

No. of Printed Pages : 4
Roll No.

220934

3rd Sem / Electrical
Subject : Electrical Engineering Materials

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The forbidden gap in a conductor is (CO1)

- a) Large
- b) Small
- c) Nil
- d) Any of the above

Q.2 A pure semiconductor under ordinary conditions, behaves like (CO2)

- a) Conductor
- b) An Insulator
- c) A magnetic materials
- d) A ferroelectric materials

Q.3 Glass is basically (CO1)

- a) anhydride
- b) oxide
- c) arsenic
- d) chloride

Q.4 Soft magnetic materials are used for making (CO3)

- a) Temporary magnets
- b) Permanent magnets
- c) Both Permanent & temporary magnets
- d) All of the above

Q.5 The choice of solder depends on (CO2)

- a) cost
- b) nature of metal to be soldered
- c) required mechanical strength
- d) all of the above

Q.6 Effect of rise in temperature on the insulating materials is to (CO3)

- a) decrease resistance
- b) increase resistance
- c) both decreases & insulation resistance
- d) none of the above

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 What is doping in semiconductor? (CO1)

Q.8 Expand C.R.G.O. (CO2)

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- Q.9 Define Valence band? (CO1)
- Q.10 Paper & wood are hygroscopic in nature. (T/F) (CO2)
- Q.11 Give two examples of diamagnetic materials? (CO3)
- Q.12 What is fuse? (CO1)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Explain how conduction takes place in conductors and semiconductors? (CO3)
- Q.14 Define low resistivity and high resistivity materials with example? (CO2)
- Q.15 Discuss any four properties of copper as a conducting materials? (CO1)
- Q.16 Give any four properties of PVC? (CO1)
- Q.17 Give any four applications of soft magnetic materials? (CO3)
- Q.18 Explain epoxy resin with examples? (CO2)
- Q.19 Describe the suitability of minerals oil as insulating cum cooling medium in power transformers? (CO3)
- Q.20 Write a short note lead soldering. (CO1)

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- Q.21 Write a short note HRC fuse (CO1)
- Q.22 Write any four properties of Mu metal? (CO2)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Explain the properties and application of (CO1)
- i) Mica
 - ii) Silicon Rubber
- Q.24 List and explain various materials required for fabrication of motors, generators? (CO3)
- Q.25 What are the Magnetic materials and give classification of magnetic materials with examples. (CO2)

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