

OFFICE OF THE PRINCIPAL, GOVT.POLYTECHNIC COLLEGE,  
AMBIKAPUR, Distt. – Surguja (C.G.)- 497001

Tender No- 3 /2004-05

NAME OF WORK	-	Supply of Equipments for Govt. Polytechnic, College Ambikapur (C.G.)
LAST DATE OF SUBMISSION OF TENDER FORM	-	08.02.2005 up to 03.00 pm
DATE OF OPENING	-	08.02.2005 at 04.00 pm
EARNEST MONEY DEPOSITE	-	@ 3 % of the total estimated cost in favourof Principal, Govt.Polytechnic Ambikapur (C.G.)
COST OF TENDER FORM	-	Rs. 200.00 (Rs. Two hundred only)
TIME PERIOD FOR SUPPLY OF EQUIPMENTS	-	45 days

**(N. K. Buade)**

PRINCIPAL

Govt. Polytechnic, College Ambikapur

Distt.-Surguja (C.G.)-497001

Ph. No. (07774)-220609

E-mail: poly\_ambika@rediffmail.com

## INSTRUCTIONS TO TENDERERS

TERMS & CONDITIONS FOR SUPPLY OF GOODS/EQUIPMENTS REQUIRED FOR GOVT. POLYTECHNIC COLLEGE AMBIKAPUR WILL BE AS BELOW -

1. **Last date & time of receiving sealed Tender Local as well as by post 08.02.2005 up to 03.00 pm.**
2. Tender will be opened on 08.02.2005 at 04.00 pm in the presence of such tenders or their representatives who may like to be present.
3. Tender received after the due date and time will not be accepted.
4. The Tender form is not transferable.
5. Consignment of things will have to be delivered for Institution. No extra payment will be made on account of packing, forwarding, freight, insurance etc.
6. It should be clearly noted that the supplier would have to affect the delivery of the things in the institution the list of things likely to be purchased in enclosed.
7. Tender should be valid up to the end of this financial year 31.03.2005
8. The Tender is required to furnish earnest money @ 3% of the quoted cost in the form of draft/irrevocable bank guarantee, which should be valid up to six months from the date of issue in the name of Principal Govt. Polytechnic College Ambikapur (C.G.) payable at State Bank of India, Ambikapur. Earnest money furnished for any other tender shall not be adjusted against this tender.
9. Request for relaxing the condition of Earnest money will not be entertained in any case no interest will be paid on the earnest money.
10. The earnest money of the successful tender will be returned after the contract performance guarantee, as required, is furnished.
11. The successful tender will have to convey his unconditional acceptance of the supply order in writing within 15 days of dispatch of the order.
12. The entire amount of **Earnest Money** is liable to be forfeited in case supplier express his inability to accept the order or if the acceptance is conditional.
13. The supplier shall furnish a performance guarantee bond valid for 9 months in the prescribed form from a Nationalized Bank which should reach the purchaser within 21 days from the date of issue of advance acceptance of tender for an amount equivalent to 10% of the value of the contract. If the supplier having been called upon the purchase to furnish performance guarantee bond fails to furnish the same within the period provide, it shall be lawful for the purchaser to forfeit the earnest money, to cancel the contract and purchaser may make awards to the next evaluated tender. On the performance and completion of the contract in all respects the performance guarantee bond will be returned to the supplier without any interest.
14. The Principal does not bind himself to accept the lowest or any tender and also reserves the right of rejecting all or any of the tender without assigning any reason for the same and split up the tenders as he may deem it.
15. No request for supply of any details in respect of tenders or comparative chart or any other enquiry in respect of tenders already received in the office will be entertained in any case.

16. **Complete specifications, make or name of manufacturer & printed literature must accompany the tender equipment with incomplete or vague specification likely to be ignored.**
17. Being a State Govt. CTS as applicable will be paid against from “D” which will be issued along with payment.
18. Sealed envelope containing tender should bear “Tender No. 3/2004-05” and its due date, it should be addressed to – Principal, Govt. Polytechnic College Ambikapur, Distt. Surguja (C.G.) 497001  
On the left bottom corner, the tender should place his name & full address.
19. If the supplier fails to deliver the goods within the period fixed for such delivery in the contract or as extended or late any time repudiated the contract before the expiry of such period, the purchaser may without prejudice to his other rights recover from the supplier as agreed liquidated damages & note by way of penalty a sum of equivalent to 2% of the price of any goods (including elements of taxes, duties freight etc.) which the supplier has failed to deliver within the period fixed for delivery in the contract or as extended for each month of part of a month during which the delivery of such good may be in arrears whose delivery there of is accepted after expiry of the aforesaid period.
20. No advance payment along with order or against R/R will be made to any supplier in any case. Hence the supplier should not stipulate conditions of advance payment along with order or against R/R please note that terms of payment are not negotiable.
21. All disputes with regard to the contracts for purchase of goods and equipment will be subject to the jurisdiction of court at AMBIKAPUR (C.G.)only.
22. Tender must submit attested photography of latest income tax clearance certificate failing which tender will be rejected.
23. A supplier not sticking to the terms and conditions of the tender shall be liable of forfeited of the performance guarantee.
24. Every page of tender should be numbered in continuation and signed by the tender on the bottom, number of total pages should be entered on the right hand corner of first sheet.
25. Commercial tax be deducted from the Bill as per Govt. orders.

**NOTE: Certificate of Registration issued from sale tax department to be submitted along with Tender documents.**

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**GOVT. POLYTECHNIC, AMBIKAPUR(C.G.)-497001**

**Department of Electrical Engg.**

(List of Equipments for Tender, Jan 2005)

<b>S.NO.</b>	<b>Electrical / Electronics Items</b>	<b>? Make, Model No.</b>	<b>? Rate</b>	<b>Remarks: Attach sheets/ leaflets for exact specifications and mention enclosure No</b>
1	<b>Wall Charts, Electrical/Electronics/Computer</b>			
2	<b>Electrical Machine Trainer</b> 1) Cut section of D/C motor. 2) Cut section of squirrel cage motor.			
3	<b>Motor test kits / Test apparatus</b> 1) DC motor test kit / DC machine test apparatus. 2) Induction motor test kit / Induction motor test apparatus.			
4	<b>DC Position Servo system</b> -Suitable to perform Experiments related to position control using DC servo-system			
5	<b>AC Position Servo system</b> -Suitable to perform Experiments related to position control using AC servo-system			
6	<b>Data Acquisition system</b> To perform experiments related with data acquisition system equipped with suitable transducers, signal conditioners, multiplexer, display devices etc. with appropriate accuracy			
7	<b>HP Laser JET Printer :</b> Make-HP, Model-Laserjet 3030, All-in-one (Print, Fax, Scan, Copy) <b>or any equivalent make</b>			
8	<b>HP Officejet Printer:</b> Make-HP, model-5510, All-in-one (Print, Fax, Scan, Copy); <b>or any equivalent make</b>			
9	<b>Electronic Pen Storage Device/USB Flash Disk</b> 1) 1GB Capacity 2) 2 GB Capacity -should be able to retain data for more than 10 years <b>Accessories</b> - installation disk, connecting cable with user's manual, etc with necessary warranty card.			
10	<b>Workstation with Dual Trace CRO, etc.:</b> (Systronics or Equivalent Make) It should include following features — 1) 25MHz dual trace Oscilloscope(2mV basic Sensitivity) 2) 10 MHz Function Generator (EXT FM, SWEEP) 3) 100MHz Frequency Counter (INT, EXT, LINE) 4) Curve Tracer & Component Tester 5)+5V, +12V, & -12V Power Supplies			
11	<b>Decade Inductor in 5/6 Decades (5/6 Steps)-</b> from 0.1 mH to 11.111 H			

12	<p><b>Simulation Model of Transmission line trainer (short/medium /long type )</b></p> <p>To measure the following  <b>1.</b>Characteristics of a line <b>2.</b> Frequency Characteristics of the line <b>3</b> Single phase shift of along the line <b>4.</b> Line under pulsed condition <b>5</b>Attenuation of the line <b>6.</b> Input impedance of the line <b>7.</b>Phase displacement between the current &amp; voltage at input of line <b>8</b>Study of stationary waves <b>9.</b> Fault localization wiithin the line</p> <p><b>FEATURES:</b>  The board consists of the following built in parts  1)12V D.C. at 100mA IC regulated power supply internally connected  2) Sine/Square wave generator having frequency range 40K ~400KHz &amp; 400K to 4MHz selection through switch  3)One potentiometer to vary the amplitude  4) One potentiometer to vary the frequency range  5) One potentiometers for adjusting input and output impedance.  6) 1E, 2W resistance for measuring current of line  7) BNC female connector provided for input signal  8) Co-axial cable four 25 metres each total 100 metre 9)  Mains ON/OFF switch, fuse and jewel light</p>			
13	<p><b>T.D.M. Pulse amplitude modulation, Demodulation Trainer</b></p> <p><b>OBJECT:</b>  To study the process of Amplitude Modulation &amp; Demodulation EXPERIMENTS  1. To observe the carrier waveforms on C.R.O.  2. To modulate carrier with audio signal and to observe waveforms on C.R.O.  3. To measure percentage modulation of the amplitude modulated waveform.  4. To demodulate amplitude modulated waveform and observe on CRO.</p> <p><b>FEATURES:</b>  The board consists of the following built-in parts:  a) +9V D.C.at 100mA, IC Regulated Power Supply internally connected.  b) Carrier generator circuit which generates carrier wave.  c) Modulating circuit based on two transistors.  d) Demodulating circuit. &amp; Adequate no. of other electronic components.  e) Mains ON/OFF switch, fuse and Neon Jewel light.</p>			
14	<p><b>T.D.M. code modulation / transmitter Trainer</b></p> <p><i>In two units:</i>  <b>1. PCM- TDM transmitter trainer 2. PCM-TDM Receiver trainer</b></p> <p>This trainer used in practical study of parameters like,  <b>1.</b> Study of Pulse modulation techniques a. PAM, b. PWM c. PPM, d. PCM  <b>2.</b> Study of digital coding methods a. study of 4-channel Time multiplexing  b. Sample and hold techniques c. Study of quantization methods  d. AID conversion division e. Study of error detection  f. Different types of coding methods techniques  g. Study of Random sync code generation methods</p>			
15	<p><b>Discrete Component Trainer:</b></p> <p>With Power Supply, Osc. and 3 multi range meters  <b>OBJECT:</b> to perform the following different experiments on  <b>A.</b> RC &amp; LC CIRCUITS.  <b>B.</b> SERIES &amp; PARALLEL RESONANCE CIRCUITS.  <b>C.</b>GERMANIUM &amp; SILICON DIODES.</p>			

	<p>D.ZENER DIODE :</p> <p>E.CLIPPING &amp; CLAMPING CIRCUITS :</p> <p>F.COMMON EMITTER CONFIGURATION OF A TRANSISTOR</p> <p>G.COMMON BASE CONFIGURATION OF A TRANSISTOR:</p> <p>H.COMMON COLLECTOR CONFIGURATION OF A TRANSISTOR ;</p> <p>I.EMITTER FOLLOWER (TRANSISTOR)</p> <p>J.CASCADED AMPLIFIER &amp; POWER AMPLIFIER:</p> <p>K.DIFFERENTIAL AMPLIFIER , CMRR</p> <p>L.FEED BACK AMPLIFIER :</p> <p>M.SELECTIVE AMPLIFIER :</p> <p>N.FET CHARACTERISTICS &amp; SOURCE FOLLOWER</p> <p>O.FET CHOPPER &amp; V.V.R. (Voltage Variable Resistor)</p> <p>P.R.C. PHASE SHIFT OSCILLATOR :</p> <p>Q.U.J.T. CHARACTERISTICS &amp; RELAXATION OSCILLATOR</p> <p>R.TRIAC CHARACTERISTICS :</p> <p>S.BISTABLE MULTIVIBRATOR :</p> <p>T.MONOSTABLE MULTIVIBRATOR :</p> <p>U.ASTABLE MULTIVIBRATOR :</p> <p>V.SCHMITT TRIGGER :</p> <p>W.BASIC LOGIC GATES :</p> <p>X.LED CHARACTERISTICS &amp; APPLICATIONS :</p> <p>Y.SCR CHARACTERISTICS :</p> <p>Z.DIAC CHARACTERISTICS &amp; APPLICATIONS</p>			
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**Note:** Only the general specifications for above items have been mentioned. **The Tenderers are required to note that—it is necessary to give the exact specifications of the material being quoted with manufacture's Make, Model no. and also to attach the leaflets, failing which the items quoted may not be considered.**

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OFFICE OF THE PRINCIPAL, GOVT.POLYTECHNIC COLLEGE,  
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**List of Equipments**  
**Civil Engineering Department**

S.No.	Equipments with specifications	Remarks
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	<p><b>Aggregate Impact Tester;</b> I.S.2386(Part-IV) &amp; I.S.9377 with automatic blow counter.</p> <p><b>Laboratory Cement Autoclave</b> as per I.S.4031, with S.S. chamber &amp; lid, with precision Pressurestat &amp; Thermostat .</p> <p><b>Air Permeability Apparatus</b> (Blaine type) with BIS certification mark ; I.S.5516</p> <p><b>Benkelman Beam Test Apparatus.</b></p> <p><b>Brazilian Test Apparatus.</b></p> <p><b>Bitumen Ashphalt Mixer</b> as per ASTM-D-1538</p> <p><b>Core cutter-</b> I.S.2720 (Part- XXIX)</p> <p><b>Cement Sampler -</b> I.S.7335</p> <p><b>C.B.R. Test Apparatus</b> (Field type) - I.S.2720 (Part-XXXI) – It should consist of –</p> <p>a. Loading Jack with Ubracket capacity 100 KN. Hand operated two speed screw jack fitted with a U-bracket with proving ring. A hexagonal adopter is provided to fix a proving ring. A thrust bar which passes through U-bracket is screwed on to a proving ring.</p> <p>b. Swivel head for the loading jack.</p> <p>c. Penetration piston, 50mm dia threaded at the upper end to connect to various length of extension sleeves through a connector.</p> <p>d. Extension set consist of 1 length 5cm,2 lengths 10cm, 1 length 30cm, 1 length 50cm &amp; a length 100cm used as spacers between the proving ring &amp; penetration piston. The lengths are machined from steel tubing.</p> <p>e. Connector set has eight connectors for coupling the penetration piston &amp; proving ring assembly either directly or through extension pieces.</p> <p>f. Datum bar assembly consisting of two stands &amp; one meter long bar.</p> <p>g. Adjustable bracket for mounting the dial gauge.</p> <p>h. Annular metal weight, 5kg, 250mm dia with 53mm dia central hole.</p> <p>i. Slotted metal weight, 5kg, 215mm to 250mm dia with 53mm dia slot, Qty. 2 Nos.</p> <p>j. Slotted metal weight, 10kg, 251mm to 250mm dia with 53mm dia slot, Qty. 2 Nos.</p> <p>k. Dial gauge 0.01mmX 25mm.</p> <p>l. Proving ring 50 KN capacity.</p> <p><b>Density basket-</b> I.S. 2386 (Part-III)</p> <p><b>Datum bar</b> for C.B.R. &amp; Plate bearing test consisting of two stands &amp; one meter long bar.</p>	
12.(a)	<p><b>Hand Operated Extractors,</b> Sample Extractors for 38mm dia specimens. It should consist of -</p> <p>a. Sample extractor screw type with a wire sample trimmer.</p> <p>b. Jarring link for driving the sampling tube of 38mm dia.</p> <p>c. Adopter with locking screw for fitting the 38mm dia sampling tube to jarring link.</p> <p>d. Split mould 38mm dia X 88mm long provided with quick release clamps.</p> <p>e. Split mould 38mm dia X 76mm long provided with quick release clamps.</p> <p>f. Sampling tube unrelieved 38mm dia x 200mm long.</p> <p>g. Sampling tube unrelieved 38mm dia x 150mm long.</p>	

<p>12.(b)</p> <p>13.</p> <p>14.</p> <p>15.</p> <p>16.</p> <p>17.</p> <p>18.</p> <p>19.</p> <p>20.</p> <p>21.</p> <p>22.</p> <p>23.</p> <p>24.</p> <p>25.</p> <p>26.</p>	<p><b>Extractor Frame Hydraulic</b>, hand operated capacity 50 KN. It should consist of –</p> <p>a. Hydraulic Jack mounted on frame.</p> <p>b. Plunger for 100mm dia moulds.</p> <p>c. Plunger for 150mm dia moulds.</p> <p>d. Thrust plate for 100mm dia moulds.</p> <p>e. Thrust plate for 150mm dia moulds.</p> <p><b>Humidity cabinet</b> including Hair Hygrometer, made of Stainless Steel, size 455 x 455 x 710mm.</p> <p><b>Jaw Crusher Laboratory</b> type, size 6”x 8”, fitted with 3 HP motor &amp; start &amp; stop switch. Capacity 250kg/hr.</p> <p><b>Jolting Apparatus</b>, as per I.S.4031, Microswitch for automatic cut-off.</p> <p><b>Kelly Ball Penetration Apparatus</b>- ASTM- C-360.</p> <p><b>Liquid Limit Device</b> motorised type A of I.S.2720 (Part-V), fitted with counter complete with Casagrande tool A &amp; tool B.</p> <p><b>Le Chatelier Mould</b>, as per I.S.5514.</p> <p><b>Pycnometer</b>- Suitable for determination of specific gravity of sand &amp; fine gravel. The apparatus should consist of a glass jar of 1kg capacity complete with brass cone, rubber seal &amp; screwed cap, including spares of rubber seal (10Nos.)</p> <p><b>Plastic Limit Apparatus</b> as per I.S.2720.</p> <p><b>Pulveriser Laboratory Type</b> – Max feed size ¼”, fitted with 3 HP, 3 Phase motor.</p> <p><b>Relative Density Test Apparatus</b> as per I.S.2720 (Part-XIV) with electrically operated vibratory table complete with cylindrical metal unit weight mould 15000 ml capacity guide sleeve with clamp assembly, surcharge base plate, dial gauge holder, dial gauge and calibration bar.</p> <p><b>Split Spoon Sampler</b> I.S. 2131 complete with all accessories</p> <p><b>Stripping Device</b> (Bitumen).</p> <p><b>Tile Abrasion Testing Machine</b> I.S. 1237 &amp; I.S. 1706.</p> <p><b>Tile Flexure Testing Machine</b> I.S. 654 and I.S. 1257.</p>	
<p>27.</p> <p>28.</p>	<p><b>Wet Sieve Shocker motorized</b> which can take up to seven sieves of 15 cm./20 cm. diameter, the sieves holder should be connected to electrically operated reciprocating mechanism which moves up and down in a water reservoir.</p> <p><b>Plate Bearing (Load) Test Apparatus</b>. I.S. 1888</p> <p>The basic outfit must consist of –</p> <p>a. Hand operated hydraulic jack with pressure gauge, capacity 500 KN. Supplied with 5 meter long metal tube with end couplings. Qty. - 01 set.</p> <p>b. Ball and Socket arrangement consisting of two steel plates with one still ball in between plates. Qty. - 01 set</p> <p>c. Extension rod 12 mm dia x 25 cm long for taking dial gauge readings. Qty – 16 nos.</p> <p>d. Magnetic base with female thread on top for holding extension rod. Qty.- 04 nos.</p> <p>e. Top end plate, 50 mm dia with male thread for fitting on to the extension rod and positioning the dial gauge plunger. Qty – 04 nos.</p> <p>f. Column 15 cm dia x 25 cm long with flanges complete with four bolts and nut. Qty - 02 nos.</p> <p>g. Column 15 cm dia x 50 cm. long with flanges complete with four bolts and nuts. Qty. – 01 no.</p> <p>h. Datum bar, light weight, portable, total span 5 meter, height approximately 30 cm. mounted on two removable legs. It is made in two parts, provision exit for datum bar of 2.5 meter span to be used. A spear leg is provided for the purpose complete with two quick release clamps for positioning and holding the dial gauge bracket. Qty. – 02 nos.</p> <p>i. Spikes. Qty.- 04 Nos.</p>	

	<p>Dial gauge 0.01mmX25mm. Qty.-04 Nos.</p> <p>As a wide range of bearing plates are manufactured the customer is advised to select the plate from the following list according to the specific requirements. These are priced extra.</p> <p>j. Grooved M.S. Plate 30cmX 30cm square X 25mm thick.</p> <p>k. Grooved M.S. Plate 45cmX 45cm square X 25mm thick.</p> <p>l. Grooved M.S. Plate 60cmX 60cm square X 25mm thick.</p> <p>m. Grooved M.S. Plate 75cmX 75cm square X 25mm thick.</p> <p>n. Plane M.S. Plate 30cmX 30cm square X 25mm thick.</p> <p>o. Plane M.S. Plate 45cmX 45cm square X 25mm thick.</p> <p>p. Plane M.S. Plate 60cmX 60cm square X 25mm thick.</p> <p>q. Plane M.S. Plate 75cmX 75cm square X 25mm thick.</p> <p>r. Load Truss 500 KN capacity with sixteen anchorages spikes &amp; Guy wires with turn buckles. Truss should be welded I Girder construction in two halves which can be bolted together when required.</p> <p>The lower chord, the cross pieces for holding the truss down &amp; the vertical thrust members should be of welded box type construction with two channel enclosing &amp; welded to an I girder. The anchorages should be in accordance with C.B.R. Institute Roorkee.</p>	
29	<b>Autocad computer software</b> - Latest version for Civil and Architecture use.	
30	<b>Digital Camera</b> with video facility.	

*Note* – Make, Model no. and detailed specifications of the item quoted must be mentioned with catalogue, otherwise quotation may not be considered.

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List of Equipments  
Chemistry Lab.

S.No.	Equipments with specifications	Remarks
1.	<b>Water Analyzer</b> – 371, Systronics or any equivalent make	
2.	<b>m Controller based Spectrophotometer</b> (340 mm – 960 mm) with 2 position sample holder – 106 Systronics or any equivalent make	
3.	<b>Freez</b> – 300 liter - Whirlpool or any equivalent make	
4.	<b>Jar Test Apparatus for Alum Deposit</b> – Systronics or any equivalent make	
5.	<b>Micro Quantum Iron kit</b> , Range – 0 – 1 to 5 mg/leter E-merk Germany or any equivalent make	

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