

2025 Ch H2 Q12

Section: Nature's Chemistry

Topic: Systematic Carbon Chemistry

Question Summary:

This question tests naming skeletal formulae, drawing full structural formulae, and drawing skeletal formulae for simple organic molecules.

Worked Solution

(a) Name the molecule

The skeletal formula shows a five carbon chain with a double bond starting at carbon number 2. The correct name is pent-2-ene.

(b) Full structural formula

The molecule shown is a straight chain alkane with five carbon atoms. The full structural formula is:



(c) Skeletal formula for pentanoic acid

Pentanoic acid is a five carbon chain ending in a COOH group. The skeletal formula is a four bend zig-zag line with COOH at the end.

Revision Tips

- Every bend or end in a skeletal formula represents a carbon atom.
- Hydrogen atoms on carbon are not shown in skeletal drawings.
- Carboxylic acids end with the COOH group.