

**B.Sc. DEGREE END SEMESTER EXAMINATION : OCTOBER 2022****SEMESTER 5 : CHEMISTRY****COURSE: 19U5CRCHE06 : ORGANIC CHEMISTRY - III***(For Regular - 2020 Admission and Supplementary - 2019 Admission)*

Time: Three Hours

Max. Marks: 60

**PART A****Answer All (1 mark each)**

1. Aldoxime or ketoximes were reduced to ..... by reduction with  $\text{LiAlH}_4$ .
2. An example for (a) Anthraquinoid dye (b) Vat dye is
3. Give two examples for Auxochrome.
4. What are LAS and ABS detergents?
5. What is Hinsberg's reagent? Predict one use.
6. What is PVC and mention its one use?
7. Draw the tautomers of  $\text{CH}_3\text{-NO}_2$ .
8. Why TMS is used as internal standard in  $^1\text{H}$  NMR spectroscopy.

**(1 x 8 = 8)****PART B****Answer any 6 (2 marks each)**

9. Compare the basicity of alkyl amines  $(\text{CH}_3)_3\text{N}$ ,  $(\text{CH}_3)_2\text{NH}$ ,  $\text{CH}_3\text{NH}_2$  and Ammonia  $\text{NH}_3$
10. How can we explain the stability of Diazonium salt?
11. Give application of synthetic reagents with example (a) Periodic acid (b)  $\text{OsO}_4$
12. Write and draw IR and NMR spectral analysis of Acetophenone
13. Draw the structure, chemical name and one use of Paracetamol.
14. What you meant by Mordant dye? Quote one example.
15. What is sulphadiazine. Write any two examples. Explain its mode of action
16. Differentiate exocyclic and endocyclic double bond with example.

**(2 x 6 = 12)****PART C****Answer any 4 (5 marks each)**

17. Explain the cleansing action of soap.
18. What is Malachite green, give its preparation and use?
19. Write down the mechanism of Gatterman reaction.
20. Write five analytical reagents, with chemical composition and its applications
21. Write a method of preparation of phenylhydrazine. How it reacts with (a) Glucose and (b) Fehling's solution
22. Explain Gabriel-Phthalimide reaction and Arndt-Eistert synthesis.

**(5 x 4 = 20)**

**PART D**

**Answer any 2 (10 marks each)**

23. Discuss the preparation, structure and application of synthetic rubbers.
24. Explain with example (a)Norrish reactions (b) photo Fries rearrangement
25. Explain briefly (a) Mass spectroscopy (b) factors affecting chemical shift in NMR spectroscopy
26. Explain (a) Phase transfer catalysis (b) Anticancer drugs (c) Hoffmann Bromamide Reaction.

**(10 x 2 = 20)**

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