E. Synthesis. (10 pts.)

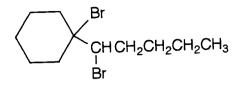
From propane, ethyne, and any inorganic reagents, synthesize the compound below.

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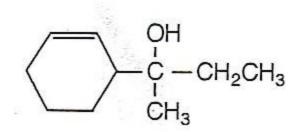
E. Synthesis: 10 Points

From cyclohexane, any alkanes, alkenes or alkynes of **two** carbons or less, and any inorganic reagents, synthesize the compound below.



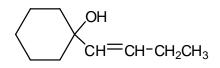
E. Synthesis: 11 Points

From cyclohexane, any alkanes or alkenes (remember, carbon and hydrogen only!) of three carbons or less, and any inorganic reagents, synthesize the compound below.



3

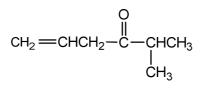
Synthesize the molecule below using any of the following reagents: cyclohexene, and alkanes, alkenes, or alkynes of no more than **two carbons**, any inorganic reagents, and any oxidizing or reducing agents.



Synthesize the molecule below using any of the following reagents: alkanes or alkenes of **three carbons or less**, cyclohexane, any inorganic reagents, any oxidizing or reducing agents, and any peroxyacids.

ОН -С--СН₂ -СН₂СН₃ CH₂CH₃

Synthesize the molecule below using any of the following reagents: alkanes or alcohols of **three carbons or less**, any inorganic reagents, any oxidizing or reducing agents.



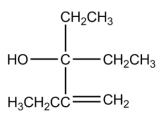
E. Synthesis (12 points) Synthesize the molecule below from alkanes or alkenes of **three** carbons or less and any inorganic reagents. (Please do not include mechanisms!)

 $\begin{array}{c} O & CH_3 \\ \parallel & \parallel \\ CH_3CH_2CH_2\text{-}C\text{-}CH_2CHCH_3 \end{array}$

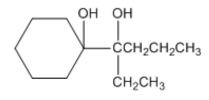
Synthesize the molecule below from alkanes, alkynes, or alcohols of **three** carbons or less and any inorganic reagents (Please do not include mechanisms.)

о́Н ____c^{___c__}

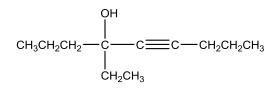
Synthesize the molecule below from cyclohexane, any alkenes, or alcohols of **three** cabons or less, and any inorganic reagents. (Please do not include mechanisms)



Synthesize the molecule below from cyclohexane, any alkenes, or alcohols of **three** cabons or less, and any inorganic reagents. (Please do not include mechanisms)



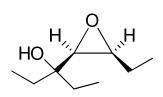
Synthesize the molecule below from alkanes, alkynes, or alcohols of **three** carbons or less, and any inorganic reagents. (Please do not include mechanisms.)



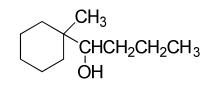


Made by Rana Shammas ranashammas93@yahoo.com

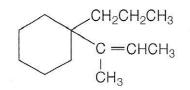
Synthesize the molecule below from alkenes, alkynes, or alcohols of **three** carbons or less, any oxidizing or reducing agents, peroxyacids, and any other inorganic reagents. (Please do not include mechanisms.)



Synthesize the molecule below from cyclohexanol and alkanes or alcohols of **two** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)



E. Synthesis: (12 points) Synthesize the molecule below from cyclohexanol and alcohols of **four** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)



E. Synthesis: (12 points) Synthesize the molecule below from **alcohols** or **alkenes** of **three** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)

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Synthesize the molecule below from cyclohexanol and alcohols or alkynes of three carbons or less, any peroxyacids, any oxidizing or reducing agents, and any other inorganic reagents. The stereochemistry of the final product is important. (Please do not include mechanisms.)

QН H₃C H Н_X

Synthesize the molecule below from alcohols of **five** carbons or less, any peroxyacids, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)

| Br

E. Synthesis: (12 points) Synthesize the molecule below from **cyclohexane**, **alcohols** of **four** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)

C CH₂CH₂CH₃

6