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C14-EC-106

4039

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2017

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.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What are the uses of gold in electronic industry?
2. Define thermoplastic and thermosetting resins.
3. What is the effect of temperature on magnetism?
4. What are the alloys used for bimetallic strips?
5. List the types of screw drivers used in electronics workshop.
6. What is the purpose of washers?
7. Define brazing and welding.
8. What are the different heat treatment processes?

- * 9. Draw the safety symbol which indicates (a) danger—high voltage, (b) emergency.
10. Explain atomic structure of the atom.

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. (a) Explain general electrical properties of copper. 6
 (b) What are the uses of silver in electronic industry? 4
12. (a) What are the applications of nylon in electrical and electronics industries? 4
 (b) What are the properties of PVC? 4
 (c) Define insulation resistance. 2
13. (a) How is hysteresis loss calculated? 4
 (b) What are the merits of using cold rolled grain-oriented steel for transformer? 6
14. What are Nano materials and explain their use in electronic industry? 10
15. (a) Explain the use of taps and dies for threading metal conduit for electrical wiring. 6
 (b) Explain riveting. 4
16. (a) Explain the heating requirements in the soldering process. 4
 (b) What are the types of soldering joints? 4
 (c) What is the tin-lead ratios used for general purpose electrical soldering? 2
- * 17. Explain mechanical properties of metals. 10
18. List the general electrical safety rules. 10
