4456

BOARD DIPLOMA EXAMINATION, (C–14)
MARCH/APRIL—2018
DECE–FOURTH SEMESTER EXAMINATION

LINEAR INTEGRATED CIRCUITS

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 any three advantages of ICs.

2. List different IC packages.

3. Draw the Circuit of Inverting OPAMP and give its voltage gain equation.

4. Draw the pin diagram of IC 741.

5. Give the classification of multivibrators and draw the Astable multi vibrator using OPAMP.

6. Draw Op Amp as *(a)* Summer *(b)* Differentiator.

7. Mention any three applications of Clampers.

8. Draw the basic block diagram of PLL.

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

10. State the need for A/D conversion.

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

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

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

11. Explain the stages of fabrication of resistor on mondithic IC.

12. Draw the block diagram of Op Amp, explain the function of each block and draw the pin out diagram of 741 IC.

13. Draw and explain RC phase shift oscillator using Op Amp.

14. Draw and explain bootstrap sweep circuit.

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

16. Draw and explain the operation of the following with waveforms :

(a) Unbiased series diode positive clipper.

(b) Unbiased shunt diode negative clipper.

17. Explain D/A conversion using binary weighted resistors.

18. Explain A/D conversion using successive weighted approximate method.

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