

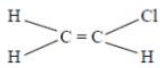
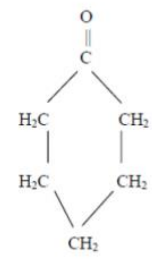
## Protected: Answers: Exercise 2\_5 – Fats & Oils

### Multiple Choice Questions

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

Mark Scheme		Worth ½	Worth 0
2	(a) esters	1	fats (or oils)
	(b) they react with hydrogen (or are hydrogenated) or they become (more) saturated (or less unsaturated) or they have fewer double bonds (or more single bonds) or the double bonds are broken	1	pack more closely together become solid (or have higher melting points)
	(c) as an energy source (or more concentrated energy source than carbohydrates) or provide essential fatty acids or carry oil soluble vitamins or good for health with reason given, eg lowers cholesterol	1	good for health without reason given or provide a layer of tissue for insulation or protect vital organs, eg kidney

Question	Expected response	Max mark	Additional guidance
8	a		
	i)	1	Octadec -9,12,15 -trienoic acid
	ii)	1	neutralisation
	b	3	Structure of soap/soap ions in terms of hydrophobic tail and hydrophilic head (1 mark). Agitation causes negatively charged oil/grease droplets to form (1 mark). Electrical repulsion prevents droplets from recombining (1 mark).

Mark Scheme		Worth ½	Worth 0
16	(a) dehydration or elimination	1	removal of water
	(b)		
	 or CH <sub>2</sub> = CHCl or CH <sub>2</sub> CHCl	1	C <sub>2</sub> H <sub>3</sub> Cl
	(c)		
		1	cyclohexanone or C <sub>6</sub> H <sub>10</sub> O