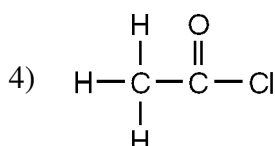
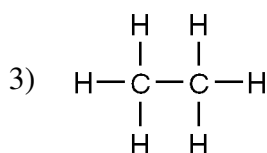
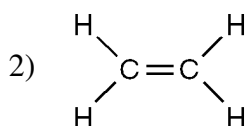
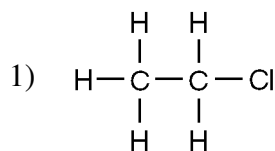


Name: _____

___ 1) Which structural formula represents a saturated hydrocarbon?



___ 2) What is the general formula of the alkane series?

- 1) C_nH_{n+2}
- 2) C_nH_{2n+2}
- 3) C_nH_{2n-2}
- 4) C_nH_{n-2}

___ 3) The chaining together of small molecules to form a large molecule occurs during the process of

- 1) fermentation
- 2) substitution
- 3) saponification
- 4) polymerization

___ 4) What is the original source of many textiles and *most* plastics?

- 1) petroleum
- 2) mineral ores
- 3) wood
- 4) coal

___ 5) Which formula represents a tetrahedral molecule?

- 1) HBr
- 2) CH_4
- 3) Br_2
- 4) $CaCl_2$

___ 6) Which hydrocarbon contains a triple bond?

- 1) benzene
- 2) butane
- 3) ethyne
- 4) ethene

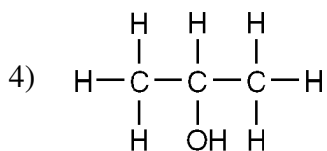
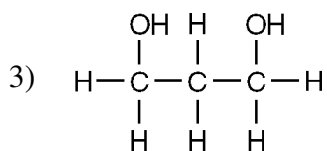
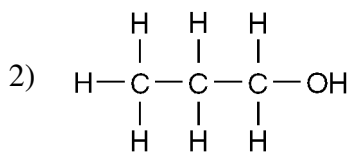
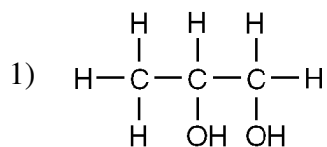
___ 7) Which compound is an isomer of CH_3OCH_3 ?

- 1) CH_3CHO
- 2) C_2H_5OH
- 3) CH_3COOH
- 4) C_6H_5OH

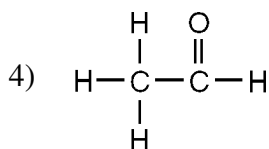
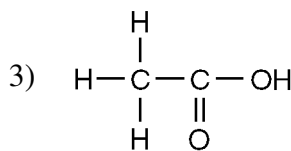
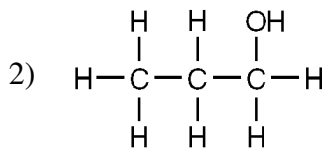
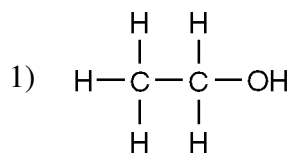
___ 8) What process is used to separate the components of a mixture based on the differences in their boiling points?

- 1) fractional crystallization
- 2) cracking
- 3) fractional distillation
- 4) polymerization

___ 9) What is the structural formula for 1-propanol?



___ 10) Which structural formula represents an aldehyde?



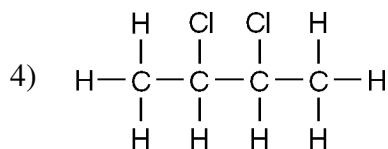
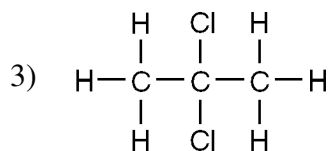
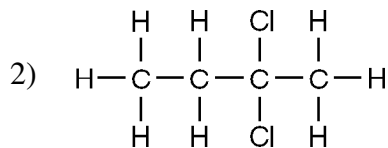
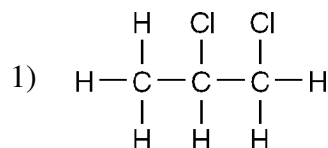
___ 11) Organic compounds differ from inorganic compounds in that organic compounds generally have

- 1) high melting points and are nonelectrolytes
- 2) high melting points and are electrolytes
- 3) low melting points and are nonelectrolytes
- 4) low melting points and are electrolytes

___ 12) The isomers CH_3OCH_3 and $\text{CH}_3\text{CH}_2\text{OH}$ differ in

- 1) number of atoms
- 2) formula mass
- 3) molecular structure
- 4) molecular formula

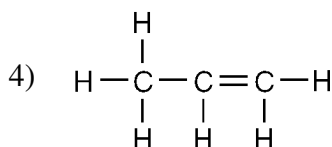
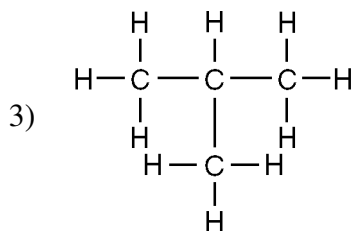
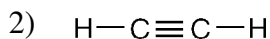
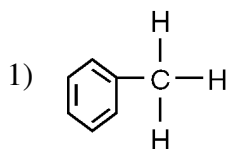
___ 13) What is the structural formula for 2,2-dichloropropane?



___ 14) When the name of an alcohol is derived from the corresponding alkane, the final "-e" of the name of the alkane should be replaced by the suffix

- | | |
|----------|-----------|
| 1) "-ol" | 3) "-ole" |
| 2) "-al" | 4) "-one" |

___ 15) Which compound belongs to the hydrocarbon series with the general formula C_nH_{2n} ?

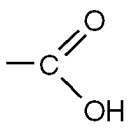


___ 16) What type of bond occurs in a saturated hydrocarbon molecule?

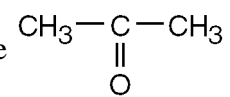
- 1) triple covalent bond
- 2) ionic bond
- 3) double covalent bond
- 4) single covalent bond

___ 17) When large hydrocarbon molecules are broken down into *smaller* hydrocarbon molecules, the reaction is known as

- 1) cracking
- 2) reduction
- 3) distilling
- 4) oxidation

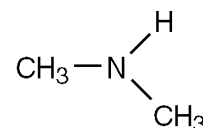
___ 18) The functional group  is *always* found in an organic

- 1) ester
- 2) ether
- 3) acid
- 4) aldehyde

___ 19) The molecule  is a member of a class of organic compounds called

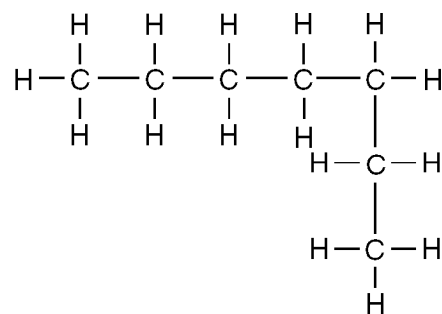
- 1) ketones
- 2) ethers
- 3) aldehydes
- 4) alcohols

___ 20) What type of compound is represented by the structural formula below?



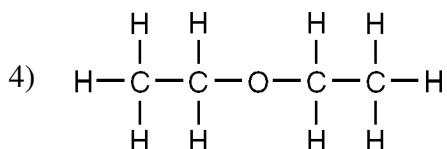
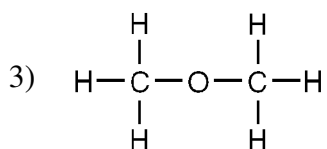
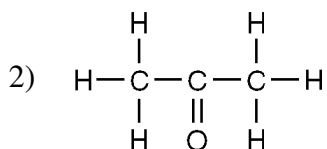
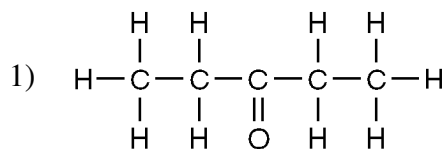
- 1) an ester
- 2) an ether
- 3) an aldehyde
- 4) an amine

___ 21) What is the correct IUPAC name for the structure shown below?



- 1) hexane
- 2) 5-ethyl pentane
- 3) 1-ethyl pentane
- 4) heptane

___ 22) Which of the following is the structural formula for diethyl ether?



___ 23) Which compound has the *greatest* possible number of isomers?

- 1) pentane
- 2) ethane
- 3) propane
- 4) butane

___ 24) Petroleum is classified chemically as

- 1) a substance
- 2) an element
- 3) a compound
- 4) a mixture

___ 25) What is the total number of hydroxyl groups contained in one molecule of 1,2-ethanediol?

- | | |
|------|------|
| 1) 1 | 3) 3 |
| 2) 2 | 4) 4 |

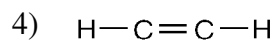
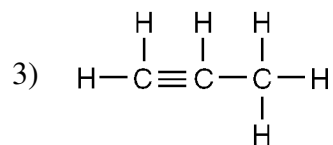
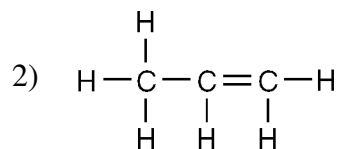
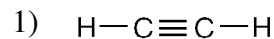
___ 26) Which formula represents a hydrocarbon with a double covalent bond?

- 1) C_2H_2
- 2) CH_3Cl
- 3) C_2H_4
- 4) $\text{C}_2\text{H}_5\text{Cl}$

___ 27) Organic chemistry is the chemistry of compounds containing the element

- 1) carbon
- 2) hydrogen
- 3) oxygen
- 4) nitrogen

___ 28) What is the structural formula for propene?



___ 29) The bonds between the atoms in an organic molecule are generally

- 1) ionic
- 2) coordinate covalent
- 3) hydrogen
- 4) covalent

___ 30) Which molecule contains a total of six carbon atoms?

- 1) 2-methyl butane
- 2) pentane
- 3) hexane
- 4) 2-methyl propane