JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester III) Examination Dec 2024

Programme: B. Pharm
Course: Pharmaceutical Organic Chemistry - II **Full Marks: 75**
Course Code: BP301T **Time: 3 Hrs.**
Enrolment no. _____

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
	Section I			
1	**Objective Type Questions**			**1 x 20 = 20**
	i. Sir Huckle was a ____ scientist - a.Australlian b. Italian c. Indian d. German ii. Chemical formula of benzene - a. C6O6 b. C6H6 c. C6H12 d. C6H5OH iii. Strongly ring activating group example- a. NH2 b. NO2 c. Br. d. -OR iv. Xylene having __ number of methyl(CH3) group - a. 3 b. 2 c. 4 d. 1 v. Boiling point of benzene is - a. 800 b. 60 c. 80 d. 100 vi. All carbons on phenanthrene are _____ hybridized. a. SP3 b. SP2 c. SP d.None of the above vii. Chemical formula of anthracene is ___ a. C14H10 b. C6H12 c. C14H14 d. C14H12 viii. Napthalene are also known as _____. a. Polycyclic carbons b. Cyclic hydrocarbons c. polycyclic aromatic hydrocarbons d. Aromatic hydrocarbons ix. ____ measures the degree of unsaturation of oil/fat. a. Iodine value b. acid value c. ester value d. None of the above x. Number of miligrams of KOH required to saponify the esters in1 gram of fat or oil is called ____ . a.Saponification value b. ester value c. acid value d. iodine value xi. Hydrolysis of fats and oils involves breakdown of triglycerides into glycerol and fatty acids through the addition of _____ . a.oils b. water c. Methanol d. Alcohol xii. Fats having ____ melting point compare with oils. a. Extremely low b. medium c.low d.high xiii. Fats and oils are ___ in water. a. Insoluble b. soluble c. sparingly soluble d. None of the above xiv. Lipase are found in ____ of body. a. Urinary tract b. nasal tract c. digestive tract d. all of the above xv. Oils contain large amount of _____ fatty acid. a.Saturated b. unsaturated c. both a and b d. none of the above xvi. The most stable conformation of cyclohexane is the - a. Haworth form b. Boat form c. Newman form d. Chair form xvii. The bond angle between carbon atoms in cyclohexane is - a. 109.5 degree b. 60 degree c. 90 degree d. 120 degree xviii. Which of the following molecules will decolorize bromine in carbon tetrachloride most readily? a. 1,2-Dimethylcyclopropane b. Cyclopentane c. 1,2-Dimethylcyclobutane d. cyclohexane xix. A compound formula C6H12 does not react with concentrated sulfuric acid. The compound could be - a. alkane b. cycloalkane c. propane d. cycloalkene xx. Which of the following cycloalkanes is most reactive? a. cyclopropane b. cyclohexane c. cyclobutane d. cycloheptane	CO1	Remember	
	Section II			
2. Short Answer type questions.				**7 x 5 = 35**
a	Write the structure and use of DDT and Chloramine.	CO1	Remember	
b	Draw the structure of o-creosol,catechol,p-nitrophenol,benzene and pyrogallol.	CO2	Remember	
c	Explain the principle involved in determination of Saponification value.	CO3	Understand	
d	Write the structure and medicinal uses of diphenylmethane.	CO4	Remember	
e	How do you calculate the angle strain in cyclobutene?	CO5	Understand	
f	Why lower cycloalkanes are unstable than higher cycloalkane give reason.	CO5	Understand	
	or			
	Discuss addition reactions of cyclopropanes.	CO5	Remember	
g	Describe the synthesis of Anthracene and its medicinal uses.	CO4	Remember	
	or			
	Write the Chemical reactions of phenanthrene and its structure. Explain haworth synthesis of Phenanthrene.	CO4	Understand	
	Section III			
Long Answer Type questions				
3	Discuss on if hydrolysis, hydrogenation and rancidification reaction have any significance?	CO3	Analyze	

	or			
	Create differentiation on Fats and Oils. Which type of chemical reactions they can go for? Explain.	CO3	Create	
4	Elaborate the substituents which can affect the acidity of aromatic acids. Describe two useful features of Cresol.	CO2	Analyze	**2 x 10 = 20**
	or			
	Explain in details how we can produce aniline by reduction reaction. How Aryl Benzodiazonium salts can be used? Explain.	CO2	Create	

Course Outcomes (CO):

CO1: Define the chemical, resonation structure of Benzene, Molecular Orbital theory of Benzene. Describe the method of synthesis of benzene and its derivatives, their medicinal uses

CO2: Discuss the principle and mechanisms of synthesis of Phenol, Aromatic acids and aromatic amines, their chemical reaction and their stability

CO3: : Define Fats and Oils, describe their chemical reactions and analytical constants.

CO4: Define Polyneuclear hydrocarbon, their properties, method of preparation, chemical reaction and detailed knowledge about their derivatives

CO5: Discuss on Cycloalkanes, their stability and the method of preparation and chemical reactions