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Roll No.

Total Pages : 3

322303

Jan. 2022

**B.Sc. (Chem.) III SEMESTER
Organic Chemistry - II (BCH-302)**

Time : 90 Minutes]

[Max. Marks : 25

Instructions :

- 1. It is compulsory to answer all the questions (1 mark each) of Part-A in short.*
- 2. Answer any three questions from Part-B in detail.*
- 3. Different sub-parts of a question are to be attempted adjacent to each other.*

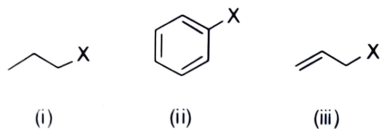
PART-A

1. (a) Write down Sandmeyer's Reaction. (1)
(b) Reflect upon the stereochemistry of products obtained from SN_1 reaction. (1)
(c) Write down the product of reaction of 2-Bromopentane with alc. KOH. (1)
(d) Why dry ether is used as solvent in reactions of Grignard reagent? (1)

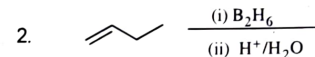
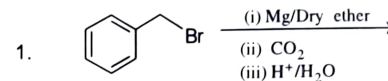
- (e) Phenols are more acidic in nature than alcohols. Explain. (1)
- (f) Arrange the following in increasing order of their acidic strengths:
 (i) Ethanol, (ii) Propanol, (iii) 2-Chloropropanol, (iv) 2,2-Dichloropropanol. (1)
- (g) Write down the product of reaction of Acetaldehyde and HCN. (1)
- (h) What do you understand by Williamson's Synthesis? (1)
- (i) Acetic acid is soluble in water while benzoic acid is not. Explain. (1)
- (j) Write down the chemical structure of vinegar. (1)

PART-B

2. Arrange the following compounds in order of their increasing reactivity towards nucleophilic substitution reactions and explain your answer. (5)



3. Write down product of the following reactions with plausible mechanism: (5)



4. Write down Reimer Tiemann Reaction with mechanism. (5)
5. (a) What is difference between Aldol condensation and Cannizarro reaction? (3)
 (b) What is Claisen condensation reaction? (2)
6. Write down Rematsky Reaction with mechanism. (5)