

NATIONAL INSTITUTE OF TECHNOLOGY, RAIPUR

(Formerly Government Engineering College, Raipur-C.G.)

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No. / Biomedical. Engg./NITRR /2009/BM-01

Raipur Dated: 13.05.2009

BIO - MEDICAL ENGG

To,

SUBJECT: TENDER QUOTATIONS

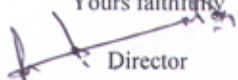
Dear Sir,

This institution intends to purchase the equipment/software/items shown in the list given on the reverse/enclosed list. Your quotation for the supply of these equipment/software/items may please be sent by ~~08.06.2009~~ 13.05.2009 positively.

PLEASE NOTE THE FOLLOWING:

1. The quotation is liable to be rejected if not submitted as per the following condition without asking any further clarification.
2. Taxes, if viable extra, should be clearly indicated failing which the rate quoted in the quotation will be considered as inclusive of all taxes.
3. The supplier will have to get the equipment delivered and duly installed to the satisfaction of undersigned in the institution and then only the payment will be made in rupees.
4. There should be no alterations/corrections made in the quotation. Quotation should always be in figures and words.
5. An earnest money Deposit @ 3% of the cost of equipment quoted or as indicated on the Enquiry Performa must be deposited with the institute in form of a Demand Draft in favor of The Director, National Institute of Technology, Raipur.
6. In case of non-acceptance of the quotation, the EMD will be refunded to the firm quoted in due course of time. The EMD will be treated as security deposit in case of quotations selected for placing orders. EMD /Security deposit will be forfeited in case of breach of agreement of supply by the supplier.
7. The order shall stand cancelled and security deposit shall be forfeited
 - a. if supplier expresses his inability to execute the order for the quoted items within validity period of the quotation at the rate and for make/ brand quoted.
 - b. If the complete equipment is not supplied within the delivery period mentioned in the order or within the extended period permitted.
 - c. If the supplier executes only part of the order.
8. Any Equipment / Trainers, Hardware or software breakdown must be attended within 48 hours during the warranty period of the equipment/software free of cost.
9. Payments will be released after the successful installation and demonstration at the institution.
10. Extension in the delivery period may be granted at the discretion of the undersigned. The penalty at a rate of 1% per month of the full cost of the equipment is liable to be charged for the extension of the delivery period. Equipment received after the delivery period or dispatched after the delivery period mentioned in the order will also be subjected to this penalty.
11. In case of any default in execution of the order, the undersigned reserves the right to forfeit the EMD /Security deposit. The undersigned also reserves the right to cancel the order and forfeit the EMD/Security deposit in case the firm concerned fails to adhere strictly to all terms and condition of the order.
12. The undersigned reserves the right to accept the lowest or any other quotes and also of rejecting all or any quotation without assigning any reasons for the same or to split up the quotation as he may deem fit.
13. No advance payment, either with the Firm concerned or agent R/R will be made to any supplier, please note that any other payment terms or such type are not negotiable.
14. Quotations must be valid for a period of at-least three months from the date the quotations are opened.
15. Printed condition on the back of the quotation will not be binding unless separately mentioned. Copies of the terms and condition should be furnished in duplicate.
16. Complete Specifications and printed material, literature concerning the item quoted must be supplied with the quotation.
17. Documents and supply of material by V.P.P. and Documents, viz. railway receipts, etc. through bank are not accepted by us.
18. All the disputes with regard to the contract of purchase of equipment, etc. will be subjected to Raipur jurisdiction only.
19. Please submit original authorization certificate from the manufacturer [for equipments of Indian origin] or importing agents [for the products of overseas manufacturers] addressed to the Director, NIT, Raipur. Certificate issued by the importing principals should be supported by Xerox copy of authorization from their overseas principals. The authorization should carry the tender enquiry number.
20. Please produce original technical brochures for the products being offered.
21. Please produce list of users of the products being offered.
22. Kindly quote price in INDIAN CURRENCY only.
23. Equipments are to be delivered at NIT, Raipur campus free of cost. Only applicable VAT will be paid extra.
24. Three year comprehensive free service and spares warranty is required. The cost of service and spares for three years should either be included in the prices or should be given separately. In case nothing is mentioned then it will be assumed that the supplier has agreed for three years free spares and service warranty at no extra cost. 5% of the total order value in form of FDR valid for three years will be required to be deposited as security money against warranty obligations.

25. Suppliers are required to commission, demonstrate and train the NIT staff on working of the offered equipments. Payment can only be released after successful commissioning of the equipments.

Yours faithfully

Director
National Institute of Technology
Raipur (C.G.)

List of Equipments

S.No.	Name of Equipment	Specification/Technical Requirement
1.	PC Based Radiology System	Display Mode: B,B/B,B/M,M, Gray Scale: 256 Image Processing: V adjust, Window curve, enhancement, Dynamic Range, Image Reverse Application: Abdomen, Urology, Small Body part Probe: 3.5MHz Linear/Convex or Multi frequency or Mechanical Multi-frequency convex probe 5.5 MHz PC: P IV,512MB RAM, 80GB HDD,CD R/W Monitor: Color 15" Cross section of various types of probes Detail on panel Block or Circuit Diagram with sufficient no. of Test points for Voltage & Waveform measurement/analysis is Provided.
2.	Earth's field MRI & NMR Teaching System	<u>Probe:</u> Dimensions: 28 * 26 * 19 cm(11*10.2*7.4 in) Weight: 9 Kg(20 lbs) Polarizing coil diameter: 17 cm(6.7in) Polarizing field: 18.8 mT@6A Gradient Coil Diameter: 10.5 cm (4.1 in) Imaging Gradient Strength: Diffusion Gradient Strength: 9.5 mTm⁻¹ @ 2 A B₁ Coil Diameter: 8.4 cm(3.3in) Tuning Range: 1800 Hz to 3000 Hz Sample Diameter: 7.5 cm Maximum(2.9in) <u>Spectrometer:</u> Dimension: 36*26*16cm (14.2*10.2*6.2 in) Weight: 4 kg(8.8 lbs) <u>Power Supply(included):</u> Input: 110~240V~50/60Hz 2.0 A Output: 24V DC 6.25 A <u>PC Requirement:(not included)</u> Windows 2000/XP PC with USB interface 100 MB of free hard disk space 256 MB of RAM minimum 700 MHz Processor or faster
3.	Operation Theater Setup Simulator	Electrically operated motorized table Adjustable height range : Electromechanical trainer panel Tele – scope 30, enlarged view, diameter 4mm, autoclavable fiber optic light transmission <u>CCD Camera with Digital processor</u> <u>ACCESSORIES</u>



		▪ C- Mount coupler ▪ Standard- Multi lenses ▪ Adjustment for Any focal length between 12mm – 50 mm <u>MONITOR:</u> Non flickering color monitor PAL, 100 Hz, High resolution <u>LIGHT SOURCE:</u> Halogen light source, rating of the bulb should be specified. Intensity control, Standby bulb, built-in cooling system. Surgical patient simulator OT light assembly trainer.																
4.	Data Formatting and Carrier Modulation/ Transmitter Trainer	<table> <tr> <td>Input</td> <td>2 channel Time Division Multiplexed Data from TDM Pulse Code Modulation Transmitter Trainer or from Data Generator</td> </tr> <tr> <td>Data Formats</td> <td>NRZ (L), NRZ (M), AMI, RB Biphase (Manchester), Bi phase (Mark), differentially encoded dibit pair</td> </tr> <tr> <td>Carrier Modulation</td> <td>ASK, FSK, BPSK, DPSK & QPSK</td> </tr> <tr> <td>On-board carrier</td> <td>Sinewave synchronized to transmit data at 1.44 MHz, 960KHz, (0deg. Phase) 960 KHz (90 deg. Phase)</td> </tr> <tr> <td>Test points</td> <td>38</td> </tr> <tr> <td>Interconnections</td> <td>4mm sockets</td> </tr> <tr> <td>Power</td> <td>220V± 10%,50/60 Hz, 3VA (approx.)</td> </tr> <tr> <td>Accessories</td> <td>Manual, Set of patch cord, Line cord.</td> </tr> </table>	Input	2 channel Time Division Multiplexed Data from TDM Pulse Code Modulation Transmitter Trainer or from Data Generator	Data Formats	NRZ (L), NRZ (M), AMI, RB Biphase (Manchester), Bi phase (Mark), differentially encoded dibit pair	Carrier Modulation	ASK, FSK, BPSK, DPSK & QPSK	On-board carrier	Sinewave synchronized to transmit data at 1.44 MHz, 960KHz, (0deg. Phase) 960 KHz (90 deg. Phase)	Test points	38	Interconnections	4mm sockets	Power	220V± 10%,50/60 Hz, 3VA (approx.)	Accessories	Manual, Set of patch cord, Line cord.
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5.	AM Transmitter and Receiver	Perfect AM transmitter which is able to produce 1MHz Use with the AM receiver experiment module for AM communications Experiments cover crystal oscillator, modulator percentage, sinewave/voice modulator, balance modulator, RF amplifier, adjust and coupling, and antenna adjustment AM Receiver (KL-93062): AM reception in the frequency range of 535KHz to 1605kHz Intermediate frequency of 455kHz Use with the AM transmitter experiment module for AM communications Experiments cover oscillator mixer, 1st IF amplifier, 2nd IF amplifier, and audio amplifier Equipped with DIP switches for fault simulation so that students can practice troubleshooting																



6.	FM Transmitter and Receiver	Perfect FM transmitter which is able to produce 10.7MHz intermediate frequency Use with the FM receiver experiment module for FM communications Experiments cover crystal oscillator, frequency modulator, RF buffer, reference oscillator, frequency tachometer, and audio modulator FM Receiver (KL-93064): FM reception in the frequency range of 88MHz to 108MHz Frequency shown by 7-segment display Use with the FM transmitter experiment module for FM communications Experiments cover tuner, FM IF amplifier, FM MPX, and audio amplifier Equipped with DIP switches for fault simulation so that students can practice troubleshooting																		
7.	Sampling & Reconstruction on Trainer	<table> <tr> <td>Crystal Frequency</td> <td>6.4 MHz</td> </tr> <tr> <td>Sampling Frequency</td> <td>2,4,8,16 & 32 KHz (Switch selectable)</td> </tr> <tr> <td>On-Board Generator</td> <td>Synchronised 1KHz Sinewave (5Vpp)</td> </tr> <tr> <td>Duty Cycle</td> <td>0-90% in decade steps (Switch selectable)</td> </tr> <tr> <td>L.P. Filters</td> <td>Butterworth 2nd & 4th order Filter Cut-off frequency 3.4 KHz</td> </tr> <tr> <td>Test Points</td> <td>51</td> </tr> <tr> <td>Interconnections</td> <td>4mm Sockets</td> </tr> <tr> <td>Power</td> <td>220V $\pm$ 10% 50/60 Hz, 3VA (approx.)</td> </tr> <tr> <td>Accessories included</td> <td>Manual, Set of patch cord, Line cord.</td> </tr> </table>	Crystal Frequency	6.4 MHz	Sampling Frequency	2,4,8,16 & 32 KHz (Switch selectable)	On-Board Generator	Synchronised 1KHz Sinewave (5Vpp)	Duty Cycle	0-90% in decade steps (Switch selectable)	L.P. Filters	Butterworth 2 nd & 4 th order Filter Cut-off frequency 3.4 KHz	Test Points	51	Interconnections	4mm Sockets	Power	220V $\pm$ 10% 50/60 Hz, 3VA (approx.)	Accessories included	Manual, Set of patch cord, Line cord.
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8.	X-RAY Machine	Power Supply: 230v, 50Hz, X-ray system, high voltage generation circuit simulation of X-ray setup. X-Ray tube std. & Dummy x-ray tube with visible radiations to simulate x-ray setup, tube with visible radiations to simulate x-ray controls: 60mA, kvp:30 to 100KVP Fluoro:0 to 20KVP Mas selection, Radio/Fluoroscopy selection Timer :0.06 to 6 seconds Remote Hand switch The machine supplied with complete setup. Lead glass with stand fluorescent screen & required accessories. With test points for analysis of various signals and waveforms																		