GALGOTIAS UNIVERSITY

ADMISSION NUMBER

School of Basic Sciences

Bachelor of Science Honours in Physics
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - C1UB201B - Chemistry of Functional Groups having Halogen and Oxygen

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Discuss the methods for preparation of aryl halides.	K1(3)
2)	Identify Haloform reaction.	K2(4)
3)	Explain reasons : (i) Benzoic acid is a stronger acid than acetic acid. (ii) Methanal is more reactive towards nucleophilic addition reaction than ethanal	K2(6)
4)	Determine Benzoin condensation with mechanism	K3(6)
5)	Determine coupling reaction between two aldehydes	K3(6)
6)	Explain the equations involved in the following reactions : (i) Wolff-Kishner reduction (ii) Etard reaction.	K3(9)
7)	Utilize the statements and write reactions that what happens when (a) Acetone is treated with Zn(Hg) / Conc. HCl, and (b) Ethanal is treated with methylmagnesium bromide and then hydrolysed ?	K3(9)
8)	Discuss wittig reaction with mechanism	K4(8)
9)	Analyse the beckmann reduction, Clemmensen reduction and rosenmund reduction	K4(12)
10)	Conclude the mechanism for the conversion of cyclic ketones to lactones using peroxyacids.	K5(10)
11)	Predict the preparation and synthetic applications of ethylacetoacetate.	K5(15)
	OR	
	Analyze to carry out the following conversions: A) phenol to 4-methoxybenzyl alcohol. B) phenol to 2,4-dinitrochlorobenzene. C) benzene to 2-methyl-5-nitrophenol	K5(15)
12)	Justify the conversion of ethyl alcohol to propyl alcohol; propyl alcohol to isopropyl alcohol and isopropyl alcohol to tert-butyl alcohol.	K6(12)
	OR	
	Justify the products formed on an acid altalyzed dehydration of 3-methylbutan-2-ol? Name the major product formed in the reaction.	K6(12)