



C16-AEI-401

6414

BOARD DIPLOMA EXAMINATION, (C-16)
SEPTEMBER/OCTOBER - 2020
DAEI-FOURTH SEMESTER EXAMINATION

LINEAR IC APPLICATIONS AND
COMMUNICATION SYSTEMS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define CMRR.
2. List the basic specifications of ideal operational amplifier.
3. Draw the diagram of summing amplifier.
4. Mention the effects of negative feedback on an amplifier.
5. Define the terms 'pass band' and 'stop band'.
6. Draw the pin diagram of 555 IC.
7. List the different types of analog modulating methods.

- * 8. List FM demodulator circuits.
9. State the merits of PCM.
10. State the basic principle of RADAR.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the operation of differential amplifier with circuit diagram.
12. Explain the principle of operation of PLL with block diagram.
13. Explain the operation of high pass filter (HPF) using Op-Amp.
14. Explain the operation of monostable multivibrator using 555 timer.
15. Explain AM, FM and PM with waveforms and give their expressions.
16. Explain the block diagram of superheterodyne receiver.
17. Explain time division multiplexing and frequency division multiplexing methods with diagrams.
18. Explain the principle of fiber-optic communication system with diagram.
