

Reg. No

Name

23U623

B. Sc. DEGREE END SEMESTER EXAMINATION : MARCH 2023

SEMESTER 6 : CHEMISTRY

COURSE : 19U6CRCHE10 : ORGANIC CHEMISTRY – IV

(For Regular - 2020 Admission and Supplementary - 2019 Admission)

Time : Three Hours

Max. Marks: 60

PART A

Answer All (1 mark each)

1. Name the two pyrimidine bases?
2. Draw the structure of the alkaloid present in the poisonous shrub "Hemlock"?
3. What is the difference between Geraniol and Nerol ?
4. Cholesterol on dehydrogenation with Se gives.....
5. Furan reacts with ammonia in presence of alumina at 400°C to give.....
6. The deficiency of phenylalanine hydroxylase causes congenital disease calledenzyme
7. An example for a disaccharide is
a) Glucose b) Fructose c) Mannose d) Sucrose
8. Fructose on reduction with sodium amalgam gives
a) Sorbitol and Mannitol b) Sorbitol Only c) Mannitol Only d) Glucose

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. Explain the structure of DNA?
10. What is denaturation of proteins?
11. Define Reichert-Meissel (R-M) Value.
12. Exposure to sunlight is good for health. Why?
13. Give any two methods of preparation of thiophene.
14. Give any two applications of enzymes.
15. Draw the Haworth structure of maltose.
16. What happens when glucose is treated with bromine water?

(2 x 6 = 12)

PART C

Answer any 4 (5 marks each)

17. Explain the structure of DNA?
18. a) Give one chemical evidence to prove that Nicotine is a Pyridine derivative.
b) "In Nicotine, the Pyrrole unit is connected to the Pyridine ring through the C2 carbon atom of the Pyrrole unit". Give one chemical evidence for this statement.
19. What are Vitamins? How are they classified? Draw the structure of Vitamin A and B1
20. Give the reaction of Furan with
a) H₂/Ni b) Alkaline solution of diazonium salt followed by treatment with NaOH
21. Draw the Haworth structure of α-D Glucopyranose and β -D Fructofuranose
22. Explain the interconversion of glucose to fructose and fructose

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Write the different steps involved in the synthesis of tripeptide having three different amino acid units?
24. Discuss the structure elucidation of Nicotine
25. a) How will you prepare isoquinoline from cinnamaldehyde oxime ?
b) How will you prepare indole from a) o-formamido toluene b) o-nitrophenyl acetaldehyde
c) Give the products of the reactions of isoquinoline with a) H_2/Pt b) alkaline $KMnO_4$
26. Elucidate the structure of Glucose

(10 x 2 = 20)