

Reg. No. :

Name :

Third Semester B.Sc Degree Examination, October 2019

First Degree Programme under CBCSS

Complementary Course for Zoology

CH 1331.4- ORGANIC CHEMISTRY

(2017 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. Answer in one word or to maximum two sentences. Each question carries 1 mark.

1. What are proteins?
2. Define Isoelectric point.
3. What is Inductive effect?
4. Name two groups which shows + M effect.
5. Draw the structure of stable conformation of butane.
6. What is meant by angle strain?
7. Draw the cyclic structure of D- Fructose.

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8. What are monosaccharides?
9. Define hyperconjugation.
10. What are Epimers?

(10 × 1 = 10 Marks)

SECTION-B

Short answer type. Answer **any eight** question from the following. Each question carries **2** marks

11. Give any one method for the synthesis of Glycine.
12. How are proteins classified ?
13. Write a short note on mutarotation.
14. Draw the structure of Citral.
15. What are Koop synthesis?
16. Explain different kinds of bond fission observed in organic reaction
17. Explain Iodine value.
18. Bring out the distinguishing features of electromeric and mesomeric effect.
19. What are natural and synthetic polymers?
20. Explain Markonikov's rule with example.
21. What is vulcanization of rubber?
22. Explain co-enzymes.

(8 × 2 = 16 Marks)

SECTION-C

(Short essay type. Answer **any six** questions from the following. Each question carries **4** marks.)

23. Write a short note on colour tests of proteins.
24. Explain the terms carbocations, carbanions and free radicals with suitable example.
25. Write any one method for the synthesis of glucose and fructose.
26. Describe the difference between thermosetting and thermoplastic polymers.
27. Write a short note on a) Racemisation b) Resolution c) Asymmetric synthesis.
28. How is Glucose converted into Fructose?
29. Discuss the optical isomerism exhibited by Tartaric acid.
30. What are the differences between Buna-S and Buna-N?
31. Explain why chloroacetic acid is stronger than acetic acid.

(6 × 4 = 24 Marks)

SECTION-D

(Answer **any 2** questions from the following. Each question carries **15** marks.)

32. Explain the conformations of cyclohexane
33. Explain the structure of DNA and RNA
34. Explain the primary, secondary and tertiary structure of protein.
35. Write short note on
 - (a) Addition polymerization
 - (b) Condensation polymerization
 - (c) Synthetic rubber.

(2 × 15 = 30 Marks)

