

Reg. No

Name

24U624

B.Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2024

SEMESTER 6 - CHEMISTRY

COURSE : 19U6CRCHE10 - ORGANIC CHEMISTRY - IV

(For Regular 2021 Admission and Supplementary 2020/2019 Admissions)

Time : Three Hours

Max. Marks: 60

PART A

Answer All (1 mark each)

1. The isomers that differ in the configuration at only one chiral carbon atom is
a) Epimers b) Anomers c) Optical isomers d) Enantiomers
2. Draw the structure of Piperine.
3. The Enzyme pepsin convertsinto
4. 2-formyl pyrrole is formed when pyrrole reacts with
5. Cholesterol on dehydrogenation with Se gives.....
6. Name a chemical test to show Geraniol contains a primary alcohol
7. Biomolecule responsible for protein synthesis?
8. The change in specific rotation with time is called
a) Mutarotation b) Specific rotation c) Dextrorotation d) Levorotation

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. What are carbohydrates? How they are classified?
10. Define Reichert-Meissel (R-M) Value.
11. The electrophilic substitution reactions of furan and other five membered heterocyclic compounds are not carried out in acidic medium. Why
12. What is Diel's Hydrocarbon? Draw its structure.
13. Give any two applications of enzymes.
14. What is GFP?
15. Explain DNA transcription?
16. What is denaturation of proteins?

(2 x 6 = 12)

PART C

Answer any 4 (5 marks each)

17. Explain primary, secondary and tertiary structure of proteins?
18. Draw the Hawroth structure of α -D Glucopyranose and β -D Fructofuranose
19. How the ring structure of fructose is established?
20. What are Vitamins? How are they classified? Draw the structure of Vitamin A and B1
21. Discuss the structure elucidation of Conine.
22. Give an electrophilic substitution reaction of pyridine. Give the mechanism of the reaction and justify the position of attack.

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. a) Discuss briefly the various methods employed for the extraction and refining of oils and fats.
b) Give the structural elucidation of Citral and Geraniol.
24. What are nucleic acids? Discuss their role in protein synthesis?
25. a) Explain Fischer Indole Synthesis
b) Give the reactions of Indole with
i) SO_2Cl_2 ii) CHCl_3/KOH iii) HCN/HCl iv) $\text{SO}_3/\text{pyridine}$ v) Sn/HCl
26. Discuss the interconversion of glucose to fructose and fructose to glucose and Kiliani-Fischer synthesis.

(10 x 2 = 20)