



C09-EE-306

3244

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2018

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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Explain the need for a filter in power supplies.
2. Draw Zener diode voltage regulator.
3. Draw the symbols of (a) LED, (b) phototransistor and (c) UJT.
4. What is a solar cell?
5. List the applications of LED.
6. List the causes for instability of biasing in a transistor amplifier.
7. Define efficiency of power amplifier.

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8. List the characteristics of an ideal operational amplifier.
9. State Barkhausen criteria for sustained oscillations.
10. List the applications of CRO.

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 principle of full-wave rectifier with centre tapped transformer using *P-N* junction diodes with waveforms.
12. Explain the construction and working principle of LCD.
13. Explain collector to base biasing method.
14. Classify amplifiers on the basis of frequency, function, type of load, period of conduction and number of stages.
15. Explain the working principle of Class-A power amplifier.
16. Draw and explain the summer and inverter circuits using operational amplifier.
17. Draw and explain the working principle of RC phase shift oscillator.
18. Describe the functions of different parts of CRT with neat diagram.

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