



C14-EC-402

4435

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2017
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 the merits of surface mount technology.
2. Define slew rate and CMRR of op-amp.
3. Give the pin configuration of IC 741 op-amp.
4. Mention the merits of active filters.
5. Draw the RC phase shift oscillator circuit using op-amp.
6. List the applications of PLL.
7. Draw the circuit of double-ended clipper.
8. Classify multivibrators.
9. List the applications of voltage to current converter.
10. Draw the three op-amp instrumentation amplifier circuit.

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 fabrication of transistor on monolithic IC.
12. Draw the circuits using op-amp (a) summer, (b) differentiator, (c) integrator and (d) inverter.
13. Draw and explain the wien bridge oscillator circuit using op-amp.
14. (a) Explain the operation of fixed voltage regulator using 78XX series.
(b) Explain the operation of adjustable voltage regulator LM317.
15. Explain the working of monostable multivibrator using 555 IC.
16. (a) Explain the operation of positive clamper with wave forms.
(b) Explain the operation of negative clamper with wave forms.
17. Explain the operation of D/A converter using R-2R ladder network.
18. Explain the operation of A/D converter using counter method with a block diagram.
