4456

BOARD DIPLOMA EXAMINATION, (C-14)
JUNE-2019
DECE - FOURTH SEMESTER EXAMINATION
LINEAR INTEGRATED CIRCUITS

Time: 3 Hours]   **[Max. Marks: 80**

PART - A

3x10=30M

Instructions: 1) Answer **all** questions Each question carries **three** marks

           2) Answer should be brief & straight to the point and shall not exceed five simple sentences.

1) Mention the power ratings of IC packages.

2) List SIX merits of Surface Mount Technology.

3) State the important characteristics of ideal operational amplifier.

4) Define the terms: Input impedance and Open loop gain of Op-amp.

5) State the fundamental consideration of sweep wave form.

6) List the advantages of IC regulators.

7) List different types of clippers.

8) Draw the block diagram of PLL.

9) State the need for A/D and D/A conversion.

10) Define the terms: monotonicity and settling time of D/A converter.

5x10=50M

Instructions: 1) Answer any **five** questions Each question carries **ten** marks

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

11) Explain the manufacturing process of monolithic ICs.

12) Explain the Inverting amplifier configuration of Op Amp and derive the formula for voltage gain. Draw input and output waveforms.

13) Draw and explain the working of OP-amp astable multivibrator with waveforms.

14) Explain the use of operational amplifier as

i) Buffer   ii) Differentiator.   (5+5)

15) Draw and explain the working of Monostable multivibrator using 555 IC with waveforms.

16) a) Explain the operation of VCO (LM566).   (7M)

b) List the applications of PLL.   (3M)

17) a) Explain the circuit of current to Voltage converter.   (7M)

b) List three applications of voltage to current converter. (3M)

18) Explain A/D converter using successive approximate method with block diagram.

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