

B.Sc. (Part-I) (With Credits)-Regular-Semester 2012 Sem II  
**2SChe-T1 - Chemistry -I (Organic Chemistry) Paper- I**

P. Pages : 2

Time : Three Hours



**GUG/W/16/5568**

Max. Marks : 50

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1. A) What do you mean by elimination reaction? Explain Unimolecular and Bimolecular Mechanism of elimination reaction. 5
- B) What are aryl halides? How are they classified. Explain following reactions of chlorobenzene 5  
i) Nitration      ii) Sulphonation      iii) Halogenation.
- OR**
- C) Distinguish between  $SN^1$  &  $SN^2$  reaction. 2½
- D) Justify the following statement alkyl halides have more reactivity than aryl halides. 2½
- E) How will you prepare benzyl chloride from 2½  
i) Toluene      ii) Benzyl alcohol.
- F) What is the action of following reagent on ethanol. 2½  
i)  $SOCl_2$       ii)  $PCl_5$
2. A) What are monohydric alcohol? How are they classified? Explain pinacol - pinacolone rearrangement. 5
- B) Discuss mechanism of Reimer – Tiemann Reaction with example. 5
- OR**
- C) How will you Prepare Glycerol from propene. 2½
- D) Discuss acidic property of phenol. 2½
- E) Give application of ethylene glycol. 2½
- F) What are ethers? How will you prepare dimethylether from methyl bromide. 2½
3. A) State necessary condition of Aldol Condensation and mechanism of Aldol condensation. Give dehydration Product of Aldol Condensation. 5
- B) Discuss reactivity of carbonyl group what is the effect substituent on the reactivity. 5
- OR**
- C) Write note on Baeyer - Villiger oxidation. 2½
- D) How will you prepare ylide from triphenyl phosphate. Discuss synthesis of isobutylene from ylide. 2½
- E) How Acetaldehyde can be prepared from. 2½  
i) Acetyl chloride      ii) Methyl cyanide

- F) What is Tollen reagent? How aldehyde can be detected by using these reagent. 2½
4. A) What is mean by polymerisation? Discuss mechanism of free radical polymerisation. 5
- B) Discuss preparation, properties & application of polypropylene. 5

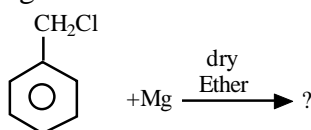
**OR**

- C) Write note on Vulcanization of rubber. 2½
- D) Distinguish between addition polymerisation and condensation polymerization. 2½
- E) How will you determine molar mass of polymer by number average molecular weight method. 2½
- F) Give synthesis & application of polystyrene. 2½

5. Attempt **any ten**. 10

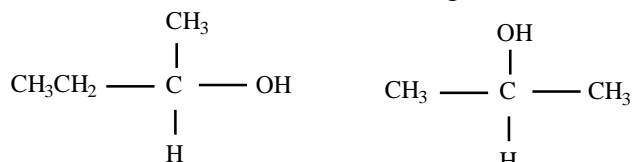
i) Draw Energy profile diagram for  $S_N^1$  reaction.

ii) complete following reaction.



iii) Arrange following in order of reactivity.  
 $\text{CH}_3\text{CH}_2\text{Cl}$ ,  $\text{C}_6\text{H}_5\text{Cl}$ ,  $\text{CH}_2 = \text{CHCl}$

iv) Give IUPAC name of the following.



v) What are phenols? Give example.

vi) Complete the following reaction.  
 $\text{C}_2\text{H}_5\text{Br} + \text{NaOC}_2\text{H}_5 \rightarrow ? + \text{NaBr}$

vii) State essential condition for cannizzaro reaction.

viii) State Benzoin reaction.

ix) State any two physical properties of carbonyl compound.

x) What are Block Co-polymer.

xi) Give any two application of Buna-N rubber.

xii) Define – Synthetic polymer.

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