

Model Question Paper

Ethers - Part I

12th Standard

Chemistry

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

Time : 01:30:00 Hrs

Total Marks : 70

5 x 1 = 5

Part-A

- 1) The isomerism exhibited by $C_2H_5OC_2H_5$ and is $CH_3 - O - \underset{\begin{array}{c} | \\ CH_3 \end{array}}{CH} - CH_3$

(a) Functional (b) metamerism (c) position (d) chain

- 2) Which one of the following is simple ether?

(a) $CH_3-O-C_2H_5$ (b) $C_2H_5-O-CH_3$ (c) $C_2H_5-O-C_2H_5$ (d) $C_3H_7-O-C_2H_5$

- 3) Diethyl ether can be decomposed with

(a) HI (b) $KMnO_4$ (c) NaOH (d) H_2O

- 4) Oxygen atom of ether is

(a) Very active (b) Replacable (c) Oxidising (d) Comparatively inert

- 5) According to Lewis concept of acids and bases, ethers are

(a) Neutral (b) Acidic (c) Basic (d) Amphoteric

Part-B

- 6) Write the IUPAC names of (a) $C_2H_5OCH_3$ (b) $C_6H_5OC_2H_5$

- 7) Ethers should not be heated to dryness. Why?

- 8) Ethers are the best solvents of Grignard reagents- Account for this statement.

- 9) Write a note on williamson synthesis.

- 10) Complete and balance $C_2H_5OH \xrightarrow[Al_2O_3]{250^\circ C} ?$

Part-C

- 11) How does diethyl ether react with the following reagents? (a) O_2 / long contact (b) HI in excess (c) PCl_5 (d) dilute H_2SO_4

- 12) Give any two chemical differences between anisole and an aliphatic ether.

- 13) Write all possible isomers with molecular formula $C_4H_{10}O$ and name them

- 14) Explain isomerism in ethers.

- 15) Write any three methods of preparation of diethyl ether.

- 16) How does diethyl ether react with i. Cl_2 dark and sunlight ii. O_2 iii. Con.HCl and Con. H_2SO_4 iv. Lewis acid (BF_3 and $AlCl_3$)

Part-D

- 17) a) How does ethers react with HI? Write its significance

b) Give three methods of preparing anisole from phenol.

- 18) a) i) How is anisole manufactured from dimethyl sulphate? ii) What is the action of anisole with BF_3 and $AlCl_3$?

b) Explain the electrophilic substitution reaction of anisole.
