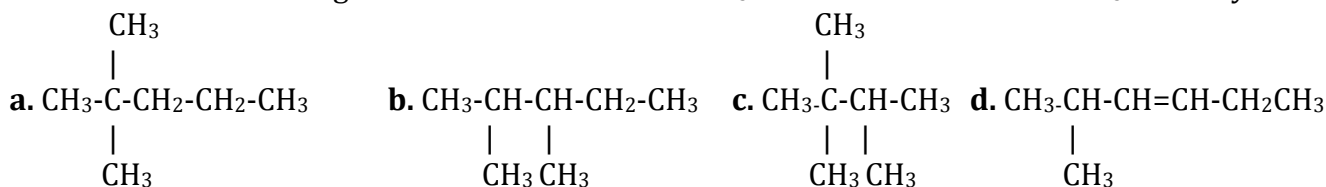


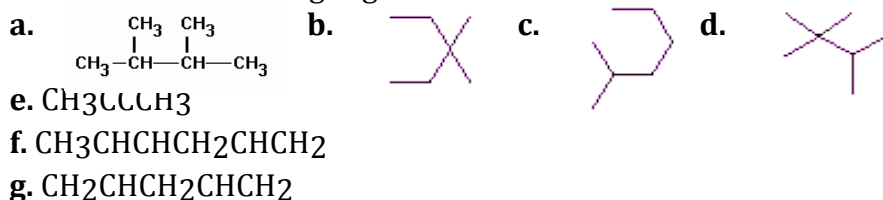
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Organic Chemistry Study Guide

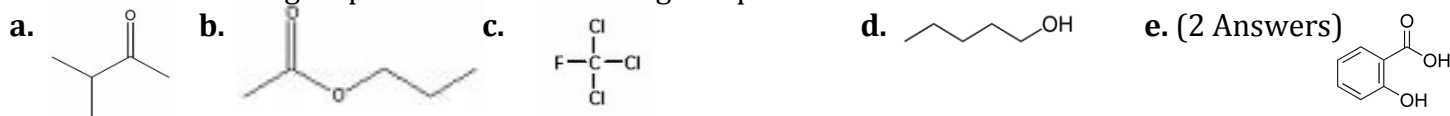
1. What element is in all organic compounds? What elements make up hydrocarbons?
2. Saturated hydrocarbons only contain _____. Unsaturated hydrocarbons contain _____ or _____.
3. Alkynes have _____ bonds, alkanes have _____ bonds and _____ have double bonds.
4. What is the molecular formula for the following:
a. alkyne w/ 18 C's b. alkane w/ 6 C's c. alkene w/15 C's
d. alkane w/ 21 C's e. alkyne w/ 4 C's
5. Are the following alkanes, alkenes or alkynes?
a. C_3H_6 b. C_4H_{10} c. $C_{13}H_{24}$ d. C_7H_{16} e. $C_{20}H_{42}$ f. $C_{31}H_{62}$ g. $C_{33}H_{64}$
6. What is the name of a ring of carbons that consist of alternating single and double bonds?
7. What makes polymers stronger? Where does natural rubber come from?
8. Which of the following is NOT an isomer of this: $CH_3-CH_2-CH_2-CH_2-CH_2-CH_2-CH_3$ and why?



9. Draw the structures for the following:
a. 2-methyl 4-ethyl 2-hexyne b. 1,3-pentadiene c. 3,4-dimethyl 1-heptyne
d. 3,4-diethyl 1,7-decadiene e. 2,3-dimethyl 5-octyne f. 2-methyl 3,4-diethyl 1,5,7 nonatriene
10. Name the following organic molecules:



11. What functional groups exist in the following compounds?



12. Identify the polymer or the monomer:

- | | |
|-------------------|--------------------------|
| a. Polymer: _____ | Monomer: Monosaccharides |
| b. Polymer: Fats | Monomer: _____ |
| c. Polymer: _____ | Monomer: Amino Acids |
| d. Polymer: DNA | Monomer: _____ |