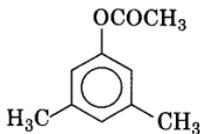




## CARBONYL COMPOUNDS ONE MARK QUESTIONS

### Class 12 - Chemistry

1. Name the following compound according to IUPAC system of nomenclature. [1]  
 $\text{CH}_3\text{COCH}_2\text{COCH}_3$
2. Write IUPAC name of - [1]  

3. Predict the products of the following reactions: [1]
  - i.  $\text{CH}_3\text{CH}_2\text{OH} \xrightarrow{\text{Cu}/273\text{ K}}$
  - ii.  $\text{C}_6\text{H}_5\text{OH} \xrightarrow{\text{Br}_2(\text{aq})}$
4. What happens when [1]
  - a. Acetone is treated with  $\text{Zn}(\text{Hg}) / \text{Conc. HCl}$ , and
  - b. Ethanal is treated with methylmagnesium bromide and then hydrolysed?
5. Name the following compound according to IUPAC system of nomenclature. [1]  
 $\text{CH}_3\text{CH}_2\text{COCH}(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}_2\text{Cl}$
6. Write the IUPAC name of the compound. [1]  
 $\text{CH}_3 - \underset{\text{OH}}{\underset{|}{\text{C}}} - \text{H} - \text{CH}_2 - \text{COOH}$
7. Write the IUPAC name of the following: [1]  
 $\text{CH}_3 - \underset{\text{OH}}{\underset{|}{\overset{\text{CH}_3}{\text{C}}}} - \text{CH}_2\text{COCH}_3$
8.  $(\text{CH}_3)_3\text{C-CHO}$  does not undergo aldol condensation. Comment. [1]
9. Name the following compound according to IUPAC system of nomenclature. [1]  
 $\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}_2\text{C}(\text{CH}_3)_2\text{COCH}_3$
10. Give the IUPAC name of the following compound: [1]  
 $(\text{CH}_3)_2\text{C}=\text{CHCOOH}$
11. Write the name of [1]  
 $\text{CH}_3 - \underset{\text{O}}{\underset{||}{\text{C}}} - \text{CH} = \underset{\text{CH}_3}{\underset{|}{\text{C}}} - \text{CH}_3$
12. Write the IUPAC name of the following: [1]  
 $(\text{CH}_3)_2\text{CH} - \text{CH}_2 - \underset{\text{O}}{\underset{||}{\text{C}}} - \text{CH}(\text{CH}_3)_2$
13. Draw the structure of product formed when propanal is treated with zinc amalgam and concentrated [1]

hydrochloric acid.

14. Arrange the following in increasing order of their boiling point: [1]



15. An aromatic organic compound **A** with molecular formula  $\text{C}_8\text{H}_8\text{O}$  gives positive DNP and iodoform tests. It neither reduces Tollens' reagent nor does it decolourize bromine water. Write the structure of **A**. [1]

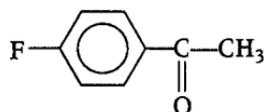
16. a.  $\text{CH}_3 - \underset{\text{OH}}{\text{CH}} - \text{CH}_3 \xrightarrow{\text{PCl}_5} \text{'A'} \xrightarrow{\text{AgCN}} \text{'B'}$  [1]



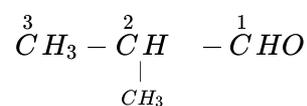
Identify **A** and **B** in the above reactions.

17. Out of  $\text{CH}_3\text{CH}_2\text{COCH}_2\text{CH}_3$  and  $\text{CH}_3\text{CH}_2\text{CH}_2\text{COCH}_3$  which gives iodoform test. [1]

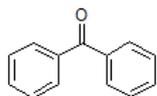
18. Write IUPAC name of [1]



19. Write the IUPAC name of the following compound: [1]



20. Write the IUPAC name of the following ketone. If possible, give also common name. [1]



21.  $\text{CH}_3\text{CHO}$  is more reactive than  $\text{CH}_3\text{COCH}_3$  towards reaction with HCN. Why? [1]

22. Predict the products formed when cyclohexanecarbaldehyde reacts with Tollens reagent. [1]

23. Write structural formula of 1-phenyl pentan-1-one. [1]

24. Write one stereochemical difference between  $\text{S}_{\text{N}}1$  and  $\text{S}_{\text{N}}2$  reactions. [1]

25. What happens when [1]

- Butanone is treated with methylmagnesium bromide and then hydrolysed, and
- Sodium benzoate is heated with soda lime?

26. Write the chemical equations when: [1]

- Ethanal is treated with 2,4-dinitrophenylhydrazine?
- Propanone is treated with  $\text{Zn(Hg)}$  and conc. HCl?

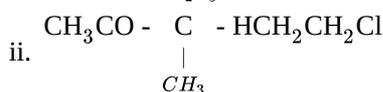
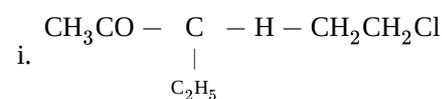
27. Write the IUPAC name of the following ketones and aldehyde. If possible, give also common name. [1]



28. Write the chemical equation when: [1]

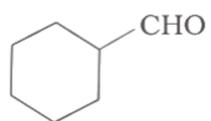
- Butan-2-one is treated with  $\text{Zn(Hg)}$  and conc. HCl.
- Two molecules of benzaldehyde are treated with conc. NaOH.

29. Give IUPAC names of following: [1]



30. Give the IUPAC name of the compound:

[1]



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