

O Level Pure Chemistry MCQs

Organic Chemistry Test 7.0

Q1

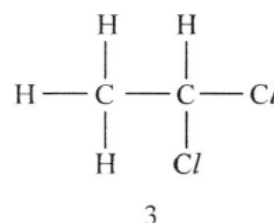
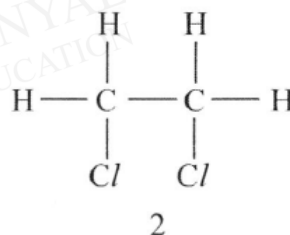
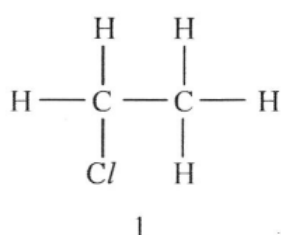
1 mole of an organic compound requires 3 moles of oxygen gas for complete combustion to form carbon dioxide and water.

What could be the formula of the compound?

- A CH_3CHO
- B $\text{CH}_3\text{CH}_2\text{OH}$
- C CH_3CH_3
- D $\text{CH}_3\text{CO}_2\text{H}$

Q2

The structures of three compounds are shown below.



Which compound(s) can be product(s) of addition reaction of ethene with chlorine?

- A 1 only
- B 2 only
- C 2 and 3 only
- D 1, 2 and 3

Q3

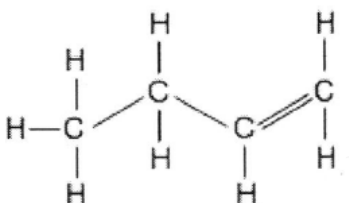

The general formula for alkene is C_nH_{2n} .

Which physical property does **not** increase as n increases?

- A boiling point
- B density
- C percentage of carbon by mass
- D viscosity

Q4

The diagram below shows how the structural formula of butene can be simplified:

Usual structural formula of butene	Simplified version
	

The simplified structural formula of benzene is shown below:



What is the empirical formula of benzene?

- A CH
- B CH_2
- C CH_3
- D CH_4

Q5

The diagrams show four monomers.



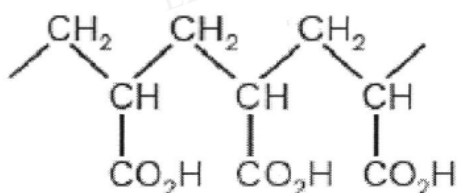
How many of the monomers above would react with the molecule below to form a polymer?



- A 1
- B 2
- C 3
- D 4

Q6

The absorbent material in babies' disposable nappies is made from the polymer shown.



From which monomer could this polymer be obtained?

- A $\text{H}_2\text{C}=\text{CHCO}_2\text{H}$
- B $\text{HO}_2\text{CCH}=\text{CHCO}_2\text{H}$
- C $\text{HOCH}_2\text{CH}_2\text{CO}_2\text{H}$
- D $\text{CH}_3\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$

Q7

A food chemist wants to create the fragrance of pineapples for a product. An ester with this fragrance has the formula $C_3H_7CO_2C_2H_5$.

Which pair of reactants would produce this ester?

- A propanoic acid and propanol
- B ethanoic acid and butanol
- C propanoic acid and ethanol
- D butanoic acid and ethanol

Q8

Which of the reactions in the list below show reactions in which hydrogen is either a reactant or a product?

Reaction 1 : addition of magnesium to hydrochloric acid

Reaction 2 : conversion of ethene to ethanol

Reaction 3 : conversion of vegetable oil to margarine

Reaction 4 : fermentation of glucose

- A 1 and 2 only
- B 1 and 3 only
- C 1, 2 and 3 only
- D 1, 3 and 4 only

Q9

The table shows the energy released by the complete combustion of some compounds used as fuels.

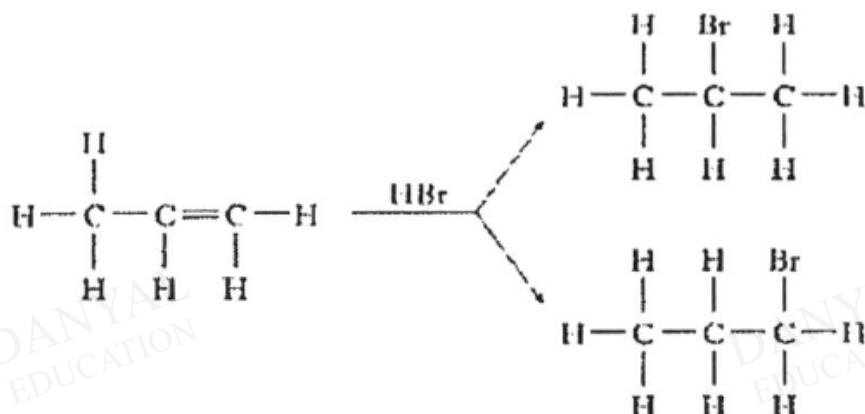
compound	Mr	ΔH / kJ/mol
methane	16	-880
ethanol	46	-1380
propane	44	-2200
heptane	100	-4800

Which fuel provides the most energy when 1 g of compound is completely burned?

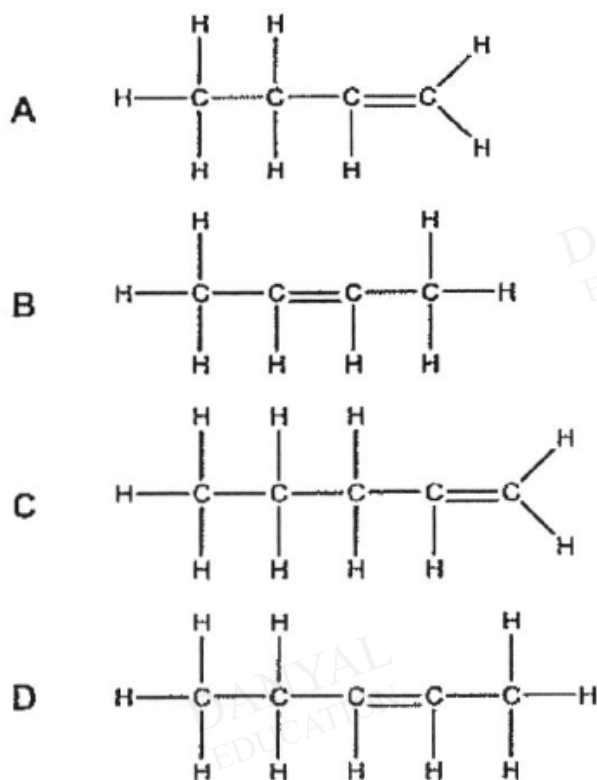
- A Methane
- B Ethanol
- C Propane
- D Heptane

Q10

Propene reacts with hydrogen bromide to form two products.



Which of the following alkenes does **not** form two products on reaction with hydrogen bromide?



Answers

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Q1 B

Q2 B

Q3 C

Q4 A

Q5 C

Q6 A

Q7 D

Q8 B

Q9 A

Q10 B

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