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**School of Computing Science and Engineering**

Bachelor of Technology in Computer Science and Engineering

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

**Sem II - C1UB129T - Chemical and Biological Materials**General Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Discuss anisotropy in liquid crystals. K2 (2)
- 2) What are the two main types of liquid crystals? K1 (3)
- 3) Illustrate the properties of nanocomposites which make them feasible for a wide range of applications. K2 (4)
- 4) What do you understand by ceramic based nanocomposites? K2 (6)
- 5) Discuss the types and phases of thermotropic Liquid Crystals. K3 (6)
- 6) Why are the properties of bulk materials affected by the addition of nanofillers? K3 (9)
- 7) Differentiate between various categories of nanocomposites with suitable examples. K4 (8)
- 8) Analyse the use of carbon nanotubes for various applications. K4 (12)

**OR**

Explain the classification of the liquid crystals and discuss any one in detail. K4 (12)