

Model Question Paper
Carbonyl Compounds - Part IV

12th Standard

Chemistry

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

III. Question number 15 is compulsory.

Time : 01:30:00 Hrs

Total Marks : 85

5 x 1 = 5

Part-A

- 1) Which of the following gives negative answer for iodoform test?
(a) CH_3CHO (b) $CH_3CH_2COCH_3$ (c) $CH_3COC_6H_5$ (d) $CH_3CH_2COC_6H_5$
- 2) Aldehydes may be distinguished from ketones by the use of
(a) conc. H_2SO_4 (b) Fehling's solution (c) pyrogallol (d) Lucas reagent
- 3) Formalin is
(a) solution of HCHO in water (b) Liquid HCHO (c) 40% solution of HCHO in water (d) 40% solution of HCHO in alcohol
- 4) The reagent of Clemmenson reduction is
(a) $N_2H_4 / NaOC_2H_5$ (b) $H_2O_2 / FeSO_4$ (c) $LiAlH_4$ (d) $Zn - Hg / HCl$
- 5) Acetone is named by IUPAC system as
(a) dimethyl ketone (b) methyl ketone (c) propanone (d) butanone

Part-B

- 6) Give the structures of a) Mesitylene b) Phorone c) Mesityl oxide. Give their IUPAC names.
- 7) Which type of aldehydes undergo Cannizaro's reaction? Give two examples
- 8) How are i) acetophenone and ii) benzophenone prepared using Friedel Crafts method?
- 9) Even though benzophenone undergoes all the reactions of carbonyl compounds, it does not undergo addition with $NaHSO_3$. Why?
- 10) Complete the following reactions:
i) $CH_3COCH_3 + HCN \rightarrow$
ii) $C_6H_5CHO + NH_2OH \rightarrow$

5 x 3 = 15

Part-C

- 11) How will you distinguish between 2-pentanone and 3-pentanone?
- 12) How will you convert acetaldehyde to acetone?
- 13) What happens when the compound obtained by the hydration of ethyne is treated with alkali?
- 14) Convert: Ethyl alcohol to 2-butanone
- 15) a) How will you effect the following conversions?
a) $CH_3COCl \rightarrow CH_3COCH_3$
b) $CH_3CN \rightarrow CH_3CHO$
c) $CH_3CN \rightarrow CH_3CH_2OH$

5X5=25

(OR)

- b) How do acetaldehyde and acetone react with ammonia individually?

Part-D

- 16) a) What happens when methyl magnesium iodide reacts with i) formaldehyde ii) acetaldehyde iii) acetone?
b) How will you get benzaldehyde from the following? i) toluene ii) benzyl chloride iii) benzal chloride
- 17) a) How will you get acetone from the following? i) isopropyl alcohol ii) isopropylidene chloride iii) calcium acetate
b) How will you get benzophenone from the following? i) benzene ii) phosgene iii) calcium benzoate.

2X10=20
