

### Chapter 4 – Health and lifestyle

Question	Answers	Extra information	Mark
1(a)	medicinal		1
(b)	ethanol/nicotine		1
(c)	ethanol		1
2(a)	Labelled clockwise: oesophagus stomach large intestine small intestine		1 1 1 1
(b)	small intestine		1
(c)	acid/enzymes/digestive juices		1
3(a)	28	Accept answers between 26 and 30	1
(b)	the longer a person smokes, the greater the risk of death		1
(c)	tar – can cause cancer nicotine – makes the heart beat faster carbon monoxide – reduces the amount of oxygen the blood can carry	1 mark for one correctly matched	2
4(a)	a catalyst		1
(b)	amino acids		1
(c)	stomach/small intestine		1
5(a)	pasta/bread/rice/potato/cereal	Accept any other starch-rich food	1
(b)	source of energy		1
(c)	add a few drops of iodine iodine will turn blue–black if starch is present		1 1

Question	Answers	Extra information	Mark
6(a)	Any <b>two</b> from: <ul style="list-style-type: none"> <li>• a poor immune system</li> <li>• lacks energy to do things/often tired</li> <li>• vitamin or mineral deficiency/named vitamin or mineral deficiency</li> </ul>		2
(b)	Any <b>two</b> from: <ul style="list-style-type: none"> <li>• heart disease</li> <li>• stroke</li> <li>• diabetes</li> <li>• (some) cancers</li> </ul>		2
(c)	Any <b>two</b> from: <ul style="list-style-type: none"> <li>• their job is more active</li> <li>• more sugar is needed in respiration</li> <li>• to transfer energy to the cell for movement</li> </ul>		2
7	Any <b>six</b> from: <ul style="list-style-type: none"> <li>• crush the food</li> <li>• using a pestle and mortar</li> <li>• add a few drops of water (and mix)</li> <li>• add a few drops of ethanol</li> <li>• shake and leave for one minute/a few minutes</li> <li>• pour the ethanol into a test tube of water</li> <li>• if solution turns cloudy, it contains fat</li> <li>• keep ethanol away from flames as it is flammable</li> <li>• wear goggles</li> </ul>		6
8(a)	it contains a higher protein content		1
(b)	(decrease of) 55%	Award 1 mark for $\frac{(1.9 - 4.2)}{4.2}$	2

Question	Answers	Extra information	Mark
(c)	the company has not made a correct/accurate claim about the fat content of their yoghurt		1
9(a)	Any <b>three</b> from: <ul style="list-style-type: none"> <li>• produce mucus</li> <li>• mucus traps dirt</li> <li>• have hairs/cilia</li> <li>• sweep mucus into mouth/into stomach/away from lungs</li> </ul>		3
(b)	Any <b>three</b> from: <ul style="list-style-type: none"> <li>• chemicals in tobacco smoke stop the cilia moving</li> <li>• mucus flows into the lungs</li> <li>• making it harder to breathe</li> <li>• often causes infection</li> <li>• smokers cough the mucus up</li> </ul>		3
10(a)	Any <b>three</b> from: <ul style="list-style-type: none"> <li>• walls covered with villi</li> <li>• increasing the surface area/creating large surface area</li> <li>• for more nutrients to be absorbed</li> <li>• lots of blood capillaries</li> <li>• to transport absorbed nutrient molecules away</li> </ul>	Credit higher level answers, such as: rich blood supply maintains a concentration gradient	4
(b)	Any <b>two</b> from: <ul style="list-style-type: none"> <li>• provide a store of energy</li> <li>• provide insulation/keep you warm</li> <li>• protect organs from damage</li> </ul>		2

Question	Answers	Extra information	Mark
(c)	Any <b>three</b> from: <ul style="list-style-type: none"> <li>• breaks the lipids down into small droplets</li> <li>• increasing the surface area</li> <li>• for lipase enzymes to work on</li> <li>• to break down lipids into fatty acids and glycerol</li> </ul>		3
<b>SPACED LEARNING QUESTIONS</b>			
11	[D] → C → A → E → B	1 mark for each step in the correct order	4
12(a)	Any <b>two</b> from: <ul style="list-style-type: none"> <li>• cytoplasm</li> <li>• cell membrane</li> <li>• mitochondria</li> </ul>		2
(b)	stores genetic material/contains instructions to make a new cell controls the cell		1 1
(c)	contain haemoglobin/disc-like shape/bi-concave to bind to oxygen/carry more oxygen		1 1