THAPAR INSTITUTE
OF ENGINEERING & TECHNOLOGY
(Deemed to be University)

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Enquiry No. TIET/CS/AA/21-22/212812
Date : July 19,2021

Sub: Request for Quotation(s) for the Supply of CDMA Trainer kit, Volte trainer kit and Dual sim mobile phone trainer kit

Dear Sir

We shall be grateful if you kindly let us have your lowest **quotations** for the following materials. THE QUOTATIONS SHOULD REACH THE UNDERSIGNED **LATEST BY July 29, 2021** through **courier or e-mail** accompanied by appropriate illustrative literature/catalogues/pamphlets/technical details, samples and specifications as the case may be. **On the quotation envelope/ subject the Enquiry Number & Date should be mentioned on the top of the Envelope/mail subject.**

Sr. No.	Item Name	Qty.
1.	CDMA Trainer kit, Volte trainer kit and Dual sim mobile phone trainer kit For specifications and qty See attached sheet	03 each

The offer sent by you must furnish the following details:

1. Name, Make & specifications of each item.
2. **Price Breakup itemwise with MRP. (Treat it mandatory)**
3. Educational discount.
4. **Validity of quotation should be at least 60 Days.**
5. **GST %**
6. **Delivery FOR Central Stores TIET, Patiala For imported product CIP New Delhi Airport**
7. Insurance, Freight & other charges if any.
8. Minimum Delivery Period.
9. **Payment terms. Net 30 days against delivery & satisfactory installation at Thapar Institute, Patiala**
10. Guarantee / Warranty Information.
11. **Also please share your Companies Turnover and Market Share along with the offer.**

Sd/-

Regards,

Head Commercial

4G VoLTE Trainer

Description: This trainer should be designed with a view to provide practical and experimental knowledge of 4 G handset to understand the fundamentals of Smart phone.

Specifications.

- Real time study and operation of Smart Phone.
- Supports to 4G VoLTE (Cat 4), 3G (UMTS/HSPA+), 2G (GSM/EDGE) Networks.
- 5" Touch screen full HD display.
- Full understanding of 4G Dual SIM VoLTE Smart Phone working principle and signals.
- Complete block diagram of a 4G Dual SIM VoLTE Smart Phone on-board.
- Easy identification of different parts and components of the system at a glance.
- Easy measurement of voltages and observation of waveforms on test points.
- Soldering free fault creation and troubleshooting.

Dual SIM Mobile Phone

Description: This trainer should be designed with a view to provide practical and experimental knowledge of a dual SIM mobile phone to understand the fundamentals of Smart phone.

Specifications

- Real time mobile operation.
- Operates on dual band frequency network (GSM 900/ DCS 1800).
- Color TFT display.
- Full understanding of Dual SIM mobile phone working.
- Provides study of all sections in Dual SIM mobile phone .
- Tx/ Rx frequency measurement and band verification.
- 2G technology GMSK signal.
- Detail study of User Interface Control signals.
- Detail study of Dual SIM operation.
- Battery identification and charging study.

CDMA Trainer

Description: This trainer should provide a detailed understanding of the concepts behind CDMA-DSSS, and various points that need to be considered in the design of a Direct Sequence Spread Spectrum System.

Specifications

- A complete CDMA-Direct Sequence Spread-Spectrum (DSSS) system.
- Customized real-time software.
- Analysis in Digital time, Analog time, and Frequency domain.

- Separate CDMA-DSSS Modulator and Demodulator for higher learning.
- More than 25 nos. of test point.
- On-board BNC connector for Analog I-Q signal analysis.
- Software based variable Chip rate up to maximum 10Mchip/s.
- User selectable different types of Gold code.
- User selectable different types of Maximum Length Sequences.
- User selectable different types of Barker code.
- Time and Frequency domain analysis and measurement of baseband BPSK, QPSK and OQPSK. Modulation with output spectral shaping I-Q filter.
- Built-in I & Q channel root-raised Cosine filter for spectral shaping.
- Built-in Digital Data Generator.
- Built-in additive White gaussian noise (AWGN) Generator for analysis of noise gain effect on the Signal.
- Built-in Frequency offset (Doppler) Generator for analysis of frequency offset effect on the Signal.
- Measurement of BER with internal data which is being transmitted.