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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2022

Fourth Semester

Complementary Course—Chemistry

ADVANCED BIO-ORGANIC CHEMISTRY

(For Students who have opted Biological Science and Family and Community Science as main)

[2013—2016 Admissions]

Time : Three Hours Maximum Marks : 60

Part A

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

1. What is zwitterion ?
2. What is a prosthetic group ?
3. What are enzymes ?
4. What is the Haworth configuration of α-D glucose ?
5. What are bile acids ?
6. What are steroid hormones ?
7. What is the importance of iodine value ?
8. What is isoprene rule ?

(8 × 1 = 8)

Part B

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

9. Discuss any *one* method for the synthesis of glycine.
10. What are the various types of peptides ?
11. Discuss the mechanism of enzyme action.
12. What is a nucleotide ? Give one example.

Turn over

13. What is the difference between cellulose and cellobiose?
14. What are steroids? Give two examples
15. What is the difference between an oil and a fat?
16. What is the difference between amine hormones and peptide hormones ?
17. What are the chemical compositions of soaps and detergents ?
18. What is citral? What is its use ?

(6 × 2 = 12)

Part C

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

19. What is the best method of amino acid separation ?
20. Describe the structure and biological functions of DNA.
21. Discuss the preparation and properties of fructose.
22. Discuss the steps involved in conversion of glucose to fructose.
23. Describe methods for the analysis of oils.
24. What is the characteristic of natural rubber ?

(4 × 4 = 16)

Part D

Answer any **two** *questions.*
Each question carries 12 *marks.*

25. Explain the classification and chemical properties of amino acids.
26. Explain the classifications of carbohydrates.
27. Discuss the structure and biological activity of vitamin B.
28. What are alkaloids ? Explain the isolation andgeneral properties of alkaloids.

(2 × 12 = 24)