Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

No. 163 GPJ/EQUIP/TENDER-

Janjgir-champa Date: 27.12.2021

TENDER NOTICE - 01 / 2021-22 Open Tender for Supply of Laboratory Equipments

Last date for Receiving sealed tender	: 29 January 2022, 3:00 PM
Date and time of opening the tender	: 29 January 2022, 4:00 PM
Cost of Tender	: Rs. 1000.00 (Rs One thousand only)

Sealed Tenders are invited from manufacturers/authorized dealers or manufacturers/authorized suppliers who are willing to undertake supply and installation of items for Department of Chemical Engineering (Group I) and Department of CIVIL Engineering (Group II) and Science & Humanity Department (Chemistry) (Group III) listed in **Annexure - IV** of this OPEN TENDER. The Tender Schedules containing detailed specifications may be obtained from the office of undersigned from 28 December 2021 on any working day between 10:30 am to 5:00 pm by paying a tender fee of Rs 1000/- (Rupees ONE THOUSAND ONLY). The tender can also be downloaded from the website www.gpjanjgir.ac.in or www.cgdteraipur.cgstate.gov.in. If downloaded from the website tender fee of Rupees ONE THOUSAND in form of demand draft payable to <u>Principal, Government Polytechnic Janjgir-champa</u> should be enclosed at the time of submission of the tender.

Eligibility Criteria: - Firm/bidders blacklisted at any stage or by any NITs/IITs/IIITs/Central Universities/State Universities, Central/State Government institutions/body/PSUs etc. need not to apply.

(a) The bidder should be a manufacturer/authorized dealer or manufacturers/ authorized supplier engaged in respective area of works. The bidder should have sufficient Infrastructure, technical expertise and financial strength to undertake the contract.

(b) **Minimum AVERAGE ANNUAL TURNOVER** of **Rs. 30 lakh** in the last 3 financial years. (Audit report/Balance sheet/CA certificate to be enclosed, duly supported by the income tax return (ITR) for financial years 2018-19, 2019-20 and 2020-2021).

(c) The bidder should have experience of supply of laboratory equipment to reputed organization/educational institutions/universities/engineering colleges/polytechnics etc. with at least 3 orders in last 03 years. The nature of completed work should be supply and satisfactory completion of project, i.e. successful installation and operation of equipments, in various Government Institutes/Reputed Firms/PSUs.

[**NOTE:** The documentary proof of **Purchase orders** in respect of works mentioned in bid **MUST** be submitted along with the bid.]

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

(d) Bidder/Tenderer should submit documents in support of minimum eligibility criteria along with the tender/bid. No document in support of minimum eligibility criteria will be accepted / entertained after opening of tender.

Bidder is required to quote all the items of a schedule (i.e. a laboratory) failing which his bid will be considered as non responsive.

(e) The Bidder/Tenderer should provide the following mandatory information:

- i. Information on supply of laboratory equipment related work experience with at least 3 orders from reputed organizations completed successfully & satisfactorily in last 3 years. Bidder/Tenderer must submit satisfactory documentary proof from end-users.
- ii. List of Organizations/Customers dealt by them.
- iii. Last three year's copies of Income Tax Return (As mention above) & PAN number.
- iv. Copy of Registration of Firm.
- v. Copy of GST registration.
- (f) Tenders/bids not meeting any of the above —Eligibility Criteria shall be rejected.

Earnest Money Deposit (EMD): - An <u>EMD as per the details given below</u> in the form of an Account Payee Bank Draft (DD) or a fixed deposit Receipt (FDR) payable in favor of <u>Principal</u>, <u>Government Polytechnic Janjgir-champa</u> is required to be submitted along with the bid/tender.

Group	Group Name	Tender Amount	EMD
		(in Rs)	(in Rupees)
Ι	Chemical Engineering Department	1189570.00	35687.00
II	CIVIL Engineering Department	608000.00	18240.00
III	Science & Humanity Department (Chemistry)	240000.00	7200.00

Performance Guarantee: - Successful Bidders must have to submit the performance security @ 10 % of the purchase order value or Contract value in the form of Fixed Deposit, Bank guarantee from a schedule commercial bank and will be retained up to the warranty Period.

Instructions for submitting the Tender:

- 1. Separate tenders are required to be submitted for Group I and Group II and Group III .
- 2. Tender will be submitted in four sealed envelope A, B, C and D as mentioned below: (A) Envelope 'A' shall contain
 - I. EMD and Tender Fee (in case of tender document downloaded from website).
 - (B) Envelope 'B' shall contain
 - I. Technical Bid as per Annexure–I along with all documents.

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

- **II.** Technical Literature and Original Leaflets of equipments offered.
- III. Authorized dealer/Manufacturer certificate for the items offered
- IV. Undertaking of fulfillment of all condition.
- V. Integrity Pact as per Annexure-III.
- (C) Envelope 'C' shall contain
 - I. Commercial Bid for quoted Items/Equipment/Machines as per Annexure II
 - II. Discount Offer, if Any
- (D) Envelope 'D' shall contain

All three afore said sealed envelope A + B + C.

3. The address and contact numbers for sending bids or seeking clarifications regarding this OPEN TENDER are given below –

Bids/queries to be addressed to:	Principal, Government Polytechnic, Janjgir-champa,
Postal address for sending the bids:	<u>Principal, Government Polytechnic, Janjgir-</u> <u>champa,</u> Village – Pendri, Post – Pendri, Dist. – Janjgir-champa, C.G. – 495668.

E-mail ID:

polyjanjgir@rediffmail.com

- 4. This OPEN TENDER is being issued with no financial commitment and the buyer reserves the right to change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the OPEN TENDER, should it become necessary at any stage.
- 5. No tender document shall be sold by the institute. Prospective bidder may download the tender paper from the website and submit the bid in the institute in due time &date as mentioned in the tender document.

TERMS AND CONDITIONS:

- 1. Terms and conditions for supply of Items / Equipment / Machines are as following:
 - a. The tender is liable to be rejected if not submitted as per the prescribed conditions and in the prescribed format.
 - b. The bidder should quote their offer / rate in clear terms without any ambiguity.
 - c. The tender will be opened as per the date and time given above in the presence of such tenderer(s) or their representatives who are desirous to be present.

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

- d. Tender received after due date and time will not be entertained.
- e. The tender form is non transferable.
- f. Item No. and page no. of the tender form should be strictly in chronological order. Make, name of the manufacturer with complete address should be mentioned against each item and equipment.
- g. Printed condition on the back of the tender will not be binding unless separately mentioned. The tenderer must furnish complete and detailed specification supported by printed literature of the equipment offered.
- 2. All the Envelopes should be signed & sealed tape on all joints.
 - a. The rate should be FOR destination including Excise and PFFI. Nothing extra will be paid.
 - b. If rates are quoted Ex-Go down / Ex-Factory then Excise duty and PFFI charge should be clearly indicated for proper rate compatibility/ comparability.
 - c. Taxes, if liable extra, should be clearly indicated failing which the rate quoted in the tender will be considered as inclusive of all taxes.
 - d. There should be no alterations / corrections made in the Tender. The quoted rate should be in figures and words.
 - e. The tender should clearly indicate whether the equipment is complete in itself. If in the opinion of the tenderer, certain accessories are necessary with the type of the equipment tendered, the tenderer must quote for aforesaid accessories under the heading Extra but Essential.
- 3. Bidders are required to submit Earnest Money Deposit (EMD) as applicable, in the form of an Account Payee Bank Draft (DD) or a fixed deposit Receipt (FDR) payable in favor of **Principal, Government Polytechnic Janjgir-champa** along with their bids. The EMD is to remain valid for a period of 90 days. EMD of the unsuccessful bidders will be returned to them at the earliest. The EMD will be forfeited if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity period of their tender.
- 4. The EMD will be adjusted towards the Performance Security in case of successful/selected tenders. The Performance Security will be forfeited in case of breach of agreement towards the supply of materials and installation - commissioning by the Tenderer(Supplier). The order shall stand cancelled and Performance Security shall be forfeited:
 - (i) If supplier expresses his inability to execute the order for the quoted items within validity period of the tender at the rate quoted in the tender and for makes / brand quoted in the tender.
 - (ii) If the complete equipment is not supplied within the delivery period mentioned in the order or within the extended period permitted.
 - (iii) If the supplier executes only part of the order.
- 5. The bidder should sign an Integrity Pact agreement as per ANNEXURE-III.

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

- 6. Any equipment breakdown must be attended within 7 days during the valid warranty period of the equipment free of cost.
- 7. Payments shall be released only after the successful installation and demonstration of the machine / equipment.
- 8. The training for handling the machine / equipment shall be mandatorily provided by the supplier at his own cost. The tenderer may be asked to give demonstration of the equipments /software preferably at Janjgir-champa.
- 9. Extension of Delivery Period and Penalty One time extension in the delivery period may be granted at the discretion of the undersigned. The penalty at a rate of 2% per month (of the cost of the equipment) is liable to be charged for the extension of the delivery period. In addition penalty will also be levied if equipment/item (s) is received after the delivery period or is dispatched after the delivery period mentioned in the order.
- 10. 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 30 days from the date of report, failing which the equipment will not be accepted and will be returned to the supplier at his own cost and risk, and the EMD/Performance Security will be forfeited. In case the equipment is sent for repairs to the firm, it should be repaired within 30 days, from the date of receipt of equipment failing which the same will not be accepted and EMD/Performance Security will be forfeited. However the undersigned may condone the delay in deserving cases at his discretion.
- 11. The undersigned reserves the right to increase/ decrease the quantity of the equipment to be supplied.
- 12. The submission of the tender will be deemed to be the acceptance of all the terms and conditions of the tender.
- 13. Tender-Rates should be valid for at least Twelve months from the date of opening of the tender. The prices should be firm without variations of any kind.
- 14. The undersigned reserves the right to accept the lowest or any tender and also of rejecting all or any tender without assigning any reasons for the same or to split up the tender as he may deem fit.
- 15. 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.
- 16. All items quoted must conform to the BIS/ISO or other certifications.
- 17. No advance payment shall be made.
- 18. The Tenderer/Bidders shall provide TIN No. and GST registration certificate having mentioned tendered item. In case of imported Machinery bill of clearance is required.

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

If, tender received without these certificates shall be rejected without assigning any reason.

- 19. The Minimum Warranty / Guarantee period for the equipment supplied by the Supplier will have to be mentioned clearly which 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 warranty / guarantee period.
- 20. All the disputes with regard to the contract of purchase of equipment etc. are subjected to Janjgir-champa, Chhattisgarh Jurisdiction only.
- 21. In the event of the order, supplier who are 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 agent or stockist will have to furnish certificate issued by the manufacturer, importer certifying that M/S is their Authorized Agent / Reseller / Retailer under the brand name. No equipment without this certificate will be accepted.
- 22. The Equipment / Machinery calibrated in metric system need be quoted.
- 23. The tenderer shall guarantee that after sales service shall be provided as and when required.
- 24. The supplier will render necessary assistance, if required, in the installation of the Equipment / Machinery at the institute/site free of charge.
- 25. No offer should be made for imported item for which import license has to be arranged by the undersigned. The entire imported item will have to be delivered in the designated institute (s) and payment will be made in Rupees.
- 26. The payments shall be released only after satisfactory and successful commissioning and installation of the Equipment / Machinery.
- 27. The rate should be quoted as per given format in Annexure-II. Packing, forwarding, freight, insurance and other incidental charges should be included in the offer price.
- 28. In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Government Polytechnic, Janjgir-champa shall be final.
- 29. The bid document /resultants contract will be interpreted under Indian laws.
- 30. If the successful Tenderer / Bidders, on receipt of the order, fails to execute the order within the stipulated period, in full or part, it will be open to the Government Polytechnic, Janjgir-champa, to recover liquidated damage from the firm at the rate of 2% of the value of undelivered goods per month or part thereof, subject to a maximum of 5% of the value of undelivered goods. Alternatively, it will also be open to the Government Polytechnic, Janjgir-champa to arrange procurement of the required goods from any other source at the risk and expenses of the Tenderer / Bidder.
- 31. 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 exgodown or factory station.

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

- 32. The Tenderer / Bidder is required to execute the agreement bond duly signed and witnessed to this office along with the letter confirming the acceptance of the order. It should be noted that in the event of failure to submit agreement bond duly filled in within the stipulated period, i.e. 10 days (Ten days), entire amount of Earnest Money / Performance Security is liable to be forfeited and order cancelled and if supply have been made in the meanwhile, they will be at the risk and responsibility of the supplier.
- 33. No claim shall be entertained in respect of interest on Earnest Money /Performance Security.
- 34. 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 entertained.
- 35. Illustrated manuals, working instructions, trainers, software and hardware, erection / wiring details of the ordered equipments must be supplied in suitable damp proof cover.

Principal R.K.R.Government Polytechnic Janjgir-champa(C.G) Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

ANNEXURE-I

PERFORMA FOR TECHNICAL – BID

Format of Application (printed on the letterhead of the Bidder/tenderer)

Sub: Supply of Laboratory Equipment –R.K.R. Government Polytechnic Janjgir-champa

- 1. Name of the Firm :
- 2. Complete Postal Address :

Mb. No. :	Telephone	No:	
Email:	Fax No:		

- 3. Details of Tender Fee:
- 4. Earnest Money Deposit details:
- 5. Are you a manufacturer/distributor/dealer/supplier? If so attach the authority letter(s) in support of your claim.
- 6. Year of starting of the Firm with Registration Number & Date:
- 7. PAN (Attach copy):
- 8. TIN & GST Registration No. (Attach copies):
- 9. Income tax return for the last three financial years and certificate for turnover (Attach copies):
- 10. Number of Important Engineering Institutions served as supplier of lab equipments (Attach at least one copy of the latest Purchase Order handled by your firm with copy of the Certificate of successful completion of supply on time from the institute concerned, use additional sheets if required).
- 11. Delivery Period in days:

DECLARATIONS:

- (ii) Mr..... whose Signature is given below, is an authorized representative of this firm.
- (iii) I/We also undertake the responsibility to communicate all subsequent changes in the constitution or working of firm, affecting the accuracy of the facts, stated above.

Date:

Authorized Signatory

Seal of the Firm

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

Technical Bid

S.No	Name of Item along with Make	Specifications given in the Tenders	Technical Specifications which the bidder wants to supply as per Catalogue/ Brochure	Remarks

NOTE: Attach Technical Catalogue/Brochure of the product in original for above quoted Items.

Authorized Signatory and Seal of the Firm

UNDERTAKING BY THE BIDDER/TENDERER

(To be signed and returned along with the tender)

I / We (Full Name,

Address.....,

have read the tender rules for the supply of various stores as per tender notice **No. GPJ/Equip/Tender-.....Date12.2021** of Principal, Government Polytechnic, Janjgir(C.G.) and I / We, fully accept the bidding rules / terms, & condition supplied with the bidding documents.

Date:/...../.....

Authorized Signatory and Seal of the Firm

OFFICE OF THE PRINCIPAL, GOVT. POLYTECHNIC JANJGIR Distt-Janjgir (Chhattisgarh)-495668

Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

ANNEXURE-II

PERFORMA FORCOMMERCIAL BID (printed on the letterhead of the tenderer)

The offer should be submitted in the following format only:

SI. No.	Name of Item along with Make	Specifications given in the Tenders	Technical Specifications which the bidder wants to supply as per Catalogue/ Brochure	Price of Equipment	Cost of equipment Inclusive all	Remarks

NOTE: All the above quoted items rate should be in confirmation with the tender conditions.

Authorized Signatory and Seal of the Firm

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

Annexure III

PRE - CONTRACT INTEGRITY PACT

1. GENERAL

- 1.1 This Pre-bid contract Agreement (herein after called the Integrity Pact) is made on....., between Government Polytechnic Janjgir, Chhattisgarh acting through Shri (Principal, Government Polytechnic Janjgir) Government of Chhattisgarh (hereinafter called the "BUYER". Which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) and the First Party, proposes to procure (Supply of Laboratory Equipments) and M/s represented Mr by Designation (Here in after called the "BIDDER/TENDERER", which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) and the Second Party, is willing to offer/has offered.
- 1.2 WHEREAS the BIDDER/TENDERER is a private Company / Public Company / Government Undertaking / Partnership / Registered Export Agency, constituted in accordance with the relevant law in the matter and the BUYER are a Ministry / Department of the Government, performing its function on behalf of the Government of Chhattisgarh.

2. OBJECTIVES

NOW, THEREFORE, the BUYER and the BIDDER/TENDERER agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/Prejudiced/dealings Prior to, during and subsequent to the Contract to be entered into with a view to:-

- 2.1 Enabling the BUYER to obtain the desired Stores/Equipment/work/Service at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and
- 2.2 Enabling BIDDER/TENDERERs to abstain from bribing or indulging in any corrupt practices in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing any corrupt practices and the BUYER will commit to prevent corruption, in any form, by its official by following transparent procedures.

3. COMMITMENTD OF THE BUYER

The BUYER commits itself to the following:-

- 3.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take Promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or Immaterial benefit or any other advantage from the BIDDER/TENDERER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 3.2 The BUYER will, during the pre-contract stage, treat BIDDER/TENDERER alike, and will provide to all BIDDER/TENDERER the same information and will not provide any such information to

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

any particular BIDDER/TENDERER which could afford an advantage to that particular BIDDER/TENDERER in comparison to the other BIDDER/TENDERER.

3.3 All the officials of the BUYER will report the appropriate Government office any attempted or completed branches of the above commitments as well as any substantial suspicion of such a breach.

In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER/TENDERER to the BUYER with the full and verifiable facts and the same Prima facie found to be correct by the BUYER, necessary disciplinary proceedings or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

4. COMMITMENTS OF BIDDER/TENDERER

The BIDDER/TENDERER commits itself to take all measures necessary to prevent corrupt practices, unfair means an illegal activities during any stage of its bid or during any precontract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:

- 4.1 The BIDDER/TENDERER will not offer, directly or through intermediaries, any bribe, gift, consideration. Reward, favor, any material or immaterial benefit or other advantage, Commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the biding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 4.2 The BIDDER/TENDERER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the BUYER or otherwise in procuring the Contract of forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the contract with the Government.
- 4.3 The BIDDER/TENDERER further confirms and declares to the BUYER that the BIDDER/TENDERER in the original Manufacture/ Integrator/Authorized government sponsored export entity of the stores and has not engaged any individual or firm of company whether Indian or foreign to inter code, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER/TENDERER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company I respect of any such intercession, facilitation or recommendation.
- 4.4 The BIDDER/TENDERER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payment he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

- 4.5 The BIDDER/TENDERER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 4.6 The BIDDER/TENDERER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 4.7 The BIDDER/TENDERER shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronics data carrier. The BIDDER/TENDERER also undertakes to exercise due and adequate care lest any such information is divulges.
- 4.8 The BIDDER/TENDERER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 4.9 The BIDDER/TENDERER shall not instigate or cause to instigate any third person to commit any of the acts mentioned above.

5. PREVIOUS TRANSGRESSION

- 5.1 The BIDDER/TENDERER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity pact with any other company in any country in respect of any corrupt practices envisaged hereunder or with any public Sector Enterprise in India or any Government Department in India that could justify BIDDER/TENDERER's exclusion from the tender process.
- 5.2 If the BIDDER/TENDERER makes incorrect statement on this subject, BIDDER/TENDERER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

6. EARNEST MONEY (SECURITY DEPOSIT)

- 6.1 Every BIDDER/TENDERER while submitting commercial bid, shall deposit an amount as specified in RFP as Earnest Money/Deposit, with the BUYER through any of the following instruments: Bank Draft (DD) or a fixed deposit Receipt (FDR) in favor of **Principal, Government Polytechnic** Janjgir-champa 6.2 The Earnest Money/Security Deposit shall be valid up to a period of five years or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER/TENDERER and BUYER, including warranty period, whichever is later.
- 6.3 In the case successful BIDDER/TENDERER a clause would also be incorporated in the Article pertaining to performance Bond in the purchase Contract that the provisions of Sanctions for violation shall be applicable for forfeiture of performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of the pact.
- 6.4 No interest shall be payable by the BUYER to the BIDDER/TENDERER on Earnest Money/Security Deposit for the period of its currency.

7. SANCTIONS FOR VIOLATIONS

7.1. Any breach of the aforesaid provisions by BIDDER/TENDERER or any one employed by it or acting on its behalf (whether with or without the Knowledge or the BIDDER/TENDERER) shall entitle the BUYER to take all or any one of the following actions, wherever required: -

Distt-Janjgir (Chhattisgarh)-495668 Telephone :- 07817222456 website:- www.gpjanjgir.ac.in <u>E-mail</u> : polyjanjgir@rediffmail.com

- (i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER/TENDERER. However, the proceedings with the other BIDDER/TENDERER (s) would continue.
- (ii) To forfeit fully or partially the Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed), as decided by the BUYER and the BUYER shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER/TENDERER.
- (iv) To recover all sums already paid by the BUYER, and in case of the Indian BIDDER/TENDERER with interest thereon at 2% higher than the prevailing Prime Lending Rate while in case of a BIDDER/TENDERER From a country other than India with Interest thereon at 2% higher than the LIBOR. IF any outstanding payment in due to the BIDDER/TENDERER from the BUYER in connection with any other contract such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (v) To in case the advance bank guarantee and performance bond, If furnished by the BIDDER/TENDERER, in order to recover the payments, already made by the BUYER, along with interest.
- (vi) To cancel all or any other contract with the BIDDER/TENDERER and the BIDDER/TENDERER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money (s) due to the BIDDER/TENDERER.
- (vii) To debar the BIDDER/TENDERER from participating in future bidding processes of the Government of Chhattisgarh for a minimum period of five years, which may be further extended at the discretion of the BUYER.
- (viii) To recover all sums paid in violation of this pact by BIDDER(s) to any middlemen or agent or broken with a view to securing the contract.
- (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER/TENDERER, the same shall not be opened.
- (x) If the BIDDER/TENDERER or any employee of the BIDDER/TENDERER or any person acting on behalf of the BIDDER/TENDERER, either directly, is closely related to any of the officers of the BUYER, or alternatively, if any close relative of an officer of the BUYER has financial interest/stake in the BIDDER/TENDERER's firm, the same shall be disclosed by the BIDDER/TENDERER at the time of filing of tender. Any failure to disclose the interest involved shall entitle the BUYER to rescind the contract without payment of any compensation to the BIDDER/TENDERER.

The term 'close relative' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated From the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly depended upon Government servant; but does not include a child or step child who is so longer in any way depended upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any person related, whether by blood or marriage, to the

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Government servant or to the Government servant's wife or husband and wholly depended upon Government servant.

- (xi) The BIDDER/TENDERER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER, and if he does so, the BUYER shall be entitled forthwith to rescind the Contract and all other contracts with the BIDDER/TENDERER. The BIDDER/TENDERER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such rescission and the BUYER shall be entitled to deduct the amount so payable from the money (s) due to the BIDDER/TENDERER.
- 7.2 The decision of the BUYER to the effect that a breach of the provisions of this pact has been committed by the BIDDER/TENDERER shall be final and conclusive on the BIDDER/TENDERER. However, the BIDDER/TENDERER can approach the Monitor (s) appointed for the purpose of this pact.

8. FALL CLAUSE

The BIDDER/TENDERER undertakes that if has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Department of the Government of Chhattisgarh or PSU and of it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER/TENDERER to any other Department of the Government of Chhattisgarh or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER/TENDERER to allower concluded.

9. INDEPENDENT MONITORS

- 9.1 This BUYER will appoint Independent Monitors (hereinafter referred to as Monitors) for this pact
- 9.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.
- 9.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions naturally and independently.
- 9.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings. The Monitors shall be under contractual obligation to treat the information and documents of the BIDDER/TENDERER/Subcontractor(s) with confidentiality.
- 9.5 As soon as the Monitor notices or has reasons to believe, a violation of this pact, he will so inform the Authority designated by the BUYER.
- 9.6 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department /within 8 to 10 weeks from the date of reference or intimation to him by the BUYER/BIDDER/TENDERER and, should the occasion arise, submit proposals for correcting problematic situations.
- 10. FACILITATION OF INVESTIGATION

In case of any allegation of violation of any provisions of this pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER/TENDERER and the BIDDER/TENDERER shall provide necessary information of the relevant documents and shall extend all possible help for the purpose of such examination.

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11. LAW AND PLACE OF JURISDICTION

This Pact is subject to Indian Law, the place of performance and jurisdiction shall be the seat of the BUYER.

12. OTHER LEGAL ACTIONS

The actions stipulated in this Integrity pact are without prejudice to any other legal action that may follow in accordance with the provisions of the any other law in force relating to any civil or criminal proceedings.

13. VALIDITY

- 13.1 Validity of this Integrity pact shall be from the date of its signing and extend up to 2 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/TENDERER whichever is later. In case BIDDER/TENDERER is unsuccessful, this Integrity pact shall expire after 03 months from the date of the signing of the contract.
- 13.2 If one several provisions of pact turn out to be invalid; the remainder of this pact shall remain valid. In such case, the parties will strive to come to an agreement to their original intentions.

		<u>BUYER</u>	BIDDER/TENDERER
Name of the	e Officer:		:
Designation	: - Principal		
Department	: R.K.R.Govt. Polytech	nic Janjgir-champa (C.G)	
Witness:			
1)		1)	
2)		2)	

Annexure IV

Technical Specifications

Group I - Department of Chemical Engineering

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SNo.	EQUIPMENT	SPECIFICATION
1	Auto Karl Fisher Apparatus	 Temperature Accuracy (Degree C)+- 0.3 Temperature Compensation Type Automatic Display : Array of 10 LED in Line Sample Size : 1 to 50mg of water Indication : RUN ADD END Display in Auto Mode K. F. Flow : Highly Sensitive solenoid control valve for automatic control of K. F. Regent K. F. dispensing Res. : 0.05ml Measuring Electrode : Dual Platinum Electrode Titration Cell : Air Tight 200ml Glass Vessel End Point Delay : 30 Seconds Stirrer : Variable speed magnetic stirrer with ON/OFF control Accuracy (pH)+- 0.05
2	Soxhlet Extraction apparatus	 Heater-Mantle Type (2 sets, One for Digestion and one for distillation) Construction-MS Powder coated Heating capacity of the heater (Watt)-500 Units of test-6 Flask capacities (ml)-300 Unit supplied-With glass part.
3	Microprocessor Turbidity Meter	 PH Metre TypeMicroprocessor Based Temperature Accuracy (Degree C)+- 0.3 Accuracy (pH)+- 0.05 Temperature Compensation TypeAutomatic Temperature: 0 Deg.C to +100 Deg.C Display-20*4 Alpha numeric Display pH Range (pH)-0.00 to 14.00
4	Magnetic Stirrer with Hot Plate	 Display Option/Output Read out Option:No integral Display Top plate Material:Stainless steel Type of Drive Motor:Carbon Brush Motor AC IP rating or Ingress protection rating:53 Number of stirring Positions:1 Calibration:Manual Calibration Controller type: Electronically controlled Maximum Stirring capacity per position:1000 millilitre Speed Control Accuracy of set speed (+/-) (RPM):5
5	Hydraulic Bench Setup	 Water Tray Size - 2000mm L X 1200mm W X 200mm Ht (Approx) Sump Tank - 1200mm L X 700mm W X 300mm Ht (approx.) Discharge Measurement Tank - 600mm L X 400mm W X 250mm Ht (Approx.) Monoblock Pump - 1 Phase, 230 V AC, 0.5 hp 2800 rpm Digital Stop Watch – 1 No. For measuring flow rate Necessary Piping arrangement with a bye pass arrangement.

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6	Centrifugal Pump Test Rig	 Clear Water Flow:Medium Drive:1 HP DC Motor with Thyristor controlled DC drive for variable speed Measuring tank of capacity 30 litrs Sump Tank Capacity:70 Liters. Flow Measurement Capacity:25Liters Pump Speed:2800 RPM Head:5 m Pump Capacity:1 HP Electronic Energy meter RPM measurement: Digital RPM Indicator with a Proximity sensor Power Supply:1kW, 220V AC, Single Phase.
7	Tumbler Mixer	Channel to mount drum jacket
		 Tumbler Capacity 25 Kg feed Drum jacket to hold drum Mounting pad AVM Entire structure powder coated / PU paint Drum lock 2 nos front side Welded structure suitable to hold drum Drum SS-304 1.6 mm wall thickness Top cover lid with 4 clamps Bottom suction chute to connect loader pipe Bonfigloli gear box 25- 27 RPM AC drive for variable speed control PLC circuit for timer set even after power failure Electrical panel comprise plc,drive, emergency switch, proximity etc
8	Sigma Mixer	 Mixing Trough : Material Stainless Steel Double U shaped. Capacity 25 kg (approx.) Sigma Blades : Material Stainless Steel, 2Nos. moving in opposite direction. Drive : 1 HP motor coupled to Reduction Gear Box. Tilting arrangement : Using worm &gear Provided so as to tilt the containerfrom (0-110°)even in running condition. Control Panel comprises of : Standard make on off switch ,Mains Indicator etc.
9	Sedimentation Study Tank	 Dimensions:1m long x 51mm bore Speed:356 Capacity:40 lit. Control Panel: Yes Current:440v Distance Of Length In Between:1.00m Electricity Supply:220 240V 1ph 50Hz at 10A Frame: Horizantal Frequency:45deg.C Height Of Beam:0.93m

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 Specific Gravity Bottle capacity : 50 ml. The set-up has the back lighting arrangement. Material : Borosilicate Glass ID : 50 to 51 mm Length: 1 m Collecting Tanks : Capacity 2 Ltrs.
 Total Weight Of Apparatus:160kg

10	Vacuum Filtration System	SIZE & MAXIMUM WORKING CONDITIONS:
		 Filtration Area : 0.6 m sq. Design Pressure : 4 Kg/cm2 Design Temperature : 150 DEG C Working Pressure : 2 Kg/cm2 Working Temperature : 130 DEG C
		 Filter Vessel Material : SS 304 Cover Material : SS 304 Filter Leaf Material : SS-304 Flanges : SS-304 EQUIPMENT CONSTRUCTION:
		SS 304 Fabricated body having shell welded to conical bottom and flanged dished top bolted to shell with `I` Bolts. The cover can be lifted by devit arm with a hydraulic Jack for removing & cleaning the leaves.
		FILTER LEAVES : SS leaves with S.S 304/316 Frame, each leaf is made of 5 ply of SS wire mesh of different gauge wires. Wire mesh are held together by a tubular frame & made leak proof by machine riveting. The leaves will be of following construction.
		(1X) 1Nos. 4 x 4 Mesh Centre Screen in S.S 304
		(2X) 2 Nos. 8 x 8 Mesh Support Screen in S.S 304
		(2X) 2 Nos. 24 x 110, outside Filtering Hollandar weave in SS316
		STORAGE TANK :
		MOC : SS 304
		Capacity : 50 liters Max. Wet Cake Volume / Ltrs : 25
11	Rotary Evaporator	 Main Machine: Manual Lift (0-150mm) Rotating Speed: 20-180 rpm/20-280 rpm (optional) Motor Power 60w Heating Bath: 750w Ceramic Coated

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		 Temperature Range:Digital Control Max. 90 degree C Total Power:810w voltage- 220v/50Hz Condenser:Vertical/Horizontal & Reflux vacuum system (not integral part of the equipment) to substantially reduce the pressure within the evaporator system condenser with double coil through which the coolant passes heated fluid (water / thermic fluid) bath to heat the sample being evaporated. Sealing Ring:Sealing Ring The instrument consist Calorimeter with berner on tripod stand gas flow meter (Non recording type) and
12	Junker Gas Calorimeter	 pressure governor The calorimeter measure the calorific value of gaseous fuels from 120 B.Th.U. To 3000 B.Th.U. (1000 to 26000K.Cal./Cu meter) It also consist measuring jar of 2 Lit. Cap. and 50ml cap. with rubber tubing for gas water connection
13	Reflux Condensor	 Capacity:150-500ml Packing: Safe packing Hose: Detachable Hose Joint size:14/23 -24/29 Color: High Transparent
14	Single Beam UV Spectrometer	 Optical System: Single Beam, Grating 1200 lines/mm Display: 20*4 Digital Alpha Numeric Display Power Requirement:AC220V/50 Hz Wavelength Range:200-1100nm Band Width:2nm Wavelength Accuracy:+/-1 nm Wavelength Repeatability:+0.1nm Photometric Display Range:-0.3-2.0A,0-200%T,
15	Rod Mill Acrylic Body Inclined Manometer	 Discharge Chute: Suitable Size Rod Mill Material: MS Dia:275mm Length:350mm Energy Measurement: Electronic Energy Meter Drive:1 Hp Motor Coupled to Reduction Gearbox & 3 Step Pulley. Product Receiver: Material Stainless Steel of Suitable Size Speed:40, 50 and 60 rpm (Approx.) Measuring Range:0 to 100mmwc Material: Acrylic
17	Hot Plate	 Shape: Square Material: Stainless Steel

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18	Closed cup Penskey Marten apparatus	 Frequency (Hz):50-60Hz Power: 2 kW maximum Voltage: 230 Style: Jet maximum surface temperature: 350 deg.C Automatic type This apparatus is made as per IP 34 and IS 1448 (Part I) 1270 (P.21) and IS 1209-1953 method B. the apparatus consists of brass test cup with handle removable cup coverwith spring operated rotating shutter having oil test jet/Gas test jet flame device, stirrer with flexible shaft. The assembly rests in air bath, which is covered, with dome shapemetal top. The cup is fitted with insulated handle and locking arrangement near cupflange. The assemble is kept on round shape electric heater with temp. Regulator. Suitable for operation on 220 Volts 50 cycle AC circuits. P.M. flash point app. With Electronic Temperature indicator , regulator oil 	
		P.M. flash point app. With Electronic Temperature Indicator , regulator oil test jet	
19	Orsat gas Analyzer Apparatus	 4 Test manifolld one unit Complete gas burette 100 ml. levelling bottle 250 ml. calcium chloride tube fitted with rubber cork with bellow fitted in wooden cabinate with sliding door 	
20	Digital Pirani Gauge	 Measuring Range: 999 to 0.001mBar Display:4 Digit auto ranging ,0.5" high display red color 7 segment type Accuracy: 10% of reading Power supply: 230V AC,50 Hz. Brand: Ace instrument 	
21	Continuous stirrer tank reactor in series	 Nos. 2-litre capacity SS CSTR's connected in series with FHP stirrer mounted on top along with a speed regulator Baffles provided 4 nos. inside the vessel Feed tank with feed pump, Rota meters and valve along with suitable pipelines Tracer injection system provided at inlet and sampling post at outlet. Collection tank for the reaction mixture Overflow inside CSTR for outlet to maintain constant level at any given point of time. Complete unit mounted on a rigid MS structure 	
22	Vibrating Screen	 Vibrating Screen : 3 Nos. Width : 18" Length : 24" Mesh Size : All Available size for lab Drive Eccentric Shaft coupled to motor 	

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 Feed Hopper : Proper capacity with arrangement to control a feed Body material: Mild steel Capacity: 100 ton/hr. Motor power: 35 KW Voltage:230 V Brand: Exel Magnetics raw material for feed Floor Area: 1.5 m x 1 m.
 Floor Area: 1.5 m x 1 m. Mesh: Size - 12.7mm, 9.5mm and 6.3mm (Approx.) Max feed size: 50-250 mm

Technical Specifications

Group II - Department of Civil Engineering

	Soil Mechanics Lab		
1	Triaxial Test Apparatus	Digital with microprocessor based loading unit, suitable for operation on 220 V, 50Hz, single phase, AC supply, Capacity:50kN Drive Mechanism: gun metal gear assembly, Platen speed range upto 6mm/minute. Forward and reverse using switches. Horizontal clearance 364 mm max, vertical clearance: 910 mm max, Platen travel: 100 mm, specimen dia:38 to 100mm, Dimensions (L*W*H); 600*500*1440mm, Weight:55kg (approx.), Display:3 ½ digit DPM, to read load,pore pressure and vertical displacement, Load cell: Universal type load cell, 1000x1kg capacity1 No. Displacement: LVDT, 25x0.001mm travel 1 No. Pore Pressure Transducer:20x0.01 kg/cm2 capacity 1 No. Testing specimen of size 38mm dia*76mm long. Triaxial cell consists of Perspex chamber with anvil and loading plunger. Cell is easily split by releasing four rods. It is leak proof upto 10 bar (10 kg/cm2) fluid pressure. An oil plug and an air vent are provided for introducing a thin layer of oil over water. This provides effective sealing at the plunger for long duration tests. The cell is fitted with four sleeve packed valves of no volume change type of base. Top loading pad, Perspex, 38mm dia. Plain Perspex disc 38mm dia specimen no.1, Rubber sheath for 38mm dia specimen 12 Nos. Drainage tube (short), 38 mm 4 Nos. Split Mould, 38mm dia 1 No. Top loading pad 38mm dia specimen 1 No. (Plain) 1 No. Constant pressure system oil water type with two cells. Pressure Capacity, 10 bar (10 kg/cm2). The apparatus is designed to provide confining pressure upto 16 bar to Triaxial cells. However for safety it has been factory locked at a max. Pressure of 12kg/cm2. The system consists of an oil pump, driven by an electric motor during the entire period of operation to maintain the desired pressure. The unit provides variable pressure upto 16 bar which can be increased or decreased simply by	

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	1	1	
2	Plate Bearing Test	turning a control knob. A transparent oil water interchange vessel is provided to transmit water pressure to the test apparatus. Range:10 kg/cm2,Resolution:0.01 kg/cm2,Accuracy:+-1% of the indicated pressure supplied complete with pressure gauge, Flow valves, connecting pressure hose. Suitable for operation on 220V,50 Hz, single phase, AC supply, With an external load cell,1000 kg capacity, Pore pressure transducer,20 kg/cm2 capacity, an LVDT (displacement sensor) having a range of 0- 25mm and a 3 channel Digital indicator which has been specially designed to meet the requirements of triaxial test. Digital indicator:Mode Of Display:Micro controller multi line alpha numeric VFD/LCD display for all simultaneous channel (no need for channel selection), Power supply voltage:200 V,50 Hz, Single Phase Load cell: Capacity 1000 kg, Max overload capacity: 50% of the rated load cell excitation:5VDC Resolution:1kg, Sensing element: Strain gauges in full bridge configuration .Pore pressure Transducer:Capacity:20 bar, Max overload capacity:150% of rated Pressure cell Excitation:5V, DC. Resolution:0.01 bar. sensing element: Strain Gauges in full bridge configuration. Displacement Transducer: Range 0- 25mm, Sensing element: LVDT	
2	Plate Bearing Test	Ref. Standard IS 1888	
	Apparatus:	 Hydraulic Jackfull Chrome Plated, with suitable handle for lifting, Automatic spring return, lightweight only 28kg, capacity 500kN, Lift 100mm: 1 No., Hydraulic Hand operated pump, 5 liter oil spill proof, easy to operate, double plunger having 49cc per stroke oil flow: 01 no. Load gauge 150mm dia500x2.5kN: 1 No. High pressure flexible rubberized hose pipe 5m long: 1No. Ball and socket arrangement consisting of two steel pipes, with one steel ball in-between the plates: 1No. Extension rod long, 12mm dia *25cm for taking dial gauges reading: 4 Nos Magnetic base with female thread on the top for holding extension rod: 4 Nos Top End Plate 50mm dia with male thread for fitting on to the Extension Rods and positioning the Dial Gauge Plunger: 2 Nos Column 15cm dia*25cm long, with flanges, complete with 4 bolts and nuts, 2 Nos Column 15cm dia*50cm long, with flanges, complete with four bolts and nuts. 1 No. Datum bar light weight, portable, total span 5m height approx. 30cm, mounted on two removable legs. It is made in two parts. Provision exists for Datum Bar of 2.5m span to be used. A spare leg is provided for the purpose. Complete with quick two release clamp for positioning dial gauge bracket; 2 Nos. Anchor spikes 10 Nos., Dial gauge 25mm travel,0.01mm least count: 4 nos. Grooved MS Plate 45cm*45cm square*25mm thick, Load truss,capacity 200 kN with Truss-2 parts, Joists-2 parts, 	

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		 Anchor spikes-50Nos, Semi cylindrical anchors-12 Nos, Bolts with nuts for anchor straps- 24 Nos, Anchor straps-12 Nos, Guy wires with six turn buckles-6 Nos., Top flange splice plate-1 No, Small bolts with nuts-8 Nos, Jointing bolts with nuts-8 Nos, Bolts with nuts for bottom spliceplate-6Nos, Sledge hammer-1 No, Spanners-2 Nos. 	
3	HeavyCompaction TestingEquipment IS:2720	Instrument consists one each of compaction mould steel 150 mm I.D. x 127.3mm height volume 2250cc. Complete with collar andbase plate. Compaction Rammer is 4.89kgs. in weight x 450 mm controlled fall	
4	Compression Testing machine	Compression Testing machine motorized 100T model complete ready to use with digital display unit having 1000kNx1kN display of peak and current value, pumping unit shall have slow and fast control mechanism, 4 solid pillar bolted model, suitable for upto 15dia x 30cm high concrete sample, duly calibrated	
5	Aggregate impact test	Aggregate impact test apparatus made as per IS: 2720-IV, complete ready to use with 13.75 kg hammer falling from 380mm height, cup, 75mm metal made measuring cup and 10 cm dia tamping rod, complete	
6	Los angel abrasion testing machine	LOSS ANGELES ABRASION TESTING MACHINE as per IS: 2386-IV. for abrasion Resistance of coarse aggregates, made from a hollow steel cylinder, closed at both ends, having an inside diameter of 700 mm and an inside length of 500 mm. The cylinder shall be mounted on stub shafts attached to the ends of the cylinders but not entering it, and shall be mounted in such a manner that it may be rotated. The opening shall be closed dust tight with a removable cover bolted in place. A removable steel shelf, projecting radially 88 mm into the cylinder and extending its full length. A digital controller shall be provided for rotation counting and stopping the machine after set rotation. The geared mechanism shall be provided for fixed rotation by mean of 220V 50Hz AC motor.	
7	Pycnometer	PYCNOMETER shall be made as per IS: 2386-III for fine aggregates or sand. Made from 1 liter clear glass jar with brass cone having hole at top, metal cap and rubber ring for complete leak proof.	

Group – III Science & Humanity Department (Chemistry)

1	MUFFLE FURNACE	Temperature up to 900 degree Celsius, Digital Temperature controller with an accuracy of +/- 3 degree Celsi	

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2	BOMB CALORIMETER	It is used for determination of heat of combustion, calorific value and sulpher contents of solid and liquid fuels the bomb body and lid are machined from corrosion resisting stainless steel road its capacity is approx.300 ml.it is provided with high pressure valve and electrodes the colorimeter vessel, water jacket ,stirrer FHP motor driven are provided as per IP standard the bomb colorimeter is supplied with firing unit with electronic digital thermometer ,pellet press ,ignition wire and pressure guage on stand with copper pipe fitting. complete with digital firing unit and all accessories. With digital Thermometer To determine the calorific value of a given sample A standard fractional distillation unit is very versatile and has many applications in various fields. A sturdy docign provide well balanced reactions. Mail parts	
	ASSEMBLY	in various fields. A sturdy design provide well balanced reactions. Mail parts includes Borosilicate glass parts like flask, condensor, valves, addition and receiver flask, column components with non glass parts like heating bath GI tubular supporting structure. Usage/Application Laboratory Material Borosilicate 3.3 Glass Color Transparent Temperature Deg 200 Deg C Celsius Voltage Voltage 230 V Quantity 5 liter	
4	CLEAVLAND OPEN CUP APPARATUS	Cleaveland Flash Point & Fire Point Apparatus This app. is used for determination of flash point and fire point of petroleum products except fuel oil with open cup flash below 800C as per specification IP 36 and IS 1448 (P: 69) 1969. The apparatus consist of a cup, heating plate to specific dimension thermometer clip and test flame attachment with swivel joint for passing over test liquid surface in the prescribed manner, Heating is controlled by means of energy regulator fitted to the app. Suitable for operation on 220 Volts 50 cycle AC circuits. Cleaveland flash & fire point apparatus with electronics Digital Temp Indicator and Regulator.	
5	CLOUD AND PORE POINT APPARATUS	Cloud and Pour Point apparatus single test with insulation body. Specification:- Laid by IP 15 & 1448 (P:10) 1970 The pour point is lowest temperature at which the oil will just fail to flow. The apparatus consists main cooling bath made out of S.S. sheet and stand unit with drain plug and cover has provision for fitting thermometer and a filling aperature for adding freezing mixture. A glass jar for containing oil, jacket, disc and gasket as specified are also provided. Cloud & Pour Single Test with Insulated Body	

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6	ELECTRIC OVEN	Laboratory Hot Air Oven.	
		Inner S.S. outer M.S. with powder coating paints.	
		Highly insulated between two walls by high quality glass wool.	
		Temperature: 5 ^{°C} above ambient 250 ^{°C} with thermostatic control.	
		Size: 18" x 18" x 18"	
		Fan for Uniform Temperature	
		Digital Temperature Indicator Cum Controller	

7	WATER BATH	specifications		
		Certification	CE Certification	
		Internal size H x W x D (cm)	40 x 30 x 10 With 6 holes of 7.5 cm dia	
		Rating	1.0 KW	
		Construction	Double walled with drop on lid and rings. Inside S.S. 304 seamless pot (argon welded) which avoid water leakage problems. Outer galvanized iron (GI).	
		Temperature Range	5°C above ambient to 95°C. Digital display	
		Temperature Accuracy	± 20 C	
		Temperature Controller	Imported microprocessor based auto tuned PID controller with <i>CE</i> mark & dual display of set value & process value for precise control of temperature.	
		Supply	230V AC, Single Phase, 50Hz	

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