• Classify the starting materials of the following reactions as nucleophile or electrophile and indicate with $\delta \oplus$ and $\delta \ominus$ the polarisation of the C–Br and C=O bonds.

Marks 4

6

• Consider the following reaction sequence.

A NaOH
OH
OH
$$\frac{1) \text{LiAlH}_4}{2) \text{H}^{\oplus}}$$
B

SOCl₂

excess methanol
C
 $\frac{\text{HN(CH}_3)_2}{\text{E}}$
E
 $\frac{\text{conc. HC1/heat}}{\text{E}}$
F

Draw the structures of the major organic products, A-F, formed in these reactions.