4456

BOARD DIPLOMA EXAMINATION, (C-14)
OCT / NOV-2017
DECE-FOURTH SEMESTER EXAMINATION
LINEAR INTEGRATED CIRCUITS

Time : 3 Hours]   [Total Marks : 80

PART - A   3 x 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. Classify ICs based on manufacturing.

2. List any three drawbacks of ICs.

3. State the ideal characteristics of Op-Amp.

4. Draw the block diagram of Op-Amp sharing different stager.

5. Classify IC regulators.

6. Draw the circuit diagrams of the following a) Integrator b) Buffer using Op-Amp.

7. Give the classification of clippers.

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8. Mention any three applications of PLL.

9. List any three applications of current to voltage converters.

10. State the need of D/A conversion.

PART - B   10 x 5 = 50

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

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

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

11. Explain the fabrication of diode on monolithic IC.

12. Explain the non-inverting configuration of Op-Amp and derive its voltage gain.

13. Draw and explain the Miller Sweep circuit using Op-Amp.

14. Draw and explain Wein bridge oscillator circuit using Op Amp.

15. Draw and explain the working of astable multivibrator using 555 IC.

16. Draw and explain the block diagram of PLL – LM565.

17. Explain A/D conversion using successive approximate method.

18. Explain the following terms of D/A converter:

a) Resolution

b) Accuracy

c) Monotonicity

d) Settling time

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