



C14-EC-402

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4435

**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DECE-FOURTH SEMESTER EXAMINATION**

LINEAR INTEGRATED CIRCUITS

Time: 3 Hours]

[Total Marks: 80

PART-A

3X10=30

- 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. Classify IC's based on manufacturing process?
2. List important features of LM324 Op-Amp?
3. Write the use of Op-Amp as buffer?
- * 4. State the conditions required for stable operation in Op-Amp wein bridge oscillator.
5. List three differences between Active and Passive filters?
6. List the applications of clipper circuit?
7. Draw Miller's sweep circuit using Op-Amp?
8. Classify Multivibrators?
9. Define the terms (a) Monotonicity (b) Resolution of D/A converter.
10. Draw Voltage to Current converter using Op-Amp?

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PART-B

10X5=50

Instructions : *

1. Answer any **Five** questions.
2. Each question carries **ten** marks.
3. Answer 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. (a) Explain Non-inverting amplifier configuration of Op-Amp.
(b) Explain effect of feedback on bandwidth of above amplifier?
13. Explain the working of Op-Amp wein bridge Oscillator with Circuit diagram.
14. Explain the operation of Adjustable voltage regulator(LM317)?
15. Explain the operation of Astable multi using 555IC with neat circuit.
16. Explain frequency multiplier and FM demodulator using PLL?
17. Explain the operation of D/A convertor using R-2R ladder network with circuit diagram?
18. Explain Op-Amp instrumentation Amplifier with neat circuit diagram?

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