand Draft must be given in favor of **Principal, Government Polytechnic, Balodabazar** payable at **Balodabazar Disitt – Balodabazar-Bhatapara (C.G.)**.Tenders received without EMD will be rejected. Exemption of EMD will be provided to those tenderer who comes under Chhattisgarh Store Purchase Rules 2002, clause-4 sub clause-4.7.However the tenderer needs to provide sufficient documentary evidence in support of the exemption along with the tender document to avail the same.
 20. In case of non- acceptance of the tender the EMD will be refunded to the tenderer in due course of time without interest. The EMD will be treated as security deposit in case of selected tenders EMD/ security deposit will be forfeited in case of breach of agreement of supply by the tenderer/supplier. The order shall stand cancelled and security deposit forfeited if.

- (I) Supplier expresses his inability to execute the order for the quoted items within the validity of supply order period at the rate quoted in the tender and for makes/ brand quoted in the tender.
 - (II) The complete equipment is not supplied within the delivery period (approximately 20-25days) mentioned in the order or within the extended period permitted.
21. Delivery period with installation for the items will be approximately 20-25days only.
 22. Any Equipment/ Trainers/ Hardware or software breakdown must be attended within 48 hours during the valid warranty period of the equipment/ software, free of cost.
 23. Payment shall be released after the successful installation and demonstration/testing of the machine equipment at the institution.
 24. The training for at least two persons for handling the machine/equipments shall be testing provided by the supplier at his own cost.
 25. The tenderer has to give demonstration/testing of the machine/ equipments software at **Government Polytechnic BalodabazarDisitt – Balodabazar-Bhatapara(C.G.)** wherever necessary at his own cost.
 26. Equipment received after the delivery period or dispatched after the delivery period mentioned in the order will not be accepted and will be taken back by the supplier at his own cost and risk,.
 27. In case of any default in execution of the order, the undersigned reserves the right to forfeit the EMD/Security deposit. The undersigned also reserves the right to cancel the order and forfeit the EMD/Security deposit in case the tenderer fails to adhere strictly to all terms and condition of the order/ tender.
 28. If defects of any kind or deviations from the specification are detected and reported to the supplier, the supplier should make replacement or rectify the defects free of cost within 10 days from the date of report, failing which the equipment will not be accepted and will be taken back by the supplier at his own cost and risk, and the EMD will be forfeited, In case the equipment is sent for repairs to the firm, it should be repaired within 10 days. From the date of receipt of equipment failing which the same will not be accepted and EMD will be forfeited, however the undersigned may consider the delay in deserving cases at his/her discretion.
 29. The undersigned reserves the right to increase/ decrease the quantity of the equipment to be supplied. If equipment supplied are not according to the ordered specifications and are not of proper quality, the same will not be accepted. Similarly second hand, reconditioned, damaged, repaired and substandard equipments and equipment having poor workmanship would not be accepted. Only brand new equipment calibrated in SI unit and with fine workmanship will be accepted.
 30. The submission of the tender will be deemed to be the acceptance of all the terms and condition of the tender as stated herein and/ or elsewhere in the tender document.
 31. Exact and earliest possible time of delivery should be indicated in the tender against each item. The delivery period given in the order will be the date of receipt of the equipment in the institute and not the date of dispatch of the equipment by the supplier.
 32. No advance payment will be made. The successful tenderer will have to execute in the form as approved by Government of Chhattisgarh.
 33. If tenderer has supplied these items to any PSU/ Government/reputed Private firm/deptt. Then submit last three years PSU/ Government/ Private Supply record as far as possible.

34. The minimum guarantee/warranty period for the equipment supplied by the supplier should be mentioned clearly and should not be less than one year from the date of installation. The tenderer will be required to undertake repair/ replacement of defective parts free of cost at the institution during the guarantee period.
35. All the disputes with regard to the contract of purchase of equipment etc. is subjected to **Balodabazar Chhattisgarh** Jurisdiction only.
36. In the event of the order, supplier who is the manufacturer of the equipment will be required to furnish a certificate to the effect that they are manufacturers of such and such make whereas the authorized dealer/distributor will have to furnish certificate issued by the manufacturer certifying that tenderer is their authorized dealer/distributor of that product/item. Without this certificate tender will not be accepted.
37. The tenderer shall guarantee that after sales services will be provided as and when required. Replacement or repair of part should be done and delivered free of cost at this institution within guarantee/warranty period.
38. The supplier will render necessary assistances, if required, in the installation of the equipment/ machinery in the institute/ site free of charge.
39. No. offer should be made for imported item for which import license has to be arranged by the supplier. The entire imported item will have to be delivered in the institute and payment will be made in rupees.
40. The payments shall be released only after satisfactory and successful commissioning and installation of the equipment/ machinery at the designated site/ institute and on submission of bill by the firm.
41. In the event of any dispute arising out of the tender or from the resultant contract, the decision of the Principal, **Government Polytechnic, Balodabazar Disitt – Balodabazar (C.G.)** will be final.
42. The Tender document/ resultants contract will be interpreted under Indian laws.
43. The undersigned is not responsible for any loss or damage to the equipments during transit irrespective of the fact that they are insured or not insured or delivery is ex- go down or factory station.
44. No claim shall be entertained in respect of interest on Earnest Money/Security deposit/ Tender Deposit.
45. Inspection of the equipment will be carried out at the institution after receipt of the equipments. Any request for the inspection of the same at the firm's factory/ go down/ showroom etc. will not be accepted.
46. Illustrated operation manuals, pamphlets/catalogue/literature/working instructions, trainers, software and hardware, erection/ wiring details as the case may be of the ordered equipments must be supplied in suitable damp proof cover. Without operational/instruction manual no equipment/machinery will be accepted.
47. If there is any variation of specification of any machine /equipment from tendered specification, it should be clearly mentioned. Specification nearest can also be considered if it is as per technical norms for the given equipment/machinery.
48. Tenderer should mention list of spares, tools and accessories provided along with equipment without any extra cost.
49. Only actual manufacturer or their authorized dealer/distributor may submit the tender .It is mandatory to have ISO/BIS certification for supply/manufacture of the item/equipments/machineries. Only BIS/ISO /ISI certified item has to be quoted.
50. The bidder shall submit a signed and stamped (on each page) copy of tender document as testimony of acceptance of T&C of tender document.

51. No octroi/excise duty shall be paid by the institution.
52. All prices quoted and other information in this regard having a bearing on the price shall be written both in figures and words in the prescribed offer form. If there is a discrepancy between words and figures, the amount mentioned in words will prevail. All prices should be in Indian National Rupees (INR).
53. Tenderer shall be entirely responsible to pay all Government. (Central and State) GST Taxes & DUTIES, custom duties and levies, sales tax, payable on components, raw materials any other items used for their consumption or dispatched directly to respective location of **Government Polytechnic, Balodabazar Disitt–Balodabazar-Bhatapara (C.G.)**.
54. **In case of supply order value is 2.5lacs or more in this case supplier will have to deposit 2% GST TDS of Net Value in the form of Demand Draft(DD) in favor of Principal, Government Polytechnic, Balodabazar payable at Balodabazar, Disitt – Balodabazar-Bhatapara (C.G.)**.
55. **Delivery and Documents**
The suppliers shall notify the purchaser & delivery the following documents to be Purchaser-
 - 1) Three Original copy of the suppliers Invoice, showing Purchaser, The Purchaser order number, Goods Description, quantity, unit price and total amount. Invoice must be signed in original and stamped or sealed with the company stamp/seal.
 - 2) One original of the manufacturers warranty certificate (if any) covering each item supplied.
 - 3) Invoice should be raised in the name as “PRINCIPAL, GOVERNMENT POLYTECHNIC BALODABAZAR (CG)
56. **OTHER IMPORTANT CONDITIONS**
 1. The purchaser shall have all rights to modify, addition, subtraction of any term(s) and condition(s) of the tender and different bids therein during any time of tender process, which shall be communicated to the tenderer.
 2. Any condition imposed by the firm/ Manufactures/company/Supplier will not be accepted.
 3. No change in the Quoted price shall be allowed to any reason.
 4. In case the item installed by the supplier/tenderer not meets the specifications of quoted equipment/item, the purchaser shall have all rights to cancel the item’s purchase order, and the supplier/tenderer shall be responsible to take back the installed item at his/her own cost after getting the order of purchaser.
 5. In all the above conditions the decision of the Government Polytechnic Balodabazar(CG) Purchase Committee or any officer authorized by the committee shall be final and binding.
 6. Principal, Government Polytechnic Balodabazar(CG) will be the final authority for any changes in tender terms.
57. All provisions of Chhattisgarh Store Purchase Rules 2002, with all amendments upto the date of publication of this tender, shall be applicable.

Principal,
Government Polytechnic Balodabazar
Disitt – Balodabazar-Bhatapara (C.G.)

ANNEXURE - I**Format for Technical Bid to be put in envelope A only**

(Please provide hard copy as well as soft copy (CD) in MS. Words/M.S.Excel Format in the envelope)

S. No.	Name of Items along with Make and model	Specifications given in the Tender	Technical Specification the bidder wants to supply as per catalogue/ brochure	Deviation (If any)	Brochure/ literature/ catalogue attached Yes/No	Remark
1	2	3	4	5	6	7

Signature:
(Name & stamp of the Firm/Tenderer)

ANNEXURE - II

The Price offer should be submitted in the following format Envelope-B only

(Please provide hard copy as well as soft copy (CD) in MS. Words/M.S. Excel Format in the envelope)

Sl. No.	Name of Items along with Make/ Model	Specifications	Price of the Equipment excluding (GST) In Rs.	(GST) %	GST In Rs.	Cost of the Equipment Inclusive of all taxes & charges (8=5+7)	Remark
1	2	3	4	5	6	7	8

Signature:

(Name & stamp of the Firm/tenderer)

ANNEXURE - III

DECLARATION FOR NOT BLACK LISTED

Date.....

To,
The Principal,
Government Polytechnic Balodabazar,
Disitt – Balodabazar-Bhatapara,(C.G.).

Dear Sir,

Ref.:- Tender No.

I/We hereby confirm that our firm has not been banned or blacklisted by any Government organization/Financial Institution/Court/Public sector Unit/ Central Government.

Place

Signature of Bidder

Date

Name

Designation

Seal

ANNEXURE-IV

(On Non Judicial Stamp Paper of Rs. 50/-)

निविदाकर्ता Bid के साथ दिए जाने वाला शपथ-पत्र

निविदाकर्ता फर्म मेसर्स की ओर से मुझे/हमें अधिकृत किया गया है और मैं/हम निम्नलिखित कथन शपथपूर्वक कहता हूँ/कहते हैं कि :-

1. मैंने/हमने निविदा की सारी शर्तें ध्यानपूर्वक पढ़ी हैं और उनसे सहमत हैं तथा उन्हें मानने के लिए वचनबद्ध है।
2. मेरे/हमारे द्वारा संलग्न किए गए सभी दस्तावेज सही हैं और उनमें किसी प्रकार की कांट-छांट नहीं किया गया है एवं गलत जानकारी नहीं दी गई है।
3. मेरे/हमारे द्वारा कामर्शियल बिड में सामग्रीयों के लिए जो स्पेशिफिकेशन दिया गया है। और उनके सपोर्ट में जो भी संबंधित दस्तावेज, कैटलॉग/ब्रोशर्स आदि संलग्न किए गए हैं उनमें लिखा विवरण निर्माता द्वारा जारी किया गया है एवं मूल रूप में है, और उनमें कोई फेरबदल या कांट-छांट नहीं किया गया है।
4. मेरे/हमारे द्वारा निर्माता से मुझे/हमें जारी अथॉराइजेशन प्रमाण-पत्र जो कि बिड के साथ संलग्न किया गए है। वे सही एवं मूल रूप में है और उनमें कोई फेर बदल नहीं किया गया है।
5. मैं/हम दिए गए क्रयादेशानुसार सामग्रीयों को निर्धारित समय सीमा में स्पेशिफिकेशन के अनुसार सप्लाई करने के लिए बाध्य है। देर होने या सामग्रीयों के स्पेशिफिकेशन में अन्तर होने पर मुझे/हमें दिए गए क्रयादेश को निरस्त किया जा सकता है, एवं शासन को होने वाले नुकसान की भरपाई मेरे/हमारे द्वारा की जावेगी।
6. टेण्डर के तहत प्राप्त क्रयादेश द्वारा प्रदाय की जाने वाली सामग्रीयों में लगने वाले सभी शासकीय (केन्द्र व राज्य) GST Taxes & DUTIES, custom duties and levies, sales tax इत्यादि का भुगतान करने की सम्पूर्ण जिम्मेदारी मेरी/हमारी होगी कृपया कर सहित राशि का भुगतान करें इस आशय से मेरे द्वारा निवेदन पत्र करुंगा।
7. मेरे/हमारे द्वारा दी गई जानकारी असत्य पाए जाने पर मुझे/हमें एवं हमारी फर्म को निविदा में भाग लेने से वंचित किया जा सकता है।
8. उपरोक्त बिन्दुओं की जानकारी गलत पाये जाने अथवा टेण्डर के नियमों का पालन नहीं करने पर हमारी फर्म को **BLACK LIST** किया जा सकता है। जिसकी सम्पूर्ण जिम्मेदारी मेरी/हमारी होगी।

दिनांक

हस्ताक्षर
 नाम
 धारित पद
 फर्म का नाम
 (सील सहित).....

ANNEXURE-V

Vendor Information	
GST NO.	
TIN No.	
PAN NO.	
Vendor Name	
Address	
Mobile No.	
State	
District	
Bank Name	
Branch Name	
Bank A/c No.	
Bank IFSC Code	
Vendor Code	
Valid Email ID.	

I hereby certify that the above particulars are correct to the best of my knowledge and I will responsible for the consequences that may arise due to wrong information if any in the above.

Vendor Signature

List and Specification of Equipments for First year (C/M/E) Lab

Applied chemistry Lab

NO	Name of the Equipments to be Procured	Specification
1	Muffle furnace	Max. Temperature-1800°C, Working Temperature-1700°C, Thermocouple-B-Type (Pt-Rh to Pt-Rh) with Alumina tube, Heating element-MoSi ₂ , Inner Chamber-Ceramic fiber board, Insulation-Ceramic fiber, Controller-PID Controller, Power supply-220 Volts 50Hz, Standard Size (Inch) (W x H x D)- 4 x 4 x 9 5 x 5 x 10 6 x 6 x 12 9 x 9 x 18, Accessories-Stainless steel Tong One pair of furnace gloves
2	pH meter	Instrument Type- Digital pH Meter MODEL # 152 – R, Measurement- PH & ORP, Display-3 1/2 Digit LED, Range Resolution-0 -14.00 pH 0 + 1999 mv, Accuracy±0.01 pH, ±1mV, Temperature Compensation- Manual 0 to 100°C, Slope Control-80 to 120%, Recorder Output-0 to 10mV/pH Adjustable, Power Requirement-220 VAC ±10% 50 Hz
3	Chemical balance	Technical Specifications: <ul style="list-style-type: none"> • Beam: • Short beam of hard brass • Upper edge divided into 50 scales divisions to each side • Each scale division representing 1/5 mg • Rider on the scale • Stand: all parts of brass • Arrester: vertical raising type • Pans: chromium plated, slightly concave inwards • Case: wooden polished case, with front slider and two side doors. • Base: sun mica black board • Capacity: 200gms • Sensitivity: 1/5 mg
4	Burette stand	<ul style="list-style-type: none"> • A highly stable and heavy duty retort stand of cast iron, Designed in accordance to international quality standards. • Provided with chrome plated steel rod, and have an allen key for tightening the rod on base. Duly powder coated finishing.

		<p>Available sizes: - 6"x4"x18"x 3/8". 8"x5"x24"x 1/2". 10"x6"x30"x 1/2".</p>								
5	Pipette(1ml,2ml,5ml)	Typical volumes are 1, 2, 5, 10, 20, 25, 50 and 100 mL. The tolerance depends on the size: a 0.5-mL pipette has a tolerance of ± 0.006 mL, while a 50-mL pipette has a tolerance of ± 0.05 mL.								
6	Test tube stand	Holds 12 test tubes , 18-20 O.D. tube size. TestTubeRack (1210D16) Product Dimensions (l x w x h) : 8x4x2.375in High-density polyethylene . Holds 12 test tubes , 20-22 O.D.								
7	Test tube holder	<ul style="list-style-type: none"> • Wooden Handle with Chrome Plated material • Length: 180mm • Accept the Test Tubes ranging from 22mm to 32mm diameter Used to hold hot test tubes in laboratories								
8	Beaker (250 ml,500ml)	<ul style="list-style-type: none"> • Un-breakable • Durable • Made from the borosilicate glass Eco-friendly • Apt thickness • Dimensionally correct • Maximum chemical resistance • Heat transfer 								
9	Conical flask (250 ml)	Borosilicate Glass Conical Flask. Colour– White transparent Material TypeBorosilicate GlassSizeCAPACITY(250ML)								
10	Reagent bottle(500 ml)	<ul style="list-style-type: none"> • High strength • Leakage-proof surface • Designed with thick wall • Non- reactive to acids • Material: Rubber / Plastic • Type: Laboratory Bottles 								
11	Wire gauge	The largest size, is 0.50 in. (500 thou or 12.7 mm) in diameter, and the smallest, No. 50, is 0.001 in. (1 thou or about 25 μ m) in diameter. Wire Gauge With asbestos center, extra strong quality in squares.								
12	Bunsen burner	Meter -3.4 in, Height-5.7 in, Material-Nickel, Diameter (Metric)- 8.5 cm, Height (Metric)- 14.5 cm, Gas Type- LPG (Liquid Petroleum Gas)								
13	Measuring cylinders(10ml,50ml,100ml)	<ul style="list-style-type: none"> • High tensile strength • Reliable to use • Sturdy construction Capacity 500.0 milliliters Material Borosilicate 3.3 , Glass Size 10ml,50ml,100ml cylinder Style 10ml,50ml,100ml								
14	Funnel (plastic)	<p>Autoclaveble ... Yes * Smooth walls * 60' Cone angle and external ribs to prevent air lock.</p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Particulars</th> <th>Inside</th> <th>Stem Length</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>100 mm</td> <td>93</td> <td>84</td> </tr> </tbody> </table>	S.No.	Particulars	Inside	Stem Length	1	100 mm	93	84
S.No.	Particulars	Inside	Stem Length							
1	100 mm	93	84							

		2	150 mm	148	55
15	Glass rod	Glass rod, commonly uses borosilicate glass and quartz as material. Its diameter and length can be customized according to your requirements.			
16	Pestle mortar (medium)	Colour – White, Size – 2.5 inch, Mortar and Pestle Set for grinding items into a fine paste or powder, Made from fine-quality porcelain; complements any decor; mortar 2.75 x 1.5-inches; pestle 2.875-inches			
17	Kipps apparatus	Kipp Apparatus made of polypropylene has three main portions. The top portion is fitted with a thistle funnel and a bulb structure through which dilute acid can be poured which reacts with a metal sulphide in the base of the apparatus. H ₂ S gas then evolved collects in the middle dome from where it can be released through a leak proof stopcock fitted with a self lubricating PTEE plug. The base is provided with a residual outlet fitted with a cap for easy cleaning. Capacity-- 250 ml, 500ml, 1000ml.			
18	Dropper	Material:- glass & rubber, Length:- approx. 20cm, Capacity:- 10ml, Colour- Transparent & Blue			
19	Tong	Size available:- 6" 8" 12" 18" 24" Material: Stainless steel			
20	Silica crucible	<ul style="list-style-type: none"> Dimensionally accurate High grade raw material Corrosion & abrasion resistant silica crucibles are translucent, have glazed surface and finished properly. Material – Silica, Capacity-24 ml, Color-White			
21	Desiccator	Product description: Desiccator complete with Desiccator Plate (Plastic/Glass) Diameter - 150 mm-300 mm Sizes: <ul style="list-style-type: none"> 150mm dia. Non Vacuum 200mm dia. Non Vacuum 250mm dia. Non Vacuum 300 mm dia. Non Vacuum 150 mm dia. Vacuum 200mm dia. Vacuum 250mm dia. Vacuum 300 mm dia. Vacuum 			
22	Whatman filter paper	Material-Wood Pulp, Usage- Liquid Filter, Thickness-<0.3mm, Type- Qualitative, Colour - White			
23	Oven	<ul style="list-style-type: none"> Standard The gap between the walls is filled with-special grade glass-wool for heat insulation Dimension: size 12"X12"X12" Item Weight- 22.0 kilograms			
24	Flash point apparatus	Specifications: - Power: 700 W - Rated Voltage: AC 220 V±10%, 50 Hz - Operating Model: LCD Touched Screen Abel flash point as per IP-170 & IS-1448 P-20, full copper			
25	Redwood viscometer	Main Components :- <ul style="list-style-type: none"> Hemertone finish Copper/stainless steel bath Drain plug Electrical heating arrangement 			

		<ul style="list-style-type: none"> Gas heating arrangement with silver plated oil cup Precision stainless steel Jet Ball value Cover Thermometer clip Stirrer Suitable stand with leveling screws <p>Power Consumption :- Operates on 220, 50 Hz Volts AC mains, IMC-433D Electric Heated Model with Digital temperature controller cum indicator</p>
26	Weight box	<p>Technical Specification -- Basic Line</p> <p>Material - 304 Stainless Steel Density - 7.85g/cm³ Susceptibility - 0.05 Magnetization - F1=25 I^{1/4}T, F2=80 I^{1/4}T Packing - Aluminum Box / Wooden Box Accessories - Tweezers, Cloth, gloves</p>
27	Test tube	<p>Tubes made from expansion-resistant glasses, mostly <u>borosilicate glass</u> (or <u>fused quartz</u>) can withstand high temperatures, up to several hundred degrees Celsius.</p>
28	Spatula	<ul style="list-style-type: none"> Temperature: 40°C to 230°C Material: Stainless Steel <p>Specification:</p> <ul style="list-style-type: none"> Size: 26*3.4*1.5cm Weight: 65.5g Material: Silicone, Silicone Spatula5502/216 mm 150 mm Spatula5502/318 mm 180 mm Spatula5502/418 mm 210 mm
29	Tripod stand	<p>A stainless steel structure 8mm thick wire.</p> <ul style="list-style-type: none"> · Joints are nicely argon welded. · Feet are covered with rubber stumps. · Size: - 20H x 12.5Wcm.
30	Colorimeter	<p>Technical Data</p> <p>Display: Seven segment LED Display Mode Selection: pH Mode, Standby Mode, mV Mode Wavelength Range: 400nm, 420nm, 480nm, 520nm, 540nm, 580nm, 620nm 680nm Transmission: N/A Absorbance: 0-1.99 abs Filters: Best Quality Glass Filters Bandwidth: 15 – 20nm Repeatability: 0.01 abs Accuracy: -0.01 to +0.01 abs Sample Holder: Cuvette Round 9mm Power: 230V Ac @ 50Hz</p>
31	Filter paper	<ul style="list-style-type: none"> 12.5cm Grade 1 Covers a wide range of laboratory applications, frequently used for clarifying liquids Areas of use include the food industry, agriculture, air pollution monitoring and gas detection Widely used in education for teaching simple qualitative

		analytical separations, 10.5 s/100ml/sq inch flow rate, grade 1, 125mm diameter
32	Wash bottle	Material - low density polyethylene
33	Pipette (10ml)	Material - Borosilicate Glass, Size - <u>10 ml</u> , Tol. - <u>±0.02 ml</u> , Lgt. - <u>400 mm</u>
34	Volumetric flask	Colour - WHITE TRANSPARENT, Material Type - Glass , Borosilicate Glass, Size - CAPACITY(500ML)
35	Water bath	Temperature – 90 degree C, Material – Stainless steel , Power – 1.5KW, Voltage - 220/240 V, Stirring Speed - 500-1000 RPM
36	Double Distillation chamber (glass) borosil	<p>Product description:</p> <ul style="list-style-type: none"> Electrical Requirement: 230-250 volts Single phase 1.5x2 kw Quartz heater Minimum cooling water requirement: 1 Lit / min Biological Activity: Pyrogen Free With Borosilicate Boiler, Borosilicate Condenser & Quartz Heater, Horizontal Type <p>Product Specification:-</p> <ul style="list-style-type: none"> Power Consumption : 1.5 x 2 = 3 (kw), 3.5 x 2 = 7 (kw) Temperature : Distillate Temp:65-75C
37	Burette	Burette Borosilicate Glass 50 ML

Work Shop Practice

NO	Name of the Equipments to be Procured	Specification
1	ARC WELDING MACHINE	I/p Vol:415 +/-10% Phase: 3 Frequency: 50Hz
2	Solder Iron Machine	<ul style="list-style-type: none"> Temp. Range: 250° C to 480° C Power Consumption: 150 watt, 250 watt
3	Accessories & Tools	Electrode Holder, Electrodes, Wire Brush, Leather Hand Gloves, Apron, Face Shield & Chipping Hammers
4	Clamping Tools	Bench Vice -6” Pipe Vice – 2”
5	Measuring and Marking Tools	BEVEL PROTECTOR: Range 360Deg Dot Punch, Centre Punch, Steel Rules, Chipping, Reaming, Drilling, Radius Gauge, Wire Gauge, Hacksaw, Flat File, Half round File, Round file, Try square & Chisels
6	Anvil	Key Features: Size in kgs: 10
7	Sledge Hammer	With handle 10lbs
8	Swage Block	Key Specification: <ul style="list-style-type: none"> Material-Cast Iron Size-12”x12”
9	Tools used in Smith Shop	Cross Peen Hammer, Ball Peen Hammer, Straight Peen Hammer & Tongs
10	Gas connection with burner	1.LPG cylinder 2. Oxygen Cylinder 3. Acetylene Cylinder With Accessories

Applied Mechanics Lab

NO	Name of the Equipments to be Procured	Specification
1	Apparatus & Models	<ol style="list-style-type: none">1. Universal Force Table Apparatus2. Lever Apparatus3. Pulley Block4. Chain Pulley Block5. Parallelogram Force Apparatus6. Portable type Jib Crane7. Friction & Inclined Plane8. Worm & Worm Wheel10. Winch Crab single Purchase11. Winch crab Double purchase.12. Combined Coil & Flat Belt Friction Apparatus13. Screw Jack14. Polygon Force Apparatus.