Model Question Paper

Carbonyl Compounds - Part V

12th Standard

Chemistry

Reg.No. : | | | | | | |

I.Answer all the questions.

II.Use blue pen only.

Time : 01:00:00 Hrs

Total Marks : 75

Part-A

5 x 1 = 5

1) Which of the following reaction givesβ hydroxy acid? i)perkin's reaction ii)claisen reaction iii)Benzoin condensation iv)Knoevengal reaction

(a) (i) and (iii) only (b) (i),(ii)and (iii) (c) (i)and(ii) only (d) (i)and(iv) only

2) The product obtained by the reaction of ammonia with acetone at high temperature is

(a) urotropine (b) diacetone amine (c) acetophenone (d) benzophenone

3) which of the following is used as hypnotic and in perfumery?

(a) paraldehyde (b) paraformaldehyde (c) acetophenone (d) benzophenone

4) CH_3CH_2CHOcan show

(a) position isomerism (b) funtional isomerism (c) chain isomerism (d) optical isomerism

5) Which of the following statement is correct?

(a) Benzaldehyde reduces Fehlings solution while acetaldehyde does not (b) Both benzaldehyde and acetaldehyde form Schiff's base with primary amines

(c) Benzaldehyde does not undergo polymerization while acetaldehyde does (d) neither benzaldehyde nor acetaldehyde reacts with caustic soda

Part-B

6 x 3 = 18

6) Even though benzophenone undergoes all the reactions of carbonyl compounds, it does not undergo addition with $NaHSO_3$. Why?

7) Complete the following reactions:

i) $CH_3COCH_3 + HCN \rightarrow$

ii) $C_6H_5CHO + NH_2OH \rightarrow$

8) While formaldehyde and benzaldehyde undergo Cannizaro's reaction, acetaldehyde does not. Why?

9) Give the tests for aldehydes

10) Give the common and IUPAC names of

i) CH_2 = CH - CHO ii) CH_3 - CH = CH - CHO iii) C_6H_5CH = CH - CHO

11) Give the structure and IUPAC names of i) Methyl n-propyl ketone ii) allyl methyl ketone iii) diethyl ketone

Part-C

6 x 5 = 30

12) What happens when acetone is treated with dry HCL?

13) Compare the reaction of acetaldehyde and acetone.

14) Give three methods of preparing benzophenone

15) Explain about the electrophilic substitution reaction in benzaldehyde.

16) Write a note on Clemmenson and haloform reaction of acetone?

17) How are paraldehyde, paraformaldehyde and urotropine obtained from aldehyde.

Part-D

2X10=20

18) a) Explain about Friedel Craft's benzoylation and acetylation reactions.

b) How does formaldehyde react with i) NH_3 ii) CH_3MgI, H_2O/H^+ iii) NaOH?

19) a) How will you get the following from acetone?

i) mesitylene ii) mesityl oxide iii) phorone iv) isopropyl alcohol

b) How will you distinguish between acetophenone and benzophenone chemically?

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