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4456**BOARD DIPLOMA EXAMINATION, (C-14)****MARCH/APRIL-2019****DECE - FOURTH SEMESTER EXAMINATION****LINEAR INTEGRATED CIRCUITS****Time: 3 Hours]****[Max. Marks: 80****PART-A****3x10=30M**

Instructions: 1) Answer **all** questions.
 2) Each question carries **three** marks.
 3) Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. List the various levels of IC integration.
2. List any three advantages of SMT.
3. Define a) CMRR b) Slew rate.
4. Draw the circuit of inverting amplifier using OPAMP.
5. Compare voltage and current sweep generators and list any three applications.
6. Draw the circuit of Op Amp summing amplifier
7. Mention any three applications of Clippers.
- * 8. Define a) Lock range b) capture range of PLL.
9. List any three advantages of instrumentation amplifier.
10. Define a) Resolution b) Settling time of DAC.

PART-B

5X10=50M

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Instructions: 1) Answer any five questions.

2) Each question carries 10 marks.

3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the method of fabrication of capacitor on monolithic IC using neat sketches.
12. Draw and explain the operation of differential amplifier.
13. Draw and explain the operation of Schmitt trigger using Op Amp.
14. Draw and explain the operation of astable multivibrator using Op Amp.
15. Draw and explain the block diagram of 555 IC.
16. Draw and explain the operation of frequency multiplier using PLL.
17. Explain D/A conversion using R-2R ladder network.
18. Explain A/D conversion using Binary counter method.

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