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C14-EC-106

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BOARD DIPLOMA EXAMINATION, (C-14)

JUNE—2019

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. Define the following mechanical properties of materials :

(a) Density

(b) Hardness

2. List any three important uses of copper.

3. Write any three properties of ceramic.

4. List the types of hammers.

5. Classify the magnetic materials.

6. Write important uses of ferrites.

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7. Define brazing and welding.
8. List any three types of nuts used in the industry.
9. What is tempering?
10. List any three types of fire extinguishers.

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 atomic structure of an atom. 5
(b) Explain the process of anodization of aluminum. 5
12. (a) Explain Y, A, E, B, F, H and C class of insulating materials. 7
(b) Define insulation resistance. 3
13. (a) Distinguish between soft and hard magnetic materials. 6
(b) List the factors affecting the hysteresis loss. 4
14. (a) List alloys used for (i) bimetallic strips, (ii) soldering, (iii) fuse material. 6
(b) Explain the composition of neodymium. 4
15. (a) List the types of screw drivers used in the workshop. 6
(b) Explain the use of taps and dies. 4
16. (a) Explain the process of wave soldering. 6
(b) Explain the use of flux in soldering. 4

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17. What is annealing? Explain the process of annealing.
18. (a) Explain first aid treatment for a person who is subjected to electric shock. 5
- (b) Explain the precautions to be taken to prevent accidents while working on machines. 5

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