



**GIET UNIVERSITY, GUNUPUR – 765022**  
M. Sc. (First Semester) Examinations, March - 2023  
**22CHPC101 - Organic Chemistry – I**  
(Chemistry)

Time: 3 hrs

Maximum: 70 Marks

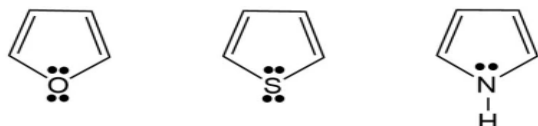
(The figures in the right hand margin indicate marks.)

**PART – A****(2 x 10 = 20 Marks)****1. Answer all questions**CO# Blooms  
Level

a. What are cryptands?

CO1 K1

b.



CO1 K2

What is the aromaticity order of above mention organic compounds

c. Mention the importance of hamett equation?

CO2 K1

d. How taft equation overcomes the limitations of hammett equation?

CO2 K1

e. Draw the fischer projection of arabinose?

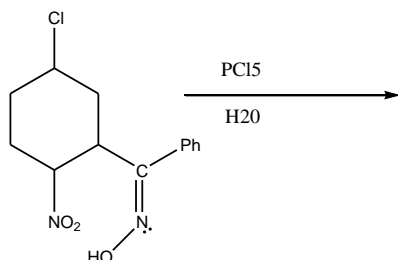
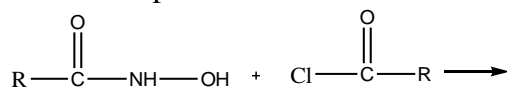
CO3 K2

f. Acetolysis of optically active trans-3-chloro-5-methylcyclohex-1-ene gives racemic mixture of cis and trans acetate. Explain?

CO3 K2

g. Predict the product.

CO4 K2

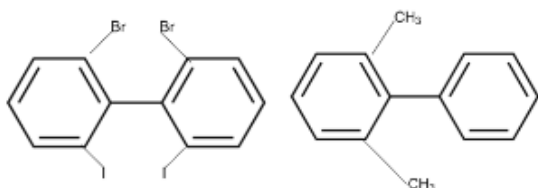


h. Per acetic acid is used as a reagent in which reaction and give an example.

CO4 K2

i. The following biphenyls are optically active. give reason.

CO3 K2



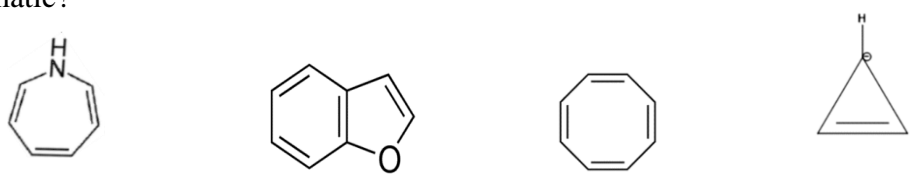
j. Which is stronger acetic acid or ethanol?

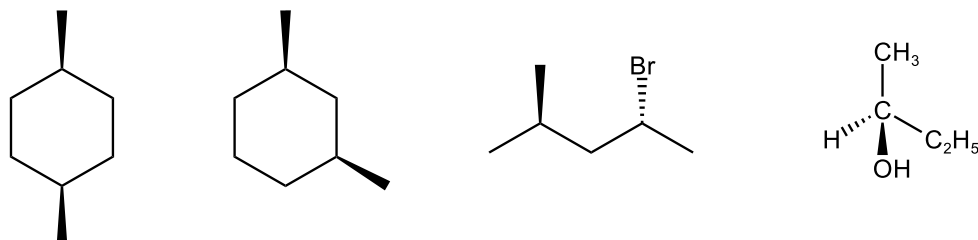
CO1 K1

**PART – B**

**(10 x 5 = 50 Marks)**

Answer ANY FIVE questions

	Marks	CO#	Blooms Level
2. a. Explain the resonance. Mention the conditions of resonance hybrid?	6	CO1	K1
b. Among the following molecules which are aromatic, anti-aromatic and non-aromatic?	4	CO1	K2
			
3.a. Write the fate and generation of carbonium ion?	6	CO1	K1
b. Write in detail about inclusion compounds?	4	CO1	K1
4. a. Discuss different types of substitution reactions with example each?	5	CO2	K1
b. Show that hammett equation represents a linear free energy relationship?	5	CO2	K2
5.a. Discuss the thermodynamic requirements for a reaction?	6	CO2	K1
b. Explain Curtin-Hammett principle?	4	CO2	K1
6. a. Give a brief account of conformational analysis of cyclohexane-1,3-diol?	6	CO3	K2
b. Which molecules are optically active from the below and why?	4	CO3	K2



7.a. Write notes on Asymmetric synthesis?	6	CO3	K1
b. Explain why trans decalin is more stable than cis decalin?	4	CO3	K2
8. a. Write a short note on name reaction	4	CO4	K1
i. Sommelet –Hauser rearrangement Smiles Rearrangement			
b. Explain Backmann Rearrangement with mechanism and applications.	6	CO4	K1

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