



C14-EC-106

4039

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2015

DECE—FIRST YEAR EXAMINATION

ELECTRONIC ENGINEERING MATERIALS AND PRACTICES

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

1. Draw the energy band diagram of conductors, insulators and semi-conductors.
2. What are the factors affecting insulating resistance?
3. Classify the magnetic materials.
4. What are the applications of neodymium magnets?
5. What are the different types of hammers?
6. List the types of Nuts used in the industry.
7. What is the tin-lead ratio used for different soldering processes?
8. Define hardness and brittleness.
9. Mention the use of goggles in welding process.
10. Define corrosion.

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PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

- 11.** Explain the physical properties of materials. 10
- 12.** (a) Distinguish between thermoplastic and thermosetting resins. 6
(b) What are the applications of PVC in electrical and electronic industry? 4
- 13.** (a) What are the factors affecting hysteresis loss and how to reduce it? 6
(b) What is the use of silicon sheet steel for transformer? 4
- 14.** (a) Explain superconductivity phenomenon. 5
(b) What are the applications of superconductors? 5
- 15.** (a) What is the use of cir clips? 3
(b) List various important hand files used in the electronics workshop. 4
(c) What are the demerits of adhesives? 3
- 16.** (a) Explain the use of flux in soldering. 3
(b) Explain the process of wave soldering. 7
- 17.** (a) Explain annealing and normalising process. 5
(b) Explain the process of tempering. 5
- 18.** (a) Explain the method of first aid treatment for electric shock. 5
(b) Explain fire preventive measures. 5
