

1. Which functional group, when attached to a chain of carbon atoms, will produce an organic molecule with the characteristic properties of an aldehyde?

- A) $\begin{array}{c} \text{O} \\ || \\ -\text{C}-\text{OH} \end{array}$ B) $\begin{array}{c} \text{O} \\ || \\ -\text{C}-\text{H} \end{array}$
 C) $\begin{array}{c} \text{O} \\ || \\ -\text{C}- \end{array}$ D) $-\text{OH}$

2. The general formula for aldehydes is

- A) $\begin{array}{c} \text{O} \\ || \\ \text{R}-\text{C}-\text{H} \end{array}$ B) $\begin{array}{c} \text{O} \\ || \\ \text{R}-\text{C}-\text{OH} \end{array}$
 C) $\begin{array}{c} \text{O} \\ || \\ \text{R}_1-\text{C}-\text{R}_2 \end{array}$ D) $\text{R}_1-\text{O}-\text{R}_2$

3. The IUPAC name of an aldehyde has the ending

- A) -ol B) -al C) -oate D) -oic

4. Which is the structural formula of an aldehyde?

- A) $\begin{array}{c} \text{H} \\ | \\ \text{H}-\text{C}-\text{OH} \\ | \\ \text{H} \end{array}$ B) $\begin{array}{c} \text{O} \\ // \\ \text{H}-\text{C} \\ \backslash \\ \text{OH} \end{array}$
 C) $\begin{array}{c} \text{O} \\ // \\ \text{H}-\text{C} \\ \backslash \\ \text{H} \end{array}$ D) $\begin{array}{c} \text{H} & & \text{H} \\ | & & | \\ \text{H}-\text{C}-\text{O}-\text{C}-\text{H} \\ | & & | \\ \text{H} & & \text{H} \end{array}$

5. Which is the common name for the organic compound whose IUPAC name is methanal?

- A) formaldehyde B) acetaldehyde
 C) formic acid D) acetic acid

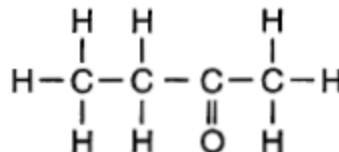
6. Which structural formula represents an aldehyde?

- A) $\begin{array}{c} \text{H} & \text{O} \\ | & || \\ \text{H}-\text{C}-\text{C}-\text{OH} \\ | \\ \text{H} \end{array}$ B) $\begin{array}{c} \text{H} & \text{H} & \text{H} \\ | & | & | \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{H} \\ | & | & | \\ \text{H} & \text{H} & \text{H} \end{array}$
 C) $\begin{array}{c} \text{H} & \text{O} \\ | & || \\ \text{H}-\text{C}-\text{C}-\text{H} \\ | \\ \text{H} \end{array}$ D) $\begin{array}{c} \text{H} & \text{H} \\ | & | \\ \text{H}-\text{C}-\text{C}-\text{OH} \\ | & | \\ \text{H} & \text{H} \end{array}$

7. Methanal is the IUPAC name for an

- A) aldehyde B) alcohol
 C) acid D) ether

8. Given the formula for a compound:



A chemical name for this compound is

- A) butanal B) butanol
 C) butanone D) butanoic acid

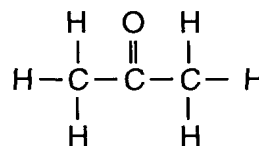
9. Which formula represents a ketone?

- A) HCOOH B) HCHO
 C) CH_3COCH_3 D) $\text{CH}_3\text{CH}_2\text{OH}$

10. An example of a ketone is

- A) propanone B) propane
 C) propanal D) propanol

11. What is the name of the compound with the following formula?

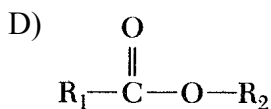
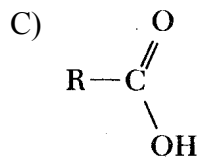
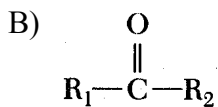
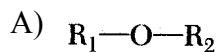


- A) propanone B) propanol
 C) propanal D) propanoic acid

12. Which structural formula represents a ketone?

- A) $\begin{array}{c} \text{H} & \text{H} \\ | & | \\ \text{H}-\text{C}-\text{C}=\text{O} \\ | \\ \text{H} \end{array}$ B) $\begin{array}{c} \text{H} \\ | \\ \text{H}-\text{C}-\text{C}=\text{O} \\ | & | \\ \text{H} & \text{OH} \end{array}$
 C) $\begin{array}{c} \text{H} & \text{O} & \text{H} \\ | & || & | \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{H} \\ | & & | \\ \text{H} & & \text{H} \end{array}$ D) $\begin{array}{c} \text{H} & \text{O} & & \text{H} \\ | & || & & | \\ \text{H}-\text{C}-\text{C}-\text{O}-\text{C}-\text{H} \\ | & & & | \\ \text{H} & & & \text{H} \end{array}$

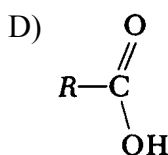
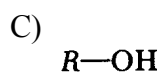
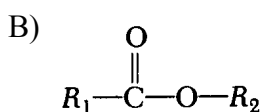
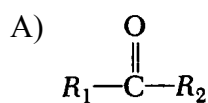
13. Which is the general formula for a ketone?



14. What is the minimum number of carbon atoms a ketone may contain?

- A) 1 B) 2 C) 3 D) 4

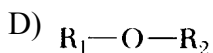
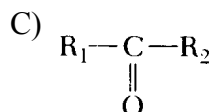
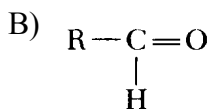
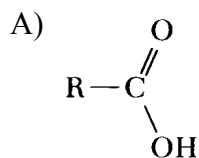
15. Which general formula represents a ketone?



16. Which atom is bonded to the carbon atom in the functional group of a ketone?

- A) fluorine B) hydrogen
C) nitrogen D) oxygen

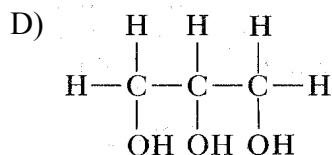
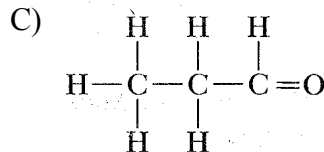
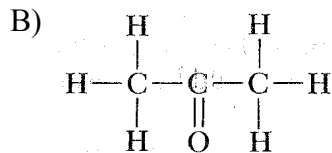
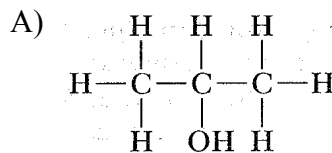
17. Which general formula represents a ketone?



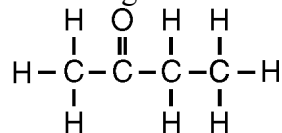
18. Which formula represents a ketone?

- A) CH_3COCH_3 B) $C_2H_5COOCH_3$
C) C_2H_5COOH D) CH_3CHO

19. Which is the structural formula for propanone (acetone)?



20. What is the IUPAC name of the compound with the following structural formula?



- A) propanone B) propanal
C) butanone D) butanal