**Quadrant IV—Assessment (Module-wise )**

**Programme: Bachelor of Science (First Year)**
**Subject: Chemistry**
**Course Code: CHC102**
**Course title: Physical Chemistry and Organic Chemistry**
**Unit: Alkyl and Aryl Halides**
**Module Name: Aryl Halides : Reactions (Chlorobenzene): Benzyne mechanism : $KNH_2/NH_3$ or $NaNH_2/NH_3$**
**Name of the presenter: Ashvini Y. Pujari**

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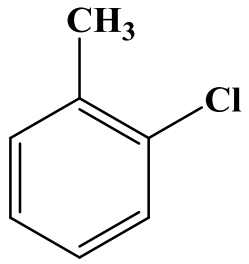
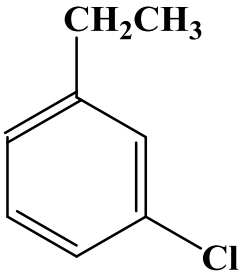
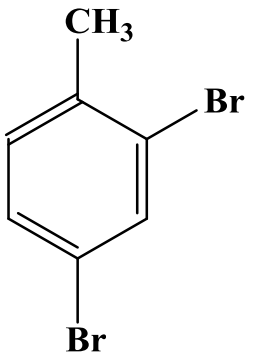
**Answer the following Questions :**

1) Describe the benzyne mechanism for nucleophilic aromatic substitution.
2) What happens when chlorobenzene reacts with soda amide in the presence of liquid ammonia? Discuss the mechanism also for the reaction.
3) Discuss nucleophilic substitution in aryl halides through elimination-addition mechanism.
4) Write the reaction and mechanism involved when Bromobenzene is treated with potassium amide at low temperature of $-33^0C$ with liquid ammonia as solvent.
5) Give the products that would be obtained from the reaction of the following compounds with sodamide in liquid ammonia.

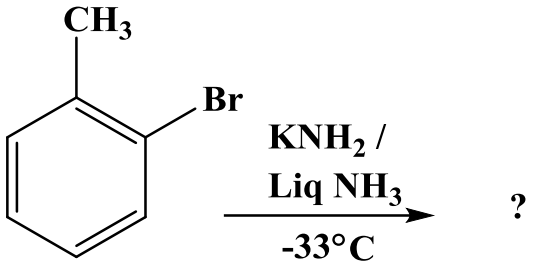
a) 


b) 

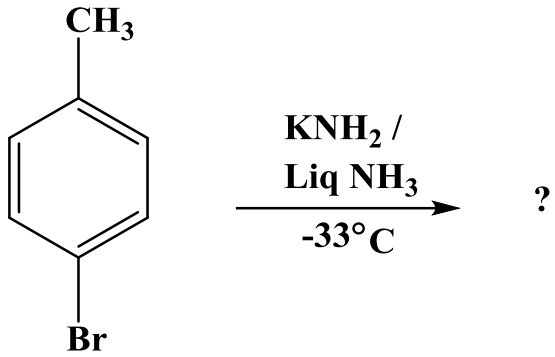

c) 

5) Predict the products of the following reactions:

a)




b)



**<u>Quadrant IV</u>—Unit End Assessment**

## Assignment:

1.) Discuss the mechanism involved in elimination-addition reactions of o-chlorotoluene and p-chlorotoluene in presence of sodamide in liquid ammonia.

2.) Discuss the reaction and mechanism involved in the formation of 3-methoxybenzenamine in the amination of 2 – Chloro methoxybenzene.

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