

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2019

(CUCBCSS)

B.Sc. Chemistry

CHE 6B 10—ORGANIC CHEMISTRY—III

Time : Three Hours

Maximum : 80 Marks

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

1. Mention any *two* uses of wax.
2. Give the structures of Vitamin A and C.
3. Give the structure of riboflavin. What is it commonly called ?
4. What is Vulcanization ?
5. What are nucleosides and nucleotides ?
6. Name a steroid hormone.
7. What are the different types of RNA ?
8. Sketch the NMR spectrum of ethyl alcohol.
9. What is Tollen's reagent ?
10. What is meant by Isoelectric point ?

(10 × 1 = 10 marks)

Section B*Answer any ten questions.**Each question carries 2 marks.*

11. Discuss the Biological functions of lipids.
12. Write short note on saponification number and Iodine number ?
13. What is meant by inversion of cane sugar ?
14. Write short note on mutarotation.
15. Give the structure of Methandrostenolone.
16. Write short note on Phospholipids.

Turn over

17. What is DNA finger printing ?
18. What are Hormones ? Why are they called chemical messengers ?
19. Discuss briefly Diel's Alder reaction.
20. Write short note on chemical shift.
21. What are the uses of Sandalwood oil ?
22. Give the structure of quinine and nicotine ?

(10 × 2 = 20 marks)

Section C

*Answer any five questions.
Each question carries 6 marks.*

23. Explain sigmatropic rearrangement with examples.
24. Write short note on types of pericyclic reactions.
25. Differentiate between RNA and DNA.
26. Discuss briefly HDL and LDL.
27. Write short note on classification of amino acids.
28. Write short note on Kiliani-Fischer synthesis.
29. Discuss briefly the tests for urine sugar and blood sugar.
30. Write short note on epimers and anomers.

(5 × 6 = 30 marks)

Section D

*Answer any two questions.
Each question carries 10 marks.*

31. Explain primary, secondary and tertiary structure of proteins. What is meant by denaturation of proteins ?
32. Discuss briefly reducing and non-reducing sugars. Also discuss applications of carbohydrates.
33. Discuss few colour tests for proteins.
34. Write short note on natural rubber and advantages of vulvanization of rubber.

(2 × 10 = 20 marks)