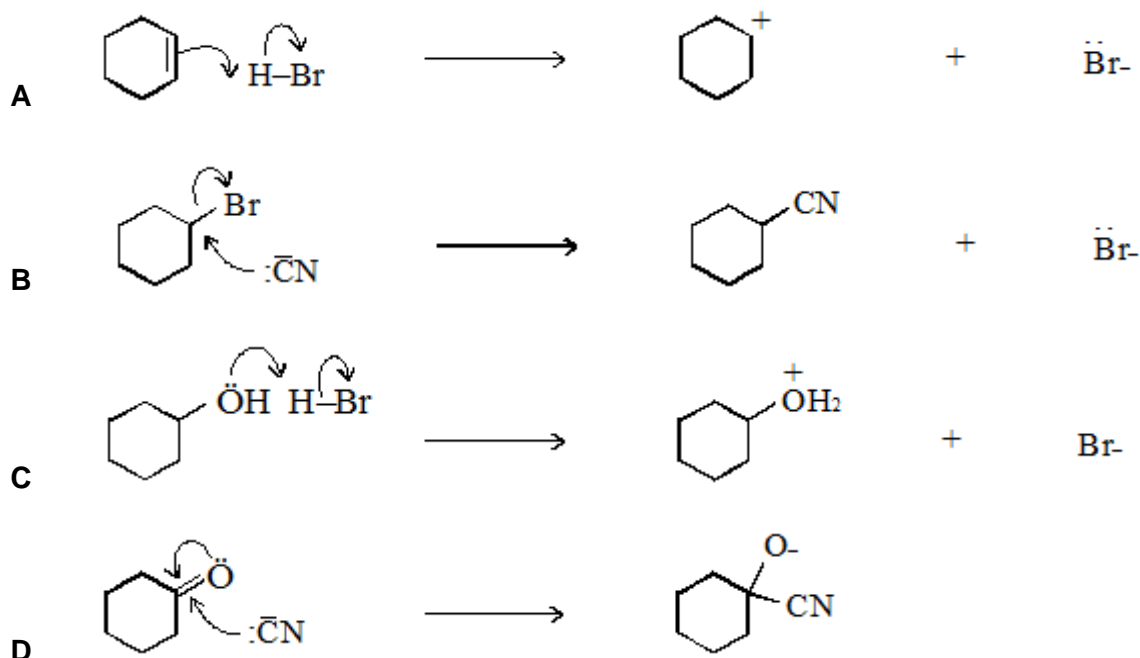


Q1. In which one of the following are the curly arrows **not** used correctly?



(Total 1 mark)

Q2. Which one of the following conversions does **not** represent a reduction?

- A propene \rightarrow propane
- B propanal \rightarrow propan-1-ol
- C propanal \rightarrow propanoic acid
- D propanone \rightarrow propane

(Total 1 mark)

Q3. Which one of the following reactions involves nucleophilic addition?

- A $\text{CH}_3\text{CH}=\text{CH}_2 + \text{HBr} \rightarrow \text{CH}_3\text{CHBrCH}_3$
- B $\text{CH}_3\text{CH}_2\text{CH}_3 + \text{Cl}_2 \rightarrow \text{CH}_3\text{CHClCH}_3 + \text{HCl}$
- C $\text{CH}_3\text{CH}_2\text{CH}_2\text{Br} + \text{NaOH} \rightarrow \text{CH}_3\text{CH}_2\text{CH}_2\text{OH} + \text{NaBr}$
- D $\text{CH}_3\text{CH}_2\text{CHO} + \text{HCN} \rightarrow \text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CN}$

(Total 1 mark)

Q4. Which one of the following is **not** a suitable method for the preparation of ethanol?

- A** oxidation of ethane
- B** hydration of ethene
- C** reduction of ethanal
- D** hydrolysis of bromoethane

(Total 1 mark)

Q5. CH_2O is the empirical formula of

- A** methanol
- B** methyl methanoate
- C** ethane-1,2-diol
- D** butanal

(Total 1 mark)

Q6. Which one of the following does **not** represent an oxidation?

- A** propene \rightarrow propane
- B** propan-1-ol \rightarrow propanal
- C** propan-1-ol \rightarrow propanoic acid
- D** propanal \rightarrow propanoic acid

(Total 1 mark)