6039
BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 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. Define Hardening and Annealing
2. State any three applications of ACSR
3. State majority and minority carriers in P-type and N-type semiconducting materials
4. State any three properties of impregnated paper
5. State any three properties of Nitrogen gas
6. Define polarization
7. Define curie point in magnetic materials
8. What is meant by Bi-metal
9. State any three active materials in Nickel iron cells
10. Compare primary cells and secondary cells in any three aspects

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 and applications of Manganin and Nichrome
12. State the properties of high resistive materials
13. State the effects of the following on PVC
    a) Filler b) Stabilizer c) Plasticizer d) Additives

14A. Distinguish between intrinsic and extrinsic semiconducting materials

B. Explain dielectric loss in dielectric materials with neat sketches

15. Define soft and hard magnetic materials and explain them

16. **Explain the process of glvanizing and impregration**

17. **Explain the construction details of Lead acid battery**

18. **Explain the charging method of batteries using constant current method**

- xxx -

257 257 257 257 257