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School of Chemical & Life Sciences
M.Sc. Chemistry Semester-III Examination-2023
Paper Title: Organic Synthesis-I
Paper Code: MCHCCO-302

Time 2:30 hours

Maximum Marks 60

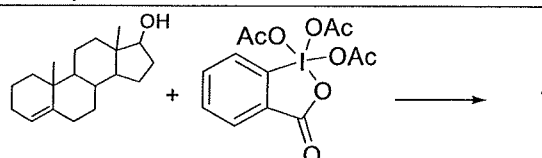
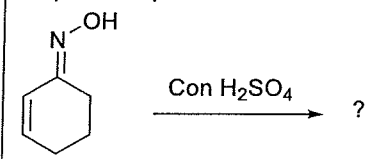
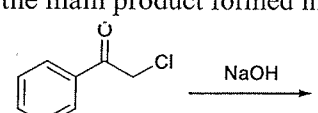
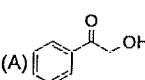
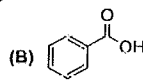
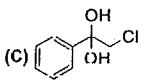
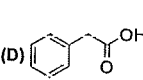
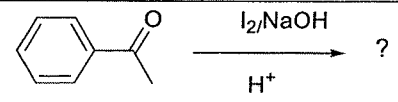
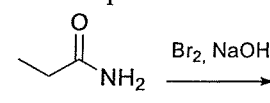
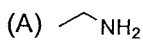
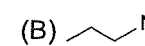
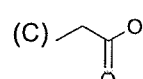
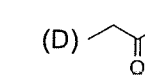
Abbreviations Used

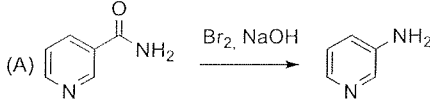
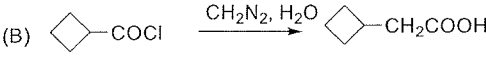
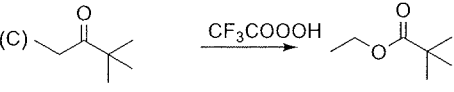
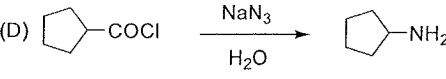
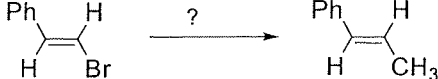
CLO- Course Outcome, PLO- Program Outcome, BTL- Bloom Taxonomy Level: BT level 1-Remember; BT level 2-Understand; BT level 3-Apply; BT level 4-Analyse; BT level 5-Evaluate, BT level 6-Create

Section A

Very Short Type Questions (attempt all)

(10x1.5=15Marks)

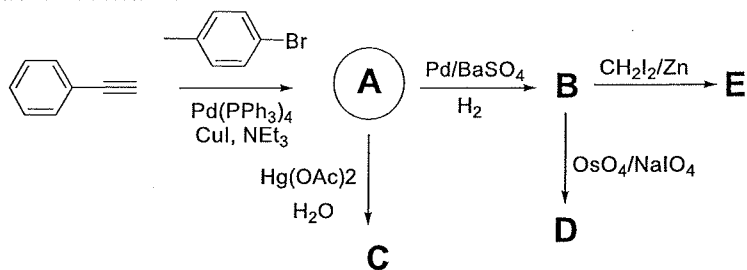
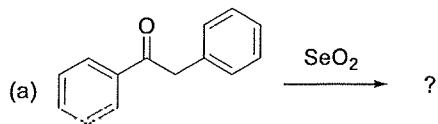
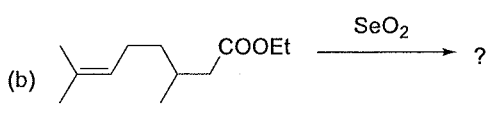
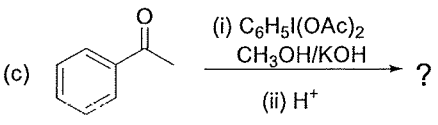
Q. No	Question	BTL	CLO	PLO
1.	What is homogeneous catalysis?	1	1	1
2.	State the Luche reduction.	1	1	1
3.	Justify that the Rosenmund reduction involves hydrogenolysis.	1	1	1
4.		2	3	1
5.	Depict the product formed in the following reaction 	1	2	1
6.	Which is the main product formed in the following reaction?  (A)  (B)  (C)  (D) 	2	2	1
7.		2	3	1
8.	Which is the main product formed in the following reaction?  (A)  (B)  (C)  (D) 	2	5	1
9.	Which of the following shows unlikely product?	2	4	1

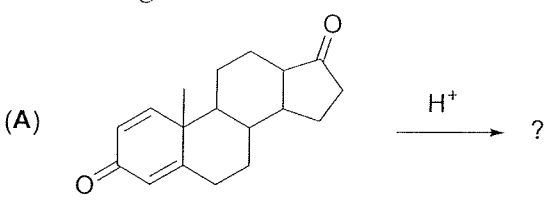
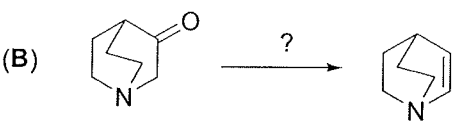
	(A)  (B)  (C)  (D) 			
10.		2	4	1

Section B

Long Type questions (Attempt any two out four)

(10x2=20marks)

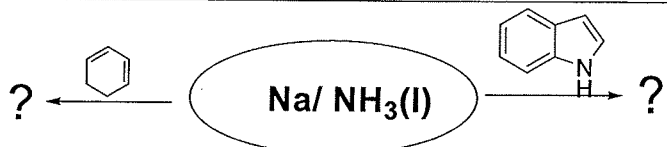
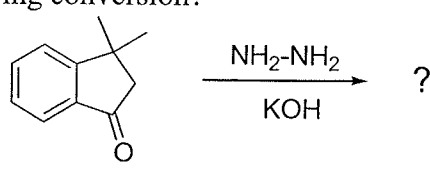
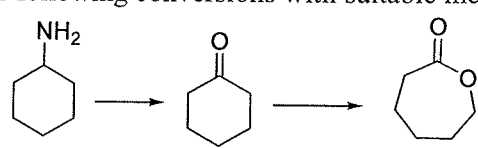
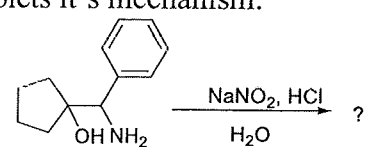
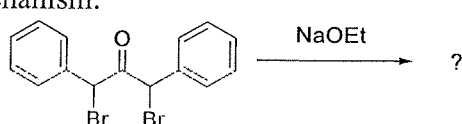
Q. No	Question	BTL	CLO	PLO
1.	Explain the product formation of the following conversions with suitable mechanism: 	6	3	5
2.	Write a short note on the following: (A) Clemmensen Reduction (B) Homogeneous hydrogenation	5	4	3
3.	Explain the products formed in the following reaction with suitable mechanism. (a)  (b)  (c) 	3/5	5	3

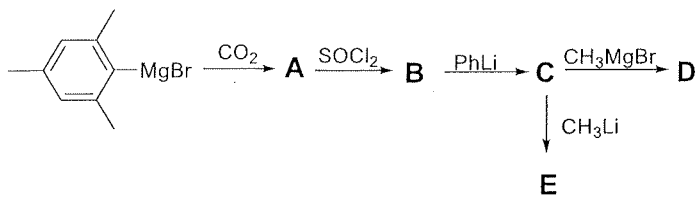
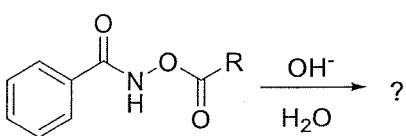
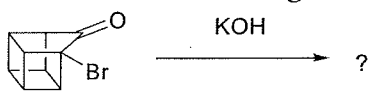
4	Complete the following conversions with suitable mechanisms	5/6	3	3
(A)				
(B)				

Section C

Short Type questions. (Attempt all questions)

(5x5=25)

Q.NO	Questions	BTL	CLO	PLO
1.	 OR Suggest reagent and conditions and the possible mechanism for the following conversion? 	4-6	5	6
2.	Complete the following conversions with suitable mechanism.  OR What is Corey-Kim oxidation? Explain with suitable mechanism.	4/5	5	2-3
3	Predict the appropriate product formed in the following reaction and depicts it's mechanism.  OR Identify the product formed in the following reaction with suitable mechanism: 	4	4	4

4	Identify the suitable reagents/products in the following conversions:  OR Write a short note on Stille coupling reaction.	3-5	3-5	3-5
5	Complete the following conversions with suitable mechanism:  OR Outline the mechanism of the following reaction: 	3/4	4	4
		4	4	4

XXXX.