B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
I Year II Semester
Allied Chemistry - II

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. What is meant by ligand? Give examples.
2. Determine the EAN of the central metal atom in $K_4[Fe(CN)_6]$ complex.
3. Define the term mutarotaion.
4. Explain why sucrose is not a reducing sugar.
5. Write a note on Zwitterion.
6. What is the importance of proteins?
7. What is meant by standard electrode potential?
8. Define the term EMF.
9. What is Rf value in chromatography?
10. What is the basic principle of solvent extraction?
11. What are the causes of diabetes?
12. What is secondary cell? Give examples.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Write short note on estimation of Aluminium using oxine.
14. Describe the structure of EDTA and explain its application in quantitative analysis.
15. Starting from glucose how will you prepare
(i) Sorbitol (ii) Glucaric acid.
16. Discuss the ring structure of glucose.
17. Discuss the structure of proteins.
18. Explain electroplating and write its application.
19. Explain the principle of volumetric analysis.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. (a) Explain the structure and biological role of haemoglobin.
    (b) Explain the magnetic properties of the following complex based on VBT
    (i) $[Ni(CN)_4]^{2-}$ (ii) $[Co(CN)_6]^{3-}$
21. (a) Write the preparation and properties of sucrose. (b) Discuss the important derivates of cellulose.
22. (a) What do DNA and RNA stand for? Write its components and biological functions. (b) Describe the Bergmann method of peptide synthesis.
23. (a) What is corrosion? How corrosion is prevented. (b) Derive Henderson equation.
24. Write notes on (i) fractional distillation (ii) ion-exchange chromatography.

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