Winter 2023

SGU	Sanjay Ghodawat University, Kolhapur Established as State Private University under Govt.of Maharashtra. ActNo XL,2017	EXM/P/09/00

Year and Program **S.Y.B.Pharm**	**School of Pharmaceutical Sciences**	**Department:Pharmacy**
Course Code:BP301T	**CourseTitle:Pharmaceutical organic chemistry- II**	**Semester –III**
Date: 20/12/2023 **Day:Wednesday** **Time: 10:30AM-1:30PM**	**Examination: End Semester**	**Max Marks:75**

Instructions: 1) All questions are compulsory.
2) Draw a neat labeled diagram if necessary.

		Mark's	Bloom's Level	CLO
Q.1	**Multiple choice Questions (20 X 1)**	**20**		
a)	Effect of ortho substituents on acidity of aromatic acids a) Increases b) Decreases c) No effect d) First increases then decreases	1	1	2
b)	An aromatic compound must consist of …. a) Cyclic molecule b) A planar structure c) A delocalized μ electron cloud d) All of the above	1	1	1
c)	Ammonolysis of aryl halides gives following…. a) Aniline b) Salicylic acid c) Benzyl d) Benzoic acid	1	1	2
d)	Esterification of benzoic acid with ethanol gives a) Benzyl alcohol b) Benzamide c) Ethyl benzoate d) None of the above	1	1	2
e	Which of the following acid will give arene as the product when its sodium salt is heated in the presence of soda lime? a) Benzoic acid b) Salicylic acid c) P-nitrobenzoic acid d) Both a) and c)	1	1	2
f)	Following is an example of a benzenoid aromatic compound which consists of two benzene rings connected via a single covalent bond. a)Diphenylmethane b) Diphenyl c) Naphthalene d) Azulene	1	1	1

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g)	Sulphonation of naphthalene at low temperature gives following a)Naphthalene-2-sulphonic acid b) Naphthalene-1,2-sulphonic acid c) Naphthalene-8-sulphonic acid d) Naphthalene-1-sulphonic acid	1	1	2
h)	Which of the following is starting material in Haworth's synthesis of naphthalene? a) Succinic anhydride b) Phthalic anhydride c) Acetic anhydride d) None of the above	1	1	3
i)	Fats and oils are a)Monoester of glycerol b) Diester of glycerol c) Triester of glycerol d) Triester of glycol	1	1	4
j)	Liquid oils can be converted into solid fats by a)Hydrolysis b) Hydrogenation c) Saponification d) Oxidation of double bond	1	1	4
k)	Vegetable ghee is manufactured by…… a) Hydrogenation b) Oxidation polymerization c) Saponification d) Reduction polymerization	1	1	4
l)	Which is fused cyclic aromatic compound? a) Biphenyl b) Diphenylmethane c) Diphenylamine d) Naphthalene	1	1	1
m)	Anthracene undergoes electrophilic substitution reaction mainly at a) C-1 b) C-9 c) C-2 d) C-4	1	1	2
n)	Nitration of benzene is carried out in the presence of a) Conc. Sulphuric acid b) Conc. Nitric acid c) Mixture of Conc. H_2SO_4 and Conc. HNO_3 d)Conc. HCL	1	1	2

o) The diazonium salts are the reaction products of the reaction of nitrous acid with.....
a) Primary aliphatic amines
b) Primary aromatic amines
c) Secondary aliphatic amines
d) Secondary aromatic amines

1 | 1 | 2

p) The bond angle between carbon atoms in cyclobutane is
a)$109^0 28'$
b) 60^0
c) 90^0
d) 120^0

1 | 1 | 1

q) Effect of Ortho $-NO_2$ group on the acidity of benzoic acid
a) Increases
b) Decreases
c) No effect
d) First increases then decreases

1 | 1 | 3

r) Following reaction is known as....

$C_6H_6 + CH3\text{-}CO\text{-}CL \xrightarrow{AlCl_3} C_6H_5\text{-}CO\text{-}CH_3 + HCl$

a)Friedal craft alkylation
b)Friedal craft acylation
c) Halogenation
d)Sulphonation

1 | 1 | 2

s) Cyclopropane on reduction with H_2 in the presence of Nickel at 80^0C gives
a) Ethane
b) Butane
c) Propane
d) Pentane

1 | 1 | 2

t) Cyclopropane when reacted with bromine it gives
a)1,2-dibromopropane
b) 1,3-dibromopropane
c) 1,4-dibromopropane
d) 1,1-dibromopropane

1 | 1 | 2

Q.2	**Long Answers (Answer 2 out of 3)**	**20**	**Bloom's Level**	**CLO**
a)	Draw structure and give synthesis, chemical reactions and medicinal uses of Anthracene.	10	1	3
b)	Why phenols are stronger acids than alcohol? Give the effect of substituents on acidity of phenol.	10	2	3
c)	Give the structure and uses of following compounds: i) Resorcinol ii) Cyclobutane iii) 1-naphthol iv) Glycerol	10	2	1

Q3		Short Answers (Answer 7 out of 9)	35	Bloom's Level	CLO
	a)	Give principle and significance of acid value and saponification value.	05	2	4
	b)	Give reactions of benzoic acid.	05	2	2
	c)	Give the structures and uses of following compounds: i) DDT ii) BHC	05	2	1
	d)	Give a note on following: i)Rancidification ii) Drying of oil	05	2	4
	e)	Define polynuclear hydrocarbons. Give structure, uses and two derivatives of Diphenylmethane.	05	1	3
	f)	Give method of preparation of cycloalkane.	05	2	3
	g)	Explain Baeyer's strain theory in detail with example.	05	2	3
	h)	Illustrate in detail Friedal craft alkylation and Friedal craft acylation with its limitations.	05	4	2
	i)	Give acidity of aromatic acids and effect of substituents on acidity of aromatic acids.	05	2	2

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