



C14-EC-106

4039

BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DECE - FIRST YEAR EXAMINATION

ELECTRONIC ENGINEERING MATERIALS AND PRACTICES

Time : 3 Hours]

[Total Marks: 80

PART-A

4X10=40

- Instructions* :
1. Answer **All** questions.
 2. Each question carries **four** marks.
 3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. (a) Define energy band. List the types of energy bands in solids.
(b) Write the effect of impurities on the resistance of conductor
2. (a) List any four methods to prevent corrosion of conductors.
(b) Write the use of silver in electronic industry.
3. (a) Define insulating materials.
(b) List the factors effecting insulation resistance
4. (a) Define soft magnetic materials.
(b) List the important magnetic materials used in electronic industry.
5. (a) Mention the need for alloying.
(b) Give the composition of Nichrome, Manganin alloys
6. (a) Write the use of cold chisel.
(b) What is the use of ball peen hammer?
7. (a) Write the use of screw drivers
(b) List four types of fasteners.
8. (a) Define brazing.
(b) State the need of flux in soldering.

9. (a) State the purpose of heat treatment
(b) List the various heat treatment processes.
10. (a) State the importance of safety in industry.
(b) List the types of fire extinguishers.

PART-B

10X4=40

Instructions :

1. Answer any **Four** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. (a) Explain the electrical properties of copper which makes it most suitable metal in electrical applications.
(b) State three reasons for preferring Aluminium for transmission of power through overhead lines.
12. (a) State and explain the electrical properties of insulating materials.
(b) Write the differences between thermo plastic and thermo setting resins
13. (a) Explain the use of CRGO steel for transformers.
(b) Distinguish between soft and hard magnetic materials.
14. (a) Explain the use of cadmium copper and beryllium copper.
(b) List any four applications of nano materials.
15. (a) Write short notes on rivets.
(b) Explain the use of cyanoacrylate.
16. (a) Explain the process of wave soldering.
(b) Explain eutectic point of metals.
17. (a) Explain the process of annealing.
(b) State the purpose of tempering.
18. (a) Write any five precautions to be taken while working on machines.
(b) Explain first-aid treatment in case of burns.
