



C16-EC-105

6032

**BOARD DIPLOMA EXAMINATION, (C-16)  
SEPTEMBER/OCTOBER - 2020  
DECE—FIRST YEAR EXAMINATION**

ELECTRONIC DEVICES AND POWER SUPPLIES

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. List the types of resistor.
2. State the physical factors that affect the value of resistor.
3. List the core materials used in inductors.
4. Sketch the ISI symbols of SPST, SPDT and DPST switches.
5. List the materials used in soldering.
6. What is the difference between drift and diffusion currents?
7. Mention the applications of diode and Zener diode.
8. Draw the common base configuration using *n-p-n* transistor.

- \* 9. List the advantages of JFET over BJT.
10. State the need for regulated power supply.

**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 of rheostat with a neat sketch and mention its applications.
12. Explain the screen printing process.
13. Explain the formation of *P*-type semiconductor and draw its energy band diagram.
14. Sketch the forward and reverse bias characteristics of diode and explain the reverse breakdown phenomenon.
15. (a) Distinguish between Avalanche and Zener breakdown.  
(b) Draw and explain the output characteristics of CB configuration.
16. Explain the construction and working of *P-N-P* transistor.
17. Explain the construction and working of Depletion MOSFET.
- \* 18. With a neat circuit diagram and waveforms, explain the working of bridge rectifier.

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