



Date: 14-11-2017
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART - A

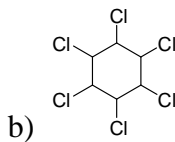
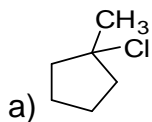
Answer ALL the questions.

(10 x 2 = 20)

1. Classify the following halides into primary, secondary, tertiary, and aryl halides:

- | | |
|------------------------------|-----------------------------|
| a) 2-bromobutane, | b) 2-methyl-1-bromopropane, |
| c) 2-methyl-2-chloropropane, | d) iodobenzene. |

2. Write IUPAC names of the following compounds.



3. Name the reagents used in the preparation of the following compounds from phenol:

- a) o-nitrophenol b) o-cresol.

4. Why p-nitrophenol has higher boiling point than o-nitrophenol?

5. How will you synthesize diethyl ether from ethyl alcohol?

6. Give the IUPAC names of diethyl ether and anisole.

7. What is the product obtained when benzaldehyde and acetaldehyde react in the presence of NaOH?
Mention the name of the reaction.

8. Name the products obtained from 2-hexanone in Norrish type II reaction.

9. What is Trans-esterification?

10. Write the structure of the following compounds: a) Adipic acid b) Cinnamic acid.

PART – B

Answer any EIGHT questions.

(8 x 5 = 40)

11. Starting from ethyl chloride how will you prepare the following compounds?

- a) Ethene b) Butane

12. Discuss the effect of (i) Nature of nucleophilic agent (ii) polarity of the solvent on S_N2 reaction.

13. Explain the mechanism of nitration of Phenol .

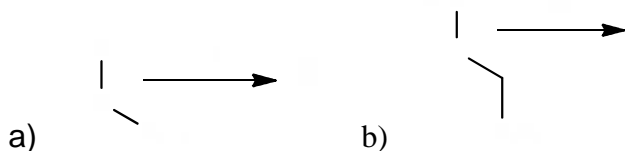
14. Explain the mechanism of Reimer-Tiemann reaction.

15. How will you convert primary alcohol into tertiary alcohol?

16. (a) Discuss Williamson's synthesis with suitable example.

(b) Explain the halogenation reactions of diethyl ether.

17. Predict the products of the following reactions and justify their formation.



18. How will you prepare cinnamic acid from benzaldehyde?

19. Explain Wittig reaction with a suitable example.

20. What are the products formed when acetophenone reacts with each of the following compounds? Write the reactions.

i) LiAlH_4 in THF followed by hydrolysis ii) HCN.

21. Write any one method each, to prepare Phthalic acid and Succinic acid.

22. How will you convert ethanol into methanol and methanol into ethanol?

PART - C

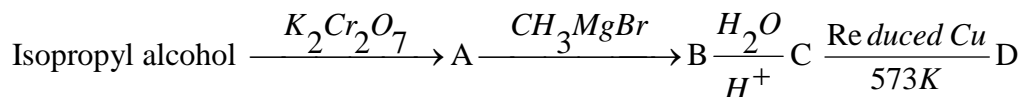
Answer any FOUR questions.

(4 x 10 = 40)

23. a) Describe E_1 mechanism with an example.

b) 2, 4 -dinitro chloro benzene undergoes nucleophilic substitution much faster than chlorobenzene. Explain. (5+5)

24. a) Identify the products in the following sequence of reactions



b) Discuss the following reactions of phenol

i) Coupling reaction ii) Kolbe's reaction

25. a) Discuss alkoxymercuration and demercuration with an example.

b.) What happens when diethyl ether is treated with the following reagents?

i) Excess of HI ii) Con. H_2SO_4 .

26. Write short notes on the following reactions:

a) Crossed Cannizzaro reaction b) Reformatsky reaction c) Wolf-Kishner reduction.

27. a) Compare the acidity of acetic acid, monochloro acetic acid, and dichloro acetic acid.

b) Explain stereospecific addition of Br_2 to maleic acid and fumaric acid.

28. a.) Write a short note on : Perkin's reaction.

b.) Bring out the mechanism of alkaline hydrolysis of an ester.
