



C09-AEI-605

3718

**BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2013
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. List the differences between AM and FM.
2. State the need for modulation in communication system.
3. Define selectivity and sensitivity of a receiver.
4. List the different types of pulse modulation methods.
5. Define CMRR.
6. Define input offset voltage and input offset current.

7. Draw the circuit of non-inverting amplifier.
8. List the names of multivibrator circuits.
9. Draw the circuit of Schmitt trigger with op-amp.
10. Draw the circuit of Weinbridge oscillator with op-amp.

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. Draw the block diagram and explain FM transmitter.
12. Draw and explain Foster-Seely demodulator.
13. Compare between PAM, PPM, PWM and PCM.
14. Draw the circuit of differential amplifier and explain its operation.
15. Draw and explain lowpass filter with op-amp.
16. Draw and explain the operation of instrumentation amplifier.
17. Draw and explain the operation with waveforms of sawtooth wave generator using op-amp.
18. Draw the block diagram of 555 timers IC and explain the operation of each block.

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