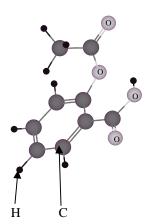
Name:

1. What is the fundamental difference between **saturated** and **unsaturated** hydrocarbons? Illustrate your answer with a simple example of each.

2. Name the class of compound that each of the following molecules belongs to:

3. Identify the **functional groups** in the following molecule (aspirin).



4. Draw a **condensed structure** for:

5. Draw **skeletal structures** for the following compounds:

- (a) 2-chloro-3,3-dimethylhexane
- (b) 3-bromo-3-ethyl-1-pentene

6. Provide **IUPAC names** for the following compounds::

$$\begin{array}{ccc} \mathsf{CH}_3 & \mathsf{CH}_2\mathsf{CH}_3 \\ \mathsf{CH}_3\mathsf{CHCH}_2\mathsf{CCH}_2\mathsf{CH}_3 \\ \mathsf{CH}_3 & \mathsf{CH}_3 \end{array}$$

7. Clearly define a **hydrogen bond** using water as an example.

• What is a typical physical property of water that is influenced by hydrogen bonding?

8. Which of the following aromatic compounds will have the **lowest boiling point**:

Justify your answer.