GOVERNMENT COLLEGE OF ENGINEERING, KALAHANDI

AT: KandBandopala, PO: Risigaon, Dist: Kalahandi, Bhawanipatna-PIN 766002, ODISHA.

No: GCEK/597 Date: 18/05/18

TENDER CALL NOTICE (FOR TWO BID SYSTEM)

Sealed tenders are invited from the reputed firms/DGS&D rate contract holders/ISO 9001 certified companies/Authorized Dealers/Manufactures with valid documents and GSTIN for supply of Laboratory Equipments for the Dept. of Mechanical Engg Lab. (Approx. Cost Rs.09 Lakhs). Interested parties may apply in the prescribed tender document which can be downloaded from the website (http://www.gcekbpatna.ac.in.) and the filled-in application form along with a nonrefundable fees of Rs.1,500/-(Rupees one thousand & five hundred) only in shape of demand draft in favour of "Principal, Government College of Engineering, Kalahandi" payable at Bhawanipatna on or before 19/06/2018 at 12 Noon. The Technical Bids will be opened on 19/06/2018 at 3 PM and the Commercial Bids will be opened on 21/06/2018 at 3PM. The sealed tenders should be submitted to the "To Principal, Govt. College of Engineering, Bhawanipatna, At: Bandopala, Po:Risigaon, Bhawanipatna-766002." through speed post/registered post only. Tenders received beyond the scheduled date and time will be summarily rejected.

The undersigned reserves the right to extend the date and accept or reject any or all tenders without assigning any reason thereof.

Sd/-Principal GCEK, Bhawanipatna

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The tender document is available in the official website of the college i.e. http://www.gcekbpatna.ac.in. All bids must be accompanied by Bid Security of 1% tendered value in shape of Account Payee demand draft in favor of "Principal, Government College of Engineering, Kalahandi" payable at Bhawanipatna from any nationalized bank with copies of relevant documents of the bidder, failing which the bid will liable for rejection. The bid security in other form like cash, personal cheque etc. will not accepted and in such case bid will be rejected. Interested parties may submit the tender documents on or before 19/06/2018 at 12 Noon. The Technical Bids will be opened on 19/06/2018 at 3 PM and the Commercial Bids will be opened on 21/06/2018 at 3 PM.

The undersigned reserves the right to extend the date and accept or reject any or all tenders without assigning any reason thereof.

GOVERNMENT COLLEGE OF ENGINEERING, KALAHANDI

AT:K Bandopala, PO: Risigaon, Dist: Kalahandi, Bhawanipatna – PIN 766002

GENERAL TERMS & CONDITIONS OF CONTRACT

1. Eligible Goods and Services

1.1 The Bidders shall quote the articles of reputed make as enclosed (in Annexure-VI) (as per list of equipments enclosed in this tender document), with their brand names as per the Bid technical specifications(in Annexure-VI) and may quote alternative standards in the Bid. The articles quoted should have adequate service facilities.

2. Documents Establishing Bidder's Eligibility & Qualification

- 2.1 The Bidder shall furnish as part of the Bid the following Documents establishing Bidder's eligibility and qualification to perform the contract, to the Purchaser's satisfaction.
 - a) That the Bidder, who is not a manufacturer / producer, has been duly authorized by the manufacturer/ producer to supply the goods.
 - b) That the Bidder (in case of manufacturers) has financial, technical and production capacity necessary to perform the contract.
 - c) That the Bidders (in case or Registered suppliers) has executed supply of such items as mentioned in Schedule of Requirement of Goods to different Govt. Organizations.
- d) Copies of valid GSTIN/STCC and ITCC/Non-Assessment Certificates shall be furnished by the Bidder and the originals of the above certificates shall be produced to the purchaser before placement of notification of award. In case of outside State Bidders, the concerned firm is required to submit copy of the Non- Assessment Sales Tax Clearance Certificate issued by competent Sales Tax authority of the State of Orissa in favour of their firm along with copy of the GSTIN & Income Tax Clearance Certificate. Any Bidder failing to submit the above documents the Bid of the firm may be rejected.

3. Documents Establishing Goods Eligibility

- 3.1 The goods offered against the schedule of requirement of goods should be in accordance with the stipulated specifications.
 - The documentary evidence may be in the form of Literature,
- 3.2 pamphlets, manuals, drawing, circuit diagram etc. and shall furnish:

 Detailed description of goods with essential technical and
- a) performance characteristics.
- b) A list giving full particulars, including available source and current price of spare parts, special tools etc. necessary for proper and continuing function of the goods for a period of two years following the commencement of the use of the goods by the Purchaser.

4. Bid Price

- 4.1 The Bidder shall quote their lowest possible price (in **Annexure-I**) (as per list of equipments for different categories enclosed in this tender document) & prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to any variation.
- 4.2 The contract price shall include the cost of the Goods, Charges towards Packing, forwarding, handling, insurance, freight, incidental service, installation & commissioning of the goods and training to the consignee's personnel at site.
- 4.3 The Bidder shall furnish the breakup of cost as follows solely for the purpose of facilitating the comparison of Bids only. The price must be stated separately for each item. (Annexure-I)
 - a) Ex-Factory/ Ex-Warehouse/ Ex-Showroom/ off the self price
 - b) Packing, Forwarding and Handling charges
 - c) Insurance charges
 - d) Freight up to destination Institution.
 - e) Erection, Assembly, commissioning, incidental service, including testing, training charges.
 - f) Tax component (i.e Excise Duty, Sales Tax, GSTIN other levies) payable by the Consignee.
 - g) Delivery cost at site (including Tax Component)

5. **Bid Security Deposit:**

- All bids must be accompanied by the bid security @ not less than 1% (One Percentage) of the tender value in shape of demand draft in favour of "Principal, Govt. College of Engineering ,Kalahandi payble at Bhawanipatna" Enclosed in sealed envelope ,failing which the tender will be rejected.
- 5.2 The bid security is required to protect the Purchaser against the risk of malfunctioning of the equipment within the Guarantee period or any damage/failure of the parts with in one year of installation.
- 5.3 Bidder's conduct which would warrant the security's forfeiture.

 Unsuccessful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Purchaser.
- The successful Bidder's bid security will be discharged upon the Bidder signing the contract and furnishing the performance security.
- The bid security may be forfeited if a Bidder withdraws its bid during the period of bid validity. In the case of a successful Bidder, if the Bidder fails to furnish performance security in accordance with Clause-6.

6. **Performance Security**

- 6.1 The successful Bidder shall furnish Performance Security within 21 days after the Supplier's receipt of Notification of Award for an amount equivalent to 5% (Five Percent) of the Contract Price in the form of a irrevocable Bank Guarantee issued by a Nationalised Bank in favour of the Purchaser valid upto 60 days after the date of completion of performance obligations including warranty obligations. The performance security form is enclosed in Annexure-II of the Bid Document.
- The Performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completing of the Supplier's performance obligations, including any warranty obligation, under the contract.

The Performance Security is liable to be deducted/ forfeited for any or all the following reasons:

- a) Unusual delay in complying the order
- b) Termination of contract for default.
- c) Any default, failure or negligence in fulfilling the contract, Losses incurred by the Purchaser during guarantee/ warranty period.

7. **Delivery of Goods**

7.1 The delivery of goods shall be made by the supplier in accordance to the order placed/ Notification of Award to the Consignee as shall be detailed in the Schedule of Requirement of Goods.

8. Inspection/ Test

- 8.1 The Purchaser or his representative shall have the right to inspect/ examine/ test the goods in conformity to contract awarded.
- 8.2 The inspection/examination/ test may be conducted in the premises of the Supplier or at the goods final destination at the premises of the consignee, as will be decided by the Purchaser.

The purchaser's right to inspect/ examine/test & where necessary to reject the goods after the goods arrival at the final destination, shall in no way be limited or waived by the reason of the goods having been inspected and tested by the manufacturer previously.

- 8.4 In case of any inspected/ tested goods fail to confirm to the specification/ working condition, the purchaser may reject them and the supplier shall replace/ repair the same free of cost to the
- 9. **PaymentTerms**

8.3

- 9.1 No advance payment is allowed by the Purchaser to the supplier for any deal.
- 9.2 The standard payment terms(subject to recoveries, if any) upon submission of required documents shall be as follows:

Full 100% payment shall be made after check/inspection/ verification/ successful test & demonstration/installation and

commissioning/ satisfactory training and final receipt and acceptance of goods by the consignee.

10. Guarantee / Warranty for supply of tools, equipments and furniture.

- 10.1 The Supplier warrants that the Goods supplied under the contract are new, unused, of the most recent or current models and incorporate all recent improvements in designand materials unless provided otherwise in the contract. The Supplier further warrants that the goods supplied under this contract shall have not defect arising from design, materials or workmanship or from any act or omission of the supplier that may develop under normal use of the supplied Goods in the conditions obtaining in the area of final destination.
- 10.2 Upon receipt of such notice, the supplier shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Purchaser.
- 10.3 If the Supplier, having been notified, fails to remedy the defect(s) within a reasonable period, the purchaser may proceed to take such remedial action as may be necessary at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

11. Packing

11.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods, final destination and the absence of suitable handling facilities at all points in transit.

12. Insurance

- The Purchaser will not pay separately for transit Insurance. The supplier is completely responsible for delivery of goods in perfect condition and shall replace/ rectify the missing / defective parts if any at his own cost.
- The goods to be supplied under the Contract shall be fully insured (110% of the Ex-Factory/ Ex-shop value of the goods) against loss or damage incidental to manufacture or acquisition, transportation, storage & delivery of the goods from Warehouse / Factory / Ex-shop of the supplier to the delivery on "All Risk" basis including war Risks and Strike clauses.

13. **Transportation**

The Supplier shall be required to meet all transport and storage expenses until delivery of the Goods covered in the contract to the Consignee.

14. Incidental Services

- 14.1 The Supplier shall be required to provide any or all of the following services: (The cost shall be included in the Contract Price)
 - a) Furnishing of detailed literature/pamphlets/ circuit diagram/ operation & maintenance manual / drawings (as applicable) for each appropriate unit of supplied goods.
 - b) Furnishing of tools required for assembly and / or maintenance of the supplied Goods.
 - c) Performance or supervision of on-site assembly and / or Maintenance of the supplied goods.
 - d) Performance or supervision or maintenance and/ or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty/ guarantee obligations under the contract:
 - e) Training of the Purchaser's personnel at the Supplier's plant and / or on site, in assembly, start up, operation, maintenance and/ or repair of The supplied Goods.
 - f) A maintenance contract for the goods supplied, if required by the user beyond the warranty period shall be on mutually agreed terms between the user and supplier. The cost of such maintenance contract shall not be included in the Bid cost.

15. **Taxes and Duties**

- The Supplier shall entirely responsible for all Government Taxes, Duties etc. incurred until delivery of the contract goods to the Consignee subject to recovery after words in the bill as claimed in the Bid offer.
- The Excise Duty is payable to Manufacturer quoting excisable items, on production of proof thereof, if claimed in the Bid Offer.
- 15.3 GSTIN as applicable is payable, to the suppliers of the State of Orissa if claimed in the Bid offer
- 15.4 C.S.T will be paid to the Suppliers of the outside State other then Odisha, if claimed in the Bid offer
- 15.5 Entry Tax, if paid by the Supplier, at the local (destination head) Corporation / Municipality / NAC is allowed once only on production of money receipt for such payment, if claimed in the Bid offer.

16. **Period of Validity of Bid**

- The bid shall remain valid for a period of minimum 120 days for acceptance, from the date of opening of bid as prescribed by the Purchaser.
- A bid valid for a shorter period may be rejected, as non-responsive.
- In absence of any indication of the date of validity in the bid, it will be presumed that the offer will remain valid for a minimum period as prescribed.
- In exceptional circumstances the purchaser may solicit the bidders consent for extension of the period of validity. If agreed upon, the bid security so deposited shall also be suitably extended.

17. Standards

17.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications and when no applicable standard is mentioned, the Goods shall conform to the latest National/ International standards.

18. **Sealing and Marking of Bids**

- The bidders shall submit bids in sealed covers. The bid security in shape of draft shall be enclosed along with bid, failing which the tender will be rejected.
- 18.2 The sealed bid envelope shall be:
 - a) Addressed to the Purchaser at the following address:

 To the Principal, Government College of Engineering, Kalahandi,
 Bhawanipatna-766002, At:Bandopal,Po:Risigaon.
 - b) Bear 'PROCUREMENT OF(as mentioned in the tender notice)
 'DO NOT OPEN BEFORE'(the last date & time of opening as indicated in tender notice)
- 19. **Deadline for Submission of Bids.**
- 19.1 Bids must be received by the Purchaser at the address specified no later than the date and time mentioned in the tender notice.
- 19.2 The Purchaser may, at its discretion, extend this deadline for the submission of bids.
- 20. Late Bids
- Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser, will be rejected and / or returned unopened to the Bidder.
- 21. Opening of Bids by Purchaser
- The Technical BID will be opened on 19/06/2018 at 03.00 P.M. in the presence of Bidder's representatives who choose to attend, at the date & time of opening mentioned in the tender Call Notice in the following location. Principal, Government College of Engineering, Kalahandi, Bhawanipatna- 766002 The Bidders' representatives who are present shall sign a register evidencing their attendance.
- The Bidders' name, bid prices, modifications, bid withdrawals and the presence or absence of the requisite bid security if any and such other details as the Purchaser, at its discretion, may consider appropriate will be announced at the opening.
- 22. **Preliminary Examination**
- The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required securities have been furnished,
 - whether the documents have been properly signed, and whether the bids are generally in order.
- Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quality, the unit price shall prevail and the total price shall be corrected. If the supplier does not accept the correction of the errors, its bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.

- Prior to the detailed evaluation, the Purchaser will determine the substantial responsiveness of each bid to the Bidding Documents. For purposes of these Clauses a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Documents without material deviations. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bids itself without recourse to extrinsic evidence.
- 22.4 Bids received without certified copies of ITCC & STCC/GSTIN valid upto current year issued by competent authority may be treated as non-responsive and liable for rejection
- 22.5 Bids received without the requisite Bid Security shall be treated as non-responsive and shall be rejected.
- The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not prejudice or affect the relative ranking of any Bidder.

23. **Evaluation and Comparison of Bids**

- The comparison shall be of ex-factory/ ex-warehouse/ off-the shelf price of the goods offered from within the Purchaser's country, such price to include all costs as well as duties and taxes paid or payable on components and raw-material incorporated or to be incorporated in the goods, the CIF port-of-entry price of the goods offered from outside the Purchaser's Country.
- 23.2 The Purchaser's evaluation of a bid will take into account, in addition to the bid price and the price of incidental services, the following factors:
 - a) Cost of the inland transportation, insurance and other costs as per Clause 4 within the Purchaser's Country incidental to delivery of the goods to their final destination;
 - b) Delivery schedule offered in the bid;
 - c) Deviations in payment schedule from that specified in the General Terms & Conditions of Contract;
 - d) The cost of components, spare parts and service;
 - e) The availability in the Purchaser's country of spare parts and aftersales services for the goods offered in the bid;
 - f) The projected operating and maintenance costs during the life of the equipment / goods;
 - g) The performance and productivity of the equipment / goods offered;
 - h) The quality and adaptability of the equipment / goods offered;

24. Award Criteria

- The Purchaser will award the Contract to the successful Bidder whose bid has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 24.2 Quality, durability and adaptability of the equipment/ goods offered suiting to use in Training Practice shall continue to be the overriding factor for selecting any goods and determining the lowest evaluated bid.

25. Purchaser's Right to Accept any Bid and to Reject any Bid

The Purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all the bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders of the grounds for the Purchaser's action.

26. Notification of Award

- Prior to the expiration of the period of bid validity, the Purchaser will notify the successful Bidder in writing by registered letter or by Fax, to be confirmed in writing by registered letter or by speed post, that its bid has been accepted.
- 26.2 The notification of award will constitute the formation of the Contract.
- 26.3 Upon the successful Bidder's furnishing of the performance security, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security.

27. Signing of Contract

- At the same time as the Purchaser notifies the successful Bidder that its bid has been accepted, the Purchaser will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- Within twenty one (21) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Purchaser.

28. **Resolution of Disputes**

- a) The Consignee & the Supplier should try to resolve the disputes (if any) amicably.
- b) Thereafter, it should be taken up with the Principal, Govt. College of Engineering, Kalahandi, Bhawanipatna.
- c) Thereafter, it may be taken to the proper Court of Law.

Principal,
Government College of Engineering, Kalahandi,
Bhawanipatna

PRICE SCHEDULE FOR GOODS

Bid No	·
Catego	pry
1.	Item No. :
2.	Item with specification :
3.	Total quantity to be delivered :
J.	(Approx. quantity as shown in schedule of requirement)
4.	Bid Price.
4.	a)Rate per unit at delivery point : (excluding tax component)
	b) Delivery cost at site (3 x 4a):
5.	Delivery period offered:
6.	Break up Price (of SL – 4b)
	a) Ex-factory/Ex-ware house/Ex-show room/off the shelf price:
	b) Packing, forwarding & handling charge:
	c) Insurance charge (if any):
	d) Transportation cost up to institution:
	e) Erection, Assembly, Commissioning & incidental service:
	f) Delivery cost at site (excluding tax component) (Add 6a + 6e) = 4b.
7.	Tax Components.
	a) Excise duty (if any):
	b) GSTIN/Sales Tax and other levies (if any):
	c) Total tax component (Add 7a + 7b):
8.	Delivery cost at site (including tax component) (Add 6f + 7c)

Signature of the Bidder

PERFORMANCE SECURITY

Bid No Notification of Award No.	
Reference No	
То	
The Principal Government College of Engineering, Kalahandi, Bhawanipatna M/s(Address)	
(The Supplier)	
above referred bid to supply the goods of Award of Contract issued by you (the put Where as it has been stipulated It the supplier shall furnish you with a Bar sum as specified there in as security for obligations in accordance with the contract And where as we have agreed Therefore, we hereby affirm that we behalf of the supplier, upto undertake to pay you, upon your first will default under the contract and without callimits of guarantee amount, as aforesain	by you in the said Notification of Award that had Guarantee by a Nationalised Bank for the compliance with the supplier's performance act. If to give the supplier a Bank Guarantee we are guarantors and responsible to you on a sum of Rs(Rupees a sum of Rs) and we written demand declaring the supplier to the interval or argument, any sum or sums within the d, without your needing to prove or to show the sum specified therein. This guarantee is
Date:-	Signature of Authority of Guarantor Bank

WARRANTY MAINTENANCE CONTRACT AGREEMENT.

THIS AGREEMEN	IT made tl	nec	lay of	, 2015	. Between The I	Principal,
Government Colle	ge of Eng	ineering, Kala	ıhandi, Bhawa	anipatna, O	rissa (hereinaf	ter "the
Purchaser")	of	the	one	part	and	M/s
					(he	ereinaftei
called "the Supplie	er") of the o	other part:				

Name of the Equipment/Software

Qty

(To be filled in as per details of goods in the award of Contract)

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- Maintenance Services shall consist of Preventive and Corrective maintenance of equipment specified above & will include supply and replacement of parts free of cost.
- 2. Preventive maintenance, monthly once, which includes:
 - 2.1 Check-up to ensure that device connection is proper, cabling is at proper condition
 - 2.2 Cleaning of the above equipment & checking the System Performance.
- 3. The Supplier is to furnish the tentative schedule of the preventive maintenance (as mentioned in item 1) of Warranty Maintenance Contract (WMC) to be carried out.
- 4. The parts replaced must be new parts or equivalent in performance to new parts.
- 5. The Supplier will also provide the same maintenance service in case of the movement of equipment from the place of original installation to a different place or location.
- 6. Any complaint informed through telephone must be acknowledged with a Complaint No. by the Supplier which will be noted by Consignee. All further contact with the Supplier on such complaint will be initiated through that Complaint No. Once rectification done, that No. will be canceled by both parties. A register is to be maintained by the Supplier where complaints are to be noted along with Complaint No.
- 7. Shoes should be removed before entering into the Computer room or the place at which the equipment has been installed.
- 8. The maintenance shall normally be done during working hours of the customer i.e. from 10 AM to 5 PM. However, in case of emergency, maintenance may have to be done beyond office hours and even on holidays. Prior arrangement through proper

- communication should be worked out in all such cases by the Supplier and the Consignee.
- 9. The Service Engineer of the Supplier will be allowed to handle the respective equipment only in presence of the officer in charge at the Consignee site.
- 10. The Supplier should ensure that maintenance job is not hampered / delayed due to paucity of spares / inadequate man power etc.
- 11. The Supplier should submit the services call report, to the Consignee for each and every service call without fail.
- 12. In case of delay / lack of communication, down time will be calculated as mentioned below in WMC Clause.

WARRANTY MAINTENANCE CONTRACT (WMC) CLAUSE

Telephone No:

Normal response time for repair is 24 hours from the actual time of reporting of the problem to the Supplier.

Respo	onse	Period Above 24 hrs & below 48 hrs	Extension of WMC period 2 days for delay of each day
TIIIIE		Above 48 hrs & below 96 hrs Above 96 hrs	One Week for each day of delay Two weeks for each day of delay
Down	time	Above 24 hrs & below 48 hrs Above 48 hrs & below 96 hrs Above 96 hrs	Two days for each day of delay One Week for each day of delay Two weeks for each day of delay.
13.		Supplier evaluation data format for the necessary action.	WMC of Consignee systems may be filled
14.	All fo	rmats after filled up should be signed a	at the end of each page by the Supplier.
15.	The	decision of(Head of th	e Organization) will be final and binding.
	Signa	ature	Signature
	For th	ne Purchaser	For the Supplier
	Name	e:	Name :
	Desig	gnation:	Designation :
	Addre	ess:	Address:

Telephone No:

MANUFACTURES' AUTHORISATION FORM

	No	/ Date		
To The Principal Government C Kalahandi, Bha		neering,		
Dear Sir,				
		Tender No	0	
We				_ who are
established	and	reputable		of ories at
M/ssubmit a bid an		act with you against	Name and address the above tender.	of Agent) to
		are authoriess against this spec	ized to bid and c ific IFB.	onclude the
	-		ranty as per general above firm against this	
			Yours faithfully,	
		(Signature fo	or and on behalf of Ma	anufacturers)
should be	signed by a pe	erson, competent an	tterhead of the manu d having the power o y the Bidder in its bid.	of attorney to
* This par product through			ms where manufactu	irers sell the

PRICE BID

Item No.	Item Quoted	Approx. Qty.	Rate/Unit (Highest Quoted Rate)	Total Amount (in Rs.)
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			Grand Total :	Rs.
Bid S	Security Amount :- 1% of Gra	nd Total Amount		Rs.

Signature of Bidder

N.B.-Only highest rates (if alternate models quoted) of each item quoted are to be taken in to account for calculation of bid security.

Government College of Engineering, Kalahandi, Bhawanipatna Synopsis

Tender number and date	:
2. Name & address of the party	:
3. Name of the owner/proprietor	:
4. GISTIN No. of the firm	:
5. Permanent account number	:
6. BID amount	
7. BID DD No. & date	: :
8. Documents attached (Tick ma	k) ⊗i) Photocopy of GISTIN certificate
	⊗ii) Photocopy of PAN
9. Rates	: (To be submitted item-wise in the Annexure-I)
10. Other items if any	:
Date :	
Place:	(Signature of the authorized person)
	Seal:

TECHNICAL SPECIFICATION

ITEM	NAME AND SPECIFICATION	QTY.
1.	Radius of gyration of connecting rod Material-Stainless steel	01 no.
2.	Tri –Filar / Bi-Filar suspension system	01 no.
	Screw Jack Apparatus with Weights	
3.	Material- Strain hardened steel	01 no.
	Weights- Starting from 500gm to 5 Kg	
4.	JOURNAL BEARING APPARATUS	01 no.
4.	Journal-Diameter 50 mm, Bearing-Diameter 55 mm	OI IIO.
	Bench area-1.5 x 1.5 x 4 m	
	Manometer- 16Tubes.	
	Single phase 1HP motor, Control panel able to rotate the motor in both directions.	
5.	EPICYCLIC GEAR TRAIN & HOLDING TORQUE APPARATUS	01 no.
.	Floor Area: 1.5 x 2 m.	or no.
	Variable speed DC Motor, I HP.	
	Thyristor controlled DC Drive for varying the speed of DC motor	
	Stands to be made of steel chaneels (2.5 cmX2.5 cm)	
6.	CORIOLLIS COMPONENT OF ACCELERATION Main Tank- Fabricated out of Stainless Steel Grade	01 no.
	Rotating Arms- 9 mm / 6 mm orifice diameter, Length 300 mm	
	Rota meter 40 LPM to 2400 LPH	
	Electric Motor Swinging field type, Variable speed,1HP.	
	Pump FHP Standard make pump	
	Control Panel Speed Control Unit On/Off Switch, Mains Indicator, etc	
	The whole set-up is to well designed and arranged in a good quality painted	
	structure.	
7.	Hydraulic Brake Unit (Four Break Drums, Actual working)- For experiement	01 no. each
7.	Power Brake Actual Working	01 IIO. eacii
8.	Centrifugal Clutch Actual	01 no. each
0.	Coil Spring type Clutch Actual	or no. cuen
9.	Experiments on Simple/Compound/Reverted Gear trains	01 no. each
	1. Simple Gear train	
	2. Compound Gear train	
	3. Reverted Gear train Wodden models of	
10.	1. cotter joint	01 no. each
	2. knuckle joint	
	3. Hooks joint Single	
	4. Double hooks joint	
1.1	CRITICAL HEAT FLUX IN SATURATED POOL BOILING APPARATUS	
11.	Water Bath Material - stainless steel Capacity-10 lit. (Approx.)	01 no.
	Water supply 5 lit/min (approx.)	
	Main Heater Nichrome Wire Heater 1.5 kw	
	Test Heater Canthel Wire (26 swg)	
	Temperature Sensors RTD PT-100 type	
	Control panel Digital Temp. Controller: 0- 199.9°C (For Water Bath),	
	Process Indicator (Amp.) for test heater, Voltmeter, Dimmer stat	
	open type (4 amp rating), On/Off switch. Mains Indicator etc.	
	Transperant window to see the heater coil	
	The whole set-up is to well designed and arranged on a powder-coated/ auto	
	painted steel structure.	

		1
12.	PARALLEL /COUNTER FLOW HEAT EXCHANGER (Double Pipe Heat	01 no.
12.	Exchanger)	01 110.
	System- Water to Water	
	Length of Heat Exchanger 1.6 m(approx.)	
	Outer Tube Material Stainless steel, ID 27.5mm, OD 33.8 mm (approx).	
	Inner Tube OD 12.7mm (approx)	
	Water Flow Measurement Measuring cylinder & Stop Watch with Rotameters	
	(2Nos.) one	
	each for cold & hot fluid	
	Hot Water Tank Made of Stainless steel Insulated with ceramic fiber wool.	
	Hot Water Circulation Magnetic Pump made of Polypropylene to circulate Hot	
	Water.Maximum working temperature is 85°C.	
	Heaters Nichrome wire heater (2 Nos.)	
	Temperature Sensors RTD PT-100 type 6 Nos.	
	Control panel Digital Temperature Controller: 0-199.9°C (For Hot Water Tank),	
	Digital Temperature Indicator: 0-199.9°C, with multi-channel	
	switch, On/Off switch, Mains Indicator etc	
	Painted rigid MS structure is to be provided to support all parts	
13.	EMISSIVITY MEASUREMENT APPARATUS	01 no.
13.	Dia 160mm (Test plate Black Plate)	or no.
	Heater (2Nos.) Nichrome Wire Heater. (One each for test plate and black plate)	
	Temperature Sensors RTD PT-100 type (3 Nos.)	
	Control panel Digital Voltmeter: 0-300Volt,	
	Digital Ammeter: 0-2Amps,	
	DPDT Selector switches: For Digital Voltmeter & Digital Ammeter,	
	Variacs: 0-230 V, 2 A, (2 Nos.) (One each for test plate and black plate),	
	Digital Temperature Indicator: 0-300 ₀ C, with multi-channel Switch,	
	On/Off switch, Mains Indicator etc	
	Overall Dimensions (L x B x H) 72 x 32 x 95	
	Cabinet to accommodate the slab assembly with front window of	
	glass/acrylic	
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