Home Assignments: Aldehydes, Ketones and Haloalkanes

Q01. The general molecular formula of aldehydes and ketones is
1) $C_nH_{2n-1}.O$ 2) $C_nH_{2n}O$ 3) $C_nH_{2n+2}O$ 4) $C_nH_{2n+4}O$

Q02. Aldehyde functional group can occur
1) Any where in the carbon chain
2) In the middle of the carbon chain
3) Only at the second carbon atom
4) Only at either end carbon atom of the chain

Q03. Propan-2-ol on treatment with copper at 300^0c forms
1) Acetone 2) Acetaldehyde 3) Ethane 4) Both 1and 2

Q04. Which of the following is correct?
1) Aldehydes undergo Cannizzaro's reaction
2) Aldehydes are less susceptible to oxidation than ketones
3) Aldehydes are more susceptible to oxidation than ketones
4) Formaldehyde forms CuO with Fehling's solution

Q05. IUPAC name of $CH_3CHOHCH_2CHO$ is
1) 2-hydroxybutanal 2) 2-hydroxypropanal
3) 3-hydroxybutanal 4) β-hydroxybutanal

Q06. The reagent which can be used to distinguish acetophenone from benzophenone is
1) 2, 4-dinitrophenyl hydrazine 2) Benedict's solution
3) Tollen's reagent 4) I_2 and Na_2CO_3

Q07. Toluene on reacting with chromyl chloride gives:
1) Chlorotoluene 2) Benzyl chloride 3) Benzaldehyde 4) Benzoic acid

Q08. Mesitylene is prepared from
1) CH_3CHO and conc. HNO_3 2) CH_3COCH_3 and conc. H_2SO_4
3) CH_3COCH_3 and conc. HCl 4) CH_3CHO and conc. H_2SO_4

Q09. $(CH_3)_2C = CHCOCH_3$ can be oxidised to $(CH_3)_2C = CHCOOH$ by
1) Chromic acid 2) NaOI 3) Cu at 300^0c 4) $KMNO_4$

Q10. Oppenaur oxidation is the reverse process of
1) Wolff –Kishner reduction 2) Rosenmund's reduction
3) Clemmensen reduction 4) Meerwein-Pondorf-Verely reduction

Q11. In the reaction $CH_3CHO + CH_2(COOH)_2 \xrightarrow{\text{pyridine/heat}} A$. The compound A is
1) CH_3COOH 2) C_2H_5COOH 3) $CH_3CH = CHCOOH$
4) $COOHCH = CHCOOH$

Q12. Benzaldehyde reacts with alcoholic KCN to give:
1) $C_6H_5CH(OH)CN$ 2) $C_6H_5CH(OH)COC_6H_5$
3) $C_6H_5CH(OH)COOH$ 4) $C_6H_5CH(OH)CH(OH)C_6H_5$

Q13. Aldehydes and ketones do not react with
1) sodium bisulphite 2) phenyl hydrazine
3) semi carbazide 4) di hydrazine sodium phosphate

Q14. Which of the following will undergo aldol condensation?
1) CH_2=CHCHO 2) CH=CCHO 3) C_6H_5CHO 4) CH_3CH_2CHO

Q15. Which type of isomerism is shown by the pentanone
1) Chain isomerism 2) Position isomerism
3) Functional isomerism 4) All 1, 2 and 3

Q16. Paraldehyde is formed as a result of polymerisation of
1) CH_3CHO 2) HCHO 3) CH_3OH 4) CH_3CH_2CHO

Q17. Aromatic aldehydes in the presence of CN^- ion give acyloins. The reaction is known as
1) Perkin reaction 2) Benzoin condensation
3) Claisen condensation 4) Cannizzaro's reaction

Q18. Which of the following method is used to convert ketone into hydrocarbon
1) aldol condensation 2) Reimer Tieman reaction
3) Cannizzaro's reaction 4) Clemmensen's reduction

Q19. Which will not give formaldehyde on heating or upon distillation?
1) Formalin 2) Trioxane
3) Paraldehyde 4) Paraformaldehyde

Q20. When ethanal is heated with Fehling's solution it gives a precipitate of
1) Cu 2) CuO 3) Cu_2O 4) CuO+Cu_2O+Cu

Q21. When $CH_3CHBrCH_2CH_3$ is reacted with alcoholic KOH the major product is
1) CH_3CH=$CHCH_3$ 2) CH_2=$CHCH_2CH_3$
3) $CH_3CH(OH)CH_2CH_3$ 4) $CH_3CH_2CH_2CH_3$

Q22. Benzene reacts with n-propyl chloride in the presence of anhydrous $AlCl_3$ to give
1) 3-propyl-1-chlorobenzene 2) n-propyl benzene
3) No action 4) Isopropyl benzene

Q23. Identify Z in the following series:

$CH_2=CH_2 \xrightarrow{HBr} \mathbf{X} \xrightarrow{Hydrolysis} \mathbf{Y} \xrightarrow{I_2/\text{excess NaOH}} \mathbf{Z}$

1) C_2H_5I 2) C_2H_5OH 3) CHI_3 4) CH_3CHO

Q24. Bromoethane reacts with silver nitrite to form

1) Nitroethane 2) Ethane
3) Ethylnitrite 4) Nitroethane and ethylnitrite

Q25. Which of the following compounds on oxidation gives benzoic acid?

1) ***o***-Chlorophenol 2) ***p***-Chlorotoluene
3) Chlorobenzene 4) Benzyl chloride

Q26. Reaction between alkyl halide and sodium metal is called

1) Wurtz reaction 2) Kolbe's reaction
3) Clemmensen's reaction 4) Wurtz - Fittig's reaction

Q27. Which compound gives iodoform by reaction between I_2 and NaOH?

1) CH_3OH 2) C_2H_5OH
3) C_3H_7OH 4) $C_2H_5OC_2H_5$

Q28. The reactivity order of halides in dehydrohalogenation reaction is:

1) R-F > R-Cl > R-Br > R-I 2) R-I > R-Br > R-Cl > R-F
3) R-I >R-Cl > R-Br > R-F 4) R-F > R-I > R-Br > R-Cl

Q29. Which of the following undergoes nucleophilic substitution exclusively by S_N1 mechanism?

1) ethyl chloride 2) isopropyl chloride
3) chlorobenzene 4) benzyl chloride

Q30. S_N2 mechanism proceeds through intervention of:

1) carbocation 2) transition state 3) free radical 4) carbanion