Reg. No ..... Name **23U525**

B.Sc. DEGREE END SEMESTER EXAMINATION - NOVEMBER 2023

SEMESTER 5 : CHEMISTRY

COURSE : **19U5CRCHE06 - ORGANIC CHEMISTRY – III**

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

Time : Three Hours Max. Marks: 60

PART A
Answer All (1 mark each)

1. The number of signals for CH_3CH_2 CO CH_2CH_3
2. Write the monomers of the polymers a) PTFE b) PVC
3. Which is the catalyst used for the conversion of benzene to cyclohexane?
4. The order of basicity of propyl amines in water is ----------
5. Give an example for triphenyl methane dye.
6. The free energy change of a thermochemical reaction.
7. Which is the theory explaining relative stability of cycloalkanes?
8. What is LAS?

(1 x 8 = 8)

PART B
Answer any 6 (2 marks each)

9. How an aldehyde and a ketone can be distinguished by IR spectroscopy?
10. Give the preparation and applications of LDA.
11. Differentiate between photochemical and thermal reactions.
12. How will you synthesize Benzonitrile from anline?
13. What is meant by Vat dye?Give examples.
14. Give any two postulates of Baeyer's strain theory?
15. Outline the formation of the polyester " Dacron"
16. What are analgesics? Give two examples.

(2 x 6 = 12)

PART C
Answer any 4 (5 marks each)

17. Outline the synthesis and applications of a) Teflon b) PVC c) Nylon 6
18. How can you synthesize diazo methane? What happens when diazomethane reacts with ketones?
19. Describe the cleansing action of soap.
20. a) Explain the use of periodic acid in organic synthesis. b) Explain the use of Raney Nickel.
21. Describe Norrish type II reaction with an example.
22. Give equations for the preparation of methylamine (methanamine) by Gabriel-phthalimide synthesis.

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Discuss the following terms a) auxochrome b) chromophore c) bathochromic shift d) hypsochromic shift e) hyperchromic effect

24. Describe briefly the classification of dyes based on a) molecular structure and b) method of application.

25. a) Write briefly about the structure and mode of action of the Sulphanilamides and Ampicillin
    b) Write briefly about the structure and applications of paracetamol and analgin

26. a) Explain the synthesis of diazonium salts detailing the mechanism.
    b) How will you synthesize fluorobenzene from aniline?
    c) How will you convert o-Toluidine to o-chloro toluene?

(10 x 2 = 20)