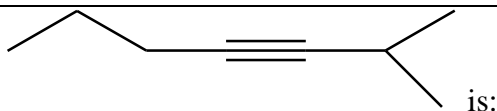


Name: ----- St. No. (-----)

Group NO. (-----) Serial No.(-----)

I) Choose the correct answer for the following:



1- The common name for

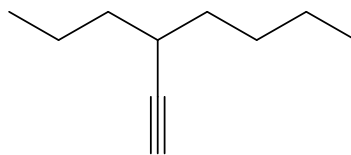
a) 6-Methyl-4-heptyne .

c) 2-Methyl-3-heptyne.

is:

b) Isopropylpropylacetylene.

d) Propylisopropylacetylene.



2- The IUPAC name for this compound

a) 3-Butylhexyne.

c) 3-Propyl-1-heptyne.

is:

b) 4-Acetyleneoctane.

d) Octylacetylene.

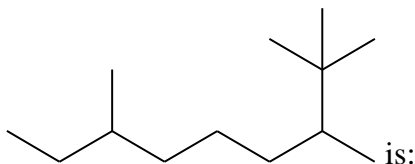
3- The IUPAC name for $(\text{CH}_3)_2\text{CHCH}(\text{CH}_3)\text{CH}_2\text{CH}=\text{CH}_2$ is :

a) 4,5,5-Trimethyl-1-pentene.

c) 2,3-Dimethyl-5-hexene.

b) 4-Methyl-4-isopropyl-1-butene.

d) 4,5-Dimethyl-1-hexene.



4- The IUPAC name for

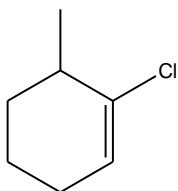
a) 3,7,8,8-Tetramethylnonane.

c) 2,2,3,7-Tetramethylnonane.

is:

b) 2-tert.Butyl-5-methyloctane.

d) 5-Methyl-2-tert.butyloctane



5- The IUPAC name for

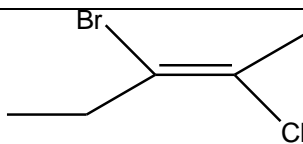
is:

a) 2-Chloro-3-methylcyclohexene.

b) 2-Chloro-3-methyl-2-cyclohexene.

c) 1-Chloro-6-methylcyclohexene.

d) 1-Chloro-6-methyl-2-cyclohexene.



6- The IUPAC name for

is:

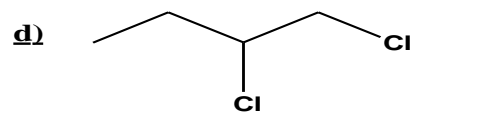
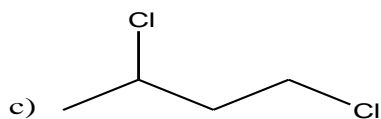
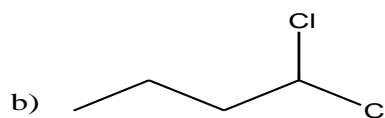
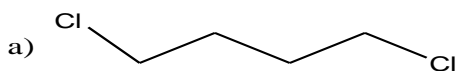
a) E-1-Bromo-2-chloro-1-ethylpropene.

b) E-3-Bromo-2-chloro-2-pentene.

c) Z-3-Bromo-2-chloro-2-pentene.

d) Z-1-Bromo-2-chloro-1-ethylpropene

7- Which compound is a likely product from addition of Cl_2 to 1-butene?



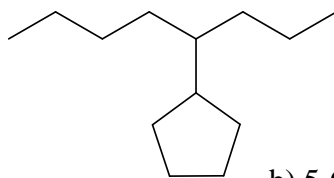
8- Which reaction conditions would best convert 2-pentyne to *trans*-2-pentene?

a) Pt catalyst and H_2 .

b) $\text{Pd}(\text{BaSO}_4)$ catalyst and H_2 .

c) Li in liquid NH_3 and H_2 .

d) LiAlH_4 in dry ether.



9- The IUPAC name for

is:

a) 4-Octylcyclopentane.

b) 5-Cyclopentyl-octane.

c) 4-Cyclopentyl-octane.

d) 1-Cyclopentyl-1-propylbutane.

10- What is the IUPAC name for $\text{CH}_3\text{CH}_2\text{C}(\text{CH}_3)_2\text{CH}_2\text{CH}(\text{CH}_3)_2$?

a) 2,4,4-Trimethylhexane.

b) 2,2,5-Trimethylhexane.

c) 1,1,3,3-Tetramethylpentane.

d) 3,3,5-Trimethylhexane.

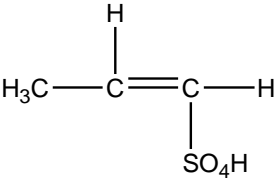
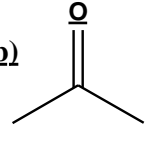
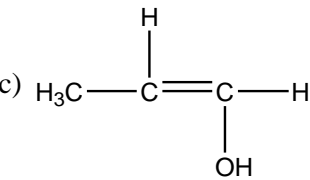
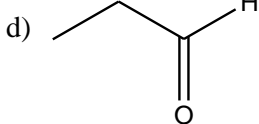
II) State whether the following statements are true or false

- 3-Hexene can show geometrical isomerism while 2-methyl-2-butene cannot. **(T)** (F).
- Boiling point of 3,3-Dimethyloctane is higher than decane. (T) **(F)**.
- Hydrohalogenation of 4-Methyl-1-hexene with HCl will produce 2-chloro -4-methylhexane. **(T)** (F).
- The hybridization of all carbon atoms in Butene is sp^2 (T) **(F)**.
- The sigma bond between hydrogen and carbon atoms in acetylene is made by overlap of sp^2 hybridized orbital of a carbon atom with 1S orbital of hydrogen atom. (T) **(F)**.

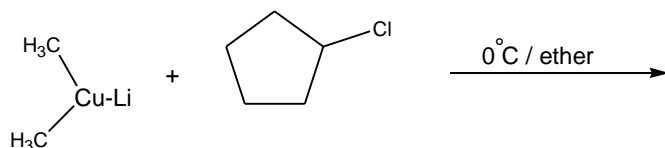
III) Choose the correct and the major product for the following reactions:

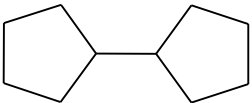
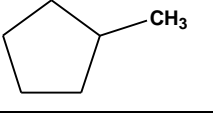
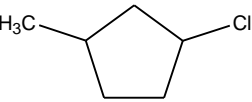
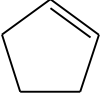
1-



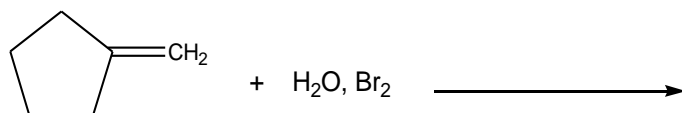
- a)  b)  c)  d) 

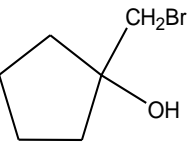
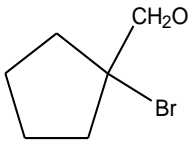
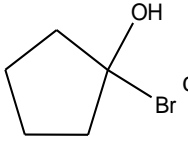
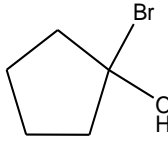
2-



- a)  b)  c)  d) 

3-



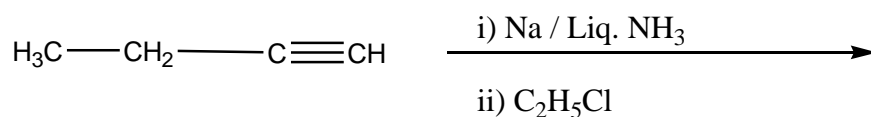
- a)  b)  c)  d) 

4- What is the best reagent used for the following reaction?



- a) Conc H₂SO₄ **b) KOH/Alcohol/heat** c) Zn/acetic acid d) Br₂, H₂O
-

5-



- a) b)
- c) **d) H₃C-CH₂-C≡C-C₂H₅**
-

(IV) Bonus:

1. Which of the following is the correct IUPAC name for the compound that has the molecular formula C₄H₉Cl?

- a) 3-Chlorobutane. **b) 1-Chloro-2-methylpropane.**
- c) 2-Chloro-2-methylbutane d) 1-Chloro-3-methylpropane.
-

2. A compound has the molecular formula of C₆H₁₂ reacts with ozone to yield two moles of a single product with molecular formula of C₃H₆O. The IUPAC name of this C₆H₁₂ is :

- a) Cyclohexane. b) 2-Hexene.
- c) Cyclohexene. **d) 2,3-Dimethyl-2-butene.**
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Dr. Nahed Nasser, Dr Noha Elnagdi and Dr. Siham Lahsasni

وبالله التوفيق،،،