

# ORGANIC CHEMISTRY TAKE HOME QUIZ 2

1. Give the structural formula for each of the following compounds.

a. 2-heptanol

b. butanone

c. propane

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d. 2-pentene

e. ethanal

f. 4-decyne

g. octane

h. methanoic acid

i. ethoxypropane

2. Give the condensed structural formula for each of the following compounds.

a. nonane

b. propanoic acid

c. ethyne

d. 1-butene

e. pentanal

f. propoxypentane

4. Write a balanced chemical equation for the combustion of each of the following hydrocarbons.

a. hexane

b. 2-butene

c. 2-pentanol

5. Complete the following word equations for each of the following addition reactions. Show the structural formulas for the reactants and products.

a. ethene + hydrogen gas  $\rightarrow$

b. 2-pentyne + bromine gas  $\rightarrow$

6. Explain the difference between a saturated and an unsaturated hydrocarbon. Use examples.
7. Explain what structural isomers are using ethoxyethane, and methoxypropane as an example.
8. Draw the condensed structural formula for all of the unbranched isomers of pentanol.
9. Differentiate between an aldehyde and a ketone.

10. Complete the following table.

Condensed Structural Formula	IUPAC Name	Family
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$		
$\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_3$		
$\text{CHOCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$		
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{COOH}$		
$\text{CH}_3\text{CH}_2\text{C}\equiv\text{CCH}_3$		
$\text{CH}_3\text{OH}$		
$\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}_2\text{CH}_3$		
$\text{CH}_3\text{CH}_2\text{CH}_2\text{COCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$		