

ORGANIC COMPOUND CONTAINING OXYGEN & AMINES

- Boiling point of p-nitro phenol is more than o-nitro phenol because
 - Inter molecular hydrogen bonding occurs in p-nitro phenol
 - inter molecular hydrogen bonding occurs in o-nitro phenol
 - intra molecular hydrogen bonding occurs in p-nitro phenol
 - all incorrect
- The product formed when phenol is heated with ammonia at 300°C in presence of zinc chloride dehydrating agent is
 - Aniline
 - benzamide
 - isocyanide
 - phenyl cyanide
- Conversion of Ketones into hydrocarbons by reduction is known as
 - Rosenmund reduction
 - Clemensen's reduction
 - dehydration
 - none
- When an aldehyde was heated with alkali part of it was converted into alcohol and part of it into an acid. The aldehyde is
 - An aliphatic aldehyde other than formaldehyde
 - an aliphatic aldehyde or salicylaldehyde
 - an aromatic aldehyde other than salicylaldehyde
 - an aromatic aldehyde or formaldehyde
- A compound containing only carbon, hydrogen and oxygen has a molecular mass of 44. On oxidation, it is converted into an acid with molecular mass 60. The original compound is
 - Aldehyde
 - alcohol
 - ether
 - acid
- An aldehyde can be obtained by dehydrogenation of
 - A primary alcohol using conc. Sulphuric acid
 - a primary alcohol using Ni
 - a primary alcohol using Cu catalyst
 - a secondary alcohol using Cu catalyst
- An organic acid was converted into its calcium salt and the dry salt was heated in a retort out of contact with air. If the product was acetone then the organic acid is
 - Formic acid
 - oxalic acid
 - lactic acid
 - acetic acid
- Aldehydes and ketones form addition products with
 - Phenyl hydrazine
 - Hydrazine
 - Semi-carbazide
 - HCN
- Phenol on exposure to air develops red colour due to
 - Air it to produce red phenanthroquinone
 - phenol is unstable
 - phenol is reduced to benzene by air
 - none of these
- Which of the following does not give acetyl chloride when treated with acetic acid,
 - SOCl_2
 - PCl_3
 - PCl_5
 - Cl_2
- Which of the following is food preservative,
 - acetic acid
 - salol
 - sodium benzoate
 - methyl salicylate
- A cyanohydrin of compound A on hydrolysis gives $\text{CH}_3\text{-CH(OH)-COOH}$. Then the compound A is
 - Formaldehyde
 - benzaldehyde
 - acetaldehyde
 - acetone
- In the series of reaction 'E' is
 - $\text{CH}_3\text{OH} \xrightarrow{\text{PCl}_5} \text{A} \xrightarrow{\text{alc.KCN}} \text{B} \xrightarrow{\text{hydrolysis}} \text{C} \xrightarrow{\text{Ca(OH)}_2} \text{D} \xrightarrow{\text{distillation}} \text{E}$
 - Acetaldehyde
 - acetic acid
 - acetone
 - methyl acetate
- Vinegar contains
 - 10 – 20% acetic acid
 - 8-10% acetic acid

- 3) 100% acetic acid 4) none
15. With respect to functional group phenol resembles
1) Aldehydes 2) ketones 3) ether 4) alcohol
16. Phenol is insoluble in
1) Ether 2) benzene 3) dil sodium hydroxide 4) dil HCL
17. Bakelite is obtained from phenol by treating with
1) Formaldehyde 2) benzaldehyde 3) acetaldehyde 4) chlorobenzene
18. Which of the below method is used to prepare aldehydes
1) Reaction of acid chloride with hydrogen in presence of Pd/BaSO₄
2) dehydrogenation of a sec. alcohol
3) treatment of Grignard reagent with CO₂ 4) acylation of benzene
19. Clemmenson's reduction of acetophenone yields
1) Ethyl benzene 2) phenyl benzene
3) phenyl methyl carbinol 4) dihydroxy benzene
20. Aldehyde and ketones differs in the reaction with
1) NaHSO₃ 2) forming oximes
3) Schiff's reagent 4) forming cyanohydrin
21. An aldehyde X reduces Tollen's reagent to silver mirror. But fails to restore red ppt. of Cu₂O with Fehling's solution. The compound 'X' is
1) Formaldehyde 2) propionaldehyde
3) benzaldehyde 4) crotonaldehyde
22. Which of the below compound will undergo both aldol condensation and Cannizzaro's reaction with alkali.
1) (CH₃)₂CHCHO 2) CH₃CHO
3) CH₃CH₂CHO 4) (CH₃)₃CCHO
23. The gas formed during the hydrolysis of nitrile is
1) CO₂ 2) CO 3) H₂ 4) NH₃
24. Increasing order of acidic strength of following monocarboxylic acid is
i) HCOOH, ii) CH₃COOH, iii) ClCH₂COOH, iv) NO₂CH₂COOH
1) i>ii>iii>iv 2) iv>iii>ii>i 3) ii<i<iii<iv 4) iv<iii<ii<i
25. The electrolysis product of sodium salt of fatty acid is
1) Alkane 2) alkene 3) alkyne 4) alcohol
26. An organic acid without carboxylic group is
1) Picric acid 2) oxalic acid 3) vinegar 4) tartaric acid
27. The reagent does not form acid chloride is
1) PCl₅ 2) PCl₃ 3) CCl₄ 4) SOCl₂
28. Which of the following does not give benzoic acid on hydrolysis
1) Phenyl cyanide 2) benzoyl chloride
3) benzyl chloride 4) methyl benzoate
29. Which acid cannot form hydrocarbon on decarboxylation
1) Cinnamic acid 2) benzoic acid 3) salicylic acid 4) acetic acid
30. When sodium benzene sulphonate is fused with NaOH, followed by acidification with HCl, the product formed is
1) Benzene sulphonylic acid 2) sodium phenate
3) phenol 4) chlorobenzene
31. The hydrogen atom of the phenolic group can be displaced
1) only by using metallic sodium
2) by using either metallic sodium or sodium hydroxide
3) by using sodium carbonate 4) by using sodium chloride
32. Which of the following undergoes nitration most readily?
1) Phenol 2) toluene 3) Nitrobenzene 4) benzaldehyde

33. The most convenient way to remove a phenolic group from a compound is to
 1) Reduce it using tin and HCl 2) Heat it strongly with copper
 3) Reduce it with stannous chloride 4) distil it with zinc dust
34. Aldehydes on oxidation give
 1) Alcohols 2) acids 3) ketones 4) esters
35. Ketones on reaction with NH_2 $\boxed{\text{CONH}}$ NH_2 form well defined compounds called
 1) Hydrazones 2) Schiff's base 3) Oximes 4) Semi carbazones
36. Acetaldehyde and formaldehyde differ in their reaction with
 1) Sodium bisulphite 2) ammonia
 3) Schiff's reagent 4) phenyl hydrazine
37. Dry distillation of calcium formate gives
 1) Formic acid 2) methanol 3) ethanal 4) acetone
38. Ammonia reacts with formaldehyde to form
 1) Urotropine 2) mesitylene 3) RDX 4) formaldehyde
39. Phenol on reaction with bromine water gives
 1) O-bromophenol 2) p- bromophenol
 3) 2, 4, 6 – tribromophenol 4) 2, 4 - dibromophenol
40. Alkyl halide is boiled with alcoholic ammonia in 1:1 ratio, the product is
 1) An amide 2) Grignard reagent 3) an amine 4) an alcohol
41. Alkyl halide is converted into alkyl cyanide by using
 1) Alcoholic KCN 2) alcoholic AgCN
 3) HCN 4) alcoholic ammonia
42. The IUPAC name of isopropyl amine is
 1) Dimethyl amine 2) propane-2-amine
 3) N-methyl ethanamine 4) ethyl methyl amine
43. Propanoic acid is heated with ammonia. The product formed is subjected to Hoffmann's
 1) Propanamine 2) ethanamine 3) 2-propanamine 4) methanamine
44. The amine which does not undergo Hoffmann's bromamide degradation is
 1) Acetamide 2) benzamide 3) propionamide 4) formamide
45. The one which does not liberate nitrogen gas is with nitrous acid is
 1) Ethanamine 2) methanamine 3) propanamine 4) aniline
46. An organic compound liberates nitrogen gas with HNO_2 & a foul smelling poisonous gas with chloroform and alkali. The organic compound is
 1) An aliphatic primary amine 2) a sec. amine
 3) a ter. Amine 4) an aromatic primary amine
47. Which of the following is weakest acid
 1) p. nitrophenol 2) p.chloro phenol 3) 2,4-dinitro phenol 4) 2,4,6-trinitro phenol
48. The carbonyl carbon is hybridized in carbonyl compounds
 1) sp^3 2) sp 3) sp^2 4) dsp^2
49. Cannizzaro's reaction is not answered by
 1) acetaldehyde 2) trimethyl acetaldehyde 3) formaldehyde 4) salicylaldehyde
50. The reagent which can distinguish formic acid from acetic acid is
 1) PbCl_2 2) ammoniacal silver nitrate 3) I_2/NaOH 4) NaOH