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u		١.

In which conversion does a nucleophile attack the organic reactant?

- **A**  $CH_3CH_2CH_3 \rightarrow CH_3CHCICH_3$
- **B**  $CH_3CH=CH_2 \rightarrow CH_3CHBrCH_3$
- **D**  $CH_3CH_2CHO \rightarrow CH_3CH_2CH(OH)CN$

(Total 1 mark)

## Q2.

What is the product when 3-methylbutan-2-one reacts with acidified KCN?

- A 2-hydroxy-2,3-dimethylbutanenitrile
- **B** 3-hydroxy-2,3-dimethylbutanenitrile
- C 2-hydroxy-3-methylpentanenitrile
- D 3-hydroxy-2-methylpentanenitrile

(Total 1 mark)

## Q3.

The skeletal formulas of two compounds are shown.



Which method would distinguish between samples of these compounds?

- A comparing fingerprint regions of their infrared spectra
- **B** obtaining molecular masses from their high resolution mass spectra
- **C** warming with acidified potassium dichromate(VI) solution
- D warming with Tollens' reagent

(Total 1 mark)