

Model Question Paper
Hydroxy Derivatives - Part IV
 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 : 80

5 x 1 = 5

Part-A

- 1) Which of the following properties cannot be explained on the basis of intermolecular hydrogen bonding of glycerol?
 (a) highly viscous (b) hygroscopic liquid (c) sweetening agent (d) high boiling point
- 2) An alcohol which occurs in animal fats and vegetable oils is
 (a) tertiary butyl alcohol (b) benzyl alcohol (c) glycol (d) glycerol
- 3) The product obtained by heating 1-propanol with copper is
 (a) CH_3CHO (b) CH_3COCH_3 (c) CH_3CH_2CHO (d) CH_3COOH
- 4) The fenton's reagent is
 (a) $FeSO_4 + H_2O$ (b) $FeSO_4 + H_2O_2$ (c) alkaline $KMnO_4$ (d) acidified $KMnO_4$
- 5) Oxalic acid is converted to formic acid by treating it with
 (a) glycerine at 533K (b) glycerine at 383K (c) acidified $KMnO_4$ (d) alkaline $KMnO_4$

Part-B

5 x 3 = 15

- 6) What happens when glycol is oxidised using dill. HNO_3 or alkaline $KMnO_4$?
- 7) Explain bromine water test to identify phenol?
- 8) How will you convert phenol into phenyl acetate?
- 9) Explain Functional Isomerism.
- 10) How will you convert 2-methyl-2-propanol into 2-methyl propene?

Part-C

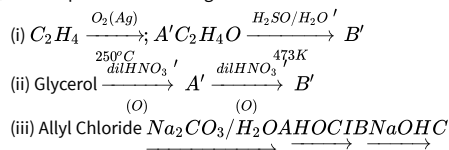
5 x 5 = 30

- 11) What are monohydric alcohols? How are they classified? Give examples.
- 12) Give the four methods of preparation of benzyl alcohol.
- 13) Write a note on acidic nature of phenol.
- 14) How will you convert acetic acid to tertiary butyl alcohol?
- 15) An organic compound has the formula $C_4H_{10}O$. It liberates hydrogen with metallic sodium. (i) Write three isomers of $C_4H_{10}O$ which react with sodium (ii) Give the action of anyone of the isomers with acetic acid.
- 16) How will you convert ethyl alcohol to isopropyl alcohol?

Part-D

2X10=20

- 17) a) Complete the following:



- b) How will you convert
- (i) Glycol to formic acid
 - (ii) Glycerol to TNG (Triniro glycerine)
 - (iii) Glycerol to Glycerol tracetate
- 18) a) What happens when Phenol
- (i) is heated with CCl_4 . NaOH (Riemer - Tiemann reaction)
 - (ii) is treated with benzoyl chloride . NaOH (Schotten - Baumann reaction)
 - (iii) is treated with conc. H_2SO_4 (Sulphonation)
- b) How are phenols classified? Give their structures and names.
