Q1.

A halogenoalkane reacts with ethanolic potassium hydroxide to form these alkenes by elimination:

- 2-ethylpent-1-ene
- *E*-3-methylhex-2-ene
- *Z*-3-methylhex-2-ene
- *E*-3-methylhex-3-ene
- *Z*-3-methylhex-3-ene

Which halogenoalkane would form these alkenes in this reaction?

A 1-bromo-2-ethylpentane ⬭

B 2-bromo-3-methylhexane ⬭

C 3-bromo-3-methylhexane ⬭

D 3-bromo-4-methylhexane ⬭

(Total 1 marks)

Q2.

Most scientists believe that ozone in the upper atmosphere should not be allowed to become depleted.

Which is a valid reason for this belief?

A Ozone absorbs ultraviolet radiation. ⬭

B Ozone helps to prevent global warming. ⬭

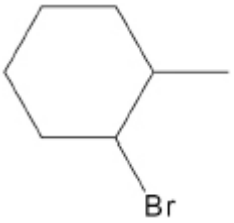
C Ozone helps to remove pollutants such as chloroalkanes. ⬭

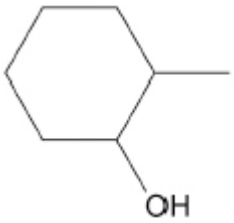
D Ozone is an efficient disinfectant. ⬭

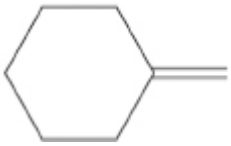
(Total 1 mark)

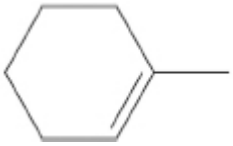
Q3.

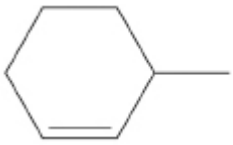
Which is **not** a possible product of the reaction of this compound with potassium hydroxide?



A 

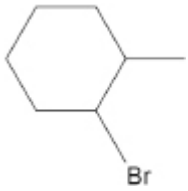
B 

C 

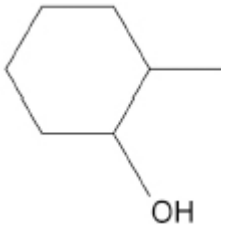
D 

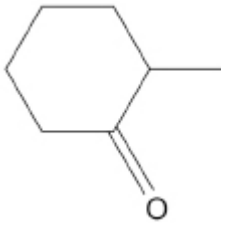
(Total 1 mark)

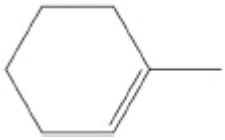
Q4.

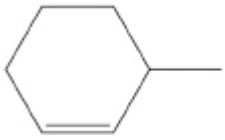


Which is **not** a possible product of a reaction between KOH and ?

A 

B 

C 

D 

(Total 1 mark)

Q5.

Most scientists believe that the concentration of ozone in the upper atmosphere should not be allowed to decrease.

Which statement is a correct reason for this belief?

A Ozone helps to prevent global warming.

B Ozone is an efficient disinfectant.

C Ozone helps to remove pollutants such as chloroalkanes.

D Ozone absorbs ultraviolet radiation.

(Total 1 mark)

Q6.

When 2-bromobutane is warmed with potassium hydroxide solution, substitution and elimination reactions both occur.

Which of these compounds is **not** produced?

A butan-1-ol ○

B butan-2-ol ○

C but-1-ene ○

D *E*-but-2-ene ○

(Total 1 mark)

Q7.

When 2-bromobutane is warmed with potassium hydroxide solution, substitution and elimination reactions both occur.

What is the role of the hydroxide ions in the elimination reaction?

A base ○

B catalyst ○

C electrophile ○

D nucleophile ○

(Total 1 mark)

Q8.

Which compound is formed from bromoethane in a nucleophilic substitution reaction?

A CH_3CN ○

B $CH_3CH_2NH_2$ ○

C $CH_2=CH_2$ ○

D $CH_3CH_2OSO_2OH$ ○

(Total 1 mark)