N – 2595

(Pages : 3)

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, March 2022

First Degree Programme under CBCSS

Chemistry

Complementary Course for Zoology

CH 1331.4 — ORGANIC CHEMISTRY

(2020 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. What is the significance of enantiomeric excess?
2. Draw the optical isomers of tartaric acid.
3. What is amylose?
4. How can we prove that glucose is a reducing sugar?
5. Give two examples for essential amino acids.
6. What are coenzymes?
7. What are waxes chemically?
8. Explain isoprene rule.
9. What are the monomers of Buna-S?
10. What is the chemical name of paracetamol?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

(Short answer Type)

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

11. Explain the structural difference between maleic acid and fumaric acid.
12. What are syn and anti aldoximes?
13. How will you convert glucose into fructose?
14. What are enantiomers? Give one example.
15. Draw the pyranoside structure of fructose.
16. What are epimers? Give one example.
17. Explain the synthesis of tryptophan.
18. Define iodine value of oils and fats? Mention its significance.
19. Give one example each for acidic and basic amino acids.
20. What are the major functions of lipids in human body?
21. What are zwitter ions of amino acids?
22. Explain the process vulcanization of rubber.
23. How is geraniol isolated?
24. What is aspirin chemically? Give its method of synthesis.
25. Give any two examples of antimalerial drugs.
26. What are antibiotics?

(8 × 2 = 16 Marks)

SECTION – C

(Short Essay)

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

27. What is asymmetric synthesis? Discuss its types.
28. Describe the E-Z system of nomenclature with suitable examples.
29. What is mutarotation? Explain with an example.

30. Give any two method of preparation of glucose.
31. Discuss the synthesis and uses of butyl rubber.
32. Explain any four colour tests of proteins.
33. What is DNA replication? Explain its importance.
34. How are oils classified?
35. Write short note on structure of proteins.
36. What are drugs? How it can be classified?
37. Explain condensation polymerization with an example.
38. What are hypnotic agents? Explain with examples.

(6 × 4 = 24 Marks)

SECTION – D

(Long essay)

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

39. Write short notes on :
    (a) Sulpha drugs and its mode of action **8**
    (b) Drugs of plant origin **7**
40. (a) Differentiate thermoplastics and thermosetting plastics. **8**
    (b) What are terpenes? Discuss its classification. **7**
41. Explain the structure and biological importance of DNA and RNA.
42. What are enzymes? Discuss the characteristics and kinetics of enzymatic reactions.
43. Discuss the various classifications of carbohydrates.
44. Write an essay on conformational isomerism and their relative stabilities.

(2 × 15 = 30 Marks)
