C14-EC–**402**

4456

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DECE - FOURTH SEMESTER EXAMINATION

LINEAR INTEGRATED CIRCUITS

Time : 3 hours]   [*Total Marks* : 80

PART—A   4×5=20

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

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

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1.   List the advantages of ICs over discrete assembly.

2.   List different IC packages.

3.   Draw the pin diagram of IC 741.

4.   Define input impedance and open loop gain of OP-Amp.

5.   List different types of IC regulators.

6.   List the applications of multi-vibrators.

7.   List different types of clippers.

8.   Define lock range of PLL.

9.   State the need for D/A converter.

10.   Define the terms accuracy and monotonicity.

PART—B

15×4=60

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

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

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

11. Describe the fabrication of capacitor on monolithic IC.

12. Explain OP-Amp inverting amplifier.

13. Explain the use of OP-Amp as buffer and scale changer.

14. Explain the working of Miller Sweep circuit.

15. Explain biased clipper.

16. Explain the block diagram of IC 555.

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

18. Explain the voltage to current converter circuit.

★ ★ ★