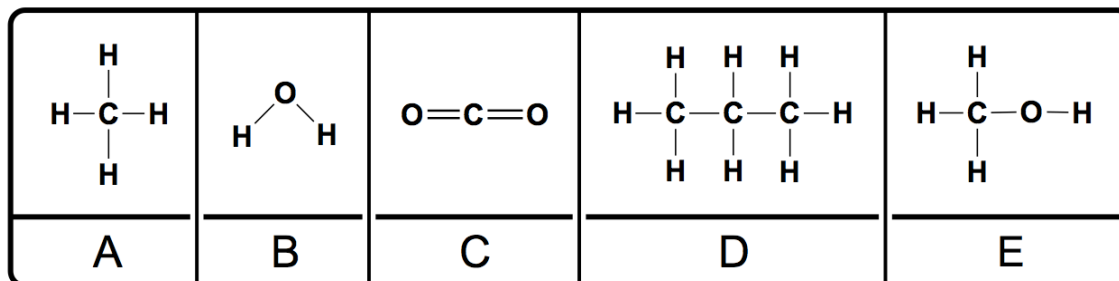


## CONCEPT: CARBON

- Of the bulk elements **CHNOPS**, if we exclude water, \_\_\_\_\_ is the *most* abundant element in living systems.
  - **Carbon** is the main component of \_\_\_\_\_ molecules (*carbohydrates, proteins, nucleic acids & lipids*).
  - **Organic molecules**: any molecules with *covalently linked* \_\_\_\_\_ & \_\_\_\_\_ atoms.
  - **Hydrocarbons**: organic molecules made of \_\_\_\_\_ Carbon & Hydrogen atoms.

**EXAMPLE:** Circle the organic molecules in green and highlight the hydrocarbons in yellow.



**PRACTICE:** Organic molecules are defined as chemical compounds that contain:

- a) Carbon.      b) Carbon & Oxygen.      c) Carbon & Nitrogen.      d) Carbon & Hydrogen.

## Carbon is an Excellent Building Block

- Carbon's ability to form \_\_\_\_\_ bonds makes it a flexible "*atomic building block*" for a variety of molecules.
  - Carbon "backbones" of *organic molecules* can vary in \_\_\_\_\_ ways:
    - ① Length.      ② Position of double bonds.      ③ Branch points.      ④ Linear vs. Ring forms.

**EXAMPLE:** Variations of Carbon Backbones.

