BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: IMSc
BRANCH: CHEMISTRY

SEMESTER: III
SESSION: MO/2023

SUBJECT: CH216 ORGANIC CHEMISTRY-II

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:
1. The total marks of the questions are 25.
2. Candidates attempt for all 25 marks.
3. Before attempting the question paper, be sure that you have got the correct question paper.
4. The missing data, if any, may be assumed suitably.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.


|				CO	BL
Q1	(a)	Outline the following conversion with an explanation. RC≡CR to RCH=CHR (cis)	[2]	CO1	1
Q1	(b)	Explain the possible pathways for the following reaction and comment on the right pathway to obtain the final product. $CH_2=CH\text{-}Br + HBr \rightarrow ?$	[3]	CO2	2
Q2	(a)	How does anti-Markovnikov addition favours the hydroboration (BH_3 and H_2O_2) reaction of $MeCH=CH_2$? Explain with a proper mechanism.	[2]	CO2	1
Q2	(b)	Predict the product obtained for the following reactions and give the proper explanation with a mechanism.	[3]	CO1	2
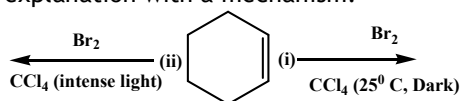
				CO	BL
Q3	(a)	What is the final product obtained from the reduction of ester by $LiAlH_4$? How can you synthesize aldehyde from the reduction of ester?	[2]	CO2	2
Q3	(b)	Write a short note on the nucleophilic addition-elimination mechanism.	[3]	CO1	3
Q4	(a)	Write the product obtained from following reactions.	[2]	CO2	2
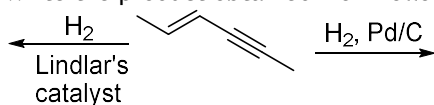
				CO	BL
Q4	(b)	Write the mechanism of the following reaction along with the product obtained.	[3]	CO2	3
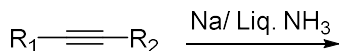
				CO	BL
Q5	(a)	Write a method for the synthesis of alkynes.	[2]	CO2	1
Q5	(b)	Write the product obtained from following reactions.	[3]	CO2	2

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