

Practice Exam 4

Part of the exam will be multiple choice here are some questions to help you prepare.

Indicate the number of covalent bonds that must be formed by the elements shown in organic compounds:

S O C N H

Write the general formula for each of the following Write and draw the functional group for those that have one.

alkyne amine aldehyde alkene alcohol ether
alkane ketone amide carboxylic acid ester.

Draw two molecules from each of the following classes of compounds: a) primary alcohol
b) secondary alcohol c) tertiary alcohol d) ether e) aldehyde f) ester g) carboxylic acid h) ketone

Write an example equation of each of the following organic reactions:

oxidation, addition, substitution, condensation, hydrolysis

Draw pairs of molecules that exhibit the following kind of isomerism:

skeletal, optical, positional, functional, geometrical.

Which type of organic molecule is characterized by the presence of a carbonyl group?

Which type of organic molecule is characterized by the presence of a hydroxyl group?

Which type of organic molecule is characterized by the presence of a carboxyl group?

Draw the structure of an organic base.

What are the products of the complete combustion of a hydrocarbon?

Draw the structure of the molecule with the structure C_5H_{12} with the highest boiling point.

What is the product of the oxidation of a primary alcohol?

What is the product of the oxidation of a secondary alcohol?

What is the product of the oxidation of an aldehyde?

What reacts with Benedict's reagent (Cu^{+2}) to form a carboxylic acid?

What reacts with an alcohol to form an ester?

What gives a positive Tollen's test?

What gives a positive bromine test?

What are four properties of organic compounds that are different for inorganic compounds?

What is a test for carboxylic acids?

Which is the class of organic compound with the lowest boiling point?

Which is the class of organic compound with the highest boiling point?

What are the products of the hydrolysis of ethers?

What are the products of the condensation of a carboxylic acid and an alcohol?

What are the products of the addition of water to an alkene?

Matching: there will be 10 matching questions where you will have to match the correct name and formula of compound

This part of the exam will be written on the back of the scantron in the free response section.

Write the IUPAC name for