

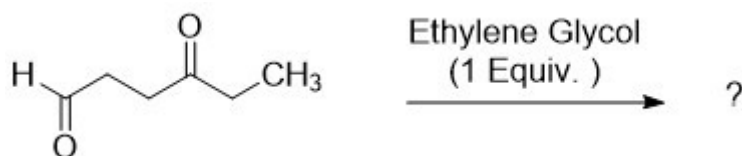
B Sc DEGREE END SEMESTER EXAMINATION - JULY 2021**SEMESTER 4 : CHEMISTRY****COURSE : 19U4RCHE4 : ORGANIC CHEMISTRY – II***(For Regular - 2019 Admission)*

Time : Three Hours

Max. Marks: 60

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

1. The product obtained by the oxidation of salicylaldehyde with alkaline Hydrogen peroxide at 50°C is
2. The products obtained when methyl tert-butyl ether is cleaved with Hydrogen Iodide
3. Predict the product of the reaction



4. Write the structure of coumarin.
5. Give one method used for the large scale production of urea
6. What is the product formed when $\text{CH}_3\text{CH}_2\text{Li}$ reacts with formaldehyde followed by hydrolysis.
7. The final product obtained by the ketonic hydrolysis of ethyl aceto acetate is
8. When distilled with Zinc dust, 9,10-anthraquinone gives

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

9. Discuss the oxidative cleavage of Ethylene glycol by Lead Tetra acetate.
10. Explain the synthesis of epoxides from chlorohydrin.
11. Write briefly on the use of acetals as protecting groups
12. What is tosylation?
13. Write a method for the preparation of Guanidine
14. Write the reaction involving the synthesis of secondary and tertiary alcohols using Grignard reagent
15. What are enamines?
16. What happens when 1-naphthyl amine is allowed to react with Sodium nitrite and HCl followed by treatment with phenol?

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

17. Write the mechanism of the reaction of benzaldehyde with alcoholic potassium cyanide.
18. How will you perform the following conversion a) acetaldehyde to crotonaldehyde b) cyclohexanone to 2-methyl cyclohexanone
19. Give one method of preparation, two properties and one use of toluenesulphonyl chloride.
20. How will you prepare adipic acid on commercial scale? Give its properties of synthetic importance.
21. Write a scheme to synthesis a) Butanoic acid and b) methyl n-propyl ketone from ethyl aceto acetate

22. Discuss the method of preparation of a) 1-naphthyl amine, b) 1-naphthol, c) 1,4-naphthaquinone

(5 x 4 = 20)

PART D

Answer any 2 (10 marks each)

23. Discuss in detail the mechanism of a) Reimer- Tiemann reaction and b) Lederer Mannase reaction.
24. Discuss the mechanism of a) Perkins reaction b) Benzoin Condensation c) Baeyer-Villiger oxidation and d) Claisen Condensation
25. Discuss the factors that influence the acidic strength of carboxylic acids.
26. Convert
- a) Diethyl malonate to hexanoic acid
 - b) Ethyl aceto acetate to acetonyl acetone
 - c) Ethyl cyano acetate to crotonic acid

(10 x 2 = 20)