Model Question Paper

Carbonyl Compounds - Part II

12th Standard

Chemistry

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

I.Answer all the questions.

II.Use blue pen only.

Time : 01:30:00 Hrs

Total Marks : 80

Part-A

5 x 1 = 5

1) Formaldehyde polymerises to give

(a) paraldehyde (b) paraformaldehyde (c) formalin (d) formic acid

2) Tollen's reagent is

(a) ammoniacal cuprous chloride (b) ammonical cuprous oxide (c) ammoniacal silver nitrate (d) ammoniacal silver chloride

3) When acetaldehyde is heated with Fehling solution, it gives a precipitate of

(a) Cu_2O (b) Cuo (c) $CuO + Cu_2O$ (d) Cu

4) The compound that does not undergo Cannizzaro reaction is

(a) formaldehyde (b) acetaldehyde (c) benzaldehyde (d) trimethyl acetaldehyde

5) The formation of cyanohydrin from a ketone is an example of

(a) electrophilic addition (b) nucleophilic addition (c) nucleophilic substitution (d) electrophilic substitution

Part-B

5 x 3 = 15

6) What type of aldehydes undergo Cannizzaro reaction ?

7) How is urotropine prepared ? Mention its important use.

8) What happens when calcium acetate is dry distilled?

9) What is formalin?write its use.

10) Ethanal is more reactive towards nucleophilic addition reaction than propanone. Why?

Part-C

4 x 5 = 20

11) Compound (A) of molecular formula C_3H_8O gives blue colour in victor Meyer test.When (A) is heated with copper it gives C_3H_6O(B).(B) answers iodoform test.Reaction of (B) with con.H_2SO_4 gives an aromatic hydrocarbon (). Identify (A),(B) and (C).Explain the reactions.

12) An organic compound 'A'(C_2H_4O) undergoes iodoform test. With hydrazine and sodium ethoxide 'A' gives 'B' (C_2H_6) a hydro carbon. 'A' with H_2SO_4 gives 'C' ($C_6H_{12}O_3$). What are A,B and C? Explain the reactions.

13) An organic compound A (C_7H_6O) has a bitter almond smell with ammonia 'A' gives 'B' ($C_{21}H_{18}N_2$) With aqueous alcoholic KCN 'A' gives 'C' ($C_{14}H_{12}O_2$). With aromatic tertiary amine. A gives D($C_{23}H_{26}N_2$) what are A, B, C and D. Explain the reactions.

14) Write any three methods of preparation of acetaldehyde from primary alcohols?

Part-D

2X10=20

15) a) Write the mechanisum of crossed aldol condensantion.

b) Write note on (i)Clemmenson reauction and (ii)Knovenagal reaction

16) a) a) Explain the following reactions i) Rosenmund's reduction ii) Clemmenson reduction iii) Wolf Kishner reduction

b) Explain the following reactions i) Friedel Craft's acetylation ii) Haloform reaction iii) Distillation of calcium acetate

(OR)

b) a) Explain in following reactions i) Friedel Craft's benzoylation, ii) Formation of benzhyrol from benzophenone.

b) Explain the following reactions i) Benzoin condensation ii) Two Friedel Craft's acylation iii) Knoevenagal reaction

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