

6039
BOARD DIPLOMA EXAMINATION
JUNE - 2019
DIPLOMA IN ELECTRICAL AND ELECTRONICS ENGINEERING
ELECTRICAL ENGINEERING MATERIALS
FIRST YEAR EXAMINATION

Time: 3 Hours

Total Marks: 80

PART - A (3m x 10 = 30m)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. State any three properties of AAAC (All Aluminium Alloy Conductor)
2. State any three properties of Carbon
3. Compare P-type and N-type semiconducting materials in any three aspects
4. Define thermosetting resins
5. State any three properties of Sulphur Hexa Fluoride (SF₆)
6. What is Di-electric loss.
7. Define magnetostriction
8. Define fuse and state different types of fuse materials
9. State any three precautions to be taken while charging of batteries
10. Classify the cells and give examples of each

PART - B (10m x 5 = 50m)

** Note 1: Answer any five questions and each carries 10 marks*

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. State the properties of high resistive materials
12. Explain the colour coding of resistors as per BIS
13. State the properties and applications of (a) PVC (b) Sulphur Hexa Fluoride
- 14A. Explain the formation of P-type semiconductor with a neat sketch
- B. Explain the process of polarization in dielectric materials with a neat diagram

15. Explain soft and hard magnetic materials
16. Explain the process of galvanization with a neat sketch
17. Explain the construction and working of maintenance free batteries
18. a) Distinguish between primary cells and secondary cells in any five aspects.
b) Explain the significance of internal resistance of a battery

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