



C14-EE-405

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**BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2017
DEEE—FOURTH SEMESTER EXAMINATION
ELECTRONICS—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. Write the differences between voltage and power amplifiers.
2. Define the following : 1½×2=3
(a) Feedback
(b) Feedback factor
3. Classify different types of oscillators.
4. State the conditions required for sustained oscillations in oscillators.
5. List the characteristics of an ideal operational amplifier.
6. What is the need of timer?

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7. What is modulation? Classify different types of modulations.
8. List the advantages and disadvantages of FM over AM.
9. State the need for A/D conversion and the need for D/A conversion.
10. List the advantages of electronic instruments.

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. (a) Derive an expression for the gain of negative feedback amplifier. 5
- (b) Explain the effect of negative feedback on gain, bandwidth, distortion and noise. 5
12. Explain the working of emitter follower with a neat circuit diagram.
13. Explain the working of Hartley oscillator with the help of circuit diagram.
14. Explain the UJT relaxation oscillator with a neat circuit diagram.

- 15.** Explain the operational amplifier as—
(a) summer;
(b) integrator;
(c) differentiator;
(d) scale changer;
(e) inverter.
- 16.** Draw and explain the internal block diagram of IC 555 timer.
- 17.** Explain about different components of the power distribution of AM wave in detail.
- 18.** Draw the block diagram of CRO and explain briefly the function of each block.
