Esters, Fats and Oils - Mark Scheme

1. B
2. B
3. B
4. A
5. B
6. D
7. D
8. A
9. B
10. D

11. (a) - \( \text{C-C-O-C-C-C-C-C-H} \)

(b) i. Correct diagram

ii. condenser used to prevent the loss of ester

iii. water bath used to make reaction go faster without using a naked flame in presence of alcohol and volatile molecules

iv. No naked flames, safety goggles, use gloves

v. to neutralise the sulphuric acid as well as any unreacted carboxylic acid.

vi. immiscible layer, smell.

12. (a) Hydrolysis is the breakdown of a compound using water.
13. (a) Glycerol
   (b) They have more C=C (higher degree of unsaturation)
   (c) Bromine water
   (d) Soaps

14. Diagram should show the soap molecule has two parts to it the hydrophobic and hydrophilic part.

The covalent tail is a hydrocarbon chain so it will bond to the greasy material on fabric or skin. This part won't bond to the water. The ionic head is attracted to polar covalent water molecules this means the grease will be dispersed in the water in globules.