

## CLASSIFICATION

1. The hybrid state of C-atoms which are attached to a single bond with each other in the following structure are :  $\text{CH}_2=\text{CH}-\text{C}\equiv\text{CH}$

(1)  $\text{sp}^2$ ,  $\text{sp}$

(2)  $\text{sp}^3$ ,  $\text{sp}$

(3)  $\text{sp}^2$ ,  $\text{sp}^2$

(4)  $\text{sp}^2$ ,  $\text{sp}^3$

2. Which of the following is an example of symmetrical or simple ether :

(1)  $\text{CH}_3-\text{C}(=\text{O})-\text{CH}_3$

(2)  $\text{CH}_3-\text{O}-\text{CH}_2-\text{CH}_3$

(3)  $\text{CH}_3-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{CH}_3$

(4)  $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{O}-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_3$

3. The higher homologue of dimethylamine ( $\text{CH}_3-\text{NH}-\text{CH}_3$ ) has the structure :-

(1)  $\text{CH}_3-\underset{\text{CH}_3}{\text{N}}-\text{CH}_3$

(2)  $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{NH}_2$

(3)  $\text{CH}_3-\text{NH}-\text{CH}_2-\text{CH}_3$

(4)  $\text{CH}_3-\underset{\text{NH}_2}{\text{CH}}-\text{CH}_3$

4. Which of the following are tertiary radicals :-

(a)  $\text{CH}_3-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-$

(b)  $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-$

(c)  $\text{CH}_3-\underset{|}{\overset{\text{CH}_3}{\text{C}}}-\text{C}_2\text{H}_5$

(d)  $\text{CH}_3-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\text{CH}_2-$

(1) a and b

(2) b and c

(3) a and c

(4) b and d

## IUPAC NAME

5. The IUPAC name for isobutyl chloride is :-

(1) 2-Methyl-2-chloro butane

(2) 2-Chloro-2-methyl butane

(3) 1-Chloro-2-methyl propane

(4) 2-Methyl-3-chloro propane

6. Write the IUPAC names of following compounds :

(i)  $\overset{5}{\text{CH}_3}-\overset{4}{\text{CH}_2}-\overset{3}{\underset{\text{CH}_3}{\text{CH}}}-\overset{2}{\underset{\text{CH}_3}{\text{C}}}-\overset{1}{\text{CH}_3}$

(ii)  $\text{CH}_3-\text{CH}_2-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2-\underset{\text{CH}_2-\text{CH}_3}{\text{CH}}-\text{CH}_2-\text{CH}_2-\text{CH}_3$

(iii)  $\text{CH}_3-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\text{CH}_2-\underset{\text{CH}_3}{\overset{\text{CH}_2-\text{CH}_3}{\text{CH}}}-\text{CH}_2-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_3$

(iv)

(v)

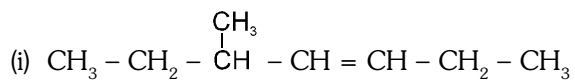
(vi)

(vii)

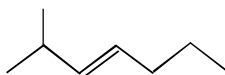
(xiii)

(ix)

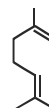
7. Write the IUPAC name of the following compounds:-



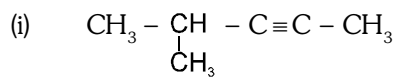
(ii)



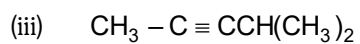
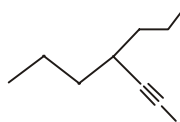
(iii)



8. Write the IUPAC name of the following compounds:-



(ii)



(iv)

