

Question	Answers	Extra information	Mark	AO / Specification reference
<b>01.1</b>	Increases (to a maximum at 1.5 s) Then returns / decreases to the original volume		1 1	AO3 4.2.2.2
<b>01.2</b>	0.5 (dm <sup>3</sup> )		1	AO2 4.2.2.2
<b>01.3</b>	5.00 + 0.5 = 5.5 (dm <sup>3</sup> )	Accept error carried forward from <b>01.1</b>	1 1	AO2 4.2.2.2
<b>01.4</b>	One cycle = 3 s Cycles per minute = 60/3 = 20 (cycles)		1 1 1	AO3 4.2.2.2
<b>01.5</b>	Rib cage moves up and out Diaphragm contracts and moves down		1 1	AO1 4.2.2.2
<b>02.1</b>	Lipids / fats		1	AO1 4.2.2.1
<b>02.2</b>	Iodine		1	AO1 4.2.2.1
<b>02.3</b>	Avoid getting on skin / wear gloves / wear safety goggles		1	AO3 4.2.2.1
<b>02.4</b>	No No Yes		1 1 1	AO3 4.2.2.1

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03.1	B		1	AO2 4.2.2.2
03.2	Any <b>one</b> from: <ul style="list-style-type: none"> <li>• Thick walls containing muscles – to withstand high (blood) pressure</li> <li>• Elastic fibres – to allow wall to stretch as (high pressure) blood passes through / to recoil / return to shape after blood (pulse / flow) passes</li> </ul>	1 mark for feature 1 mark for explanation linked to the feature stated	2	AO1 4.2.2.2
03.3	Pulmonary artery		1	AO1 4.2.2.2
03.4	Any <b>one</b> from: <ul style="list-style-type: none"> <li>• takes blood from the heart to the lungs</li> <li>• transports deoxygenated blood towards lungs</li> <li>• transports blood that has provided oxygen to body cells</li> </ul>		1	AO1 4.2.2.2
03.5	Any <b>two</b> from: <ul style="list-style-type: none"> <li>• To provide cell with oxygen / glucose</li> <li>• To remove waste products / carbon dioxide / other named waste product</li> <li>• To enable respiration to take place</li> </ul>		2	AO1 4.2.2.2

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<b>04.1</b>	Left top: trachea Left bottom: lungs Right top: bronchiole Right bottom: alveolus		1 1 1 1	AO2 4.2.2.2
<b>04.2</b>	Ribcage		1	AO1 4.2.2.2
<b>04.3</b>	Any two from: <ul style="list-style-type: none"> <li>rich blood supply</li> <li>thin walls</li> <li>spherical shape</li> <li>large surface area</li> </ul>		2	AO1 4.2.2.2
<b>04.4</b>	Any <b>three</b> from: <ul style="list-style-type: none"> <li>(Intercostal) muscles between ribs contract</li> <li>Ribs move up and out</li> <li>Diaphragm moves down</li> <li>Chest cavity / lung volume increases</li> <li>Pressure in the chest cavity / lung decreases</li> </ul>		3	AO1 4.2.2.2
<b>05.1</b>	an organ system		1	AO1 4.2.1
<b>05.2</b>	A - Liver C - Small intestine		1 1	AO2 4.2.2.1

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05.3	Organ D		1	AO2 4.2.2.1
05.4	muscular tissue – churns the food and digestive juices of the stomach together glandular tissue – produces the digestive juices epithelial tissue – covers the inside and outside of the stomach	1 mark for one correct match 2 marks for all correctly matched	2	AO1 4.2.2.1
06	<b>Level 3:</b> Detailed description of the test for all four food groups given that includes named reagents and the positive result.		5–6	AO2 4.2.2.1
	<b>Level 2:</b> Description of the test for all four food groups given but named reagents or positive results not provided. OR Description with named reagents and positive result provided for at least two of the food groups.		3–4	
	<b>Level 1:</b> Description of test given for at least one food group, but no named reagents or positive results given.		1–2	
	<b>No Relevant content</b>		0	

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	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Place the food sample into each of the four test tubes.</li> <li>• Add a few drops distilled water.</li> <li>• Add a few drops of iodine to one sample.</li> <li>• If colour change yellow-orange to blue-black starch is present.</li> <li>• Add a few drops of Benedict's solution.</li> <li>• Heat tube in water bath (at &gt;60°).</li> <li>• If colour change blue to brick-red sugar is present / or green if only a small amount of reducing sugars are present.</li> <li>• Add a few drops of Biuret reagent.</li> <li>• If colour change blue to purple protein is present.</li> <li>• Add a few drops of ethanol (and shake).</li> <li>• If cloudy layer forms fats are present.</li> </ul>			
<b>07.1</b>	<p>cell – building blocks of life</p> <p>organism – group of organ systems working together</p> <p>tissue – group of similar cells working together</p> <p>organ – group of tissues working together to perform a function</p> <p>organ system – group of organs working together to perform a function</p>	<p>1 mark for one correct</p> <p>2 marks for two correct</p> <p>3 marks for three correct</p> <p>4 marks for all correct</p>	4	AO1 4.2.1
<b>07.2</b>	to transport materials around the body in the blood		1	AO1 4.2.1

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<b>07.3</b>	liver stomach		1 1	AO1 4.2.1
<b>08.1</b>	B		1	AO2 4.2.2.3
<b>08.2</b>	red blood cells – transport oxygen white blood cells – fight disease plasma – transports blood cells platelets – clot the blood	1 mark for one correct 2 marks for two correct 3 marks for all correct	3	AO1 4.2.2.3
<b>08.3</b>	It is a group of similar cells working together		1	AO2 4.2.2.3
<b>08.4</b>	Any <b>one</b> from: <ul style="list-style-type: none"> <li>• No nucleus</li> <li>• biconcave shape</li> <li>• contain haemoglobin</li> </ul>		1	AO1 4.2.2.3
<b>09.1</b>	sperm / egg brain / heart / uterus blood nervous system		1 1 1 1	AO1 4.2.1
<b>09.2</b>	tissue organ organ system	1 mark for one correct 2 marks for all correct	2	AO1 4.2.1

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09.3	A group of similar cells working together		1	AO1 4.2.1
10.1	C		1	AO1 4.2.2.2
10.2	A – vena cava B – aorta		1 1	AO1 4.2.2.2
10.3	Valve Prevents blood flowing backwards into the (right) atrium		1 1	AO1 4.2.2.2
10.4	One transport system carries blood from the heart to the lungs (and back) to allow gas exchange The second system transports blood around the body to enable cells to respire / to transport oxygen / glucose / other materials		1 1	AO1 4.2.2.2