



C16-EE-405

**6444**

**BOARD DIPLOMA EXAMINATION, (C-16)**  
**MARCH/APRIL—2018**  
**DEEE—FOURTH SEMESTER EXAMINATION**  
**ELECTRONICS ENGINEERING—II**

Time : 3 hours ]

[ Total Marks : 80

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**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. Draw the circuit diagram of Colpitts oscillator.
3. List the applications of operational amplifier.
4. Draw the pin diagram of IC555.
5. Define amplitude modulation.
6. Define modulation index of an AM wave.
7. List any six front panel controls of a CRO.
8. Draw the circuit diagram of an R-2R ladder D/A converter.
9. List the factors influencing the choice of transducer.
10. List the applications of sensors.

**PART—B**

10×5=50

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

11. Explain the working of RC-phase shift oscillator with circuit diagram.
12. Draw the circuit diagram of UJT relaxation oscillator and explain its working.
13. (a) Explain Op-Amp as non-inverting amplifier and obtain its gain expression. 5  
(b) Explain Op-Amp as differentiator. 5
14. Draw the internal block diagram of IC555 and explain the function of each pin.
15. (a) Draw the wave forms of AM wave and explain power distribution in AM wave. 5  
(b) Draw the wave forms of FM wave and mention bandwidth requirements of FM wave. 5
16. Explain the working of R-amp type digital voltmeter with the help of a block diagram.
17. Explain construction and working of LVDT and also mention its advantages and disadvantages.
18. (a) Explain the use of thermocouple in measuring the temperature. 5  
(b) Explain the measurement of temperature using thermistor in bridge circuit. 5

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