Reg. No..... Name..... **19U618**

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2019

SEMESTER – 6: CHEMISTRY (CORE COURSE)

COURSE: 15U6CRCHE10: ORGANIC CHEMISTRY IV

(Common for Regular - 2016 Admission / Supplementary-Improvement 2015 admission)

Time: Three Hours Max. Marks: 60

SECTION - A

(Answer **all** questions. ach question carries 1mark)

1. The alkaloid present in Hemlock tree is .....
2. Give an example of condensed heterocyclic ring.
3. Draw the pyranose form of α-D-glucose.
4. Give 2 examples for basic amino acid.
5. Write an example for hydrolytic enzyme
6. What is acid value?
7. The bases in RNA are .....
8. Maltose on hydrolysis gives.....

(1 x 8 = 8)

SECTION - B

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

9. Write note on epimerization?
10. What is furfural? Give its preparation and uses?
11. What are anomers? Explain with an example.
12. What is meant by denaturation of proteins?
13. Explain complementary base pairing in nucleic acids.
14. Distinguish between co-enzyme,apo-enzyme and metallo enzyme?
15. Explain the aromatic character of thiophene.
16. What is meant by zwitter ions?

(2 x 6 = 12)

SECTION - C

(Answer any **four** questions. Each question carries 5 marks)

17. Give an account of structural elucidation of coniine.
18. Discuss Skraup synthesis of quinoline?
19. Briefly explain the mechanism of enzyme action?
20. What are osazone? How is it prepared?
21. Differentiate between HDL and LDL.
22. Give evidence in support of ring structure of glucose.

(4 x 5 = 20)

SECTION – D

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

23. How are the following conversions affected
    a) Fructose into glucose
    b) Aldopentose into aldohexose
    c) An aldose into another aldose having one carbon atom less
24. i) Discuss the synthesis and chemical properties of pyridine and piperidine.
    ii) Compare the basicity of pyrrole pyridine, piperidine with amines
25. How are enzymes classified? What are the important characteristics of enzyme action?
26. i) Explain primary, secondary and tertiary structure of protein.
    ii) Explain the structure and biological functions of DNA and RNA.

(10 x 2 = 20)

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