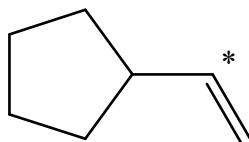


**Chem. 106 Exam
Model A**

1. Hybridization of the C* marked is:



- a) sp^3 b) sp^2 c) sp d) s
-

2. Which of the following compounds contain secondary C-atom?

- a) CH_4 b) $CH_3 - \underset{\text{CH}_3}{\text{CH}} - CH_3$ c) $CH_3 - CH_3$ d) $CH_3 - CH_2 - CH_3$
-

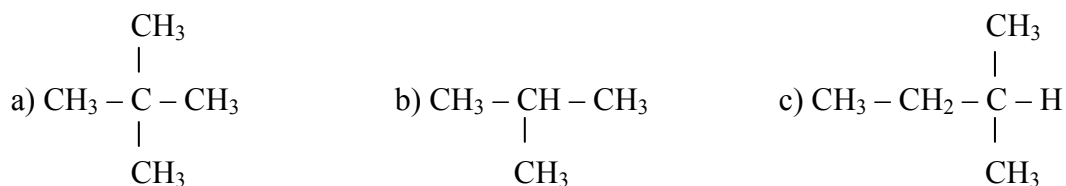
3. The bond length between C=C in this structure $CH_3CH=CHCH_3$ is:

- a) 1.34 Å b) 1.92 Å
c) 2.5 Å d) 1.50 Å
-

4. Which of the following compounds is isomer of 1-Pentene ?



5. Which of the following compounds is neopentane?



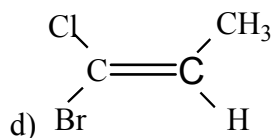
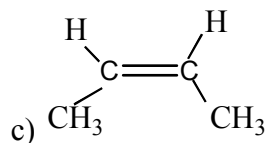
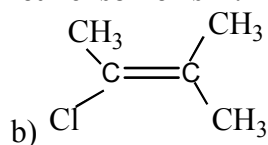
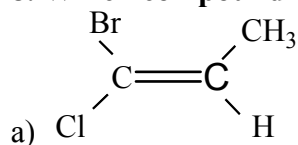
6. Allyl group is :

- a) $CH_3 - CH_2 -$ b) $CH_2 = CH - CH_2 -$ c) $CH_3 - CH_2 - CH_2 - CH_3$ d) $CH_3 - CH_2 - CH_3$
-

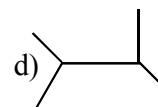
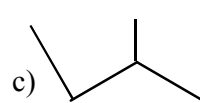
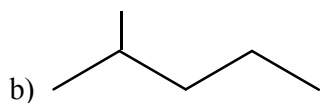
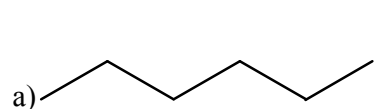
7. Which of the following alkenes exist as geometrical isomers (cis /trans)?

- a) $(CH_3)_2C = CH - CH_3$ b) $CH_2 = CH - CH_3$ c) $\begin{matrix} C_2H_5 \\ | \\ C = CH - CH_2 - CH_3 \\ | \\ C_2H_5 \end{matrix}$ d) $CH_3CH = CHCH_3$
-

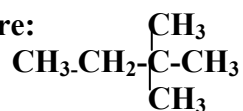
8. Which compound exists in (E) form from geometric isomerism?



9. Which of the following compounds will show highest boiling point ?



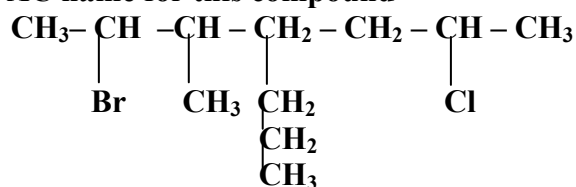
10. Choose the IUPAC name for the following structure:



- a) 2-Ethyl-2-methylbutane
c) 2,2-Dimethylbutane

- b) 3-Ethyl-3-methylbutane
d) 1-Ethyl 1,1-dimethylpropane

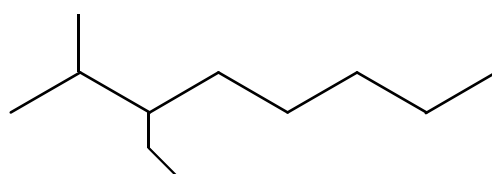
11. The IUPAC name for this compound



is :

- a) 2-Bromo-3-methyl-4-pentyl-6-Chloroheptane
b) 6-Bromo-2-chloro-5-methyl-4-pentylheptane
c) 2-Bromo-6-chloro-3-methyl-4-propylheptane
d) 2-Chloro-4-pentyl-5-methyl-6-bromoheptane

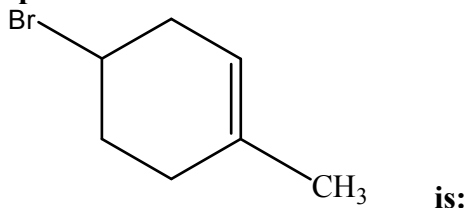
12. The name of this compound



is:

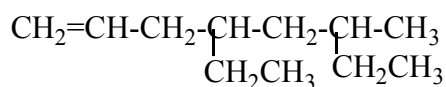
- a) 3-Iso-propyl-2-methyloctane
b) 2-Ethyl-3-isopropyloctane
c) 2-methyl-3-isopropyloctane
d) none of the above

13. The name of the following compound



- a) 4-Bromo-1-Methylcyclohexene b) 1-Methyl-4-bromocyclohexane
c) 2-methyl-3-bromohexane d) 5-Bromo-2-Methylcyclohexene
-

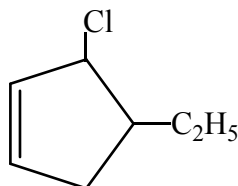
14. The IUPAC name of the following compound



is:

- a) 4-Ethyl -6-methyl-1-octene
b) 4,6-Diethylheptene
c) 2,4-Diethylheptane
d) 3-methyl 5-ethyloctene
-

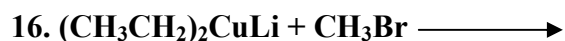
15. The IUPAC name of the following compound



is:

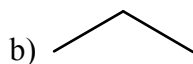
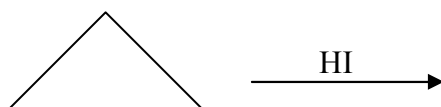
- a) 1-Chloro-5-ethyl-2-cyclohexene
b) 1-Chloro-3-ethylcyclopentene
c) 3-Chloro-4-ethylcyclopentene
d) 1-Ethyl-3-chloro-pentene.
-

Choose the major product from each equation:

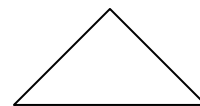


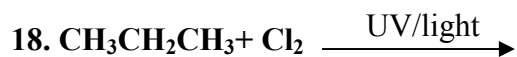
- a) $\text{CH}_3\text{CH}_2\text{CH}_3$ b) $(\text{CH}_3\text{CH}_2)_2\text{CHCH}_3$ c) $\text{CH}_3\text{CH}_2\text{CH}_2\text{Br}$ d) $(\text{CH}_3\text{CH}_2)_2\text{CHCH}_2\text{Br}$
-

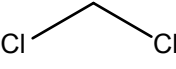
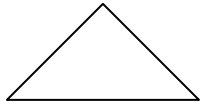
17.



d)

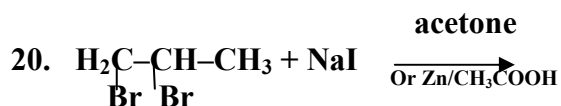




- a) $\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl}$ b) $\text{CH}_3\underset{\text{Cl}}{\text{CH}}\text{CH}_3$ c)  d) 

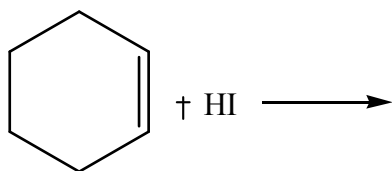


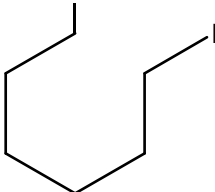
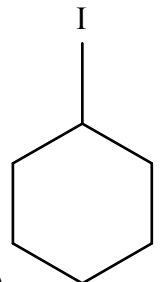
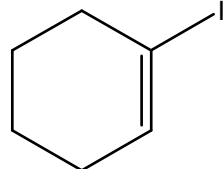
- a) $\text{CH}_2 = \text{CH}_2$ b) $\text{CH}_3 - \text{CH}_3$ c) $\text{CH}_2\text{OH} - \text{CH}_2\text{OH}$ d) $\text{CH}_3 - \text{CH}_2\text{OH}$



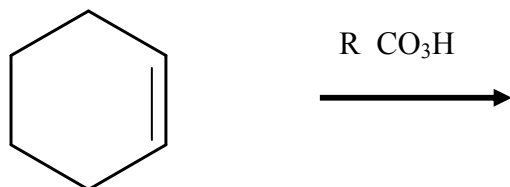
- a) $\text{H}_3\text{C}-\text{CH}=\text{CH}_2$ b) $\text{CH}_3\text{CH}_2\text{NaBr}$ c) $\text{H}_3\text{C}-\text{CH}=\text{CH Br}$ d) $\text{H}_3\text{C}-\text{CBr}=\text{CH}_2$

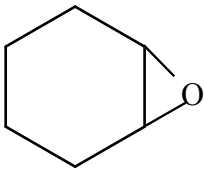
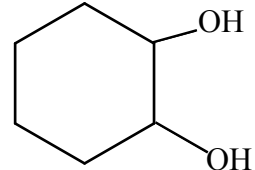
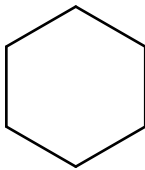
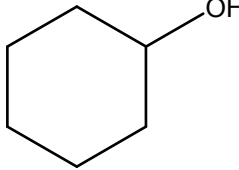
21.



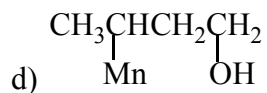
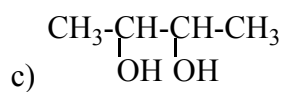
- a)  b)  c)  d) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$

22.

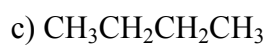
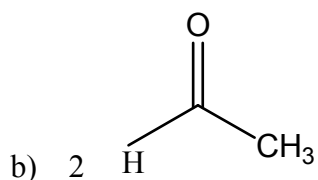
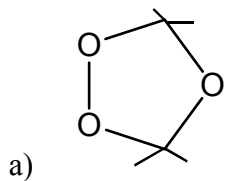
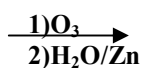


- a)  b)  c)  d) 

23.



24. $\text{CH}_3\text{CH}=\text{CHCH}_3$



25.

