C09-EE-306

3244

BOARD DIPLOMA EXAMINATION, (C-09)

APRIL/MAY—2015

DEEE—THIRD SEMESTER EXAMINATION

ELECTRONICS ENGINEERING

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. Draw the regulation characteristics of a Zener diode.
2. Define Ripple factor, RMS value.
3. Write the applications of LCD.
4. Write the applications of photodiode.
5. Write the applications of UJT.
6. State the necessity of biasing for a transistor amplifier.
7. Draw a circuit diagram of current series feedback.
8. Define efficiency of a power amplifier.
9. Give the condition for sustained oscillations.
10. Write any three applications of a CRO.

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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 criterion for valuation is the content but not the length of the answer.

11. *(a)* Explain the working of a HW rectifier with LC filter. 7

(b) Draw the circuit of FW rectifier with centre tap transformer using LC filter. 3

12. *(a)* Explain the construction and working of solar cell. 7

(b) Write the applications of solar cell. 3

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13. *(a)* Explain the need for stabilization. 3

(b) Explain the collector to base biasing method. 7

14. Draw the practical CE amplifier and explain the function of each component.

15. Draw and explain the operation of a two-stage transformer coupled amplifier.

16. Explain the use of OP-AMP as a summer and an integrator.

17. Draw and explain the working of Hartley oscillator.

18. Draw and explain the circuit of simple timer 555 IC used as astable multivibrator.

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