THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

CHE 3423 **INORGANIC CHEMISTRY** **Max : 75mks**

Time : 3 Hrs

Answer any five the questions **(5 x 15=75)**

1. a) Describe the extraction of chromium from its ore.
   b) Explain the magnetic properties of first transition elements. (10+5)
2. Explain the stereoisomerism in coordination compounds.
3. Explain crystal field theory as applied to octahedral complexes and discuss the applications of CFT(10+5)
4. Describe the preparation and importance of the following compounds.
   i) Prussian blue ii) Nessler's reagent iii) titaniumterachlorie(3x5)
5. a) Explain Werner's theory of coordination compounds.
   b) Give an account on chelate effect and explain the factors that affect the stability of complexes.
6. Point out the difference between first, second and third transition matals.
7. a) Explain JahnTeller effect
   b) Apply VB theory to the following complexes
      a. $K_3[FeF_6]$ b) $[Cu(NH_3)_4]SO_4$

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