

1. Why are aldehydes more reactive than Ketones ?
2. Why carboxylic acids do not give the characteristic reactions of carbonyl group ?
3. Predict the products when but-1-yne is subjected to (i) hydroboration oxidation and (ii) hydration in presence of Hg^{2+} and dil. H_2SO_4
4. $\text{CH}_3-\text{C}-\text{OH}$ A, A B Identify A and B.
5. An organic compound (A) with molecular formula, $\text{C}_8\text{H}_8\text{O}$ forms an orange-red precipitate with 2,4-DNP reagent and gives yellow precipitate on heating with iodine in the presence of sodium hydroxide. It neither reduces Tollens' or Fehling's reagent, nor does it decolourise bromine water or Baeyer's reagent. On drastic oxidation with chromic acid, it gives a carboxylic acid (B) having molecular formula, $\text{C}_7\text{H}_7\text{O}_2$. Identify the compounds (A) and (B) and explain the reactions involved.
6. Give the IUPAC names of : (i) Diacetone alcohol (ii) Crotonaldehyde.
7. Suggest a reason for the large difference in the boiling points of butanol and butanal, although they have the same solubility in water.
8. Arrange the following in order of their increasing reactivity towards HCN :
 CH_3CHO , CH_3COCH_3 , HCHO , $\text{C}_2\text{H}_5\text{COCH}_3$
9. Give the chemical reaction, when ethanol is heated with hydrogen iodide and red phosphorous under high pressure.
10. Write the IUPAC of the following : $(\text{CH}_3)_2\text{C}=\text{CHCOCH}_3$
11. How is acetone obtained from ethanol ?
12. Out of acetophenone and benzophenone, which gives iodoform test ? Write the reaction involved.
13. Write the structural formulae of the following compounds :
(i) 3-Bromo-4-phenylpentanoic acid.
(ii) Hex-2-en-4-ynoic acid.
14. What is vinegar ?
15. Mention a chemical property in which methanoic acid differs from acetic acid.

16. Why HCOOH does not give HVZ reaction but CH₃COOH does ?

17. Give the IUPAC name of the following compound :



18. Write giving chemical equations, a brief account of the following :

(i) Aldol condensation

(ii) Cannizzaro reaction

(iii) Wolff Kishner reduction

(iv) Rosenmund's reduction

(v) Tollens' reagent

(vi) Gattermann – Koch reaction

(vii) Cross aldol condensation

19. Complete the following equations and name the products formed :

(i) HCHO + NH₃

(ii) CH₃COCH₃ + CH₃MgBr product

(iii) CH₃CHO

(iv) HC ≡ CH + HO₂

(v) HCHO

(vi) CH₃CHO + (CH₂OH)₂ ☐

(vii) C₆H₅COCH₃ + I₂ + NaOH

(viii) C₆H₅CHO + KOH (conc.)

(ix) C₆H₅COCH₃

(x) (CH₃)₂CO

(xi) C₆H₆ + RCOCl

Expert's Academy , 85/1,Guru Govind Singh Marg, Opp. Rojgar Bhawan,Lalkuan
Road,Lucknow.Ph.4078294,3294605

393,Ramdas ki Bagia , Behind Traffic Police Office , Sadar, Lucknow. Ph. 2483707 9984444476

Expert's Academy , 85/1,Guru Govind Singh Marg, Opp. Rojgar Bhawan,Lalkuan
Road,Lucknow.Ph.4078294,3294605

393,Ramdas ki Bagia , Behind Traffic Police Office , Sadar, Lucknow. Ph. 2483707 9984444476