C16-EE-**405**

6444

BOARD DIPLOMA EXAMINATION, (C-16)

MARCH / APRIL — 2021

DEEE — FOURTH SEMESTER EXAMINATION

ELECTRONICS ENGINEERING - II

Time : Three Hours] [*Maximum Marks* : 80

PART-A 3×10=30

Instructions : (*i*) Answer **all** questions.

(*ii*) Each question carries **three** marks.

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

1. State the conditions required for sustained oscillations.

2. Explain the need for AF oscillator.

3. List the characteristics of an ideal operational amplifier.

4. Draw the pin diagram of 555 IC.

5. Define frequency modulation.

6. State the need of modulation in communication systems.

7. Mention any six front panel controls of a CRO.

8. State the need for D/A conversion.

9. Define transducer.

10. What are the advantages and disadvantages of LVDT ?

PART-B

10×5=50

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

(*ii*) Each question carries **ten** marks.

(*iii*) Answer should be comprehensive and criterian for valuation is the content but not the length of the answer.

11. Draw and explain the working of transistor multivibrator circuit.

12. Draw and explain the working of UJT relaxation oscillator.

13. (*a*) Explain the operation of differential amplifier with the help of a circuit diagram. 6

(*b*) Explain the concept of virtual ground. 4

14. (*a*) Explain the working of Op-Amp inverting amplifier with input and output waveforms. 7

(*b*) List the applications of Op-Amps. 3

15. (*a*) Explain the generation of sidebands in AM signal. 5

(*b*) Draw the waveforms of FM wave and mention the bandwidth requirements of FM wave. 5

16. Explain the working of Ramp type digital voltmeter with the help of a block diagram.

17. (*a*) Explain the use of thermocouple for the measurement of temperature. 6

(*b*) List the applications of sensors. 4

18. Explain the construction and working of LVDT (Linear Variable Differential Transformer).

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