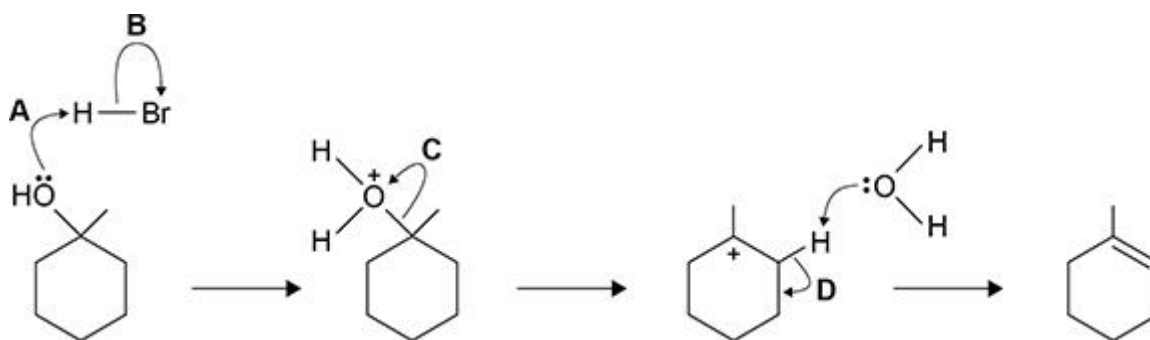


**Q1.**What is the  $M_r$  of this compound?**A** 94.0☐**B** 96.0☐**C** 98.0☐**D** 100.0☐

(Total 1 marks)

**Q2.**Which labelled curly arrow shows an **incorrect** movement of an electron pair?**A**☐**B**☐**C**☐**D**☐

(Total 1 marks)

**Q3.**

A sample of cyclohexane contains  $3.011 \times 10^{24}$  atoms of carbon.

What is the mass of this sample?

The Avogadro constant,  $L = 6.022 \times 10^{23} \text{ mol}^{-1}$

**A** 70.0 g

☐

**B** 71.7 g

☐

**C** 420 g

☐

**D** 430 g

☐

(Total 1 marks)

**Q4.**

What is the correct structural formula for 4-chloro-2-methylpent-2-enoic acid?

**A**  $\text{CH}_3\text{CCl}=\text{CHCH}(\text{CH}_3)\text{COOH}$

☐

**B**  $(\text{CH}_3)_2\text{C}=\text{CHCHClCOOH}$

☐

**C**  $\text{CH}_3\text{CHClCH}=\text{C}(\text{CH}_3)\text{COOH}$

☐

**D**  $(\text{CH}_3)_2\text{CHCH}=\text{CClCOOH}$

☐

(Total 1 mark)

**Q5.**

Compound **Y** has the structural formula  $\text{CH}_3\text{COOCH}_2\text{CH}(\text{CH}_3)_2$

Which compound is a position isomer of **Y**?

**A** 5-hydroxyhexan-3-one

☐

**B** butyl ethanoate

☐

**C** hexanoic acid

☐

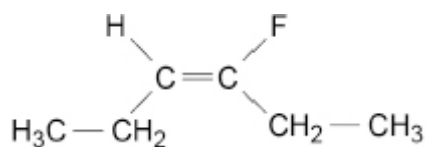
**D** propyl propanoate

☐



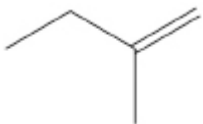

(Total 1 mark)

**Q6.**Which compound shows *E*–*Z* isomerism?**A** 2,3-dimethylbut-1-ene☐**B** 2,3-dimethylbut-2-ene☐**C** 2-methylpent-2-ene☐**D** 3-methylpent-2-ene☐**(Total 1 mark)****Q7.**

Which is the IUPAC name for this compound?

**A** *E*-3-fluorohex-3-ene☐**B** *E*-4-fluorohex-3-ene☐**C** *Z*-3-fluorohex-3-ene☐**D** *Z*-4-fluorohex-3-ene☐**(Total 1 mark)**

**Q8.**Which compound has the greatest  $M_r$ ?

- A**  ☐
- B**  ☐
- C**  ☐
- D**  ☐

(Total 1 mark)

**Q9.**Which compound has the empirical formula  $C_2H_4O$ ?

- A** butanal ☐
- B** ethanoic acid ☐
- C** ethanol ☐
- D** methylpropanoic acid ☐

(Total 1 mark)

**Q10.**

Which compound is an isomer of ethyl ethanoate?

- A** butyl methanoate ☐
- B** methyl propanoate ☐
- C** methyl butanoate ☐
- D** propanoic acid ☐

(Total 1 mark)