

**UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING
ROURKELA -769004**

TeleFAX:+91661 2401130,

Website:www.ugierkl.ac.in,

Email: ugie_principal@rediffmail.com

BID Reference No. – 626/UGIE, RKL, Dt. 22.06.2020

SealedTendersare invited from reputed Manufacturers/Authorised Dealers/Distributors/Suppliers for supply and installation of **Machines/Equipments for different Departments and Software** to Utkalmani Gopabandhu Institute of Engineering, At:- Jail road, Rourkela, Odisha. Complete BID document containing the details of items with specification, terms & condition, cost of tenderpaper (Rs500/-) & EM Ddetails can be downloaded from the Institute's website www.ugierkl.ac.in **with effect from 24.06.2020**. The complete BID can be submitted at the office during the office hours in person or by speed post/Regd. Post.The last date of receipt of sealed BID at this officeis **09.07.2020 upto 5PM** & the same will be **opened on 10.07.2020 at 11AM**.

The Authority reserves the right to accept or reject any or all the BIDS without assigning any reason the reof.

-Sd/-

Principal,

Utkalmani Gopabandhu Institute of Engineering,
Rourkela - 769004

**UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING,
ROURKELA - 769004**

TeleFAX:+916612401130,Website:www.ugierkl.ac.in,E
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BID Reference No. – 626/UGIE, RKL, Dt. 22.06.2020

BIDDING DOCUMENTS

FOR

**PROCUREMENT AND SUPPLY OF MACHINES/ EQUIPMENTS FOR
DIFFERENT DEPARTMENTS AND SOFTWARE**

Bidding Document:Not Transferable

UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING,
At – Jail Road, Rourkela, Dist – Sundergarh, Pin- 769004
TeleFAX:+916612401130, Website: www.ugierkl.ac.in,
Email:ugie_principal@rediffmail.com

BID Reference No. – 626/UGIE, RKL, Dt. 22.06.2020

**TENDER FOR SUPPLY & INSTALLATION OF
MACHINES/EQUIPMENTS FOR DIFFERENT DEPARTMENTS AND SOFTWARE
UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA**

Bidding Document: Not Transferable

COMMENCEMENT OF DOWN LOADING THE TENDER : 24.06.2020

LAST DATE/TIME FOR RECEIVING BID BY PERSON / SPEED POST / REGD. POST : 09.07.2020

DATE OF OPENING OF BID DOCUMENTS :10.07.2020

PLACE OF OPENING OF TENDER ,
ADDRESS FOR COMMUNICATION
&
RECEIPT OF BID DOCUMENTS

UTKALMANI GOPABANDHU INSTITUTE OF
ENGINEERING, ROURKELA
At – Jail Road, Rourkela, Dist – Sundergarh,
Pin- 769004, TeleFAX:+916612401130,
Website: www.ugierkl.ac.in,
Email:ugie_principal@rediffmail.com

**Price of each Tender Document -Rs500/-
(Non Refundable / Not Transferable)**

(The BIDDER must enclose E.M.D.@ 2% of the quoted amount & Tender Document Fee i.e. Rs.500/- in shape of A/C Payee Bank Draft infavour of **Principal, Utkalmani Gopabandhu Institute of Engineering, Rourkela** payable at **Rourkela** from any Nationalized Bank along with the BID documents)

**UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING,
ROURKELA - 769004**

Telefax- +916612401130

Email-Id: ugie_principal@rediffmail.com

Website:-www.ugierkl.ac.in

SECTION I : INVITATION FOR BIDS

1. INTRODUCTION:

Sealed Bids are invited by the **Principal, Utkalmani Gopabandhu Institute of Engineering, Rourkela** from the manufacturers / authorized distributors / Suppliers having valid GST registration for supply and installation of MACHINES /E QUIPMENTS FOR DIFFERENT DEPARTMENTS AND SOFTWARE for Utkalmani Gopabandhu Institute of Engineering, Rourkela

Interested Bidders may down load the **Tender Documents** directly from the institute's WEBSITE <http://www.ugierkl.ac.in>. The Tender document fee of Rs 500/- (Non-refundable) & Earnest Money Deposit (E.M.D.) @ 2% of the quoted amount inshape of A/C Payee Bank Draft, infavour of **Principal, Utkalmani Gopabandhu Institute of Engineering, Rourkela** payableat **Rourkela**, should be closed along with the Bid documents. In case of any bid amendments and clarifications made later on in the website, responsibility lies with the bidders to collect the same from the website before last date i.e. 09.06.2020 and the purchasersh all have no responsibility for any delay / omission on part of the bidder.

TIME SCHEDULE:

(A) Price of bidding document	: Rs 500/-(Non-Refundable) per package
(B) Earnest Money Deposit (E.M.D.)	: 2% of the quoted amount per package
(C) Date of commencement of Downloading of bidding document.	: 24.06.2020
(D) Last date & time for receipt of bids	: 09.07.2020 up to 5.00PM
(E) Time & date of opening of Tender	: 10.07.2020 at 11.00AM
(F) PLACE OF OPENING OF TENDER, ADDRESS FOR COMMUNICATION & RECEIPT OF BID DOCUMENTS	UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA At – Jail Road, Rourkela, Dist – Sundergarh, Pin- 769004, TeleFAX:+916612401130, Website: www.ugierkl.ac.in, Email:ugie_principal@rediffmail.com

-Sd/-

Principal

Utkalmani Gopabandhu Institute of
Engineering, Rourkela - 769004

GENERAL INFORMATION, TERMS AND CONDITION FOR THE BIDDERS

1. The Principal,Utkalmani Gopabandhu Institute of Engineering,Rourkela invites sealed Tenders for supply and installation of **MACHINES/EQUIPMENTS FOR DIFFERENT DEPARTMENTS AND SOFTWARE**.
2. Interested eligible Bidders can obtain further information from this Institution and seek clarification from this office before submission of tender documents.
3. A complete set of Tender documents may be purchased from the Office of the Principal,Utkalmani Gopabandhu Institute of Engineering,Rourkela along with the cost of the tender documents of Rs500/-in shape of DD drawn in favour of the **Principal, Utkalmani Gopabandhu Institute of Engineering, Rourkela**,payable at **Rourkela** from 24.6.2020 during the Office hours on all working days. **The Tender documents are not transferable.**
4. The Tender Documents can also be downloaded from the websitewww.ugierkl.ac.in. Duly completed documents can be submitted along with the cost of Tender documents in shape of Account Payee Demand Draft/Banker's Cheque of RS500/-from any Nationalized Bank in favour of "**Principal, Utkalmani Gopabandhu Institute of Engineering, Rourkela** payable at **Rourkela** failing which the Tender will be rejected.Incase of any discrepancy in downloading and submission of Tender documents,theTender documents preserved in original at office of the Principal,Utkalmani Gopabandhu Institute of Engineering, Rourkela shall be taken as final and override the Tender submitted by the bidders.
5. The **Technical Bid and Financial Bid** should be submitted in separate sealed packets and should be kept in one outer envelope super scribing"**TENDER FOR SUPPLY AND INSTALLATION OF MACHINES / EQUIPMENTS FOR DIFFERENT DEPARTMENTS AND SOFTWARE.**"with detail address of the firm.
6. The tender shall be accompanied by the Earnest Money Deposit (EMD) or Bid Security of the amount in shape of Account Payee Bank Draft or Bank Guarantee froma Nationalized Bank (**Annexure-II**) drawn in favor of the **Principal, Gopabandhu Institute of Engineering,Rourkela** payable at **Rourkela**, failing which the bid shall be summarily rejected.Tender with part-EMD is also liable for rejection. The bid security shall be returned to unsuccessful bidders on finalization of order. In the event of failure to execute the supply order or violation of term sand conditions, the E.M.D. shall be forfeited.The E.M.D of successfu bidder will be refunded after supply, installation and complete demonstration.
7. Conditional tender shall be summarily rejected.

8. **The tenders should be submitted in the office of the Principal, Gopabandhu Institute of Engineering, Rourkela during office hours on all working days from 24.06.2020 TO 09.07.2020 up to 5.00 PM** by speed post/ registered post/ Courier Service or can be deposited in the office of **The Principal Gopabandhu Institute of Engineering, Rourkela** and the same will be opened on 10.07.2020 at 11.00 AM in the Office of the Principal Gopabandhu Institute of Engineering, Rourkela in presence of the Bidders or their authorized representatives who ever may be present. Tender received after due date and time shall not be entertained and the authority shall not be held responsible for delay or missing of the tender during postal transit. **Tender by E-mail/ Fax shall not be entertained.** If the office happens to be closed on the date of receipt and opening of this tender specified, the tender will be received & opened on the next working day at the same time and venue.
9. (I) The Price quoted should be inclusive of all required accessories.
- (II) **The Bidder shall have to quote the price break up indicating basic price, ex-factory/ex-ware house, duties, taxes, packing ,forwarding, handling freight, insurance etc. as per the price schedule format (item-wise) in Annexure-III. Rate shall be indicated both in words and figures . In case of discrepancy, the rate quoted in words in the tender shall be taken in to consideration.**
10. No claim shall be entertained towards any expenses made by the Bidders for submission of the tender in case of cancellation or withdrawal of tender notice.
11. Materials rejected by the authority shall be immediately removed with the knowledge of the undersigned .If it is not removed within the specified time, the authority reserves the right to remove the same and deduct the expenditure incurred from the supplier's bill. The authority shall in no way be held responsible for any deterioration or damage to the materials under any circumstances what-so-over.
12. **BID EVALUATION:-**The Purchaser will evaluate and compare the bids determined to be substantially responsive i.e.
- (a) Properly signed; and
- (b) Confirm to the terms and conditions,and specifications.

13. PERFORMANCE SECURITY:-

- i) **The Supplier shall submit a Performance Security Guarantee to the purchaser for an amount of 5% of the contract value** after completion of supply and before release of his payment as enclosed at **Annexure-IV**. The validity of the performance security guarantee should cover the warranty period of the supplied-materials.
- ii) **No payment shall be released to the supplier against his bill without submission of the performance security**

- iii) The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the contract.
- iii) The performance security shall be denominated in Indian Rupees and shall be in one of the following forms:
 - (a) A Bank Guarantee issued by a Nationalized bank located in India in the form provided in the bidding Documents acceptable to the Purchaser , or
 - (b) A Demand Draft issued by a Nationalized Bank located in India acceptable to the purchaser.The performance security guarantee will be discharged by the purchaser and returned to the supplier not later than 30 days following the date of completion of its validity.

14. DELIVERY OF GOODS / CONSIGNEE :-The materials shall be delivered at Gopabandhu Institute of Engineering,Rourkela with in 15 (**Fifteen**) days from the date of issue of Purchase Order. Any delivery beyond the stipulated period shall attract a penalty of **0.5%per week** of the contract amount subject to maximum of 10% of contract value.The goods on delivery will be physically verified by the authority of Gopabandhu Institute of Engineering,Rourkela through Technical Experts of the Institute and it shall be the responsibility of the suppliers to arrange demonstration and training on functioning of Individual goods wherever required.

15. PAYMENTTERMS:-100% payment shall be made (deducting penalty amount if any) with in **30 (Thirty) days** after receipt of stock entry certificate and after satisfactory supply , installation, demonstration & training of the goods with in due date of delivery..

16. BIDVALIDITY:The price quoted in the bid should valid at least for **180 (Hundred Eighty) days** from the date of opening of the tender.

17. **PACKING/FORWARDING/INSURANCE:**The materials dispatched shall be properly packed and forwarded to avert any incidental damages during transit/handling. The material may be insured at supplier's cost.
18. **WARRANTY/GUARANTEE:**The goods shall be covered with **warranty/guarantee** for minimum period of **12 (Twelve)** Months from the date of supply. The firm shall provide prompt after sale services and attend complaint within a week to prevent disruption of work in Gopabandhu Institute of Engineering, Rourkela.
19. **TAXES AND DUTIES:** The Bidder shall be entirely responsible for all Taxes, Duties, License fees, Road permits etc. incurred until delivery of the contract goods to the consignee. The Bidder has to provide Valid GST Clearance certificate as applicable. **Attested copies of Firm registration, Valid GST clearance certificate and PAN Card must be furnished along with the Bidding Documents.** Entry Tax paid by the Bidder is allowed once only on production of the money receipt for such payment, if claimed by the Bidder.
20. **AUTHORIZATION:** In case of **Authorized supplier of the Manufacturer/ Dealer** the bid must accompany with authorization from the Manufacturer/Dealer.
21. **ACCEPTANCE:-**The Bidder should sign each page of Bid document with seal as a token of acceptance of all terms and conditions of the Tender and should submit along with the Bid documents.
22. **PURCHASER'S RIGHT:** The purchaser is having the right to accept/ reject any or all bids without showing any reason thereof. He/She may also withhold the payment on account of subsequently discovered evidence, nullify the whole or part to the extent as may be necessary to protect himself from loss on account of:
 - (i) Defective supply not remedied.
 - (ii) Damage caused due to departmental property.
23. **AWARD OF CONTRACT:** Purchase order shall be placed with successful bidders.
24. **BIDDER'S RESPONSIBILITY:**
 - (i) The Bidder shall bear all costs associated with the preparation and submission of its Tenders and **the Principal, Gopabandhu Institute of Engineering, Rourkela** hereafter referred to as "**The Purchaser**", will in no case shall be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

(ii) The Bidder is expected to examine all instructions, forms, terms & conditions as well as specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding document sine very respect will be at the Bidder's risk and may result in rejection of its bid.

25. DOCUMENTS TO BE ATTACHED WITH TENDER DOCUMENT:

- **Tender cost (RS500/-)**
- **EMD (2% of the quoted rate per package)**
- **PAN Card**
- **ISO Certificate**
- **GST clearance**
- **Authorization/ Manufacturer Certificate**
- **Past performance certificate if any**
- **Aadhar card of Proprietor**

-Sd/-

Principal

Utkalmani Gopabandhu Institute of
Engineering, Rourkela - 769004

		External Dimension in mm	W D H 1370 X 530 X 940	
		Internal Dimension in mm	840 X 430 X 840	
		No of Doors	One	
		No of Blowers	One	
		No of motors / H.P. 3 Phase 415 Volts.	1 / 0.5 H.P. 3 phase 415 volts.	
		Electrical Heating Load for 100°C / 200°C / 300°C	3kw / 6kw / 9kw	
		Steam Heater No. of coils.	2	
		Steam Pressure	3.3 kg / cm ²	
		Steam consumption	25 LBS / hr	
		Insulation in mm 100°C / 200°C / 300°C	50 / 75 / 75	
		No of Trolleys	Rack System	
		Tray Size	812 X 406 X 31	
		Trolley Dimension	Fixed Racks	
3	SPRAY TOWER	<ul style="list-style-type: none"> ➤ Standard Auto-load Spray Tube Spray ➤ Tube diameter (Top) 15.7 15.7 ➤ Spray Tube diameter (Bottom) 11.9 11.9 ➤ Tube length 69cm 69cm ➤ Max. diameter of specimen dish 11cm 11cm ➤ Max working pressure supply 2.1 bar (30lbs/sq.in.) 2.1 bar (30lbs/sq.in.) ➤ Operating pressure 15lb/sq.in. 15lb/sq.in. ➤ Standard sample reservoir capacity 12cc 12cc ➤ Tower overall dimensions Height 120cm 120cm ➤ Width 36cm 36cm ➤ Depth 36cm 36cm ➤ Ship weight Net 21.4Kg 28Kg Gross 43Kg 49.5Kg ➤ Crate size 51X51x153cm 51x51x153cm 		1
4	SPECTROPHOTOMETER	Wavelength Range (nm)	190 nm - 1,100 nm	1
		Photometric accuracy (K ₂ Cr ₂ O ₇)	±0.01A	
		Wavelength accuracy	±0.8nm	
		Resolution (Toluene in hexane)	>1.9	
		Stray light (KCl, 198nm)	>2	
		Shortcuts per user	24	
		Max. Number of Methods	100	
		User Identification	yes	
		Minimal Scan time	1 s	
		Display	7 inch QVGA Color TFT touch sensitive screen	

		Displayed Resolution	800x400	
		Dimensions (DxHxW)	10.04 in x 8.98 in x 8.19 in (255 mm x 228 mm x 208 mm)	
		Weight (incl. Terminal)	6.4 kg	
5	CALORIMETER	<ul style="list-style-type: none"> • Static Jacket Calorimetry • 2 Tests Per Hour • Operator Time Per Test is 25 Minutes • 0.3% Precision Class • 6775 Digital Thermometer • Manual Oxygen Fill • Manual Bucket Fill • Manual Bomb Wash • Dimensions (in) 8.5w x 8.5d x 11.5h • Dimensions (cm) 21w x 21d x 29h 		1
6	WETTED WALL COLUMN	borosilicate glass with dia 45mm,height 1000mm,pressure regulator:0-2kg/cm2 pressure gauge:bourdon type,material stainless steel,capacity 100 ltrs,compressed air supply at 2bar,4CMF &		1
7	REYNOLD'S APPARATUS	electricity supply:single phase 220vAC,50hz,5-15 amp,floor area required:1.5m*0.75mchemical required :Dye (KMNO4)-10gm, Dye vessel : material stainless steel ,capillary tube :material copper ,sump tank: capacity 60 ltrs		1
8	VENTURIMETER & ORIFICEMETER	<p>Ø Venturimeter : Material Clear Acrylic, Compatible to 1" Dia pipe</p> <p>Ø Orificemeter : Material Clear Acrylic, Compatible to 1" Dia. Pipe</p> <p>Ø Water Circulation : FHP Pump, Crompton / Sharp make</p> <p>Ø Flow Measurement : Using Measuring Tank, Capacity 25 Ltrs.</p> <p>Ø Sump Tank : Capacity 50 Ltrs.</p> <p>Ø Stop Watch : Electronic</p> <p>Ø Control Panel : On / Off Switch, Mains Indicator etc.</p> <p>Ø Tanks will be made of Stainless Steel</p> <p>Ø The whole Set-up is well designed and arranged in a good quality painted Structure</p> <p>Ø Water Supply & Drain</p> <p>Ø Electricity Supply: Single Phase, 220 VAC, 0.5 Kw</p>		1
9	BERNOULLIS APPARATUS	<ul style="list-style-type: none"> • Inlet Tank Capacity: 20 Ltrs. MOC SS • Supply Tank Capacity: 85 Ltrs. MOC SS • Measuring Tank Capacity: 40 Ltrs. MOC SS fitted with Piezometer Tube & scale • Piezometer Tubes: Material P.U. Tubes (9 Nos.) • The whole set-up is ingeniously designed and schematically arranged on a powder-coated rigid structure <p>ControlPanel:</p>		1

		<p>Standard make On/Off switch, Mains Indicator etc.</p> <ul style="list-style-type: none"> • Electric supply 0.5 kW, 220V AC, Single Phase • Water supply Tap water connection • Floor Area with Drain facility 	
10	LOSSES DUE TO FRICTION IN PIPE LINE	<ul style="list-style-type: none"> • Pipes (2 Nos.): Material GI of 1/2" & 1" diameter • Pipe Test Section : Length 1 m • Water Circulation : FHP Pump, Crompton make • Flow Measurement : Using Measuring Tank with Piezometer, Capacity 25 Ltrs. • Sump Tank : Stainless Steel, Capacity 50 ltrs. Stop Watch : Electronic • Electric supply 0.5 kW, 220V AC, Single Phase • Water supply Tap water connection • Floor Area with Drain facility 	1
11	DIGITAL PH METER	Size: 20*5*5, type: water testing equipment and meters, power consumption: 3*1.5 volts, material :plastic	1
12	DIGITAL REFRACTOMETER	Voltage: 12 V, power source :battery, capacity: 9-12 V	1
13	STAINLESS STEEL DIGITAL REDWOOD VISCOMETER	Material: stainless steel, voltage: 220 volt, power source: electric, frequency: 50 Hz, phase: single phase, continuous working temperature: 95°C	1
14	DIGITAL THERMOCOUPLE	Material: plastic, accuracy: 0.2%, range: -50 to 199 °C and 200- 1350 °C, battery type: 3* 1.5 V , environment: -10-50 °C, dimension: 150*80*36mm, weight:235 gm	1
15	BOD LAB INCUBATOR	Chamber Volume: 250 litre, number of shelves: 2 shelves, 4 shelves, material: mild steel, production capacity: 100 lit	1
16	COD DIGESTOR	Display: Digital 12 mm Rod LED, timer: selectable 15,30,45 min with alarm, heating Rating: 750 watt, hole size: 40 mm dia and 80 mm depth, sample volume: 20 ml, glass tube: 38 mm dia 15 nos, temperature range: 180C, dimension: 500 W* 270 D*210 mm H	1
17	DIGITAL OXYGEN METER	Display: 13 mm super large LCD display, accuracy: +0.4 mg/litre, temperature: 0-50 C, power supply: 9 V battery	1
18	TURBIDITY METER	Material: plastic, light source: LED,accuracy:3%,power: 230 V,50 Hz, weight: 3 kg, temperature(0-100)°C, number of calibration: 5 point calibration	1

PACKAGE- 3(CIVILENGG.DEPARTMENT)

SL NO.	NAME OF EQUIPMENT	SPECIFICATION	QUANTITY
1	IS SIEVE	80mm,60mm,50mm,40mm,31.5mm,25mm,20mm,16mm,12.5mm,10mm,6.3mm,4.75mm,3.35mm,2.36mm,1.18mm,600 micron,300 micron,150 micron,90 micron,75 micron	5
2	VICAT APPARATUS	1)A frame with a vertically movable rod having a cap at the top 2)Frustum type mould with top diameter 60mm bottom diameter 70mm height 40mm 3)Glass base plate 4)Initial and Final setting time needle, 5)Consistency plunger	2
3	MEASURING CYLINDER	1000ml	5
		500ml	5
4	LE CHATELIER APPARATUS	1)Legs of the instrument= 150 ± 0.3 mm 2)Internal diameter of mould= 30 ± 0.15 mm 3)Wall Thickness= 0.5 ± 0.05 mm 4)Height= 30 ± 0.15 mm 5)Split= 0.5 mm	2
5	PYCNOMETER BOTTLE	50 ml	10
6	DENSITY BOTTLE	50 ml	10
7	WATER BATH	Chamber size 375x300x175mm(18Ltrs Capacity)	1
8	SLUMP CONE	BOTTOM DIA 20cm, TOP DIA 10cm HEIGHT 30cm Mild Steel Polished finish Thickness 1-5mm	2
9	ULTRA-SONIC PULSE VELOCITY	1)Input Voltage -220V AC,50Hz 2)Ultrasound frequency-1MHz 3)Ultrasound Power Density- 3.5watt/cm^2	1
10	MASONRY TROWEL	SMALL AND MEDIUM SIZE	10
11	ENAMEL TRAY	24"X 36"	10
12	SHOVEL	1.5kg	10
13	FINISHING TROWEL	280X130 mm	10
14	PLUMB BOB		10
15	WHEEL BARROW		5
16	HOE	1.5kg	5

17	LIQUID LIMIT APPARATUS	1)Glass Plate 500x500x10mm Flexible 2)Spatula100mm,160mm long 3)Porcelain dish 120mm dia 4)Rotating handle(Manual and digital)	2
18	GRAIN SIZE ANALYSIS USING PITTETE METHOD APPARATUS	Pipette 10mL Beaker 1000ML capacity	1
19	WEIGHING BALANCE	30 kg	1
20	TRIAxIAL TEST APPARATUS	COMPLETE SET	1
21	LABORATORY DRYING OVEN	Chamber Volume=100 Litre	1
22	TURBIDITY TEST APPARATUS	TURBIDITY METER NEPHELOMETER	1
23	PH METER	Digital PH meter	1
24	COLIFORM TEST APPARATUS	COLIFORM TEST KIT (1 pack containing 5 tests)	1
25	VISCOMETER	50mL orifice cup, valve, water bath, sleeve, stirrer, receiver, thermometers	1
26	METALLIC TAPE	30m	10
27	METALLIC TAPE	15m	10
28	STEEL TAPE	3m	2
29	INVAR TAPE	15m	1
30	CROSS STAFF	100mmX100mmX150mm	10
31	ARROW		30
32	RANGING RODS	2-3m LENGTH,30mm DIA	30
33	HAMMER		10
34	PRISMATIC COMPASS	150mm diameter	6
35	PLANE TABLE	750mmx600mmx20mm	10
36	TELESCOPIC ALIDADE	175mm	6
37	AUTO LEVEL		6
38	TRIPOD STAND	SEASONED TIMBER RIGID WITH METAL SHOES	6
39	LEVELLING STAFF	4m LONG	6
40	TOTAL STATION	TRIMBLE BRAND	1

PACKAGE- 4(ELECTRICAL ENGG. DEPARTMENT)

SL NO	NAME OF THE MACHINE WITH SPECIFICATIONS	QUANTITY
1	DC SHUNT MOTOR 3HP, 220V, 1500 RPM DIRECTLY COUPLED ON CHANNEL FRAME WITH FLEXIBLE TYRE COUPLING TO DC SHUNT GENERATOR 220 V, 2KW WITH CONTROL PANEL. (FOR OCC CHARACTERISTICS)	1 SET
2	DC SERIES MOTOR 3HP, 220V, 1500 RPM WITH PRONY BRAKE LOADING ARRANGEMENT, CONSISTING OF CI DRUM PULLEY, SUITABLE FOR WATER-COOLING, DIAL TYPE SPRING BALANCES, CANVAS BELT WITH HOOKS, THREADED STUDS WITH WHEEL FOR LIGHTING THE BELT, FRAME AND BASE COMPLETE WITH CONTROL PANEL. WITH SPRING WEIGHT.	1 SET
3	DC SHUNT MOTOR 3HP, 220V, 1500 RPM WITH PRONY BRAKE LOADING ARRANGEMENT, CONSISTING OF CI DRUM PULLEY, SUITABLE FOR WATER-COOLING, DIAL TYPE SPRING BALANCES, CANVAS BELT WITH HOOKS, THREADED STUDS WITH WHEEL FOR LIGHTING THE BELT, FRAME AND BASE COMPLETE WITH CONTROL PANEL. (FOR BRAKE TEST)	1 SET
4	DC COMPOUND MOTOR 3HP, 220V, 1500 RPM WITH PRONY BRAKE LOADING ARRANGEMENT, CONSISTING OF CI DRUM PULLEY, SUITABLE FOR WATER-COOLING, DIAL TYPE SPRING BALANCES, CANVAS BELT WITH HOOKS, THREADED STUDS WITH WHEEL FOR LIGHTING THE BELT, FRAME AND BASE COMPLETE WITH CONTROL PANEL. (FOR EXPERIMENT OF SPEED-TORQUE, LOAD CURRENT-TORQUE CHARACTERISTICS, STUDY OF 4 POINT STARTER CONNECT & RUN DC COMPOUND MOTOR WITH DIFFERENTIAL CUMULATIVE SHORT SHUNT, LONG SHUNT FIELD CONNECTION)	1 SET
5	DC SHUNT MOTOR 3/2HP, 220V, 1500 RPM, HEAVY DUTY FRAME AND BASE COMPLETE WITH CONTROL PANEL. (FOR EXPERIMENT OF SPEED CONTROL BY FIELD CONTROL, ARMATURE VOLTAGE CONTROL METHOD)	1 SET
6	SINGLE PHASE, DOUBLE WOUND TRANSFORMER, 'CONTINENTAL' MAKE. [THE TRANSFORMERS ARE MADE FROM LAMINATED CORE OF SILICON STEEL. THE COILS ARE MADE OF S.E. COPPER OF PROPER GAUGE WOUND ON BOBBINS, VARNISHED & TAPED. ALL THE TERMINAL CONNECTIONS OF PRIMARY & SECONDARY ARE BROUGHT OVER TO A BAKELITE SHEET FOR EDUCATIONAL STUDY FOR DIFFERENT CONNECTION COMBINATIONS. THE AIR COOLED TRANSFORMERS ARE ENCLOSED IN M.S. PERFORATED SHEET BOX.]	1 SET

7	TRANSFORMER THREE PHASE 1KVA INPUT 415V OUTPUT 415V WITH TAPING AT 50% & 100% HOUSED IN STEEL BOX WITH EDUCATIONAL TYPE TERMINALS PROVIDED. TECH TRACK MAKE WITH CONTROL PANEL (FOR OC & SC TEST)	1 SET
	IT CONSIST OF NICELY POWDER COATED M.S. FABRICATED BOX WITH ENGRAVED CIRCUIT WILL BE FITTED ON THE BAKELITE SHEET PANEL WITH DULY MARKED TERMINATION AND ALSO BACK DOOR OF THE PANEL WILL HAVE LOCK FACILITY FOR SAFETY OF PANEL.	
8	MEGGER(0-1000V)	2 NOS
9	MEGGER(0-500V)	2 NOS
10	AMMETER(0-1AMP)(AC AND DC) DIGITAL	3 NOS
11	AMMETER(0-5AMP)(AC AND DC) DIGITAL	4 NOS
12	MULTIMETER	5 NOS
13	STAR DELTA STARTER	2 NOS
14	LAMP LOAD BOX	1 NOS
15	INDUCTIVE LOAD BOX	1 NOS
16	DIGITAL TACHOMETER	1 NOS
17	VOLTMETER DIGITAL(0-300V)(AC AND DC)	2 NOS
18	VOLTMETER DIGITAL(0-500V)(AC AND DC)	2 NOS
19	POWER FACTOR METER(3AMP)	2 NOS
20	POWER FACTOR METER(10AMP)	2 NOS
21	RHEOSTAT 300 OHMS, 5AMP	2 NOS
22	RHEOSTAT 500 OHMS, 5AMP	2 NOS
23	RESISTIVE LOAD BOX (5KW, 3PHASE WITH NEUTRAL, 440V)	2 NOS
24	CAPACITIVE LOAD BOX	1 NOS
25	2-POINT STARTER	2 NOS
26	RECTIFIER (15KVA)	1 SET
27	MG SET , 15KVA (3PHASE INDUCTION MOTOR WITH SHUNT GENERATOR SET)	1 SET
28	PANEL BOARD REQUIRED FOR : MOTOR ALTERNATOR SET, 3 PHASE, 5KVA WITH EXCITER, 3PHASE, 400V, 50HZ, 1500RPM COUPLED WITH DC COMPOUND MOTOR (5KW, 220V, 1500RPM)	1 SET
29	DOL STARTER (3 PHASE, 415V, 3 KW)	2 NOS
30	STAR -DELTA STARTER (3 PHASE, 415 V, 3 KW)	2 NOS
31	AUTO TRANSFORMER STARTER (3 PHASE, 415 V, 3 KW)	2 NOS
32	WATTMETER (SINGLE PHASE, 230V, 5 KW)	2 NOS
33	WATTMETER (3 PHASE, 415 V, 3 KW)	2 NOS
34	CAPACITOR START INDUCTION MOTOR (SINGLE PHASE, 1KW, 1440 RPM)	2 NOS
35	VOLTAGE SOURCE INVERTER TRAINING KIT	1 NOS
36	CHOPPER CIRCUIT FOR SPEED CONTROL OF DC MOTOR	1 NOS
37	STUDY OF UPS & CVT TRAINER KIT	1 NOS

38	EARTH FAULT RELAY TEST KIT	1 NOS
39	BUCHHOLZ RELAY TRAINER KIT	1 NOS
40	REVERSE CURRENT RELAY TEST KIT	1 NOS
41	OIL CIRCUIT BREAKER DEMONSTRATION MODEL	1 NOS
42	FIELD REGULATOR	1 NOS

PACKAGE- 5 (ELECTRONICS DEPARTMENT)

Sl No	Name of Equipment	Specification
1	Stereophonic System trainer	<p>A self contained trainer with built in power supply</p> <p>Functional block indicated on board mimic</p> <p>Various test points provided on board Switch fault are provided to study different effects on circuit</p> <p>Complete FM Stereo Receiver with on board stereo Signal (LED) indicator Capable of receiving signal between 88 to 108 MHz</p> <p>On board dual Speaker to identify signal for L and R channel separately</p>
2	MODEM Trainer	<p>Waveform of different section</p> <p>The system must perform FSK Mod / De-mod based PC to PC communication</p> <p>Based on Advance 32 bit processor , with USB interface</p> <p>Adjustable Baud Rate:</p> <p>300BPS/1200BPS</p> <p>Serial communication software for PC to PC communication.</p> <p>Modulation built in FSK</p> <p>Modulation and Demodulation</p> <p>Two 20×4 LCD DISPLAY.</p> <p>4×4 matrix keypad , selection switch</p> <p>TRW as o p b o n e r b r y o a p r i d , M p r o i d n e t e l b d diagrams.</p>

3	Roseberry Pi trainer with Software	4GB Flash SD Card Breadboard (a.k.a. protoboard) Pi Cobbler and cable (to attach a Pi to a breadboard) Collection of LEDs Temperature/humidity sensor Photocell sensor Momentary switch Collection of resistors Collection of connecting wires Control LEDs Get switch feedback Get the temperature Detect light
4	Arduino Development Trainer Kit with Software	LCD Display/Single phase/50Hz/Plug and Play design On Board Breakout of sensors and actuators.
5	LED TV Trainer kit with VGA &HDMI interface and accessories	Superior quality 32-inch full HD/WiFi/Smart LED Color Television/ PC Monitor Manual and Remote control operation PAL/ NTSC video formats Composite video input/ VGA&HDMI input Complete block diagram of a LED TV/WiFi/Smart LED TV system on-board The different circuit boards of LED TV are exposed on a PCB Easy identification of
6	Chopper Trainer kit	Built in power supply; On board PWM circuit On board MOSFET, IGBT, Transistor & SCR Assembly; Test points provided to check the outputs at different blocks DC Motor 24V 500mA with 100 RPM as Load Easy to operate and understand Sockets provided to make different connections
7	Series Inverter (Single Phase)	With gradual variation of frequency Easy to operate and understand On board triggering circuit Test points to observe output at different points
8	Servo Type AC Stabiliser Trainer	0.9 power factor-for 30 kVA 40 kVA is designed Life oil cooled Less air cooled life Fans for cooling above 50 kVA
9	Single Phase Cycloconvertor Trainer kit	Easy to Operate, Built in Power Supply Firing circuit on single board. Gradual firing angle control up to 180°. Test point for observe output for different

		block. Socket to make different
10	UPS Trainer	Experiments:- 1-Study of PWM Technology 2- Study of AVR transformer of UPS 3-Study of the UPS Circuit in load condition 4-Fault identification >Experiment Trainer board that Contains:- 1.Input : 190 to 260 V/ 50Hz 2.Output : 230 V 3.Transformer specifications a.Input : 12-0-12 V b.Output : 0,190,220,240,260 V c.18-0 for battery
11	Digital Multimeter	4000 Counts Large LCD Display with Auto/Manual Range No Power-OFF under natural operation Data Hold, Max. / Min. Value Hold Capacitance, Frequency / Duty Cycle, Temperature
12	WiFi / Smart LED/Cable TV/HD TV/CCTV using Digital Camera Trainer with VGA&HDMI interface and accessories	Superior quality 32 inch full HD WiFi/Smart LED Color Television/ PC Monitor Manual and Remote control operation Built in WiFi adaptor PAL/ NTSC video formats Composite video input/ VGA &HDMI input Complete block diagram of a WiFi/Smart LED TV system on board The different circuit sections of WiFi/Smart LED TV are exposed on a PCB.Easy identification of different parts and components of the system at a glance
13	PCB Design Machine	Versatile PCB prototyping Auto depth adjustment Position Selection facility Two Layer PCB design Auto etching and drilling processes. Light for work area; Micro drilling & milling
14	Digital Storage Oscilloscope- 2G/s, 4 Channel 100 MHz	with 64K color TFT, 16 kpts memory depth, FFTfunction, alternate triggering, Roll mode, math functions, digital filter,waveform recorder, cursor Measurements, 22 automatic measurements, standard interface USB host, USB device with waveforms analysis software

15	Power scope CRO, 2 channel, 30MHz-40MHz	<p>Bandwidth : DC -30 MHz (-3 dB) Risetime : 12 ns approximately Deflection coefficients : Microcontroller based 12 calibrated steps 5 mV / div. - 20 V / div. (1-2-5 sequence). Electronic control. Display on LCD Accuracy : $\pm 3\%$ Input Impedance : 1 MWII 30 pF approximately</p>
16	VLSI Trainer	<p>FPGA (XILINX Spartan3) Application Development Board (50 K Gates, 1728 logic cells), 10 switches Input ,8-LED for output,7 segment Display, ports 176, Number of pins 208 The I/O experiments board Xilinx Webpack Development Software CD Sample Code for Board Testing</p>
17	ARM7 TDMI Kit	<p>with interface boards The Chip set may be TMS470, LPC2138, LPC2148, or STR7 etc. Interfaces: RTC, ADC, LCD, Seven segment display, LEDS and Switches.</p>
18	Universal Embedded Trainer	<p>ALTERA: EPF10K10TC144 (TQFP144 pin) XILINX: XCS10TQ144(TQFP144 pin) Chip board model: ALTERA: FPT-EPF10K10TC144 XILINX: FPT-XCS10TQ144 8 x 2 LED shown output. 8 x 2 Logical input toggle. 4 pulse keystrokes producer (two positive pulses:two negative pulses). 6 digits and 7 nodes monitor. Own red main power guiding lights. Within 10MHz oscillator. Own main power switch to exchange adaptor with Extend Power Pin. 25pin D Type Connector (Printer Port Download FPGA). Use DC 9V adaptor or Extend Power Pin provided for user. Specification: DC 5V. Support ALTERA MAX +Plus II</p>

19	Antenna Trainer (Motorised)-With Different types of Antenna and Accessories	with Motorised rotating unit and Plotting Software and with Radiation Pattern Plotting Software and 22 Antennas RF Generator for easy experimentation with built-in modulation and DC transmitting mast, and receiving mast with detector. Experiment with different types of antennas. Antenna Fabrication kit
20	DC Regulated power supply	Input 0-100V, 2A/5A
21	High Voltage Power Supply	Input-0-250V, 1A /5A
22	Signal generator	Range-0.2Hz to 2Mhz Square wave, sine wave, triangle wave, TTL pulse, positive and negative ramp, pulse and skewed sine wave, AM, and sweep functions, 0.1 Hz to 11 MHz, up/down range switchable in eight decade steps -
23	Trainer Board/Kit for sampling theorem	Study of Sampling and Reconstruction techniques Study Nyquist criteria for Sampling and Reconstructing signal Study effect of Sample amplifier and Sample and Hold amplifier on reconstructed signal Study effect of Sample /Hold Circuitry on reconstructed waveform Study and compare responses of 2nd order and 4th order LPFs
24	Audio out put Meter	LED display Accurate measurement of power with digital meter Impedance selector for load termination
25	DC Voltmeter and Ammeter(Analog/Digital) Kit Different Ranges	DC Voltmeter and Ammeter(Analog/Digital) Different Ranges
26	8 Bit ADCand DAC Converter	8 Bit ADCand DAC Converter trainer kit
27	Clamp meter	Display Type: LCD DC Voltage: 0-600 V Resistance: 0-4000 Ohms

PACKAGE- 6 (MECHANICALENGG.DEPARTMENT)

SL NO	EQUIPMENT	SPECIFICATION
1	EPICYCLIC GEAR TRAIN	Automatic , single phase,220 v,50 Hz, Power- 0.5 KW
2	JOURNAL BEARING APPARATUS	Journal dia- 50 mm, bearing dia- 55 mm, DC shunt wound motor with speed range 500-3000rpm in both directions, 16 tubes manometer panel mounted on wooden background
3	SINGLE CYLINDER PETROL ENGINE	Maximum Power50 BHP, Torque 120N-m,speed- 3000-5000rpm,water cooled, differential pressure transducer with digital indicator
4	SINGLE CYLINDER DIESEL ENGINE	4 stroke, water cooled, 12 HP/8.8 KW Power, 1000rpm, 127 mm bore,146.05 mm stroke, compression ratio 1:18
5	MULTI CYLINDER PETROL ENGINE MORSE TEST RIG	0-25 Pressure gauge,4 cylinders,230V,Single phase
6	VENTURIMETER & ORIFICEMETER	<p>Ø Venturimeter : Material Clear Acrylic, Compatible to 1" Dia pipe</p> <p>Ø Orificemeter : Material Clear Acrylic, Compatible to 1" Dia. Pipe</p> <p>Ø Water Circulation : FHP Pump, Crompton / Sharp make</p> <p>Ø Flow Measurement : Using Measuring Tank, Capacity 25 Ltrs.</p> <p>Ø Sump Tank : Capacity 50 Ltrs.</p> <p>Ø Stop Watch : Electronic</p> <p>Ø Control Panel : On / Off Switch, Mains Indicator etc.</p> <p>Ø Tanks will be made of Stainless Steel</p> <p>Ø The whole Set-up is well designed and arranged in a good quality painted Structure</p> <p>Ø Water Supply & Drain</p> <p>Ø Electricity Supply: Single Phase, 220 VAC, 0.5 Kw</p>
7	BERNOULLIS APPARATUS	<ul style="list-style-type: none"> • Inlet Tank Capacity: 20 Ltrs. MOC SS • Supply Tank Capacity: 85 Ltrs. MOC SS • Measuring Tank Capacity: 40 Ltrs. MOC SS fitted with Piezometer Tube & scale

		<ul style="list-style-type: none"> • Piezometer Tubes: Material P.U. Tubes (9 Nos.) • The whole set-up is ingeniously designed and schematically arranged on a powder-coated rigid structure <p>ControlPanel: Standard make On/Off switch, Mains Indicator etc.</p> <ul style="list-style-type: none"> • Electric supply 0.5 kW, 220V AC, Single Phase • Water supply Tap water connection • Floor Area with Drain facility
8	DARCY'S COEFFICIENT FROM FLOW THROUGH PIPE	
9	CAM AND FOLLOWER APPARATUS	0-30V DC Voltmeter, 0-50 DC Ammeter, plastic casing.
10	WATER COOLER TESTRIG	Hermitically sealed compressor Agitator: Compatible Capacity Condensor: Forced Convection air cooled Condensor cooling fan: Axial Flow type Digital Voltmeter: 0-300v Digital Ammeter: 0-5 Amp Temp. Measurement: Digital Temperature indicator with multi channel switch Pressure gauge: 2
11	PARALLEL/ SHEAR FORCE APPARATUS	Variable Dc Power Supply of 30 V, DC Voltmeter, 0-50 A DC, wooden casing material
12	IMPACT TESTING MACHINE	Analog type, 0-30V DC Voltmeter, DC Ammeter 0-50, 2 no's of variable DC, plastic casing, 240 V power supply.
13	JOULES APPARATUS	
14	CENTRIFUNGAL PUMP TEST REG	Centrifugal Pump: 1X1 size with variable speed D.C motor & speed controller Sump tank: 900X 400X400 mm Measuring Tank: 400X 400X 400 mm 1HpD.C motor, Stop Watch. Energy Meter for motor I/P measurement
15	PNEUMATIC CYLINDER TRAINER KIT WITH ACCESSORIES	310 V, Automatic, 50Hz

16	HYDROLIC CYLINDER TRAINER KIT WITH ACCESSORIES	1 Phase, 220V AC, Size-1100X300, Capacity-10, Current- 5Amp, Dimension-1150X330mm
17	PELTON WHEEL TURBINE TEST RIG	0-30 V DC Voltmeter, DC Ammeter 0-100, 2no. of variable DC, plastic casing
18	DIGITAL TACOMETER	
19	TWO STAGE AIR COMPRESSOR TEST RIG	3 phase, direct drive, 11KW prime mover, positive displacement rotary screw type, air cooled, oil lubricated with intercooler
20	MORSE TEST APPARATUS	
21	HALIDE TORCH OR ANY LEAK TESTER	
22	STATIC AND DYNAMIC BALANCING APPARATUS	ANALOG TYPE, 0-30V DC

PACKAGE-7 (METALLURGICAL ENGG. DEPARTMENT)

Sl. No.	NAME OF MACHINERY	Qty in nos.
1	BRINELL HARDNESS TESTER	1
2	ROCKWELL HARDNESS TESTER	1
3	VICKER HARDNESS TESTER	1
4	CHARPY IMPACT TESTER	1
5	IZOD IMPACT TESTER	1
6	FATIGUE MACHINE	1
7	SAMPLE CUTTETR	2
8	POWER HECKSHAW	1
9	DISC POLISHER (2 DISC)	2
10	METALLURGICAL MICROSCOPE	2
11	MOUNTING PRESS	2
12	AUTOMATIC POLISHING & ETCHING MACHINE	3

BID SECURITY FORM

Whereas.....(Here in aftercalled “the Bidder”) has submitted its bid dated.....(Date of Submission of bid) for the supply of.....(name and /or description of the goods)(here in after called “the Bid”) .KNOW ALL PEOPLE by these presents that WE.....(name of bank) of.....(name of country), Having our registered officeat.....(address of bank)(here in after called “the Bank”), are bound unto.....(name of Purchaser)(here in after called “the purchaser ”)in the sum of----- --for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this-----day of-----2020.

THE CONDITIONS of this obligation are:

1.If the Bidder

(a)With drawsits Bid during the period of bid validity specified by the Bidder on the Bid Form

or

(b)Does not accept the correction of errors in accordance with the Quotation;

or

2.If the Bidder, having been notified of the acceptance of its bid by the purchaser during the period of bid validity:

(a)Fails or refuses to execute the contract form if required,

or

(b)Fails or refuses to furnish the performance security, in accordance with the Instruction to

Bidders;

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including Forty Five(45) days after the period of the bid validity, and any demand in respect there of should reach the Bank not later than the above date.

.....(Signature of the Bank)

Note: The bank guarantee [submitted by Indian Bidder] should be executed on stamp paper in accordance with stamp Act. The stamp paper should be in the name of executing bank.

Bidder's Seal & Signature

PERFORMANCE SECURITY FORM

To,
The Principal,
Utkalmani Gopabandhu Institute of
Engineering, Rourkela - 769004

WHEREAS.....(Name of Supplier) here in after called
"TheSupplier"has under taken,in pursuance of Contract (Notification of Award)
No.....dated,.....20.....to supply.....(Description of Goods and
Services) here in after called"the Contract".

ANDWHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank
Guarantee by arecognized Bank for the sum specified therein as security for compliance with the Supplier's
performance obligations in accordance with the Contract.

ANDWHEREAS we have agreed to give the suppliera Guarantee:
THEREFOREWE here by affirm that we are Guarantors and responsible to you,on behalf of the Supplier,up to a
Total of.....(Amount of the Guaranteein Words and Figures) and we undertake to pay
you,upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or
argument, any sum or sums with in the limit of.....(Amount of Guarantee) as aforesaid, without your needing
to prove or to showground or reasons for our demands or the sum specified therein.

This Guarantee is valid until the.....day of.....20.....

Signature and Seal of Guarantors

.....
.....

Date.....20.....

Address:.....

**Note:The Bank Guarantee (Submitted by Indian Supplier) should be executed on stamp paper in accordance
with stamp Paper act. The stamp paper should be in the name of Executing Bank.**