

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)

B. Tech. Sem - II E&TC :SUMMER- 2022

SUBJECT : CHEMISTRY OF ELECTRONIC MATERIALS

Day : Thursday
Date : 28-07-2022

S-24100-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPUSLORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data if necessary

Q.1 Explain the different types of glasses and their applications. **[10]**

OR

Q.1 Explain the various factors affecting the electrical resistivity of materials. **[10]**

Q.2 What are compound semiconductors? Briefly explain its composition, properties and applications. **[10]**

OR

Q.2 Explain how piezoelectricity is generated in materials with suitable examples. **[10]**

Q.3 Explain the seven crystal systems with suitable examples. **[10]**

OR

Q.3 Briefly explain: **[10]**

- a) Molecular crystals
- b) Ionic crystals
- c) Covalent crystals

Q.4 Explain the preparation, properties and applications of two important conductive polymers. **[10]**

OR

Q.4 By taking an example briefly explain the requirements in a polymer to act as conducting polymer. **[10]**

Q.5 What are reference electrodes? With a neat diagram explain the working of calomel electrode and standard hydrogen electrode. **[10]**

OR

Q.5 Explain the construction and working of dry cell and Ni-Cd batteries. **[10]**

Q.6 Explain the instrumentation and applications of IR spectroscopy. **[10]**

OR

Q.6 Derive combined Beer-Lambert's law. What is molar absorptivity? **[10]**

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