

CBSE Class 12 Chemistry Chapter 12 Aldehydes, Ketones, and Carboxylic Acids Worksheet – Set 2

Q1. Fehling solution test is used in the determination of

- (a) Ketonic group
- (b) Alcoholic group
- (c) Aldehydic group
- (d) All of the above

Q2. Name a reagent that can be used to test acetaldehyde and acetone.

- (a) Grignard reagent
- (b) Tollen's reagent
- (c) Fehling's solution
- (d) All of the above

Q3. An aldehyde on oxidation gives

- (a) An alcohol
- (b) A ketone
- (c) A carboxylic acid
- (d) None of the above

Q4. A ketone on reduction gives

- (a) Primary alcohol
- (b) Secondary alcohol
- (c) Tertiary alcohol
- (d) None of the above

Q5. Which of the following compound can be oxidised to prepare ethyl methyl ketone?

- (a) Tertiary butyl alcohol
- (b) Butanal
- (c) Ethoxy methane
- (d) None of the above

Q6. Deduce the structure of 3-oxo pentanal.

Q7. What is the IUPAC name of $\text{C}_6\text{H}_5 - \text{CH} = \text{CH} - \text{CHO}$.

Q8. How will you distinguish between benzoic acid and ethyl benzoate?

- Q9.** Why do carboxylic acids not give distinctive reactions to the carbonyl group?
- Q10.** Why is propanal more reactive than propanone in nucleophilic addition reactions?
- Q11.** How will you distinguish between pentan-2-one and pentan-3-one?
- Q12.** Why is carboxylic acid has a higher boiling point than aldehyde, ketone and alcohol?
- Q13.** What is etard reaction?
- Q14.** Why is 4-nitrobenzoic acid more acidic than benzoic acid?
- Q15.** Why is acetaldehyde more reactive than methoxy methane towards hydrogen cyanide?
- Q16.** Draw the structure of the semicarbazone of ethanal.
- Q17.** Molecules A and B are the two functional isomers of compound C_3H_6O . On heating with sodium hydroxide and iodine, isomer B forms a yellow iodoform precipitate, whereas isomer A does not form any yellow iodoform precipitate. Write the chemical formulae of molecules A and B.
- Q18.** How will you distinguish between benzaldehyde and benzoic acid?
- Q19.** Why electrophilic substitution in benzoic acid occurs at the meta position?
- Q20.** (a) Write down functional isomers of a carbonyl compound with molecular formula C_3H_6O .
(b) Which isomer of C_3H_6O will give a fast reaction with HCN? Give a reason for your answer.
(c) What will affect the product's concentration if a potent acid is added to the reaction mixture?