QP CODE: 24803623	24803623	Reg No	:	.....
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INTEGRATED MSC DEGREE EXAMINATION, JUNE 2024

Fifth Semester

INTEGRATED MSC BASIC SCIENCE-CHEMISTRY

CORE - ICH5CR03 - ORGANIC CHEMISTRY-II

2020 Admission Onwards

EBD9C20A

Time: 3 Hours	Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1.	Predict the order of reactivity of NH_3,CH_3NH_2,$(CH_3)_2NH$ and $(CH_3)_3N$.
2.	Explain the role of tetrabutylammonium chloride in organic reactions.
3.	How can you prepare benzene diazonium salts from aniline? Explain.
4.	Write the difference between anomers and epimers.
5.	Write down the steps to convert aldose to ketose.
6.	Discuss the reactions of carboxylic acids with PCl5, PCI3 & SOCI2.Which reagent is always preferred and why?
7.	What are the primary uses of adipic acid, particularly in the production of nylon and linear polymeric adipic anhydride?
8.	List any five synthetic uses of ethyl cyano actate.
9.	What is the structure of a thiol? How thiols can be prepared from alkyl halides and disulphides?
10.	Give an example for a thioether. How the thioethers can be oxidised and reduced ? Mention the products formed

(8×1=8 weightage)

Part B (Short Essay/Problems)	
*Answer any **six** questions.*	
*Weight **2** each.*	
11.	Suggest any three methods to convert aniline to nitrobenzene.Explain with equation,
12.	Discuss the structure ,preparation and uses of diazoacetic ester.
13.	Explain the structure and reactions of sucrose.
14.	Account the following:a) Acetic acid is weaker than chloroacetic acid and formic acid b)Trichloroacetic acid is stronger than dichloroacetic acid c) Carboxylic acid do not give the characteristic reactions of carbonyl group.d) Maleic acid is stronger than fumaric acid.
15.	Write a note on the Comparative study of nucleophilicity of acid derivatives citing examples
16.	Analyze the uses of benzene sulfonic acid in different industries, such as pharmaceuticals, dyes, and detergents.
17.	Discuss the preparation and synthetic uses of ethyl aceto acetate.
18.	Explain the ring-opening of epoxides and its significance in the synthesis of various functional groups.
	(6×2=12 weightage)
Part C (Essay Type Questions)	
*Answer any **two** questions.*	
*Weight **5** each.*	
19.	(i)Explain the different methods of preparation of amines. (ii) Describe the mechanism of Gabriel phthalimide synthesis
20.	Explain in detail how Emil Fischer determined the configuration of glucose?
21.	How is citric acid prepared by Reformatsky reaction?Predict the products formed when it is heated? Mention any 4 uses of citric acid.
22.	a) Discuss an two methods of preparation of ethers. b) Write a short note on Zeisel's method of estimation of alkoxy groups. c) Explain the stereospecificity in alkene epoxidation reactions with examples.
	(2×5=10 weightage)