GOVERNEMNT COLLEGE OF ENGINEERING, KARAD
(An Autonomous Institute of Government of Maharashtra)

Dist. Satara, Maharashtra, India, PIN: 415124
Tel.: 91- 02164- 271711, 272414, 272415(P), 271712(R)
Fax No.: 91- 02164- 271713
Web: http://www.gcekarad.ac.in.

No. CEK/ ENTC/Quotation /2018-2019/ 3743

DATE –12/12/2018

To,

Subject – Quotation for Analog Communication kits

Dear Sir,

With reference to above, I have to request you to kindly quote your rates for below mentioned material for **Electronics and Telecommunication Engineering Department** "of this Institute so as to reach this office on or before 02/01/2019 till 5.00 pm ,The details are as given below –

Sr. No.	Description	Qty.
1	DSB/SSB AM Transmitter kit	02
2	DSB/SSB AM Receiver kit	02
3	Frequency Modulation/Demodulation kit	02
4	Sampling and Reconstruction Techniques kit	02
5	TDM Pulse Code Modulation & Transmitter kit	02

Your quotation should be valid for at least 30 days from the date of opening. The quotation should be sent to **"The Principal, Government College of Engineering, Karad"** in sealed envelope superscripted with word **"Quotation of Analog Communication for Electronics and Telecommunication Engineering Department" due on 02/01/2019.**The Institute does not bind itself to accept or reject the quotation. Please note that if there is any over-writing in the quotation, the said term will not be taken into consideration.

Terms and Conditions:

1. Quotation validity for at least 30 days from the date of opening.
2. Delivery period 4 weeks from date of supply order.
3. Payment 100% after delivery and satisfactory acceptance.
4. Warranty 12 months or more.
5. Total amount will be considered for final call for quotation.

The quotation will be opened on **03/01/2019 at 03.00 p.m.**
Specifications are as enclosed.

Thanking you.

Principal,
for Govt. College of Engineering, Karad.

Sr. No.	Name and description of the equipment	Specification
1	DSB/SSB AM Transmitter	Audio Oscillator : With adjustable Amplitude & Frequency (300 Hz - 3.4 KHz) Audio Output : Amplifier with speaker Modulators : Balanced Modulator with Bandpass Filter (1 MHz) - 2 nos. Balanced Modulator : 1 No. (455 KHz) Ceramic Bandpass Filter : 1 No. (455 KHz) Carrier Frequency : 500 KHz ~1.5MHz Transmitter Amplifier Output: (Gain adjustable) DSB (1 MHz), SSB (1.445 MHz) connected to Antenna/cable Switched Faults : 8 nos. Interconnections : 2mm Banana socket Test Points : 27 nos Power Supply : 110-220 V AC ±10%, 50/60Hz
2	DSB/SSB AM Receiver	Construction : Superhetrodyne Frequency Range : 980 KHz to 2060 KHz Intermediate Frequency : 455 KHz Input Circuits : 1) RF Amplifier 2) Mixer 3) Local Oscillator 4) Beat Frequency Oscillator 5) IF Amplifier 1 6) IF Amplifier 2 Tuning : With variable capacitor (ganged) Dial marking on board Receiving media : Telescopic antenna / Cable Detectors: 1) Diode detector (for DSB) 2) Product detector (for SSB) Audio Output : Amplifier with speaker Automatic Gain Control : Switchable Switched Faults : 8 nos. Interconnections : 2 mm Banana sockets Test points : 30 nos. Power Supply : 110-220 V AC ±10%, 50/60Hz
3	Frequency Modulation/Demodulation	Audio Oscillator : With adjustable Amplitude & Frequency (300 Hz - 3.4 KHz) Audio Oscillator : With adjustable Amplitude & Frequency (300 Hz - 3.4 KHz) FM Modulator : 2 nos. 1) Reactance Modulator (with carrier Frequency adjustment) 2) Varactor Modulator (with carrier Frequency adjustment) Mixer / Amplifier : 1 no. (With Gain adjustment) Allows FM input signal to be amplitude modulated by a noise input prior to demodulation. Transmitter Output : 455 KHz Frequency FM Demodulator : 5 nos. 1) Detuned Resonant Detector 2) Quadrature Detector 3) Foster -Seeley Detector 4) Ratio - Detector 5) Phase Locked Loop Detector Low Pass Filter : 3.4 KHz Cut off Frequency Amplifier (with adjustable gain) Amplitude Limiter : 1 no. Switched Faults : 8 nos. Interconnections : 4 mm banana sockets Test points : 74 nos (Gold plated) Power Supply : 230 V ±10%, 50 / 60 Hz
4	Sampling and Reconstruction Techniques	Crystal Frequency : 8 MHz Sampling Frequency : 20, 50, 80, 100, 200 & 400 KHz (switch selectable) On-board Generator : Synchronized 1 KHz sine wave (5 V) pp

		Duty cycle : 0 - 90% in Decade steps (switch selectable) nd th Low Pass Filters : 2 & 4 order Butterworth filters Cut-off frequency : 3.4 KHz each Test Point : 50 nos. Interconnections : 2 mm sockets Power Consumption : 3 VA (approximately)
5	TDM Pulse Code 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 Interconnections : 2 mm Sockets Power Supply : 110-220 V, ±10%, 50 /60 Hz