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C14-EE–405

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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DEEE - FOURTH SEMESTER EXAMINATION

ELECTRONICS - II

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. Write the differences between degenerative and regenerative feedbacks.

2. List the applications of emitter follower.

3. Classify the oscillators based on mechanism involved and frequency range.

4. List the conditions required for sustained oscillations in an oscillator.

5. Draw the PIN diagram of 555 IC.

6. State the need of timer.

7. Define modulation and demodulation.

8. Define bandwidth of AM wave and give the equation of AM wave.

9. List the advantages of electronic instruments over ordinary instruments.

10. State the necessity of time base voltage.

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. Draw the circuit diagram of emitter follower and explain its characteristic performance. 15

12. Derive the expression for voltage gain of negative feedback and list the advantages of negative feedback. 15

13. Explain the need for AFO and RF oscillators and mention examples for each. 15

14. Explain the working of RC phase shift oscillator with the help of circuit diagram. 15

15. Explain the working of operational amplifier with the help of a block diagram. 15

16. Explain the working of an operational amplifier as the following : 15

(a) Summer

(b) Differentiator

(c) Integrator

17. *(a)* Explain the power distribution in AM. 8

(b) Explain the generation of sidebands in AM. 7

18. Explain the working of ramp type digital voltmeter with the help of block diagram. 15

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