

Gurudas College
Department of Chemistry
Internal Assessment Examination-2021
SEM-II
Paper: CEMA-CC-2-4

Full Marks-10

Answer any five questions

Time-30 mins

$5 \times 2 = 10$

1. Between strontium sulfate and magnesium sulfate, which one is more soluble in water and why?
2. What are the stoichiometric defects found in ionic crystals? Explain with examples.
3. Give formal charge and hybridization of the central atom in each of the following:
 $S_2O_3^{2-}$, ICl_3 .
4. Explain the order of bond angles: $F-O-F < H-O-H < Cl-O-Cl$.
5. Give the shape of the following using VSEPR or hybridization of the central atom. $IO_2F_2^-$, BrF_4^+ .
6. State with reasons the expected changes in bond order and bond distances in the following ionization processes: $O_2 \longrightarrow O_2^+ + e$.
7. Indicate the semiconductor type (n or p) with explanation when:
 - a. As doped Ge
 - b. B doped Si
8. When do radionuclides attain their stability by positron emission and K-electron capture? Explain with suitable examples.