



C09-AEI-605

3718

BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2017

DAEI—SIXTH SEMESTER EXAMINATION

**PRINCIPLES OF COMMUNICATIONS AND
LINEAR IC APPLICATIONS**

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. State the need for modulation.
2. List the different types of modulation.
3. List the FM demodulator circuits.
4. List the different types of pulse modulation methods.
5. List the practical values of A_v , Z_o , Z_i for an op-amp.
6. List the advantages of integrated op-amp.
7. List the effects of negative feedback on an amplifier.
8. List the applications of timer 555 IC.

- * 9. Draw the circuit of Wein Bridge oscillator using op-amp.
10. Draw the pin diagram 555 IC timer.

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 two types of multiplexing methods with neat sketches. 8+2
12. Explain the FM receiver circuit with a neat circuit. 8+2
13. Explain the AM transmitter with a block diagram. 8+2
14. State the different package styles of analog ICs and sketch them. 10
15. Draw and explain the operation of the voltage follower circuit. 2+8
16. Draw and explain the operation of instrumentation amplifier. 2+8
17. Explain the operation of each block in block diagram of 555 timer IC's. 10
- * 18. Explain the operation of Astable multivibrator using timer 555 IC. 10
