



C16-EE-405

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**BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER—2020
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. Classify different types of oscillators.
2. State the need for square wave oscillators.
3. Define CMRR of a differential amplifier.
4. State the need of a timer.
5. Define modulation index of an AM wave.
6. Define modulation and demodulation.
7. State the need for A/D conversion.
8. List the applications of CRO.
9. Classify the transducers based on the principle of transduction form used.
10. List the applications of sensors.

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[*Contd....*

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PART—B

10×5=50

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

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

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

- 11.** Explain the working of RC phase shift oscillator with the help of a circuit diagram. 10
- 12.** Explain the need for AF and RF oscillators and mention examples for each. 10
- 13.** Draw and explain the internal block diagram of IC 555 timer. 10
- 14.** Explain the working of operational amplifier as—
(a) integrator;
(b) differentiator. 10
- 15.** (a) Explain the effect of over modulation and under modulation with waveforms. 5
(b) Compare AM and FM. 5
- 16.** Explain the functions of various stages of a CRO with the help of a block diagram. 10
- 17.** (a) Explain the factors influencing the choice of a transducer. 5
(b) Write about semiconductor sensors. 5
- 18.** (a) Explain the use of thermocouple for the measurement of temperature. 6
(b) Explain the working principle of strain gauge. 4
