

Question 32**(9 marks)**

Ethanol and methanol are completely miscible (soluble) in water.

- (a) By referring to any intermolecular forces present, describe the dissolving process as ethanol is added to water. (3 marks)

- (b) Explain what happens to the solubility of alcohols in water as the hydrocarbon chain length increases. (3 marks)

- (c) For each of the following substances, list **all** force/s of attraction formed between the solute and solvent when each substance dissolves in water. (3 marks)

Substance	Force/s of attraction with water
Propanal	
Methanoic acid	
Sodium chloride	