



C16-EE-305

6241

BOARD DIPLOMA EXAMINATION, (C-16)

OCT/NOV—2018

DEEE—THIRD SEMESTER EXAMINATION

ELECTRONICS ENGINEERING - I

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. Compare conductors, insulators and semiconductors with their energy band diagram.
2. List the manufacturer specifications of zener diode.
3. Define peak inverse voltage.
4. Compare center-tapped and bridge type full-wave rectifier.
5. List the applications of photo-diode.
6. Mention the application of UJT.
7. What is meant by faithful amplification?
8. List the applications of transformer coupled amplifiers.
9. Define feedback and feedback factor.
10. What is the need for power amplifier?

PART-B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each questions 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 PN junction diode with no bias, forward bias reverse bias and draw its V-I characteristics.
- 12.** Explain the working of bridge rectifier with and without capacitor filter.
- 13.** Explain the construction and working of JFET and draw its drain characteristics.
- 14.** a) Explain the principle, construction and working of LCD.
b) List the applications of LED.
- 15.** a) Draw and explain the self bias circuit of BJT.
b) State need of DC biasing for an amplifier.
- 16.** a) Explain the need for stabilization in transistor biasing.
b) Classify amplifiers on the basis of (i) Frequency (ii) function.
(iii) Type of load (iv) period of conduction (v) number of stages.
- 17.** Draw and explain the circuit of RC coupled amplifier and draw its frequency response.
- 18.** Explain the effect of negative feedback on gain, bandwidth, distortion, noise.

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