



B.Sc DEGREE (CBCS) EXAMINATION, MAY 2019

Fourth Semester

Complemetary Course - CH4CMT06 - CHEMISTRY - ADVANCED BIO-ORGANIC CHEMISTRY

(Common for B.Sc Botany Model I, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Horticulture and Nursery Management, Bsc Botany Model II Environmental Monitoring and Management, B.Sc Family & Community Science Model I, B.Sc Food Science & Quality Control Model III, B.Sc Zoology Model I, B.Sc Zoology Model II Aquaculture, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology, B.Sc Botany Model II Plant Biotechnology, B.Sc Food Technology & Quality Assurance)

2017 Admission onwards

3E2336A4

Maximum Marks: 60 Time: 3 Hours

Part A

Answer any **ten** questions.

Each question carries 1 mark.

- 1. Write two uses of geraniol?
- 2. How are alkaloids classified based on the plant source?
- 3. Write any two methods for the extraction of fats and oils?
- 4. What are soaps chemically?
- 5. Draw the zwitterionic form of phenyl alanine.
- 6. What is meant by a peptide bond?
- 7. Write down Michaelis-Menton equation for enzyme calalysed reactions and explain the terms
- 8. Draw the structure of adenine and guanine
- 9. Draw the structure of AMP
- 10. Write the molecular formula of cellulose
- 11. Which are the diseases caused by the deficiency of vitamin B12?
- 12. Draw the structure of vitamin D.

 $(10 \times 1 = 10)$

Part B

Answer any six questions.

Each question carries 5 marks.

13. How are terpenoids classified? Give examples for each class?



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- 14. What are different types of soaps?
- 15. Explain the denaturation of proteins.
- 16. Explain the structure of DNA
- 17. Explain translation process in protein synthesis
- 18. Explain the industrial preparation of fructose
- 19. How fructose is converted to glucose
- 20. What are bile acids? What are its functions?
- 21. Write short notes on amine hormones and artificial hormones.

 $(6 \times 5 = 30)$

Part C

Answer any two questions.

Each question carries 10 marks.

- 22. What are synthetic detergents? How are they classified? What are the differences between soaps and detergents?
- 23. Explain the
 - a) Stecker Synthesis of alanine
- b) Gabriel Phthalimide synthesis of glycine
- c) synthesis of phenyl alanine

24. a) Write a note on the different classes of enzymes

b) Explain Michaelis-Menton theory

25. Elucidate the structure of Glucose

(2×10=20)

