

Brett Robbins Academic Consulting

Chemistry 30 Practice Test

Unit C: Organic Chemistry

10 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.

Question 1

But – 1 – ene can be classified as

- A) an aliphatic alkane
- B) an aromatic alkene
- C) an aliphatic alkene
- D) a saturated hydrocarbon

Question 2

A hydrocarbon has a five – carbon parent chain with methyl groups on carbons 2 and 4. Its IUPAC name is

- A) 2, 4 – dimethylpentane
- B) 2, 4 – dimethylhexane
- C) 3, 4 – dimethylpentane
- D) 2, 4 – dimethylbutane

Question 3

The molecular formula of the alkane that contains 9 carbon atoms is

- | | |
|----------------|----------------|
| A) C_9H_{18} | B) C_9H_{20} |
| C) C_9H_{16} | D) C_9H_{22} |

Question 4

When one molecule of butane undergoes complete combustion, the number of carbon dioxide molecules produced is

Question 5

The number of hydrogen atoms in one molecule of 3 – ethylhexane is

Question 6

Aqueous bromine is added to separate samples of cyclohexane and cyclohexene. The sample that causes the bromine solution to lose its colour rapidly, in the absence of light, is

- | | |
|-----------------|-------------------|
| A) cyclohexane | B) cyclohexene |
| C) both samples | D) neither sample |

Question 7

Crude oil is separated into fractions by *i*, a process that works because the components of crude oil have different *ii*.

A) *i*: fractional distillation

ii: boiling points

B) *i*: fractional distillation

ii: solubilities

C) *i*: filtration

ii: boiling points

D) *i*: filtration

ii: solubilities

Question 8

When but – 1 – ene reacts with water in the presence of an acid catalyst, the major product of the addition reaction is

- A) butan – 1 – ol
- B) butan – 2 – ol
- C) butane
- D) butanoic acid

Question 9

The ester ethyl methanoate can be formed by the reaction of

- A) ethanol and methanoic acid
- B) methanol and ethanoic acid
- C) ethanol and ethanoic acid
- D) methanol and methanoic acid

Question 10

The number of carbon atoms in one molecule of 2, 2, 4 – trimethylpentane is

Answer Key

- | | | |
|------|-------|-------|
| 1. C | 5. 18 | 9. A |
| 2. A | 6. B | 10. 8 |
| 3. B | 7. A | |
| 4. 4 | 8. B | |

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