

MARK SCHEME

1.2.3

1 – C

2 – D

3 – A

4 – C

Answer		Mark
<b>Body System damaged by smoking</b>	<b>Health risk associated with smoking for this system</b>	
Cardiovascular (system) Accept circulatory Do not accept heart / CV	increase chance of heart attack/failure/CHD/heart disease/stroke/angina/blood clots Max 1	
Respiratory (system) Do not accept lungs	increase chance of lung cancer/lung disease/respiratory disease/ emphysema/ bronchitis / increased chance of asthma Max 1	
<p>Systems can be in any order - only credit each system once</p> <p>Do not accept high blood pressure/heart problems/breathing difficulty/lung failure/clogs up arteries/throat cancer</p> <p>NB can credit risk if system not stated in first column ONLY if obvious which system referred to in second column. E.g. cancer too vague; lung cancer is OK.</p>		
(4 x 1)		<b>(4)</b>

Question Number	Answer	Mark
9(b)	<p>Any one of following:</p> <ol style="list-style-type: none"> <li>1. <u>Decrease</u> (accept alternative words but must imply decrease) in performance in practical activity (e.g. <u>decrease</u> in stamina)/ reduction in oxygen carrying capacity of blood</li> <li>2. role model/bad image/bad example</li> </ol> <p>Do not accept health risks</p> <p style="text-align: right;">(1 x 1)</p>	<b>(1)</b>

Question Number	Answer	Mark
10	<p>Any three of the following:</p> <ol style="list-style-type: none"> <li>1. (Amount of) oxygen consumed / used / needed / paying back / replaced.</li> </ol> <p>Do not credit if in context of exercising/during exercise</p> <ol style="list-style-type: none"> <li>2. during recovery / <u>after</u> exercise / <u>after</u> anaerobic work</li> <li>3. above that normally used at rest</li> <li>4. <u>shortfall</u> in the available oxygen</li> </ol> <p style="text-align: right;">(3 x 1)</p>	<b>(3)</b>

4 -

Question Number	Answer	Mark
11(a)(i)	B	(1)
(ii)	1. Arrow shows air flow inwards 2. Lungs inflated/bigger/expand / equiv 3. More space for lungs/equiv 4. (Arrow indicates) diaphragm has moved down/flattened/contracts/equiv 5. (Arrows indicate) ribs moved up and/or out/increased thoracic cavity/expand  Point per correct response to max 3	(3)
(b)(i)	Higher concentration/increased (percentage)/equiv (of oxygen in the lungs during inspiration than expiration.)	(1)
(ii)	1. Some oxygen is used by the body/muscles /goes to the muscles 2. to release energy/produce energy/for respiration	(2)
(c)(i)	Carbon dioxide/CO2/Nitrogen	(1)
(ii)	Expected response relates to CO <sub>2</sub> , but must credit Nitrogen if stated  There is less Accept increase ONLY if linked to expiration  remain constant/equiv	(1)
Total for Question 11		(9)

5 -

(b)(i)	1. Amount of oxygen consumed/used/needed/paying back/required 2. above that which would normally be used 3. at rest/pre-exercise state.	(3)
(ii)	Anaerobically	(1)
(iii)	1. reference to need for recovery/rest/equiv 2. reference to varying intensities/aerobically to prevent/reduce oxygen debt/equiv 3. credit reference to an appropriate selection of training method accept any two, any order NB Differential question	(2)

6 -

Question Number	Answer	Mark
12(a)	Increase/goes up/rises/equiv	(1)
12(b)	Any order: Oxygen Carbon Dioxide	(2)
12(c)	The amount of air breathed in (to the lungs) <u>in one breath</u> The amount of air breathed out (of the lungs) <u>in one breath</u> The amount of air breathed in and out (of the lungs) <u>in one breath</u>	(1)
12(d)	vital capacity	(1)
(Total 5 marks)		

7 –

Question Number	Answer	Mark
11(a)	Tidal volume.	(1)
11(b)	Vital capacity.	(1)
11(c)	Oxygen debt/deficit/ O <sup>2</sup> debt.	(1)

Mark out of 35.

A*	A	B	C	D	E	F	G	U
90%	80%	70%	60%	50%	40%	30%	20%	10%