

6241

BOARD DIPLOMA EXAMINATION, (C-16)

MAY/JUNE—2023

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. Sketch the circuit symbols of PNP and NPN transistor. 3
2. Distinguish P-type and N-type semiconductors. 3
3. Draw the circuit diagram of bridge rectifier using PN diode. 3
4. List different types of filters. 3
- \* 5. Draw the VI characteristics of photo diode. 3
6. List the applications of LED. 3
7. State the necessity of proper biasing for transistor amplifier. 3
8. Classify amplifiers based on frequency and period of conduction. 3
9. List the differences between degenerative and regenerative feedback. 3
10. List the applications of emitter follower. 1+1+1

\*

## PART—B

10×5=50

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

- 11.** Draw and explain the input and output characteristics of transistors in CE configuration. 5+5
- 12.** Explain the Zener diode as a voltage regulator with a neat circuit diagram. 10
- 13.** Explain the construction and working of UJT with a neat diagram. 10
- 14.** Explain the construction and working of LCD with a neat diagram. 5+5
- 15.** Explain the method of self-biasing with a circuit diagram. 10
- 16.** (a) Explain the concept of DC load line. 5  
(b) Explain the necessity of cascading amplifiers. 5
- 17.** Explain the working of RC coupled amplifier with its circuit diagram. 10
- 18.** Explain the effect of negative feedback on gain, bandwidth distortion and noise. 10

\*

★ ★ ★