Exercise # 1

Q.1 Dry distillation of calcium propanoate gives :

[1] Propanone [2] Propanal [3] Butanone [4] Diethyl ketone

Q.2 Acetone can be prepared by dry distillation of :

[1] Calcium formate & calcium acetate [2] Calcium acetate

[3] Calcium propanoate [4] Calcium propanoate and calcium formate

Q.3 Stephen reaction is the reaction involving :

[1] Reduction of alkanoyl chloride with $Pd/BaSO_4$

[2] Reduction of alkyl isocyanide with sodium and alcohol

[3] Reduction of alkyl cyanide with $SnCl_2$ and HCl and hydrolysing the intermediate aldimine

[4] Reduction of carbonyl compound with zinc amalgum and HCl

Q.4 Hydration of acetylene in the presence of dilute sulphuric acid and Hg^{2+} ions at 80°C gives :

[1] Ethanol [2] Ethanal [3] Vinayl alcohol [4] All of these

Q.5 $CH_3–CH(OH)–CH_2(NH_2)$ is a :

[1] a β–amino alcohol [2] an α–aminoalcohol

[3] a hydroxy primary amine [4] a β–hydroxy amine

Q.6 Carbonyl compounds are best purified by :

[1] Steam distillation [2] Hydrolysis of sodium bisulphite adducts

[3] Fractional crytallisation [4] Sublimation

Q.7 Carbonyl compounds readily undergo :

[1] Nucleophilic substitutions [2] Electrophilic addtion reactions

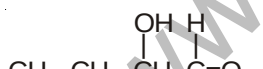
[3] Nucleophilic addition reactions [4] Free radical substitution reactions

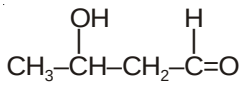
Q.8 Aldol condensation is the reaction of :

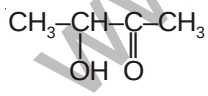
[1] Formaldehyde and 10% NaOH [2] Acetaldehyde and dil. KOH

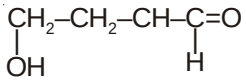
[3] Formaldehyde and HCN [4] Acetone and chloroform

Q.9 Acetaldehyde reacts with K_2CO_3 to form :

[1] 

[2] 

[3] 

[4] 

Q.10 Cannizaro reaction is given by :

[1] Aldehydes containing alpha hydrogens [2] Aldehydes not containing alpha hydrogens

[3] A ketone having alpha hydrogen atoms [4] Ketones not having alpha hydrogens

Q.11 Paraldehyde is obtained by :

[1] Evaporating aqueous formalin [2] Heating ethanal with conc. H_2SO_4

[3] Adding a few drops of conc. H_2SO_4 to acetaldehyde

[4] Treating acetaldehyde with dry HCl gas at low temperature

Q.12 Acetone and acetaldehyde are readily distingusihed by their reaction with :

[1] Iodine and alkali [2] 2,4–dinitrophenylhydrazine

[3] Tollen's reagent [4] Chlorine and alkali

Q.13 Formaldehyde and acetaldehyde are readily distinguished by reaction with :

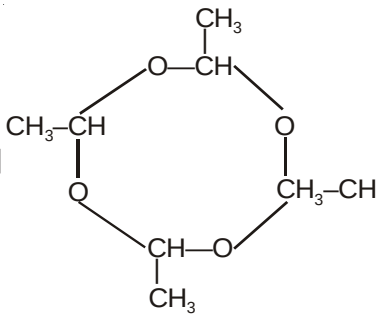
[1] A solution of 2,4–dinitrophenylhydrazine [2] Fehling's solution

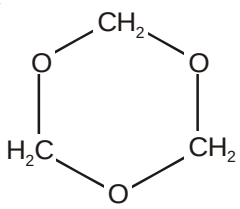
[3] Tollen's reagent [4] Iodine and alkali

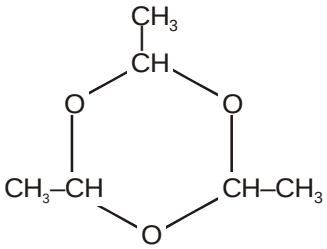
Q.14 Formaldehyde and acetone are disinguished by reaction with :

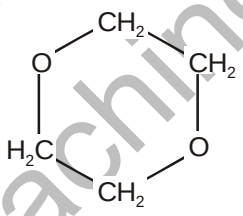
[1] Alkali [2] Schiff's reagent [3] Ammonia [4] Phenylhydrazine

Q.15 Metaldehyde has the structure :

[1] 

[2] 

[3] 

[4] 

Q.16 Fehling's solution is a :

[1] Solution of magenta dye belached by SO_2

[2] Ammonical solution of $AgNO_3$

[3] Mixture of a solution of $CuSO_4$ and a solution of caustic soda and sodium potassium tartarate

[4] Alcoholic solution of 2,4–dinitrophenylhydrazine

Q.17 Acetaldehyde on warming with Fehling's solution gives a red precipitate of :

[1] Elemental copper [2] Cuprous oxide

[3] Cupric oxide [4] Mixture of all of the above

Q.18 Acetone on distillation with conc. H_2SO_4 gives :

[1] Mesityl oxide [2] An aromatic hydrcarbon

[3] An aromatic compound containing phenolic group and a ketonic group

[4] Phorone

Q.19 Gem dihalides are obtained by the reaction of :

[1] Chlorine on ethanal [2] Chlorine on a keetone

[3] PCl_5 on a carbonyl compound [4] PCl_5 on diols

Q.20 Chlorine reacts with acetaldehyde in the presence of antimony chloride to from :

[1] CCl_3–CHO [2] CH_3COCl [3] CH_2Cl–CHO [4] $CHCl_2$–CHO

Q.21 Formaldehyde reacts with dilute alkali to form :

[1] A resinous mass [2] Formic acid

[3] A mixture of methanol and sodium formate [4] A charred mass

Q.22 Schiff's reagent is :

[1] R–CH=NR

[2] A solution of copper sulphate, alkali and sodium ptassium tartarate

[3] A solution of magneta dye belached by SO_2 [4] An alcoholic solution of 2,4–dinitrophynylhydrazine

Q.23 The oximes of which of the following pairs of compounds will have the same percentage of nitrogen :

[1] Acetone and acetophenone [2] Propionaldehyde and dimethyl ketone

[3] Propanal and ethanal [4] Methanal and acrolein

Q.24 Which of the following is not a heterocyclic compound :

[1] Phorone [2] Dioxan [3] Trioxan [4] Paraldehyde

Q.25 Which of the following does not contain a ketonic group :

[1] Mesityl oxide [2] Phorone [3] Acetone oxime [4] Pyruvic acid

Q.26 Match list I and list II and then select the correct answer from the codes given below the lists :

List I	***List II***
[A] C_6H_5CHO	[a] Mesitylene
[B] CH_3COCHO	[b] Paraldehyde
[C] CH_3COCH_3	[c] Iodoform reaction
[D] CH_3CHO	[d] Cannizzaro reaction

Codes :

	A	B	C	D
[1]	d	c	b	a
[2]	d	b	c	a
[3]	a	c	b	d
[4]	d	c	a	b

Q.27 Which of the following aldehydes does not form iodoform on heating with iodine and alkali :

[1] Pyruvic aldehyde [2] ICH_2CHO

[3] Propionaldehyde [4] 2–Hydroxypropanal

Q.28 Acetaldehyde on treatement with aluminium ethoxide gives :

[1] Ethyl methanoate [2] Ethyl acetate [3] Ethyl propionate [4] Ethyl formate

Q.29 Formalin contains 40% formaldehyde and :

[1] 40% methanol + 20% water [2] 8% methanol + 52% water

[3] 60% water only [4] 60% methanol only

Q.30 Which of the following alkoxides is used to oxidize secondary alcohols to corresponding ketones :

[1] Aluminium isopropoxide [2] Aluminium ethoxide

[3] Aluminium t–butoxide [4] Sodium ethoxide

Q.31 Ketones can be prepared by the following methods except :

[1] By heating calcium salts of acids

[2] By reducing acid chlorides with hydrgoen in the presence of palladium catalyst supported on barium sulphate

[3] By passing vapours of an acid over manganous oxide at 300ºC

[4] By passing any alkyne having three or more carbon atoms in hot dilute sulphuric acid in the presence of mercuric ions.

Q.32 Ketone cannot be prepared by :

[1] Ozonolysis of alkenes [2] Heating of calcium salts of acids

[3] Epoxidation of alkenes with peracids [4] Oxidation of a glycol with periodic acid

Q.33 Oxidation of 2–methylpropane–1,2–diol with periodic acid gives :

[1] Propionic acid and formaldehyde [2] Acetone and formaldehyde

[3] Acetone and acetic acid [4] Acetone and Propionic acid

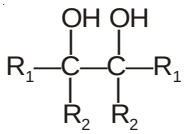
Q.34 Lemieux reagent consists of :

[1] An aqeous solution of periodic acid

[2] Lead tertraacetate

[3] An aqueous solution of sodium periodate and trace of potassium permangante

[4] Zinc chloride and conc. HCl

Q.35 Oxidation of 1,2–glycols of the general structure  with periodic acid gives :

[1] A diketone [2] Two molecules of an aldehyde

[3] A ketone [4] A diol

Q.36 The compounds A, B and C in the reaction sequence $RCOOH \xrightarrow{A} RCOCl \xrightarrow{B,Pd/H_2} C$ are given by the set :

[1] Cl_2, $BaSO_4$, RCHO [2] HCl, $BaSO_4$, RCOR

[3] PCl_5, $BaSO_4$, RCHO [4] PCl_3, $BaSO_4$, CH_3CHO

Q.37 Which of the following statments is incorrect :

[1] Carbonyl compounds undergo nucleophilic additions

[2] Carbonyl compounds have large dipole moments

[3] Acetone is more reactive towards nucleophilic reagents then acetaldehyde

[4] Carbon atom of the carbonyl group is sp^2 hybridised

Q.38 Which of the following statements is wrong :

[1] Acetone gives iodoform reaction

[2] Acetone gives diacetoneamine on treatement with ammonia

[3] Acetone does not react with nitrous acid

[4] Acetone reacts with sodamide to form sodio–derivatives

Q.39 Which of the following compounds does not have a C=C :

[1] Allyl alcohol [2] Propargyl alcohol [3] Crotyl alcohol [4] Mesityl oxide

Q.40 Acetone is oxidised by selenium dioxide at room temperature to form :

[1] CH_3COOH and CO_2 [2] Glyoxal [3] Methylglyoxal [4] Dimethylglyoxal

Q.41 A carbonyl compounds gives pink colour with Schiff' reagent and a yellow precipitate when boiled with iodine and caustic alkali. It also gives a red precipitate with Fehling's solution. It is likely to be :

[1] Formaldehyde [2] Propionaldehyde [3] Acetaldehyde [4] Crotonaldehyde

Q.42 A carbonyl compound gives a positive iodoform test but does not reduce Tollen's reagent or Fehling's solution. It forms a cyanohydrin with HCN, which on hydrolysis gives a hydroxy acid with a methyl side chain. The compound is :

[1] Acetaldehyde [2] Propionaldehyde [3] Acetone [4] Crotonaldehyde

Q.43 Which of the following statements is wrong :

[1] The polar character of the C=O group gives rise to intermolcular attractions called dipole–dipole attraction

[2] The lower aldehydes and ketones are soluble in water

[3] The boiling points of aldehydes and ketones are lower than those of nonpolar alkanes of comparable molecular weights

[4] Aldehydes and ketones are incapable of intermolecular hydrogen bonding with themselves

Q.44 Which of the following statments is wrong :

[1] Paraldehyde is a cyclic trimer of acetaldehyde

[2] Acetaldehye is marketed in the liquid form as paraldehyde

[3] Acetaldehyde is difficult to handle because of its high boiling point

[4] Acetaldhyde is manufactured by oxidation of ehthylene with air–water in the presece of palladium chloride

Q.45 Cannizzaro reaction is given by :

[1] Aldehydes containing α–hydrogen atoms

[2] Aldehydes as well as ketones containing α–hydrogen atoms

[3] Aldehydes not containing α–hydrogen atoms

[4] Aldehyde containg β–hydrogen atoms

Q.46 Aldehyde not containing α–hydrogen atoms reacts with aqueous alkali to form :

[1] an α,β unsaturated aldehyde [2] an α,β unsaturated acid

[3] Corresponding alcohol and corresponding carboxylate anion

[4] Corresponding carboxylic acid

Q.47 Formaldehyde reacts with 50% aqueous alkali to form :

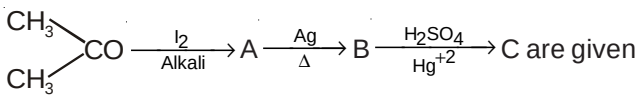
[1] A mixture of methanol and sodium acetate [2] A mixture of ethanol and sodium acetate

[3] A mixture of methanol and sodium formate [4] A resinous mass

Q.48 Benzladehyde reacts with formaldehyde in the presence of alkali to form :

[1] Methyl alcohol and sodium benzoate [2] Benzyl alcohol and sodium formate

[3] Benzoic acid and ethanol [4] Formic aicd and benzyl alcohol

Q.49 The compounds A, B and C in the reaction sequence  are given by the set :

[1] Iodoform, ethylene, ethyl alcohol [2] Iodoform, acetylene, acetaldehyde

[3] Iodoform, propyne, acetone [4] Iodoform, 2–propanol, propanone

Q.50 Which of the following is mismatched :

[1] Acetaldehyde – Cannizzaro reaction

[2] Acetone – Bimolecular reduction

[3] Propionaldehyde – Aldol condensation

[4] Formaldehyde – Pink colour with Schiff's reagent

Q.51 Acetone does not form :

[1] A phenylhydrazone with phenylhydrazine [2] A sodium bisulphite adduct with sodium bisulphite

[3] A silver mirror with Tollen's reagent [4] An oxime with hydroxylamine

Q.52 Oximinoacetone is formed by the reaction of :

[1] Hydroxylamine and acetone [2] Nitrous acid and acetone

[3] Nitrous acid and propionaldehyde [4] Ethylamine and acetone

Q.53 Which of the following cyanohydrins on hydrolysis gives an optically active acid giving iodoform reaction :

[1] Acetone cyanohydrin [2] Propionaldehyde cyanohydrin

[3] Acetaldehyde cyanohydrin [4] Formaldehyde cyanohydrin

Q.54 Which of the following carbonyl compounds exhibits keto–enol isomerism to an appreciable extent :
[1] Acetone [2] Acetylacetone [3] Acetaldehyde [4] Acetic ester

Q.55 The specific reagent for reducing aldehydes and ketones to alcohols is :
[1] Sodium and ethanol [2] Aluminium isopropoxide
[3] Amalgamated zinc and concentrated hydrochloric acid
[4] Sodium bisulphite

Q.56 Reaction of acetaldehyde with aluminium ethoxide in the presence of anhydrous $AlCl_3$ is called :
[1] Cannizzaro's reaction [2] Bouveault–Blanc reduction
[3] Tischenko reaction [4] Rosenmund reaction

Q.57 The components of Benedict's reagent are :
[1] Ammonium hydroxide + silver nitrate [2] Copper sulphate + Sodium Carbonate + Sodium citrate
[3] Copper acetate + acetic acid [4] Mercuric oxide + Sulphuric acid

Q.58 On heating ethanal with fehling solution gives :
[1] Cu [2] CuO [3] Cu_2O [4] Cu + Cu_2O + CuO

Q.59 Which of the following substrates show cannizzaro's reaction :
[a] CH_3CHO [b] HCHO [c] CCl_3CHO [d] C_2H_5CHO
[1] b and c [2] b, a, c [3] b, c, d [4] a and d

Q.60 $C_6H_5COCl \xrightarrow[H_2]{Pd-BaSO_4}$ Intermediate $\xrightarrow{Oxidation}$ Intermediate $\xrightarrow[Dry\ Distillation]{Ca-Salt}$ A

Compound (A) in above reaction sequence is –
[1] Benzophenone [2] Benzaldehyde [3] Acetophenone [4] Benzoquinone

Q.61 Benzaldehyde will be formed in the reaction
[1] Hydrolysis of $C_6H_6CHCl_2$ [2] Ozonolysis of $C_6H_5CH=CH_2$
[3] Both the above [4] None of the above

Q.62 A $\xrightarrow[H_2]{Pd/BaSO_4}$ ϕ - CHO $\xleftarrow[(ii)H_2O]{(i)\ SnCl_2/HCl}$ B

A and B respectively are –
[1] Benzoyl chloride, benzonitrile [2] Benzyl chloride, benzylnitrile
[3] Benzal chloride, benzonitrile [4] Benzotrichloride, benzonitrile

Q.63 In connection with benzyldehyde which of the following statements is incorrect –
[1] –CHO group of benzaldehyde is meta directing
[2] Benzaldehyde undergoes Claisen condensation
[3] Benzaldehyde on oxidation gives phenyl acetic acid
[4] Benzaldehyde on reduction gives benzyl alcohol

Q.64 –CHO group in benzene nucleus –
[1] Activates the ring [2] Deactivates the ring
[3] Does not affect the ring [4] None of these

Q.65 Malachite green is obtained when benzaldehyde reacts with the following
[1] Aniline [2] Phenol [3] Phthalic anhydride [4] N,N–Dimethyl amine

Q.66 $C_6H_5CHO \xrightarrow{NH_2OH}$ A $\xrightarrow{H_2O}$ B

What is not true for the compound B –
[1] Gives cannizaro's reaction [2] Acts as strong reducing agent
[3] Gives phenol on reduction [4] Gives optical active compound with HCN

Q.67 Which of the folloiwng compounds would not form a silver mirror with Tollen's reagent :
[1] RCHO [2] ArCHO [3] CH_3COR [4] RCHOHCOH

Q.68 An organic aromatic compound containing C, H & O has a characteristic smell of bitter almonds. This on oxidation with potassium permanganate gives a monobasic acid. The sodium salt of which on distillation with sodalime gives benzene. What is the original compound –

[1] $C_6H_5CH_2CHO$ [2] C_6H_5CHO [3] C_6H_5OH [4] None of the above

Q.69 Benzaldehyde is oxidised and reduced in the presence of –

[1] $NaHCO_3$ [2] NaOH [3] Na_2CO_3 [4] HCl

Q.70 I $\xleftarrow{O_2}$ Benzaldehyde $\xrightarrow{NH_3}$ II

I, II are –

[1] Benzoic acid, Benzaldehyde ammonia [2] Benzoic acid, Hydrobenzamide

[3] Phenyl acetic acid, Benzaldehyde ammonia [4] Benozic acid, Aniline

Q.71 Benzaldehyde is heated with a conc. solution of KOH to form –

[1] $C_6H_5CH_2OH$ [2] C_6H_5COOH [3] C_6H_5COOK [4] $C_6H_5COOK + C_6H_5CH_2OH$

Q.72 Benzaldehyde can be conveted benzyl alcohol by –

[1] HCl [2] NaOH [3] $LiAlH_4$ [4] 2nd and 3rd are correct

Q.73 Benzyl alcohol from benzaldehyde is obtained in the following reaction –

[1] Cannizzaro's reaction [2] Kolbe's reaction

[3] Wurtz reaction [4] Fitting's reaction

Q.74 Benzaldehyde condenses with acetic anhyderide to give cinnamic acid in presence of –

[1] Sodium acetate [2] Sodium chloride [3] Sodium benzoate [4] Sodium metal

Q.75 ? $\xrightarrow[EtOH,\ H_2O]{\Delta,\ CN^-}$ Benzoin.

The reactant is obtained by dry distillation of the calcium salts of the following pairs –

[1] $C_6H_5CH_2COOH$, HCOOH [2] C_6H_5COOH, HCOOH

[3] $C_6H_4(OH)COOH$, HCOOH [4] $C_6H_4(NH_2)COOH$, HCOOH

Q.76 Hydrobenzamide is formed in the reaction –

[1] $C_6H_5COOH + NH_3$ [2] $C_6H_5CHO + NH_3$

[3] $HCHO + NH_3$ [4] $CH_3COCH_3 + NH_3$

Q.77 Benzaldehyde shows different reaction than aliphatic aldehyde with the following reagent –

[1] Tollen's reagent [2] Schiff's reagent [3] Fehling's reagent [4] Hydroxylamine

Q.78 Which statement is true about benzaldehyde –

[1] It does not react with Tollen's reagent [2] It does not react with Fehling's solution

[3] It does not react with HCN [4] It does not react with $NaHSO_3$

Q.79 Benzaldehyde gives all the reaction except –

[1] Nucleophilic addition [2] Reduction

[3] Electrophilic substitution [4] Reduction of Fehling solution

Q.80 $CH_3-\underset{\underset{O}{\|}}{C}-CH_3 \xrightarrow{HCN} A \xrightarrow{LiAlH_4} B$, [B] is :

[1] $CH_3-\underset{OH}{\underset{|}{CH}}-\underset{CH_3}{\underset{|}{CH}}-COOH$

[2] $CH_3-\underset{OH}{\overset{CH_3}{\overset{|}{\underset{|}{C}}}}-COOH$

[3] $CH_3-\underset{OH}{\overset{CH_3}{\overset{|}{\underset{|}{C}}}}-CH_2NH_2$

[4] $CH_3-\underset{CH_3}{\underset{|}{CH}}-CN$

Q.81 C_6H_5CHO and HCHO reacts with NaOH to give :

[1] $C_6H_5CH_2OH + HCOONa$ [2] $C_6H_5COONa + CH_3OH$

[3] $C_6H_5COOH + CH_4$ [4] None of these

Q.82 Ethyl alcohol an oxidation with $K_2Cr_2O_7$ gives :

[1] Acetic Acid [2] Acetaldehyde [3] Formaldehyde [4] Formic acid

Q.83 Schiff's reagent gives pink colour with :

[1] CH_3OH [2] CH_3CH_2OH [3] CH_3COCH_3 [4] CH_3CH_2CHO

Q.84 The cannizzaro reaction is not given by :

[1] Trimethyl acetaldehyde [2] Acetaldehyde

[3] Benzaldehyde [4] Formaldehyde

Q.85 $CH_2O \xrightarrow{Heat} A + B$, A and B are :

[1] $CO_2 + H_2$ [2] $C + H_2O$ [3] $CO + H_2$ [3] All

Q.86 A compound 'A' has the molecular formula C_2Cl_3OH. It reduces fehling's solution and on oxidation gives a monocarboxylic acid B. A is obtained by action of chlorine on ethyl alcohol, A is :

[1] Chloral [2] $CHCl_3$ [3] CH_3Cl [4] Chloroacetic acid

Q.87 Acetone on reaction with bromine in presence of basic catalyst gives :

[1] CH_3COCH_2Br [2] CH_3COCBr_3 [3] Propane [4] $(CH_3)_2C–Br_2$

Q.88 $A \xrightarrow{HCN} B \xrightarrow{2HOH}$ 2–Hydroxy propanoic acid, the compound B is :

[1] CH_3CHO [2] Acetaldehyde cyanohydrin

[3] Formaldehyde cyanohydrine [4] Acetone

Q.89 $A \xrightarrow{PCl_5} B \xrightarrow{Pd/BaSO_4} C \xrightarrow[0°C]{Conc.\ H_2SO_4} D$ in the above reaction A, B, C & D are :

[1] CH_3COOH, CH_3COCl, CH_3CHO, Metaldehyde

[2] CH_3COOH, CH_3COCl, CH_3CHO, Paraldehyde

[3] CH_3COOH, CH_3COCl, $CH_3–CH_2OH$, Paraldehyde

[4] None of these

Q.90 Formaldehyde on reaction with PCl_5 gives :

[1] Methyl chloride [2] Methylene chloride [3] Chloroformaldehyde [4] None of these

Answer Key

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	4	2	3	2	1	2	3	2	2	2	3	3	4	2	1	3	2	2	3	1
Qus.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	3	3	2	1	3	4	3	2	2	3	2	3	2	3	3	3	3	3	2	3
Qus.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	3	3	3	3	3	3	3	2	2	1	3	2	3	2	2	3	2	3	1	1
Qus.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Ans.	3	1	3	2	4	3	3	2	2	2	4	4	1	1	2	2	3	2	4	3
Qus.	81	82	83	84	85	86	87	88	89	90										
Ans.	1	1	4	2	3	1	2	2	1	2										

Exercise # 2

Q.1 Formaldehyde reduces :

[1] $Ag(NH_3)_2^{+1}$ [2] CuO [3] $HgCl_2$ [4] All

Q.2 Pentane–2–one differs from pentane–3 one in that :

[1] Pentane–2–one does not give iodoform test [2] Pentane–2–one gives iodoform test

[3] Pentane–3–one gives iodoform test [4] Pentane–2–one does not react with $NaHSO_3$

Q.3 Aldehydic group can occur :

[1] Any where in the carbon chain [2] In the middle of the carbon test

[3] Only at the second carbon atom of the chain [4] Only at the end carbon atom of the carbon chain

Q.4 When propyne is teated with aqueous sulphuric acid in the presence of mercuric sulphate, the major product is :

[1] Propanal [2] Propyl hydrogen sulphate

[3] Propanol [4] Acetone

Q.5 Paraldehyde is :

[1] A timer of formaldehyde [2] A trimer of acetaldehyde

[3] A hexamer of formaldehyde [4] A hexamer of acetaldehyde

Q.6 Which one of the following aldehyde will not form an aldol when treated with dilute NaOH :

[1] CH_3CHO [2] CH_3CH_2CHO [3] $(CH_3)_3CCHO$ [4] $C_6H_5CH_2CHO$

Q.7 Compound (A) $C_5H_{10}O$ forms a phenyl hydrazone and gives negative Tollen's and iodoform tests. Compound (A) on reduction gives n–pentane. Compound (A) is :

[1] A primary alcohol [2] An aldehyde [3] A ketone [4] A secondary alcohol

Q.8 The structural formula of chloral hydrate is :

[1] $CCl_3CH(OH)_2$ [2] $HCCl_2CH(OH)_2$ [3] $CCl_3CH_2(OH)$ [4] None

Q.9 An organic liquid which reduces tollen's reagent gives one semicarbazone derivative in which 36.47% Nitrogen is present. The liquid would be :

[1] CH_3CHO [2] CH_3CH_2CHO [3] $CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CHO$ [4] $CH_3CH_2CH_2CHO$

Q.10 $CH_3CHO \xrightarrow[H^+]{KMnO_4} A \xrightarrow{PCl_3} B \xrightarrow{CH_3COONa} C$, [C] is :

[1] $CH_3COOC_2H_5$ [2] CH_3COCl [3] CH_3COOH [4] $(CH_3CO)_2O$

Q.11 $A \xrightarrow{Alc\ KOH} B \xrightarrow{Br_2} C \xrightarrow[NaNH_2]{Alc.\ KOH} D \xrightarrow[dil.\ H_2SO_4]{Hg^{+2}} E \xrightarrow{NH_2OH} (CH_3)_2C = NOH$ [A] is :

[1] CH_3CH_2Br [2] $CH_3CH_2CH_2Br$ [3] CH_3CHBr_2 [4] $CH_3CH_2CHBr_2$

Q.12 Formaldehyde when treated with conc. KOH gives :

[1] CH_3CHO [2] C_2H_4 [3] CH_3OH, HCOOK [4] CH_3OH, CH_3CHO

Q.13 Acetone on heating with ammonia produces :

[1] Acetaldimine [2] Diacetone alcohol [3] Diacetone amine [4] Hydrobenzamide

Q.14 The product of the reaction between diethyl cadimium and acetylchloride is :

[1] CH_3COCH_3 [2] $C_2H_5COC_2H_5$ [3] CH_3CHO [4] $CH_3COC_2H_5$

Q.15 Acetone + X $\longrightarrow$ Oxamino acetone

Acetone + Y $\longrightarrow$ Diacetone amine

X and Y are :

[1] NH_2OH, NH_3 [2] HNO_2, NH_3 [3] H_2SO_4, NH_3 [4] None

Q.16 Acetaldehyde $\xrightarrow[SbCl_3]{Cl_2}$ A $\xrightarrow[Con.\ H_2SO_4]{C_6H_5Cl}$ (B), (B) is :

[1] Chloroform [2] Chloral [3] DDT [4] TNB

Q.17 Formaldoxime on hydrolysis gives product, which on further reaction with baryta water gives

[1] Paraldehyde [2] Metaldehyde [3] Trioxane [4] Formose

Q.18 The oxidation of RCH_2COCH_3 with acidic potassium dichromate produces :

[1] A mixture of RCOOH and CH_3COOH [2] A mixture of RCH_2COOH and HCOOH

[3] CH_3COOH only [4] RCOOH only

Q.19 Two molecules of an aldehyde reacts with a concentrated solution of NaOH and produces one molecule of an alcohol and acid each, which one is the aldehyde :

[1] Acetaldehyde [2] Formaldehyde [3] Propionaldehyde [4] Butyraldehyde

Q.20 Which of the following compounds will give a mixed ketone on oxidation :

[1] $(CH_3)_3COH$ [2] $CH_3CH_2CH_2OH$ [3] $CH_3CH_2CH(OH)CH_3$ [4] $(CH_3)_2CHCH_2OH$

Q.21 Magenta is :

[1] Alkaline phenolphthalein [2] Red litums

[3] p-rosaniline hydrochloride [4] Methyl red

Q.22 An organic compound $C_5H_{10}O$ forms phenyl hydrazone, gives positive iodoform test and undergoes Wolf-Kishner reaction to give isopentane. It is :

[1] Pentanol [2] Pentan-2-one [3] Pentan-3-one [4] 3-methylbutan-2-one

Q.23 Which of the following is the mechanism of representative reactions of carbonyl compounds

[1] Neucleophilic substitution [2] Electrophilic substitution

[3] Neucleophilic addition [4] Electrophilic addition

Q.24 In the aqueous solution of which of the following compounds forms the compounds belonging to carbo hydrate family on keeping it in the aqueous solution of barium hydroxide :

[1] Benzaldehyde [2] Formaldehyde [3] Acetaldehye [4] Acetone

Q.25 What happens on adding concentrated caustic alkali to an aldehyde containing α-hydrogen :

[1] Resinification [2] Saccharification [3] Tischenko reaction [4] Cannizzaro's reaction

Q.26 Which of the following reactions may be used for obtaining an unsaturated aldehyde containing more carbon atoms than the parent alkanal :

[1] Aldol condensation [2] Polymerisation [3] Tischenko reaction [4] Cannizzaro's reaction

Q.27 Which of the following is formed on heating the representative member of alkanoic acid family with manganous oxide at 300^o :

[1] Acetaldehyde [2] Ethyl acetate [3] Acetone [4] Manganous acetate

Q.28 Oximinoacetone is formed by the reaction of which of the following :

[1] Propanal + HNO_2 [2] Methylamine + Acetone

[3] HNO_2 + Propanone [4] Acetone + NH_2OH

Q.29 Hypnotic drugs named sulphonals can be manufactured by which of the following reactions :

[1] Carbonyl compound + alcohol $\longrightarrow$ A $\xrightarrow{[O]}$

[2] Carbonyl compound + Thioalcohol $\longrightarrow$ A $\xrightarrow{[O]}$

[3] Ketone + Phenylhydrazien $\longrightarrow$

[4] Aldehyde + Baryta water $\longrightarrow$

Q.30 Which of the following compounds is formed on heating acetone with a weak alkali like baryta water :

[1] Phorone [2] 3-Methyl-2-penten-2-one

[3] Mesitylene [4] Mesityl oxide

Q.31 Tetramethylethylene glycol is obtained on the reduction of which of the following compounds by Hg/Mg in benzene

[1] Butanone [2] Ethanal [3] Propanal [4] Propanone

Q.32 Formamint, the medicine for throat infections, is a mixture of which of the following compounds :

[1] Acetaldehyde + Lactose [2] HCHO + Lactose

[3] C_6H_5CHO + Glucose [4] CH_3CHO + Fructose

Q.33 A mixture of the simplest members of alkanone and alkanal families is formed on ozonolysis of which of the following compounds

[1] Propyne [2] Isobutylene [3] α-Butylene [4] 3-Pentaone

Q.34 Which of the following compounds reacts with acidified dichromate to form a carboxylic acid having less number of carbon atoms :

[1] Acetaldehyde [2] Ethyl methyl ketone [3] Isobutyraldehyde [4] n-Butyraldehyde

Q.35 Which of the following products should be formed on the reactions of formaldehyde with concentrated NaOH solution :

[1] Ethanol + sodium formate [2] Methanol + sodium methanoate

[3] Methanol + sodium acetate [4] Ethanol + sodium acetate

Q.36 An organic compound having molecular formula C_3H_6O, does not give any precipitate with 2,4-dinitrophenylhydrazine and also does not react with metallic sodium. It can be :

[1] $CH_3 - CH_2 - CHO$ [2] $CH_2 = CH - CH_2OH$ [3] $(CH_3)_2CO$ [4] $CH_2 = CH - O - CH_3$

Q.37 $CH_3CHO + CH_3CHO \xrightarrow[OH^{-1}]{dil} CH_3CH(OH)CH_2CHO$

which of the following is the principal intermediate of the above reaction :

[1] A carbanion [2] A carbocation [3] A carbene [4] None of the above

Q.38 Which of the following compounds can be formed from simplest aldehyde :

[A] Bakelite [B] Metaldehyde [C] Urotropine [D] Formamint [E] Paraldehyde

[1] ABC [2] ABE [3] ACD [4] ADE

Q.39 Which of the following will be in gaseous state, if room temperature is 25ºC :

[1] Actaldehyde [2] Butanone [3] Acetone [4] Formalin

Q.40 $[(CH_3)_2C=CH]_2$ C = O is :

[1] Ketone [2] Trimer of acetone [3] Unsaturated aldehyde [4] Dimer of acetone

Q.41 $>C=O + 2RSH \rightarrow >C(SR)_2 + H_2O$, the product is called :

[1] Mercaptan [2] Thioketal [3] Thiacetal [4] All

Q.42 Phenyl–hydrazone derivative of an aldehyde contains 20.9% Nitrogen. Then the Aldehyde is :

[1] Propionaldehyde [2] Butyraldehyde [3] Isobutyraldehyde [4] Acetaldehydes

Q.43 $C_6H_5CHO + PCl_5$, the product is :

[1] Benzyl chloride [2] Benzotrichloride [3] Benzal chloride [4] Triphenyl phosphate

Q.44 Benzaldehyde and formaldehyde give a common reaction :

[1] Cannizzaro's reaction [2] Benzoin condensation

[3] Claisen condensation [4] Perkin's reaction

Q.45 $C_6H_5CHO \xrightarrow{Cl_2} A + HCl$

The product A when reacts with the following compounds the reaction is known as Schotten Baumann reaction

[1] $C_6H_5NH_2$ [2] $C_6H_5CH_2OH$ [3] C_6H_5OH [4] All of these

Q.46 HCHO and C_6H_5CHO can be distinguished by :

[1] Fehling solution [2] Tollen's reagent [3] $KMnO_4$ [4] All of these

Q.47 Benzaldehyde is used in all except :

[1] In the manufature of perfuming agents [2] An an oxidising agent

[3] In the manufacture of dyes [4] In the manufacture of cosmetics

Q.48 Benzylidene acetone is the product of the reaction of an orgnaic compound (A) with acetone in the presence of ethanolic sodium hydroxide. The organic compounds (A) is :

[1] Benzylalcohol [2] Benzaldehyde [3] Benzoic acid [4] Acetophenone

Q.49 Which of the following is most stable :

[1] $C_6H_5COO^-$ [2] CH_3COO^- [3] C_6H_5COOH [4] CH_3COOH

Q.50 Replacement of carbonylic oxygen is observed in the reaction :

[1] $C_6H_5CHO/2H$ [2] $C_6H_5CHO/H_2N–NH_2$ [3] C_6H_5COOH/PCl_5 [4] C_6H_5CHO/HCN

Q.51 Use is made of the following reagent to convert benzaldehyde to benzoyl chloride :

[1] Phosphorus pentachloride

[2] Thionyl chloride

[3] Reaction with chlorine in presence of $AlCl_3$

[4] Reaction with Cl_2

Q.52 Benzyl phenyl ketone is :

[1] $C_6H_5COC_6H_5$ [2] $C_6H_5–CO–CO–C_6H_5$

[3] $C_6H_5CH_2–CO–C_6H_5$ [4] $C_6H_5CH_2–CO–CH_2–C_6H_5$

Q.53 The following compound is obtained on refluxing benzaldehyde with aqueous ethanolic potassium cyanide :

[1] Benzoic acid [2] Benzyl acetate [3] Cinnamic acid [4] Benzoin

Q.54 An organic compound contains 40% C and 6.66% H. Its empirical formula is :

[1] CH_2 [2] CH_2O [3] CHO [4] CHO_2

Q.55 Choose the wrong statement :

[1] Smell of benzaldehyde and mirbane oil is not different

[2] Benzaldehyde undergoes Tischenko reaction

[3] Benzaldehyde reduces Fehling's solution

[4] Dry distillation of calcium benzoate gives a ketonic compound

Q.56 Etard reaction in the following is :

[1] Oxidation of toluene to benzaldehyde by chromychloride

[2] Oxidation of toluene to benzaldehyde by alkaline $KMnO_4$

[3] Dry distillation of calcium benzoate

[4] Reaction of benzene with Cl_2 in the presence of ultra violet light

Q.57 Aromatic aldehydes react with primary amines to form the following :

[1] Urea [2] Amide [3] Schiff's base [4] Oxime

Q.58 Which aldehyde is used in the manufacture of perfumes :

[1] Cinnamaldehyde [2] Benzaldehyde [3] Propionaldehyde [4] Acryaldehyde

Answer Key

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	4	2	4	4	2	3	3	1	2	4	2	3	3	4	2	3	4	1	2	3
Qus.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	3	4	3	2	1	1	3	3	2	4	4	2	2	2	2	4	1	3	1	2
Qus.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58		
Ans.	2	4	3	1	4	1	2	2	1	2	4	3	4	2	3	1	3	2		

Exercise # 3

Q.1 In the presence of a dilute base C_6H_5CHO and CH_3CHO react together to give a product. The product is : **[MP PET 1994]**

[1] $C_6H_5CH_3$ [2] $C_6H_5CH_2CH_2OH$ [3] $C_6H_5CH_2OH$ [4] $C_6H_5CH=CHCHO$

Q.2 In the metal carbonyls of the general formual $M(CO)_x$, where M = metal and x = 4, then metals is bonded to: **[CBSE 1995]**

[1] Carbon and oxygen [2] Carbon [3] Oxygen [4] C≡O triple bond

Q.3 Oxidation of toluene with CrO_3 in the presence of $(CH_3CO)_2O$ gives a product 'A' which on treatment with aqueous NaOH produces : **[CBSE 1995]**

[1] C_6H_5CHO [2] $(C_6H_5CO)_2O$ [3] C_6H_5COONa [4] 2,4–diacetyl toluene

Q.4 The general order of reactivity of carbonyl compounds for nucleophilic addition reactions is : **[CBSE 1995]**

[1] $H_2C = O > RCHO > ArCHO > R_2C = O > Ar_2C = O$

[2] $ArCHO > Ar_2C = O > RCHO > R_2C = O > H_2C = O$

[3] $Ar_2C = O > R_2C = O > ArCHO > RCHO > H_2C = O$

[4] $H_2C = O > R_2C = O > Ar_2C = O > RCHO > ArCHO$

Q.5 What is/are the product(s) formed when an equimolar mixture of benzladehyde and formladehyde is heated with concentrated NaOH : **[IIT 1995]**

[1] $C_6H_5–CH_2–OH$ and H–COONa [2] $C_6H_5–COONa$ and $CH_3–OH$

[3] $C_6H_5–COOH$ and $CH_3–ONa$ [4] $C_6H_5–CH_2–COONa$

Q.6 The suitable reagent for the reduction of ketones to hydrocarbons is : **[Roorkee 1995]**

[1] Zn–Hg/HCl [2] HI [3] Red P [4] H_2SO_4

Q.7 Which of the following regents distinguishes between aldehyde and ketone : **[CPMT 1994, 97; MP PET 1995; MP PMT 1996; RPMT 1997; RPMT 1999]**

[1] Fehling soluion [2] H_2SO_4 solution [3] $NaHSO_3$ [4] NH_3

Q.8 Acetone is easily oxidized with : **[MP PET 1996]**

[1] Tollen's reagent [2] Fehling solution

[3] Acidic dichromate solution [4] Benedict's solution

Q.9 Which of the following does not give yellow precipitate with I_2 and NaOH **[MP PET 1996]**

[1] C_2H_5OH [2] CH_3CHO [3] CH_3COCH_3 [4] HCHO

Q.10 Dry distillation of the mixture of calcium formate and calcium acetate gives : **[MP PMT 1996]**

[1] Acetone [2] Acetaldehyde [3] Formaldehyde [4] Formic acid

Q.11 Reaction of acetaldehyde with HCN followed by hydrolysis gives a compound which shows : **[MP PET 1997]**

[1] Optical isomerism [2] Geometrical isomerism

[3] Metamerism [4] Tautomerism

Q.12 Formaldehyde when treated with KOH gives methanol and potassium formate. The reaction is knows as : **[MP PET 1997]**

[1] Perkin reaction [2] Claisen reaction [3] Cannizzaro reaction [4] Knoevenagel reaction

Q.13 Which of the following does not give yellow precipiate with NaOH + KI ? **[MP PMT 1997]**

[1] Acetone [2] Acetaldehyde [3] Benzaldehyde [4] Acetophenone

Q.14 Which one of the following reactions is a method for the conversion of a ketone into a hydrocarbon ? **[MP PET/PMT 1998]**

[1] Aldol condensation [2] Reimer–Tiemann reaction

[3] Cannizzaro reaction [4] Wolff–Kishner reduction

Q.15 Which of the following reagent reacts differently with HCHO, CH_3CHO and CH_3COCH_3 : **[MP PET 1999]**

[1] HCN [2] NH_2NH_2 [3] NH_2OH [4] NH_3

Q.16 Which of the following on reaction with NH_3 gives urinary antiseptic compound **[MP PMT 1999]**

[1] HCHO [2] CH_3CHO [3] C_6H_5CHO [4] $C_6H_5CH_2CHO$

Q.17 Bakelite is a polymer of : **[Delhi PMT 1996; MP PMT 2002]**

[1] HCHO + phenol [2] HCHO + aldehyde (acetaldehyde)

[3] Phenol + H_2SO_4 [4] HCHO + acetone

Q.18 Aldol condensation involving $CH_3CHO + CH_3CHO$ gives the product : **[Delhi PMT 1996]**

[1] $CH_3CHOHCH_2CHO$ [2] $CH_3COCH_2CH_3$ [3] $CH_3CH=CH_2$ [4] None of these

Q.19 The reaction : $C_6H_5CHO + CH_3CHO \rightarrow C_6H_5CH = CH–CHO$ is known as : **[BHU 1996]**

[1] Perkin's reaction [2] Claisen condensation

[3] Benzoin condenstaion [4] Cannizzaro's reaction

Q.20 Which one of the following gives iodoform test : **[AIIMS 1996]**

[1] Formaldehyde [2] Ethyl alcohol [3] Benzyl alcohol [4] Benzaldehyde

Q.21 Acetone is prepared by : **[RPMT 2002]**

[1] Oxidation of n–propyl alcohol [2] Pyrolysis of acetic acid

[3] Oxidation of acetaldehyde [4] Pyrolysis of calcium acetate

Q.22 Which of the following does not give brick red precipitate with Fehling solution : **[AIIMS 1996]**

[1] Acetone [2] Acetladehyde [3] Formalin [4] D–glucose

Q.23 Acetaldehyde and acetone can be distinguished by : **[AIIMS 1996; DEC 1999]**

[1] Molisch test [2] Bromoform test [3] Solubility in water [4] Tollen's test

Q.24 When CH_3COCH_3 reacts with Cl_2 and NaOH, which of the following is formed : **[CPMT 1996]**

[1] $CHCl_3$ [2] CCl_4 [3] CCl_2H_2 [4] CH_3Cl

Q.25 Which compound is soluble in H_2O : **[RPMT 1997]**

[1] HCHO [2] CH_3CHO [3] CH_3COCH_3 [4] All

Q.26 $CH_3CHO + CH_3MgBr \rightarrow$ Product $\xrightarrow{H_2O}$ A **[RPMT 1997]**

[1] Primary alcohol [2] Secondary alcohol [3] Tertiary alcohol [4] Ketone

Q.27 Among the following compounds, which will react with acetone to give a product containing > C = N – **[IIT 1998]**

[1] $C_6H_5NH_2$ [2] $(CH_3)_3N$ [4] $C_6H_5NHC_6H_5$ [4] None of these

Q.28 Which of the following will not undergo aldol condensation : **[IIT 1998]**

[1] Acetaldehyde [2] Propanaldehyde [3] Benzaldehyde [4] Trideuteroacetaldehyde

Q.29 Which of the following has the most acidic proton : **[Roorkee 1998]**

[1] CH_3COCH_3 [2] $(CH_3)_2C=CH_2$ [3] $CH_3COCH_2COCH_3$ [4] $(CH_3CO)_3CH$

Q.30 Which of the following compound will undergo self aldol condensation in the presence of cold dilute alkali : **[CBSE 1994]**

[1] C_6H_5CHO [2] CH_3CH_2CHO [3] $CH\equiv C-CHO$ [4] $CH_2=CH-CHO$

Q.31 Acetaldehyde cannot show : **[AIIMS 1997]**

[1] Iodoform test [2] Lucas test [3] Benedict's test [4] Tollen's test

Q.32 $CO + NaOH \rightarrow$: **[CPMT 1997]**

[1] HCOONa [2] $C_2H_2O_4$ [3] HCOOH [4] CH_3COOH

Q.33 Benzladehyde + NaOH $\rightarrow$ **[Pb. PMT 1999]**

[1] Benzyl alcohol [2] Benzoic alcohol [3] Hydrobenzamide [4] Cinnamic acid

Q.34 Ketones [$R-\underset{\underset{O}{\|}}{C}-R_1$] where R = R_1 = alkyl group.

It can be obtained in one step by : **[CBSE 1997]**

[1] Hydrolysis of esters [2] Oxidation of primary alcohol

[3] Oxidation of secondary alcohol [4] Reaction of acid halide with alcohols

Q.35 C_2H_5CHO and $(CH_3)_2CO$ can be distinugished by testing with : **[EAMCET 1998]**

[1] Phenyl hydrazine [2] Hydroxylamine [3] Fehling solution [4] Sodium bisulphite

Q.36 the oxidation of toluene to benzaldehyde by chromyl chloride is called : **[AIIMS 2000; JIPMER 2001]**

[1] Cannizzaro reaction [2] Wurtz reaction [3] Etard reaction [4] Reimer–Tiemann reaction

Q.37 Clemensen's reduction of ketones is carried out in : **[BHU 2000]**

[1] H_2 with Pd catalyst [2] Glycol with KOH

[3] $LiAlH_4$ in water [4] Zn–Hg with HCl

Q.38 $(CH_3)_2CO \xrightarrow[(HCl)]{NaCN} A \xrightarrow[\Delta]{H_3O^+} B$ in the above sequence of reactions A and B are : **[CPMT 2000]**

[1] $(CH_3)_2C(OH)CN$, $(CH_3)_2C(OH)COOH$ [2] $(CH_3)_2C(OH)CN$, $(CH_3)_2C(OH)_2$

[3] $(CH_3)_2C(OH)CN$, $(CH_3)_2CHCOOH$ [4] $(CH_3)_2C(OH)CN$, $(CH_3)_2C=O$

Q.39 Reduction of > C = O to CH_2 can be carried out with : **[DEC 2000]**

[1] Catalytic reduction [2] Na/C_2H_5OH

[3] Wolf–Kischner reduction [4] $LiAlH_4$

Q.40 From which of the following tertiary butyl alcohol is obtained by the action of methyl magnesium iodide : **[MP CET 2000]**

[1] HCHO [2] CH_3CHO [3] CH_3COCH_3 [4] CO_2

Q.41 Which of the following gives aldol condensation reaction : **[CPMT 2001]**

[1] C_6H_5OH [2] $C_6H_5-\overset{\overset{O}{\|}}{C}-C_6H_5$ [3] $CH_3CH_2-\overset{\overset{O}{\|}}{C}-CH_3$ [4] $(CH_3)_3C-\overset{\overset{O}{\|}}{C}-C_6H_5$

Q.42 The product formed by the reaction of chlorine with benzladehyde in the absence of a catalyst is : **[Tamil Nadu CET 2002]**

[1] Chlorobenzene [2] Benzyl chloride [3] Benzoyl chloride [4] o–Chlorobenzladehyde

Q.43 The products obtained via oxymercuration ($HgSO_4 + H_2SO_4$) of 1–butyne would be : **[IIT 1999]**

[1] $CH_3CH_2COCH_3$ [2] $CH_3CH_2CH_2CHO$

[3] $CH_3CH_2CHO + HCHO$ [4] $CH_3CH_2COOH + HCOOH$

Q.44 Formaldehyde reacts with ammonia to give urotropine. The formula of urotropine is : **[MP PMT 2003]**

[1] $(CH_2)_6N_4$ [2] $(CH_2)_4N_3$ [3] $(CH_2)_6N_6$ [4] $(CH_2)_3N_3$

Q.45 Cinnamic acid is formed when C_6H_5–CHO condenses with $(CH_3CO)_2O$ in presence of : **[Orissa Jee 2003]**

[1] Conc. H_2SO_4 [2] Sodium acetate [3] Sodium metal [4] Anhydrous $ZnCl_2$

Q.46 Reduction of aldehydes and ketones to hydrocarbon take place in the presence of : **[CPMT 2003]**

[1] Zn amalgam and HCl acid [2] $Pd/BaSO_4$

[3] Anhydrous $AlCl_3$ [4] Ni/Pt

Q.47 Benzaldehyde on reaction with acetophenone in the presence of sodium hydroxide solution gives : **[BVP 2003]**

[1] $C_6H_5CH=CHCOC_6H_5$ [2] $C_6H_5COCH_2C_6H_5$ [3] $C_6H_5CH=CHC_6H_5$ [4] $C_6H_5CH(OH)COC_6H_5$

Q.48 Product in following reaction is :

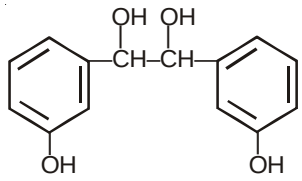
$CH_3MgI + HCHO \rightarrow$ Product : **[RPMT 2003]**

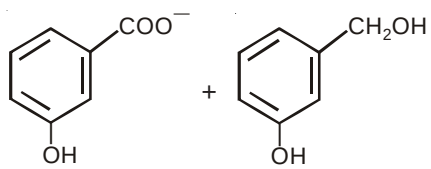
[1] CH_3CHO [2] CH_3OH [3] C_2H_5OH [4] $CH_3–O–CH_3$

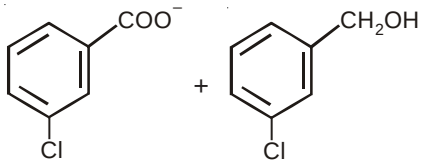
Q.49 $A \xrightarrow[800^oC]{\Delta} CH_2=C=O$, Reactant 'A' in the reaction is : **[RPMT 2003]**

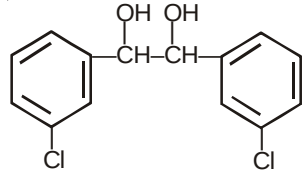
[1] CH_3CH_2CHO [2] CH_3CHO [3] $CH_3-\overset{\overset{O}{\|}}{C}-CH_3$ [4] C_2H_5OH

Q.50 When m–chlorobenzaldehyde is treated with 50% KOH solution, the products obtained is/are : **[CBSE 2003]**

[1] 

[2] 

[3] 

[4] 

Q.51 In the reaction :

$CH_3CHO + HCN \rightarrow CH_3CH(OH)CN \xrightarrow{H^+/OH^-} CH_3CH(OH)COOH)$

an asymmetric centre is generated. The acid obtained would be : **[CBSE 2003]**

[1] 20% D + 80% L–isomer [2] D–isomer

[3] L–isomer [4] 50% D + 50% L–isomer

Q.52 $CH_3COCH_2COOC_2H_5 \xrightarrow[H_2O]{NaOH}$ A [A] is **[CBSE 2003]**

[1] CH_3COOH [2] CH_3COCH_3 [3] C_2H_5CHO [4] None of these

Q.53 Which one of the following is reduced with zinc and hydrochloric acid to give the corresponding hydrocarbon? **[AIEEE 2004]**

[1] Butan-2-one [2] Acetic acid [3] Acetamide [4] Ethyl acetate

Q.54 Which one of the following undergoes reaction with 50% sodium hydroxide solution to give the corresponding alcohol and acid? **[AIEEE 2004]**

[1] Benzoic acid [2] Benzaldehyde [3] Butanal [4] Phenol

Q.55 Which one of the following aldehydes gives cannizaro reaction when heated with strong alkali ? **[VIEEE 2005]**

[1] Banzaldehyde [2] Propionaldehyde [3] Acetaldehyde [4] Butanal

Q.56 2-Butanone is best converted to propanoic acid by **[JEE(Scr.) 2005]**

[1] aq. $NaOH/NaI/H^+$ [2] aq. $NaOH/I_2/H^+$ [3] Tollen's reagent [4] Fehiling solution

Q.57 The increasing order of the rate of HCN addition to compounds A - D is - **[AIEEE 2006]**

[A] HCHO [B] CH_3COCH_3 [3] $PhCOCH_3$ [4] PhCOPh

[1] D < B < C < A [2] D < C < B < A [3] C < D < B < A [4] A < B < C < D

Q.58 A carbonyl compound reacts with hydrogen cyanide to form cyanohydrin which on hydrolysis forms a racemic mixture of α-hydroxy acid. The carbonyl compound is -? **[CPMT - 2006]**

[1] acetone [2] diethyl ketone [3] formaldehyde [4] acetaldehyde

Answer Key

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	4	2	3	1	1	1	1	3	4	2	1	3	3	4	4	1	1	1	2	2
Qus.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	4	1	4	1	4	2	1	3	4	2	2	1	1	3	3	3	4	1	3	3
Qus.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58		
Ans.	3	3	1	1	2	1	1	3	1	3	4	2	1	2	1	2	2	4		