



GIET UNIVERSITY, GUNUPUR - 765022
M. Sc (Second Semester) Regular Examinations, July - 2023
22CHPC201 - Organic Chemistry -II
(Chemistry)

Time: 3 hrs

Maximum: 70 Marks

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

PART - A**(2 x 10 = 20 Marks)**Q.1. Answer *ALL* questions

CO #	Blooms Level
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a. Why Halogen groups being electron withdrawing group are o,p-directing

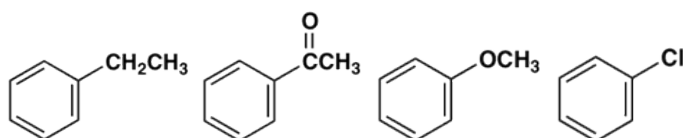
CO1 K4

b. Explain Benzene has a lower electrophilic substitution reaction reactivity than Five membered heterocycles (pyrroles, furan and thiophene)

CO1 K4

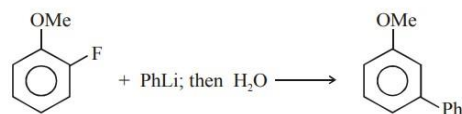
c. Which among the following is most reactive in electrophilic substitution?

CO1 K4



d. Complete the reaction and explain the mechanism

CO2 K4

e. Draw the energy profile diagram of SN₁ and SN₂.

CO2 K2

f. What do you mean by walden inversion.

CO2 K3

g. Write Halohydrin reaction

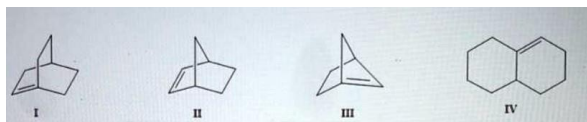
CO3 K4

h. Why Cyclopropane shows addition reaction.

CO3 K4

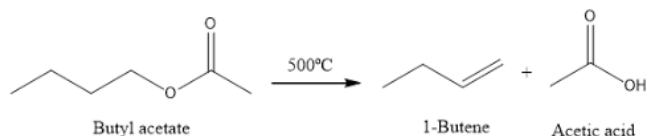
i. According to Bredt's rule which of the following alkenes are likely to exist?

CO4 K4

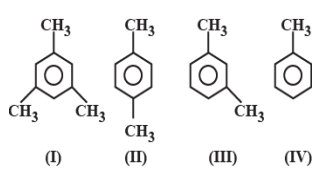
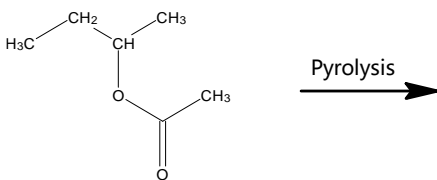


j. Explain the reaction

CO4 K4



PART – B**(10 x 5=50 Marks)**Answer ANY FIVE questions

	Marks	CO #	Blooms Level
2. a. Explain Arenium ion mechanism.	5	CO1	K2
b. What is the order of reactivity for the following molecules towards electrophilic aromatic substitution. Give the explanation	5	CO1	K4
			
3. Explain ArSN2 & ArSN1 mechanism	10	CO2	K3
4. a. Write about Sharpless asymmetric epoxidation?	5	CO3	K2
b. Describe Hydrogenation of double and triple bonds?	5	CO3	K2
5.a. Differentiate between E2, E1 and E _{1CB} elimination?	6	CO4	K5
b. Write down the possible products, explain which one will be major product and why?	4	CO4	K4
			
6. a. Write a note on Diazonium coupling.	5	CO1	K2
b. Explain Free radical substitution at bridge head as allylic halogenation.	5	CO1	K4
7.a. Explain Oxymercuration-Demercuration reaction with its mechanism.	10	CO3	K2
8. a. What is Saytzeff and Hofmann Elimination?	5	CO4	K4
b. Write about the mechanism and orientation in pyrolytic elimination?	5	CO4	K2

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