

GOVERNMENT GENERAL DEGREE COLLEGE, CHAPRA

U.G. INTERNAL ASSESSMENT (2020-21)

SEMESTER-IV

SUBJECT- CHEMISTRY (CHEMGT-4)

FULL MARKS – 15

Time: 1 Hour

A. Answer any seven questions from the following: [7x2=14]

1. What are high spin low spin complexes? Give example. 2
2. Explain why $[\text{CoF}_6]^{3-}$ is paramagnetic. 2
3. Calculate the CFSE for $[\text{Fe}(\text{CN})_6]^{4-}$? 2
4. Explain why hydrated copper sulphate is blue in colour but anhydrous copper sulphate is white? 2
5. Write the IUPAC name for the following compounds.
 - i. $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$ 1
 - ii. $\text{K}_4[\text{Fe}(\text{CN})_6]$ 1
6. Draw all possible isomers of $[\text{Co}(\text{en})_2\text{Cl}_2]^+$. 2
7. Why Ce^{3+} is more basic than Ce^{4+} ? 2
8. Discuss the cause of lanthanide contraction? 2
9. Explain the following terms.
 - i. Specific conductance. 1
 - ii. Cell Constant. 1
10. Write the one application of Kohlrausch Law. 2

B. Answer any one question from the following: [1x1=1]

1. What do you mean by transport number? 1
2. Give one example of following isomerism in coordination compounds.
 - i. Ionisation isomerism. 1/2
 - ii. Hydrated isomerism. 1/2