

Class – B.Sc (Med./N.M./C.Sc. Sem-IV)

Subject – Organic Chemistry

Time Allowed : 3 Hours

Maximum Marks : 35

Note:— The question paper has two parts. Part-A is compulsory. Part-B has three sections. Two questions are to be attempted from each of these sections. (Total six questions from Part-B)

PART-A

1. Out of Benzoic acid and Phenyl acetic acid which is more acidic and why? 1
2. How will you convert acetic acid to Ethanoyl chloride? 1
3. Acid chlorides are easily hydrolysed than acid amides. Explain. 1
4. Nitro compounds dissolve in aqueous sodium hydroxide. Explain how. 1
5. Why primary alkyl halides are used in the preparation of ethers by Williamson's synthesis? 1
6. What is Gabriel Phthalimide reaction? 1
7. Out of thioalcohol and alcohols which are stronger acid and why? 1

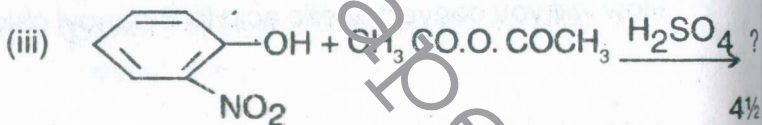
8. Give the structure of Grignard reagent.

PART-B

SECTION-I

9. Explain Hell-Volhard Zelinsky reaction. How is the product of this reaction used in synthesis of amino acids? 4½

10. Complete the following reactions



11. (a) Discuss the mechanism of acidic hydrolysis of esters.

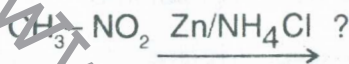
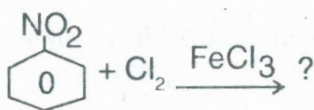
(b) What is transesterification? Give example. 3, 1½

SECTION-II

12. (a) What is epoxidation? Give its mechanism.

(b) Anisole is prepared by the reaction between sodium phenoxide and methylbromide but not by reaction between sodium methoxide and bromobenzene. Explain. 2½, 2

13. (a) Complete the following reactions



(b) Outline the synthesis of nitroethane from silver nitrite and iodoethane. Give suitable mechanism.

(2, 2½)

14. How will you prepare ethylamine from propanamide?

Write the reaction. Give its mechanism. 4½

SECTION-III

15. (a) How are the following compounds obtained from suitable grignard reagents

(i) 2-Propanol (ii) 2-Methyl-2-Propanol

(iii) Acetic acid

(b) How TEL is formed? Write its importance. 3, 1½

16(a) Give one method of preparation of Alkyl lithium reagent from alkyl halides. Why alkyl lithium compounds are more reactive than grignard reagents?

(b) Write the product formed when oxirane reacts with



3, 1½

17. (a) How thiols are prepared from alkyl halides? Give mechanism.

(b) How will you convert thiol into

(i) Sulphonic acid.

(ii) Thioether.

2½, 2
