

B.SC DEGREE END SEMESTER EXAMINATION OCTOBER 2016**SEMESTER - 5: CHEMSITRY (CORE COURSE)****COURSE: U5CRCHE6 - BASIC ORGANIC CHEMSITRY - II**

Time: Three Hours

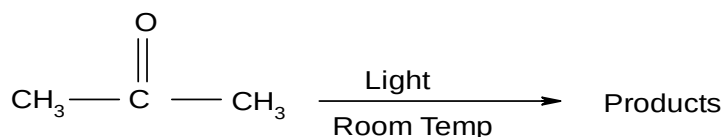
Max. Marks: 60

SECTION A*Answer **all** questions. Each question carries **1 mark***

1. Name the product when diazomethane reacts with ethene?
2. What happens when a 1° - nitroalkane is boiled with acid?
3. What are auxochromes and chromophores?
4. What is phosphorescence emission?
5. Define thermosetting plastics with suitable examples.
6. What are the advantages of LAS over ABS
7. Ethanal is warmed with Tollen's reagent in a water bath. What is your observation?
8. Why is the region 1300 - 900 cm⁻¹ called the finger print region of the compound? (1 × 8 = 8)

SECTION B*Answer **any Six** questions. Each question carries **2 marks***

9. How can you convert Ethanoic acid to Propanoic acid?
10. Primary and secondary nitroalkanes are soluble in alkali. Explain?
11. How are detergents classified? Give examples.
12. Explain Otto Witt's theory of colour.
13. Explain



14. What are analgesic and antipyretic drugs? Give examples?

15. What happens when Lead Tetra Acetate is treated with a) acid amide b) toluene?
16. Indicate which of the following compounds would or would not show splitting of NMR signals? a) Toluene b) n - Butane c) Ethyl formate
- (2 × 6 = 12)

SECTION C

*Answer **any Four** questions. Each question carries **5** marks*

17. a) Aniline gives 2 products on electrophilic substitution. Explain? (3)
b) Explain why ethyl amine is a stronger base than aniline? (2)
18. a) How can you prepare o- and p-dinitro benzene? (2½)
b) Suggest reactions for the conversion of Aniline to biphenyl. (2½)
19. a) Baeyer's Strain theory can describe the stability of cycloalkanes. Explain (3)
b) Give the structure and mode of action of sulphapyridine. (2)
20. a) What are the advantages of detergents over soaps? (2)
b) How is anthraquinone converted to alizarin? (3)
21. What is Chemical shift? What are the factors affecting chemical shift? Explain
22. Discuss the synthesis of polyurethanes. (5 × 4 = 20)

SECTION D

*Answer **any Two** questions. Each question carries **10** marks*

23. a) Nitrobenzene undergoes reduction under different conditions to different products. Explain using suitable reactions? (6)
b) How can you prepare m - nitro phenol from benzene? (4)
24. a) How can the synthesis of p - toluidine from toluene be conducted? (4)
b) Suggest a route for the conversion of Aniline to 1,3,5 - tribromobenzene. (4)
c) What are the requirements of a good dye? (2)

25.a) Give reagents and reactions to bring about the conversion of anthranilic acid to Indigo. (4)

b) Discuss the synthesis of monomers and the polymer SBR. (3)

c) Explain with mechanism the action of $\text{HIO}_4 \cdot 2 \text{H}_2\text{O}$ on cis - glycols. (3)

26.a) Explain the reaction and mechanism of Paterno - Buchi reaction. (4)

b) What is the structure and mode of action of Chloramphenicol. (2)

c) A compound having molecular formula C_9H_{12} gives two signals at

$\delta = 2.27(9\text{H})$ and $6.7(3\text{H})$ respectively in NMR spectra. The area under the

two peaks is 3:1. Assign structure to the compound (4)

(10 x 2 = 20)
