P – 3876

Reg. No. : ....

Name : ....

Third Semester B.Sc. Degree Examination, January 2023

First Degree Programme Under CBCSS

Chemistry

Complementary Course for Zoology

CH 1331.4 : ORGANIC CHEMISTRY

(2017 – 2018 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. **Each** question carries **1** mark

1. What is isoelectric point?

2. Name the sugar present in DNA.

3. What is the number of optical isomers possible for glucose?

4. Give the name of a non – reducing disaccharide.

5. Write the species formed by hetrolytic fission.

6. Give an example of tertiary carbocation.

7. What do you understand by the term resolution?

8. Define chirality.

P.T.O.

9.   What are thermosetting plastics?

10. Which type of monomers are used in addition polymerization?

SECTION – B

Answer any **eight** questions. **Each** question carries **2** marks

11. Outline a synthesis of phenyl alanine.

12. What are phospholipids?

13. What is saponification?

14. Define epimers.

15. What are polysaccharides? Give two examples.

16. What are enantiomers?

17. What conformational changes occur as the temperature rises?

18. Explain rotational isomerism.

19. What is mesomeric effect?

20. Between dimethylamine and methylamine, which is the stronger base and why?

21. What is hyperconjugation?

22. Write a note on elastomers?

SECTION – C

Answer any **six** questions. **Each** question carries **4** marks

23. Explain any four colour tests for proteins.

24. Write the different steps involved in the synthesis of a tripeptide having three different amino acid groups.

25. Discuss the mechanism of Markonikoff addition to alkenes.

26. Discuss the various conformations of cyclohexane and their relative stabilities.

27. Explain the requirements for a compound showing optical activity. Explain your answer with examples.

28. Write short note on natural polymers.

29. What are terpenes? Discuss its classification.

30. Explain Iodine value on oil. What is its significance?

31. Write a note on the role of DNA in biosynthesis of proteins.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks.

32. Explain the part played by DNA in protein synthesis. Explain genetic coding.

33. Discuss about mutarotation and epimerization.

34. Discuss about enzyme catalysis. Derive Michaelis – Menton equation.

35. (a) Discuss the preparation and applications of the synthetic rubbers Buna N and butyl rubber. 8

    (b) Differentiate SN^1 and SN^2 reactions. 7

(2 × 15 = 30 Marks)

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