



C16-EE-305

6241

BOARD DIPLOMA EXAMINATION, (C-16)

MARCH/APRIL—2021

DEEE - THIRD SEMESTER EXAMINATION

ELECTRONICS ENGINEERING - I

Time : 3 hours ]

[ Total Marks : 80

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**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. Distinguish between P type and N type Semiconductors.
2. Draw the V-I characteristics of Zener diode.
3. State the need for filter in power supplies.
4. Draw the circuit diagram of Zener voltage regulator.
5. What are the applications of LCD?
- \* 6. Draw the circuit symbols of Photodiode and SCR.
7. List the causes for instability of bias in transistor amplifier.
8. Define gain and bandwidth of an amplifier.
9. List the applications of emitter follower.
10. What are the advantages of negative feedback in amplifiers?

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## PART—B

- 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 the input and output characteristics of transistor in CE configuration and explain. 10
- 12.** Draw and explain the working of centre tapped full-wave rectifier with waveforms. 10
- 13.** Explain the construction and working of LED with neat diagram. 10
- 14.** Describe the construction and working of UJT with neat diagram. 10
- 15.** Explain the potential divider biasing method with diagram. 10
- 16.** (a) Explain the operation of transistor as an amplifier. 5  
(b) Classify amplifiers on the basis of period of conduction and number of stages. 5
- 17.** Draw and explain the working of two-stage transformer coupled amplifier. 10
- 18.** Draw the block diagrams of voltage series, voltage shunt, current series and current shunt feedback amplifiers. 10

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