Seat No:

Enrollment No:

PARUL UNIVERSITY **FACULTY OF PHARMACY**

B. Pharm. Winter 2022 - 23 Examination

Semester: 3 Date: 10/10/2022 **Subject Code: BP301T** Time: 10:00am-1:00 pm Subject Name: Pharmaceutical Organic Chemistry II **Total Marks: 75 Instructions:** 1. Figures to the right indicate maximum marks. 2. Make suitable assumptions wherever necessary. Q.1 Multiple Choice Questions (MCQs) (1 Mark Each) (20)1. Huckel's Rule is used in order to estimate the aromatic qualities of any planar ring-shaped molecule in the field of a) Inorganic chemistry b) Organic chemistry c) Analytical chemistry d) Physical Chemistry 2. Strongly activating substituents such as NH₂, -NHR, -NR₂ -OR, and -OH make the benzene ring _____toward electrophilic substitution a) less reactive b) more reactive c) moderately active d) activate The reagent which is used to generate nitronium ion from HNO₃ 3. a) FeCl₃ b) NaOH c) K₂CO₃ d) H₂SO₄ CCl₃COOH is the strongest of 4. a) Acids b) Bases c) Alkali d) compounds 5. Arylamines are less basic than alkylamines due to a) lone pair of C is delocalised b) electron density on C atom c) lone pair of N is delocalised d) electron density on N atom Conversion of benzoic acid to benzoyl chloride possible by which reagent? b) SOCl₂ a) PCl₅ c) Oxylyl chloride d) All of the above 7. The iodine value of fat is a) milligrams of iodine bound to one gram of fat b) milligrams of iodine bound to one mole of fat Organic chemistry c) milligrams of iodine bound to 10 grams of fat d) number of grams of iodine absorbed by 100 grams of fat 8. The number of -OH groups in fats can be expressed as: a) Reichert-Meissel number b) Polenske value c) Iodine Value d) Acetyl Value Fats and oils are: 9. a) Diesters of glycerol b) Triesters of glycerol c) Diesters of glycol d) Triesters of glycol The following compound is formed when anthracene is treated with sodium in ethanol 10. a) 1,4-dihydroanthracene b) 5,8-dihydroanthracene c)) 9,10-dihydroanthracene d) 1,3,4-tetrahydroanthracene Naphthalene + Sulphuric acid (80 °C) ? + NaOH 11. b) Naphthalene-1- sulphonic acid, 2a) Naphthalene-1- sulphonic acid, 1- Naphthol c) Naphthalene-2- sulphonic acid, 1- Naphthol d) Naphthalene-2- sulphonic acid, 2- Naphthol 12. According to Baeyer's strain theory which is highly stable a) cyclobutene b) cyclopentane c) cyclohexane d) cycloheptane

13.	Phenanthrene is a fused polycyclic compound containingbenzene rings		
	a) 2	b) 4	
	c) 3	d) 5	
14.	Cyclopropane reacts with bromine in the dark to form	1	
	a) 1,3-dibromopropane	b) 1,2-dibromopropane	
	c) Tribromocycloprapane	d) 1- bromocyclopropane	
15.	Which of the following carboxylic acids has the highest boiling point?		
	a) heptanoic acid	b) octanoic acid	
	c) nonanoic acid	d) decanoic acid	
16.	4n + 2 where n can be any integer with a		
	a) Positive Value	b) Negative Value	
	c) Zero	d) Positive value including zero	
17.	Nitration of chlorobenzene gives		
	a) o - chloronitrobenzene	b) p- chloronitrobenzene	
	c) m - chloronitrobenzene	d) 1-chloro-2,4-dinitrobenzene	
18.	Anthracene undergoes electrophilic substitution reaction	on mainly at	
	a) C-1	b) C-9	
	c) C-2	d) C-3	
19.	Naphthalene undergoes oxidation with V_2O_5 to form		
	a) Phthalic anhydride	b) Tetralin	
	c) Benzoic acid	d) Salicylic acid	
20.	What is the bond angle of alkanes		
	a) 60°	b) 90°	
	c) 109.28°	d) 120°	
Q.2	Long Answers (any 2 out of 3) (10 Mark Each)		(20)
1.	What is Huckel' rule? How it explains the aromatic nature of compounds? Write the structure of two compounds that follow this rule. Draw the orbital picture of benzene		
2.	Discuss the various synthetic reaction and chemical pro		
	cresols, resorcinol and naphthol.	operates of phonon. Give structure and uses of	
3.	Explain Bayer strain theory with limitations.		
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Q.3	Short Answers (any 7 out of 9) (5 Mark Each)		(35)
1.	Give important synthetic reaction and uses of aryl diaz	onium salts.	
2.	Explain Coulson Moffit model.	Explain Coulson Moffit model.	
3.	Draw the structure and uses of DDT and Saccharin.		
4.	Write a detail note on: acidity of substituted phenols.		
5.	Discuss molecular structure, Synthesis and medicinal uses of Naphthalene.		
6.	Describe the effect of substituents on acidity of benzoic acid.		
7.	Discuss the reactions of Fat and Oil.		
8.	Discuss the reactions of Anthracene.		
9.	Discuss methods for analysis of fats and oils with expla	anations of Iodine Number, Saponification	
	number and Acetyl number.		