CHANDIGARH COLLEGE OF ENGINEERING & TECHNOLOGY (DIPLOMA WING) SECTOR 26 CHANDIGARH

TENDER DOCUMENT

(PAGES 1 –17)

LAST DATE AND TIME FOR RECEIPT OF TENDER	:	**18.11.2015 UPTO 4:00 PM**
DATE AND TIME OF OPENING		
Technical Bid	**:**	**19.11.2015 at 10-00 AM**
Financial Bid	**:**	**20.11.2015 at 10-00 AM**
PLACE OF OPENING OF TENDER	:	**COMMITTEE ROOM CHD. COLLEGE OF ENGG. & TECH. (DIPLOMA WING), SECTOR -26, CHANDIGARH**

CONTENTS

CHECK LIST DULY FILLED IN TO BE ATTACHED WITH THE TENDER

FOR TECHNICAL BID

1.	Whether EMD in the shape of Demand Draft valid for three months, for the asked amount attached ?	Yes/No
2.	Whether Technical specifications, of the Machinery/equipment attached?	Yes/No
3.	Whether tender document duly signed by authorized signatory Attached ?	Yes/No
4.	Whether affidavit duly attested by Notary/ Executive Magistrate regarding non-black listing of firm attached?	Yes/No
5.	Whether a list of institutions/organizations where your firm has Supplied this item/equipment / instrument recently, is attached?	Yes/No
6.	In case you are manufacturer, have you enclosed the certificate?	Yes/No
7.	Whether you are an authorized agent / dealer / distributor of the firm / company / manufacturer and whether authority letter as issued by them in your favour attached ?	Yes/No
8.	Whether Technical broucher of the machinery /equipments attached?	Yes/No
9.	Whether the item / machinery / equipment to be supplied is covered under guarantee /warrantee valid for 01 years from the date of installation as asked for in the tender document ?	Yes/No

Signature of authorized signatory
With seal of the firm

CHANDIGARH COLLEGE OF ENGINEERING AND TECHNOLOGY (DIPLOMA WING)

SECTOR 26 CHANDIGARH

TENDER FOR PURCHASE OF MACHINERY/EQUIPMENT
2015-2016

IMPORTANT NOTE AND DATES

1. All the instructions contained in the Tender Form are important and required to be complied with.

2. Please ensure that Technical Bid, Financial Bid and Bid Guarantee (EMD) are submitted in three separate envelopes and these should be put in an outer envelope, super – scribing, **" Tender for Machinery/Equipment for CCET (Diploma Wing) Due 18.11.2015 UPTO 4:00 PM ".**
3. The Earnest Money Deposit should be submitted in the shape of demand Drafts valid for three months in favour of Principal, Chandigarh College of Engg. & Tech, Sector 26, Chandigarh payable at Chandigarh. Earnest Money in any other shape is not acceptable.

Last date & Time for the receipt of Tender : 18.11.2015 UPTO 4:00 PM

Opening of Technical Bid : 19.11.2015 at 10-00 AM

Opening of Financial Bid : 20.11.2015 at 10-00 AM

Place of opening of tender : COMMITTEE ROOM
CHD. COLLEGE OF ENGG. & TECH.
(DIPLOMA WING), SEC -26, CHANDIGARH

ANNEXURE-1

CHANDIHARH COLLEGE OF ENGINEERING & TECHNOLOGY SECTOR 26, CHANDIGARH (DIPLOMA WING)

TENDER NOTICE

Sealed tenders on the prescribed format are invited for purchase of Machinery / Equipment i. e. Trainer Kits for Electronics & Comm. Engg. deptt. so as to reach in the office of undersigned up to 4.00 PM on or before 18.11.2015. The tender documents containing details of machinery/equipment/material, terms & condition can be down loaded from College website i.e. www.ccet.ac.in. or govt. website http://tenders.gov.in or Directorate of Technical Education, UT Chandigarh website http://chdtechnicaleducation.gov.in. The Tender should be accompanied by EMD in the shape of Bank Drafts in favour of "Principal Chandigarh College of Engg. & Tech. (Diploma Wing), payable at Chandigarh. Conditional tender will be summarily rejected.

PRINCIPAL (DIPLOMA WING)

INSTRUCTIONS/GUIDELINES TO THE TENDERER / BIDDER

The tenderer is required to go through the instructions before submission of tender document.

1. A copy of Tender Notice is enclosed as Annexure –1.

2. Tenders duly sealed in envelope and clearly super scribed as "**TENDER FOR PURCHASE OF MACHINERY/EQUIPMENT FOR CHANDIGARH COLLEGE OF ENGINEERING & TECHNOLOGY, Sector 26, CHANDIGARH (DIPLOMA WING)** " due on **18.11.2015 UPTO 4:00 PM** should be submitted in three separate sealed envelops duly super scribed as under and all these sealed covers are to be put in bigger cover which should also be sealed as super scribed as above.

   i) Bid Guarantee containing earnest money deposit instrument (IN ENVELOPE NO.1)
   ii) Technical Bid along with Tender documents and Affidavit (IN ENVELOPE NO 2)
   iii) Financial Bid (IN ENVELOPE NO 3).

3. Attach an affidavit duly attested by an Executive Magistrate or a Notary Public as per proforma given at Annexure II, check list and technical brochure of the equipments with TECHNICAL BID.

4. Attach a signed copy of tender documents with the TECHNICAL BID.

5. Unsealed tender (s) will be rejected.

6. Offer should be preferably typed or written in neat/legible hand.

7. The tenderer (s) will be responsible to ensure that the tender is received on or before the due date and time in the office of Principal, Chandigarh College of Engineering & Technology (Diploma Wing), Sector 26, Chandigarh.

8. Each page of tender document should be signed by the tenderer (s) with stamp of the firm duly affixed on each page.

9. The tenderer, preferably, should fill the rates and amount in the price schedule as per Annexure –III himself and submit the bid to avoid any kind of mistake..

10. The tenderer should indicate specifically the sales tax, duties and levies chargeable against each item.

11. The tenderer should clearly indicate the availability of service and maintenance facilities at Chandigarh for the item quoted.
12. The tenderer must indicate the list of eminent institutions/ organizations particularly in and around Chandigarh, where the same equipment has been supplied during the last three years.

13. The Tender must be submitted alongwith the copies of :

    - **Manufacturers license or authority from the manufacturer.**
    - **Sales Tax Registration Certificate**

TERMS AND CONDITIONS OF THE TENDER

1. The last date and time for receipt of tenders is **18.11.2015 UPTO 4:00 PM**. Tender (s) received after the due date and time shall not be considered.

2. Each tender must be accompanied with earnest money deposit Rs 10,000/- only in the shape of Demand Draft in favour of the Principal, Chandigarh College of Engineering & Technology, Chandigarh, valid for three months payable at Chandigarh on any Scheduled Bank.

3. Tender (s) received without earnest money shall be rejected straightway.

4. Earnest Money deposited with the Chd. College of Engg. & Tech., (Diploma Wing) Chandigarh in connection with any other tender will not be considered against this tender.

5. The Principal, CCET (Diploma Wing) Chd., reserves all rights to accept or reject any tender without assigning any reason.

6. This Tender form is not transferable.

7. The tender i.e. Technical Bid shall be opened at **19-11-2015 at 10:00 am.** Financial bids of only those tenderer will be opened on **20-11-2015 at 10-00 AM** whose Technical Bids are found to be acceptable as per tender specifications.

8. In the event of date of receipt or opening of tender being declared a holiday in the Chandigarh College of Engineering & Technology, Sector 26, Chandigarh, tenders will be opened on next working day at the same time.

9. The tender (s) shall be opened in the presence of intending tenderer (s) or their authorized representative (s) present at that time of opening.

10. Conditional offer shall be rejected.

11. Any attempt direct or indirect, to cast influence, negotiation on the part of the tenderer with the officials/authority to whom he will submit the tender or the tender accepting official/authority before the finalization of tenders will render the tenderer liable for exclusion from consideration.

12. The tenders incomplete in any respect will be rejected outright.

13. No advance payment or payment against proforma invoice will be made. Payment will be made after receipt of Machinery /equipment/ material, its inspection, installation and testing to the satisfaction of the authorized representative (s) of The Principal, CCET (Diploma Wing) Chd

14. All damaged or unapproved goods shall be returned at the risk and cost of the Tenderer and the incidental expenditure thereupon shall be borne by the concerned party.

15. The quoted prices must be mentioned showing Excise Duty and sales tax separately.(Annexure-III)

16. Copy of PAN no. / TAN no. of the firm must be attached with the tender documents.

17. Copy of annual return of Income Tax for the financial year **2013-14** & **2014-15** must be attached with the tender documents.

18. The Public Sector undertaking of the Central / State Govt. are exempted from furnishing Earnest Money Deposit.

19. Rates should be quoted F.O.R i.e Chd. College of Engg. & Tech., Sector 26, Chandigarh including packing, forwarding postage and freight etc.

20. Principal, CCET (Diploma Wing) Chd. reserves all rights to reject the goods if the same are not found in accordance with the required description / specifications.

21. In case of violation of any term and condition as mentioned, Earnest Money Deposit of the tenderer shall be forfeited in full or part at the entire discretion of the Principal, Chd. College of Engg. & Tech., Diploma Wing, Chandigarh.

22. Training, shall be provided by the firm free of cost to the faculty / other allied staff of the college at the premises of Institute.

23. The defective machinery /equipment/ material from the Store of Chd. College of Engg. & Tech., Chandigarh will be lifted at the entire cost & risk of the firm. Chd. College of Engg. & Tech., Chandigarh will not bear any expenses on this account and the material will be lying in the CCET premises at tenderers risk and cost.

24. The Equipment/ Machinery/ Material will be maintained free of charges during the warranty period.

25. Performance security @ 10% of the value of supply order covering the warranty period + 60 days shall be furnished by the firm in the shape of Bank Guarantee duly pledged in favour of **Principal, Chd. College of Engg. & Tech. (Diploma Wing), Chandigarh** alongwith the supply of Equipment/Machine/Material.

26. The CCET would return the Earnest Money Deposit to the successful tendering firm on the submission of the Bank Guarantee. EMD of unsuccessful bidders will also be returned.

27. Rates quoted in Indian Currency only shall be accepted irrespective of foreign make of Machinery/ equipment / material which includes all kinds of charges, taxes, duties etc.

28. <u>Period for which the offer will remain open</u>

    The tendering firms should keep their offers valid for acceptance up to 31.03.2016. If the firms are unable to keep their offers open for the above said period, they should specifically state the period for which their offers would remain open but they must realize that such a provision may result in the rejection of their offers, provided, that in the event that the day upto which the offer is to remain open is declared holiday for the CCET the offer shall remain open for the following day.

29. Any conditional tender or any deviation from the terms and conditions of the tender document shall render the tender liable to rejection.

30. Any quantity discounts must be specifically indicated in the price bid.

31. The Machinery/equipment/Material will be installed free of charge by the firm / agent at the designated premises.

32. The delivery period of the equipment / material shall be 30 days from the date of supply order. The delivery period can be extended at the sole discretion of Principal, CCET (Diploma Wing) Chd in special circumstances on written request from the qualified firm. Penalty @ 0.5% per week of delayed period after the due date of supply of machinery/Equipment/Material will be charged for actual period of delay.

33. Installation and demonstration will be done by the supplier to the satisfaction of Officer Incharge of the Deptt.

34. Warranty period, where applicable, should be clearly specified not less than 1-2 year in any case.

35. All machinery / equipment / material should **conform to BIS specifications**.

36. Any fault or deficiency in the Machinery /equipments/ Material should be rectified by the supplier within two weeks after intimation.

37. Foundations of Machinery wherever necessary shall be provided/constructed by the supplier.

38. Instructional materials and manuals will be supplied by the supplier free of cost.

39. The technical broucher for the machinery/ equipments shall be supplied along with Technical Bid

40. The concerned firm will have to impart training to the staff of the Institute for smooth operating of Machinery/ equipment.

41. The concerned firm will also quote the Annual Maintenance Contract cost in the tender after expiring of warranty period.

42. In case of failure or default in the performance or responsibilities or break of terms and conditions of DNIT or MOU or any agreement of contract between the company / firm / agency / person or any legal entity and Chandigarh College of Engineering & Technology , as the case may be, the said firm / company/ agency/ person or any legal entity shall be black listed in the light of notification issued by Chandigarh, Administration under No 1927 – F&PO(3) -2009/1170 dated 27-02-2009 or any other instruction issued from time to time,

43. <u>JURISDICTION</u>

The courts of Chandigarh alone will have the jurisdiction to try any matter, dispute or reference between the parties arising out of this purchase. It is specifically agreed that no court outside and other than Chandigarh Court shall have jurisdiction in the matter.

S.No	Item Description & specification	Qty Reqd
01.	**TDM Pulse Code Modulation & demodulation Training kit Module with Hamming code & Parity & software for Demonstration of PCM technique** **Training Kits should have : Separate Boards for transmitter & receiver** **PCM Modulation Transmitter** Crystal Frequency : 16 MHz On Board Analog Signal : 2 KHz, 4 KHz (Sine wave synchronized to sampling pulse Adjustable amplitude and separate variable DC level) Input Channels : 2 nos.; Multiplexing : Time Division Multiplexing Modulation : Pulse Code Modulation ; Sync Signal : Pseudo Random Sync Code Generator Error Check Code : Off - Odd - Even - Hamming Operating Mode : Fast : 320 KHz / channel approximately Slow : 1.9 Hz / channel approximately ; Test Points : 50 nos ; 4 Nos of Switched faults for different Error Check Options Power Supply : 110-220 V, ±10%, 50 Hz **PCM Demodulation/receiver** Should accept two channel Multiplexed data On Board Low pass Filters , Fast & Slow mode of operation , On Board PLL for clock regeneration ; On Board Sync code Detector , Error check code options , Odd or even parity -Single bit error detection ; Hamming code single bit error detection & correction , Switched faults for different error check code options Input Channel : Time Division Multiplexed serial Input Demodulation : Pulse Code Demodulation Clock Regeneration : By Phase Locked loop Error Detection (Single bit) : Off-Odd- Even parity & Hamming code Error Correction : Hamming code ; Test Points : 50 nos. Power Supply : 110-220 V, ±10%, 50 Hz Casing : Trainer should be encased in a plastic molded box with a cover to protect it from dust etc. No components on the top of the Trainer only block diagram to be provided Software should be a licensed version & should be supplied with hardware lock. Software : Should be supplied with teaching & simulation software for digital communication. Theory Part on digital communication should also be covered in software. Software should be a licensed version & should be supplied with hardware lock	01
02.	**Amplitude Modulation (SSB/DSB) Transmitter Trainer** Transmitter : On board Functional blocks with self explanatory waveforms and technical details indicated .Oscillator controlled carrier frequency ;LED indication for signal flow and selection. At least 25 nos. test points for waveform observation At least 8 Switched faults for troubleshooting at different functional blocks Telescopic antenna should be provided for transmission of AM signal On board audio jacks should be provided for Microphone and Earphone connection. On board Speaker provided for audio communication Audio Oscillator : Adjustable Amplitude & Frequency (300 Hz - 3.4 KHz) Audio Output : Amplifier with speaker Modulators : Balanced Modulator with Band pass Filter (1 MHz) - 2 nos. Balanced Modulator : 1 No. (455 KHz) ; Ceramic Band pass Filter : 1 No. (455 KHz) Carrier Frequency : 1 MHz (Oscillator controlled) Transmitter Amplifier Output: (Gain adjustable) DSB (1 MHz), SSB (1.445 MHz) connected to Antenna/cable Antenna: Telescopic with Radiation distance up to approx. 1 meters Switched Faults : 8 nos.; Test points: 27 nos Amplitude Modulation (SSB/DSB) Transmitter & Receiver Trainer No components on the top of the Trainer except Tuning coils , That too protected by Plastic covers , only block diagram to be provided in the top of the Training Boards . Software : Should be supplied with Technology teaching & simulation software for Analog communication. Theory Part on Analog communication should also be covered in software. Software should be a licensed version & should be supplied with hardware lock	01

03.	**Amplitude Demodulation (SSB/DSB) Receiver Trainer** On board Functional blocks with self explanatory waveforms and technical details indicated. On board Tuner provided for tuning the transmitting station LED indication for signal flow and selection At least 30 nos. test points for waveform observation and analysis 8 Switched faults for troubleshooting at different functional blocks Telescopic antenna for reception of AM signal.On board audio jack provided for Earphone connection. On board Speaker provided for audio communication Construction : Superhetrodyne Frequency Range :980 to 2060 KHz Intermediate Frequency :455KHz ;Input Circuit:1. RF amplifier 2. Mixer 3. Local oscillator 980 to 2060 KHz 4. Beat Freq. Oscillator 5. IF Amplifier. 6. IF Amplifier 2 Tuning :Variable capacitor(Ganged) Dial marking on board : Range 525 to 1600 KHz Receiving Media :Telescopic Antenna/ Cable Detectors :1). Diode Detector (DSB) 2.) Product Detector (SSB) Audio Output :Amplifier With Speaker/ Headphone Switch able Automatic Gain Control ,Switched Faults:8 Nos. ; Test points: 30 nos No components on the top of the Trainer except Tuning coils , That too protected by Plastic covers , only block diagram to be provided in the top of the Training Boards . Software : Should be supplied with Technology teaching & simulation software for Analog communication. Theory Part on Analog communication should also be covered in software. Software should be a licensed version & should be supplied with hardware lock.	01
04.	**ASK, FSK, BPSK, DBPSK Modulator & Demodulator** Modulator and Demodulator on same board Modulation & Demodulation Techniques : ASK , FSK , BPSK , DBPSK Internal Data Generator : Digital Data Data Pattern : 8-Bit , 16-Bit , 32-Bit , 64-Bit Frequency : 2KHz, 4KHz, 8KHz, 16KHz Internal Carrier Generator : Direct Digital Synthesized Carrier Signal : Sine Wave SMD LED Indicators : 24 nos for Digital Data Selection , Data frequency selection & Technique selection Number of Test Points : 40 nos.; Crystal Frequency : 8MHz Selection Mode : Push switches. No components on the top of Trainer, only block diagram to be provided in the top of the Training Boards	01
05.	**TDM Pulse Amplitude Modulation & demodulation Module** Crystal Frequency : 8 MHz ; Analog Input Channels : 4 channels Multiplexing : Time Division Multiplexing Modulation : Pulse Amplitude Modulation On Board Analog Signal : 500 Hz, 1 KHz, 2 KHz and 4 KHz (Sine wave synchronized to s amp l i n g pulse) Adjustable amplitude & separate variable DC level) Sampling Rate : 4 sampling signals 32, 40, 50 & 80 KHz/ ch (switch selectable) Sampling Pulse : With duty cycle variable from 0-90% in decade steps. Clock Regeneration at Receiver : Using PLL ; Test points : 55 nos. Demodulation: Active Low pass filters Demultiplexing : Time Division DeMultiplexing Software :Should be supplied with Technology teaching & simulation software for Digital communication.	01
06.	**Breadboard based general purpose Digital trainer** Breadboard : 172.5 mm 128.5 mm ;Tie points : 1685 DC Power Supply : +5 V /1 A, 5 V / 500 mA (Fixed) +3 V to +15 V / 500 mA (variable), -3 V to -15 V / 500 mA (variable) Pulse Generator :Frequency range : 1 Hz to 1 MHz in 6 steps. Variable in between steps Amplitude : 3 V -15 V (CMOS), 5 V (TTL) Duty cycle : 50 %, TTL / CMOS Output Pulser Switches : 2 Nos. (Push to On) Data switches : 8 Nos. (Toggle switches for both TTL & CMOS) Bi colour LED display : 8 Nos. (TTL/CMOS Mode) BCD to Seven Segment Display : 3 Nos Logic Probe : Logic level indicator High/low for TTL/CMOS (Seven Segment) Interconnections: 2mm ; Patch cords : 2 mm banana stackable & 2 mm to 1 mm Mains Supply : 110-220V ±10%, 50Hz Software : Should be supplied with Technology teaching & simulation software for Digital Electronics . Theory Part on Digital Electronics should also be covered in software. Software should be a licensed version & should be supplied with hardware lock.\	01

07.	**Demonstration Kit for Microwave Oven** Power Output : 700 W max Microwave Frequency : 2450 MHz Capacity : 17 Litres ; Cavity Type : Epoxy Tunable Diameter : 245mm Training board : Display Seven Segment Connection between Oven & Board using FRC Cable Trainer board should not have any components on the top of the board. Mains supply 230 V ± 10%, 50 Hz	01
08.	**Colour TV Trainer with remote 36 cm Remote** TV Receiver in open form with all components & controls placed on single PCB Each circuit block shown in different colour for easy identification Solderless fault creation & Rectification ; Legend printing on PCB More than 50 Test points ; Sliding main board with locking facility Manual and remote control operation ;Detachable CRT Unit Standard :CCIR-B-PAL-G, 625 Lines Channels :230 ; 2 - 4 VHP I (VL), 5 - 12 VHP III (VH) 12 - 100 : BAND IV & V, else : S BAND & HYPER BAND Picture Tube Size : 36 cms. Diagonal ; RF Input Impedance : 75 ohms Circuit Blocks : System Control Circuit, Video IF, Sound Section , Tuner Section, Horizontal Oscillator, Horizontal Output, Vertical Oscillator, Vertical output, Video & Chroma Section, Power Supply, AV sections On Screen Display to set : Volume, Brightness, Contrast, Colour, Channel & Band Selection, Panel Control : ON-OFF switch, stand by Menu Vol +/ - , Prog +/ - Remote Control Function : Volume, Brightness, Stand by, Colour, Contrast, Channel Selection, Audio Mute, AV Mode, Zoom, Swap, Scan, Child Lock PCB Size (mm) : 475× 360 ; No. of Faults : 48 ; No. of Test Points : 55 I.F. Frequency : Video - 38.9 MHz, Audio - 33.4 MHz ; Speaker Size (mm.) : 50 × 125 Accelerating Potential : 24 KV max. ; Operating Voltage for EHT : 110 V Mains Supply : 230 V ±15 %, 50 Hz . Power Consumption : 75 VA (approximately)	01
09.	**Microwave Bench X Band with different antennas & Motorized turntable** Klystron Power Supply digital : 1 With LCD display simultaneous for Voltage & current. Klystron Oscillator : 1 PIN Modulator : 1 Isolator : 1 Frequency Meter Digital : 1 Variable Attenuator : 1 Tunable Probe : 1 Detector Mount : 1 Digital VSWR Meter with : 1 Coaxial to WG adapter : 1 Wave guide twist : 1 Waveguide Stands : 2 ANTENNAS E Plane Sectorial Horn Antenna : 1 H Plane Sectorial Horn Antenna : 1 Parabolic Dish antenna : 1 Pyramidal horn antenna : 1 Motorized Radiation Pattern turntable : 1 With Microcontroller based high precision DC stepper Motor. Auto zero point setting Built in DC Power supply, resolution 1 deg. RS 232 interface, software & PC Based motorized Unit. Accessories: Cooling Fan : 1 BNC to BNC cable : 2 Coaxial N to N cable : 1 Microphone : 1 VSWR Meter should Have built in Socket for headphone For audio comm & RS 232 Interface for data Communication .	01.

10.	**VI Characteristics of PN Diode ,Zener Diode & LED .** Trainer should be compact & can be used to study study the PN, Zener & LED diode Forward and reverse characteristics Technical Specifications : PN , Zener diode and LED should be provided on board. On Board DC power supply : +12V DC Ammeter : 3 1/2 Digit LCD ; Range : 1µA to 200mA Voltmeter : 3 1/2 Digit LCD ; Range : 1mV to 200V Mains Supply : 230V AC ±10% Trainer should be on PCB. Should have in built power supply.Circuit diagram should be printed on the top of the board. Test points provided on board to measure voltage, current & resistance at various points.	01
11.	**Half wave, Full wave & Bridge rectifier** Study of Half wave, Full wave & Bridge Rectifier. Test points are provided on board. Transformer Rating: 9 V center tapped (300mA) approx. Mains Supply : 230V, ±10%, 50Hz Half wave Rectifier output : + 4V DC approx. Center-Trapped Rectifier : +8 V DC approx. Bridge Rectifier Output : + 8 V DC approx. Filter : LC Type ;Load : Resistive 220W, ½Watt Interconnections: 2mm ;Patch cords : 2 mm banana stackable Mains : 230V AC ±10%	01
12.	**Transistor Characteristics Trainer** Trainer should be compact & can be used to study Characteristics of PNP, NPN transistor in all different Type of configuration and to understand various Regions of operation of PNP and NPN Transistor. CE,CB& CC config. Technical Specifications: DC power supply : +5V, -5V+12V, -12V Transistor : BC548, 2N3906 ; Base should be provided to use other transistors . Ammeter : 3½ digit LCD ; Range : 1µA to 200mA Voltmeter : 3½ digit LCD ; Range :1mV to 200V Mains : 230 V AC ±10% (Detachable mains chord to be provided)	01
13.	**FET Characteristics Trainer** Trainer should be compact & can be used to Study of characteristics of Field Effect Transistor and to evaluate-AC Drain resistance, Transconductance, Amplification factor, and DC Drain resistance Technical Specifications: DC power supply : -5V+12V, FET :J112A Ammeter : 3½ digit LCD ; Range : 2mA to 200mA Voltmeter : 3½ digit LCD ; Range :200mV to 200V Mains : 230 V AC ±10% (Detachable mains chord to be provided)	01
14.	**Two RC Coupled amplifier and emitter follower** Trainer should have : Provision to study Single & Multistage RC Coupled amplifier & Emitter follower circuit. On Board sine wave generator with variable frequency and amplitude & DC power supply Technical specifications: On Board DC power supply : +12 V, +5 V On Board Sine wave generator: Frequency : 10 Hz - 100 KHz ±10% ; Amplitude : 0 to 5 Vpp Interconnections: 2mm ;Patch cords : 2 mm banana stackable Mains : 230 V AC ±10% (Detachable mains chord to be provided)	01
15.	**1 GHz Universal Frequency Counter** Instruments should have : Frequency measurement from 0.1Hz to 1000MHz Two Inputs : Input A: 0.1Hz - 20MHz & Input B : 20MHz - 1000MHz Frequency range selection in 3 steps ; Two selectable Gate time; 1s, 10s Frequency and Period measurement ;Digital readout with backlit LCD Microcontroller based design ; Attenuation of 20dB and input impedance of 1M ohms (Input A) Display : 16x2 LCD display with frequency range, frequency, period & gate time display. Frequency Stability (Over Temp.) : ±10ppm (- 20 ~ +70 ºC) Frequency Tolerance (at 25 ºC) : ±10ppm Mains Supply : 230V AC ±10%, 50Hz	01

16.	**Cordless Telephone Training** On board telephone line connection facility Dual mode operation - Telephone Line / On board Power Supply Functional block diagram indicated on mimic 2.4GHz Digital technology Dual mode DTMF/FSK Caller ID system compatible More than 70 test points for measurement of signals/ voltages Operation : Telephone line: CO Line/DOT Line / EPABX Line Telephone jack : RJ11C type modular telephone jack Key Board : 3 X 4 matrix key board Dialing : DTMF and Pulse dialling; Redial up to 24 digits, Pre-dialling and Clearing function Indications : In-Use/Charge/Ringer LED indication on base unit battery charging level indicator on handset Control : Ringer volume control; Handset and Speaker phone receive volume control Speech function : Mute function available Dial Pulse Ratio : 67: 33% Make Break ratio (approximately) On-board Supply : +15V DC Supply Display : Blue backlit 3- Line LCD display Audio out : Two-way speaker phone with adjustable volume Handset Locator : Paging from Base unit to Handset Test Points : 73 test points are provided to observe various signal/ voltages. Handset Operation : Battery /Adaptor Battery : NI-MH rechargeable battery, 2.4V, 750mAh, AAA Adaptor for Handset : 7V DC, 500mA Power Supply : 110 / 230V ± 10%, 50/60Hz Accessories: Power Supply , }Mains cord ,Hands free kit ,Cable for charging the Handset. Telephone line cord , Adaptor -- 7V DC- 500mA ,patch cords & Manual CD	01
17.	**Basic CDMA 2 Channel Trainer (DSSS & FHSS) with numeric data transfer** Training Board should have: Data rat: 16Kbps, 8 Kbps, 4Kbps World Length & data format : 8 bits , NRZ (Non Return to Zero) PN Sequence Generators Chip Clock : 240 KHz, 120 KHz, 60 KHz, 16KHz, 8KHz, 4KHz. Sequence type : Maximal length sequence Sequence patterns : Selectable through feedback taps in LFSR. BFSK frequencies : 100 KHz for mark and 50 KHz for space Frequency synthesizer O/P : Sinusoidal Frequency synthesizer frequencies : 1.6 & 1.4 MHz, 800& 400 KHz Hopping channels : Four No. of hops per data period : variable (selectable for slow/ fast) Interconnections : 2mm socket ; Test Points : 36 ; Mains: 230V± 10 %/50 Hz Trainer should have no components on the top of the board & should be encased in a plastic moulded case with cover on the top	01

LIST OF ITEMS FOR THE PURCHASE OF MACHINERY AND EQUIPMENT (2013-2014) DIPLOMA WING

ANNEXURE –II

AFFIDAVIT

I/We (Name) _____

Contractor / partner / sole proprietor (Strike out word which is not applicable) or (Firm)

_____do hereby declare and

solemnly affirm to the fact that the individual firm / companies are not black-listed by the Govt. of India, Chandigarh Administration or any State Government or any autonomous body.

DEPONENT

Address_____

_____

I/We do hereby solemnly declare and affirm that the above declaration is true and correct to the best of my knowledge and beliefs. No part of it is false and nothing has been concealed.

DEPONENT

Dated :

Note : (To be furnished on non judicial stamp paper duly attested by executive Magistrate or Notary Public)

ANNEXURE –III

PRICE SCHEDULE

PROFORMA FOR FINANCIAL BID

(TO BE UTILIZED BY THE BIDDER FOR QUOTING THEIR RATES)

Sr. No	Item	Qty Reqd	Rate/Price (To be quoted by Bidder)					
			Basic unit price	Sales Tax % age & Amt.	VAT %age & Amt.	Exise Duty %age & Amt.	Total Unit Price	Gross Total

Signature with seal of the firm

(**This letter alongwith Earnest Money Deposit be submitted in the envelope No. 1**

and should be clearly super scribed as EARNEST MONEY DEPOSIT)

From

M/S_____

_____

_____

To

Principal,
Chandigarh College of Engineering & Technology
(Diploma Wing) Sector 26, Chandigarh

No_____
Dated _____

Subject : Tender for the Purchase of Machinery /Equipment for CCET , Chandigarh.

Sir,

Please find enclosed herewith Earnest Money Deposit (EMD) of Rs. _____ in Shape of a demand draft bearing No. _____dated _____ issued by_____ (Name of the Bank) on _____drawn in favour of the Principal , Chandigarh College of Engineering & Technology, (Diploma Wing), Sector 26, Chandigarh valid for a period of Three months.

Thanking you,

Yours faithfully,

(Signature)
Seal of the Firm with full address

Enclosed
EMD

(**This letter along with Technical bid, Check List and Affidavit be submitted in the envelope No 2 and should be clearly super scribed as TECHNICAL BID)**

From

M/S_____

_____

_____

To

Principal,
Chandigarh College of Engineering & Technology
(Diploma Wing) Sector 26, Chandigarh

No_____

Dated_____

Subject Tender for Purchase of Machinery /Equipment/Material for CCET Chandigarh

Sir,

With reference to your Tender Notice dated _____for the Purchase of Machinery / Equipment for Chandigarh College of Engineering & Technical, (Diploma Wing), Sec.- 26, Chandigarh, I/We enclose herewith my / our Technical Bid duly filled, stamped and authenticated on each page along with Check List and Affidavit.

I/We undertake to abide by the terms and conditions of the tender set forth by you.

Thanking you,

Thanking you

Yours faithfully,

(Signature)
Seal of the firm with full address

Enclosed :
Technical Bid
Affidavit
Tender Documents Page 2 to __

(This letter alongwith Financial Bid be submitted in the envelope No 3 and should be clearly super scribed as FINANCIAL BID)

From

M/s_____

_____

_____

To

Principal,
Chandigarh College of Engineering & Technology
(Diploma Wing) Sector 26, Chandigarh

No_____

Dated _____

Subject : Tender for the Purchase of Machinery/Equipment for CCET Chandigarh.

Sir,

With reference to your Tender Notice dated _____for the purchase of Machinery/ Equipment /Material for Chandigarh College of Engineering & Technology, (Diploma Wing), Sector 26, Chandigarh, I/we enclose herewith, my / our financial bid duly filled, stamped and authenticated on each page.

I/We undertake to abide by the terms and conditions of the tender set forth by you.

Thanking you,

Yours faithfully,

(SIGNATURE)
Seal of the firm with full address

Enclosed :
Financial Bid