

7440

BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

DECE - FOURTH SEMESTER EXAMINATION

ELECTRONIC CIRCUITS—II

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 different linear and non-linear wave shaping circuits.
2. List the applications of clippers.
3. State various levels of integration.
4. List different IC packages.
- * 5. Draw the pin diagram of IC 741.
6. Define sweep voltage.
7. Define lock range of PLL.
8. Give the pin configuration of IC 555.
9. List IC numbers of any three DACs.
10. Define the terms accuracy and resolution.

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PART—B

8×5=40

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Explain the working of Zener diode clipper with waveforms.

(OR)

(b) Explain the working of double ended clipper with waveforms.

12. (a) Explain the working of op-amp as inverting amplifier with a neat circuit diagram.

(OR)

(b) Explain the working of differential amplifier constructed using BJTs.

13. (a) Explain the working of op-amp based R-C phase shift oscillator.

(OR)

(b) Explain the working of op-amp based Schmitt trigger circuit with waveforms.

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14. (a) Draw internal block diagram of PLL-LM 565 and explain its working.

(OR)

(b) Draw the circuit of astable multivibrator using 555 IC and explain its working.

15. (a) Explain A/D conversion using successive approximation method.

(OR)

(b) Explain D/A conversion using binary weighted resistor.

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PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Why are the integrator and differentiator using op-amp superior to simple RC integrator and differentiator? Explain.

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