6444

BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

DEEE - FOURTH SEMESTER EXAMINATION

ELECTRONICS ENGINEERING - 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.   State the conditions required for sustained oscillations.

2.   List the applications of oscillators.

3.   What is the concept of virtual ground?

4.   Draw the pin diagram of 555 IC.

5.   Write the equation for AM wave and mention different components in the equation.

6.   Define frequency deviation.

7.   State the need for A/D converters.

8.   Mention the use of any three front panel controls of CRO.

9.   Classify transducers.

10.   What is the working principle of strain gauge?

* PART—B

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

(2) Each question carries ten marks.

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

11. Draw and explain the working of RC phase shift oscillator. 10

12. Draw the UJT relaxation oscillator and explain its operation. 10

13. Explain the working of differential amplifier with a neat circuit diagram. 10

14. Explain the operational amplifier as *(a)* summer and *(b)* integrator. 10

15. *(a)* Distinguish between AM and FM. 4

(b) Explain the effect of overmodulation with waveforms. 6

16. Explain the working of ramp type of digital voltmeter with block diagram. 10

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

(b) Mention the advantages and disadvantages of LVDT. 4

18. *(a)* Explain the concept of sensor and mention its applications. 6

(b) Write about semiconductor sensors. 4

★ ★ ★