

Alkenes Quiz

1. For propene give its

- a. Molecular formula

- b. Structural formula

- c. Displayed formula

- d. Skeletal formula

[4]

2. Describe the bonding between the two carbon atoms in ethene.

[2]

3. Describe and draw the shape of an ethene molecule, labeling all bond angles.

[2]

4.

- a. Describe a simple chemical test to determine whether an unknown hydrocarbon is an alkene. Describe the result if the test is positive.

[2]

5.

- a. Give the equation for propene reacting with hydrogen. You may use either structural or displayed formulae.

[2]

b. What catalyst is required for this reaction to occur?

[1]

6.

a. Draw the displayed formulae for the two products formed when propene reacts with steam. Label the major product.

[3]

b. State the catalyst required for this reaction.

[1]

7. Using structural formulae give the equation for the reaction of ethene with hydrogen chloride.

[1]

8. Ethene will react with chlorine to give 1,2-dichloroethane.

a. By what mechanism does this reaction occur by?

[1]

b. Write a balanced equation for this reaction using structural formulae.

[1]

c. Describe the reaction mechanism using curly arrows.

[4]

d. Which substance behaves as an electrophile? Explain what is meant by the term electrophile.

[2]

9. Give the equation for the polymerisation of fluoroethene and name the product.

[2]

10. Give the equation for the polymerisation of cyclohexene and name the product.

[2]