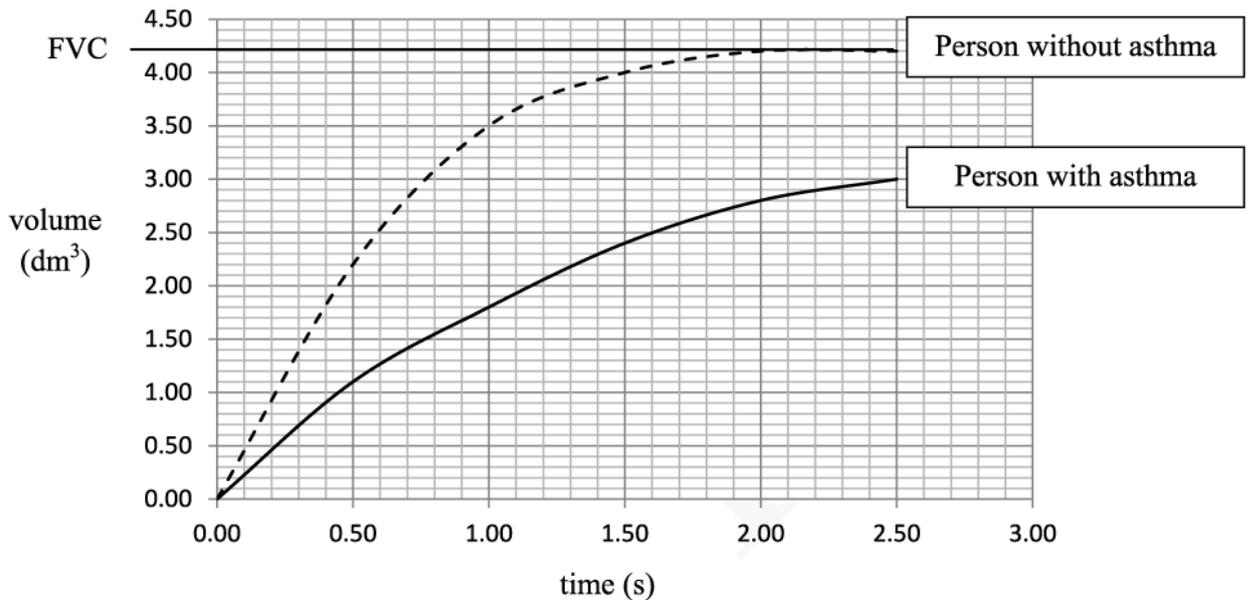


- The severity of an asthma attack is commonly measured using three pulmonary parameters. These are Forced Vital Capacity (FVC), and two others, FEV<sub>1</sub> and PEF<sub>R</sub>.

To measure these parameters, a person inhales, then exhales as hard and fast as possible into a spirometer, which measures the volume of air exhaled.

Fig. 1.1 shows the volume of air exhaled by two people and the time taken to exhale that volume. One of the people has asthma.



**Fig. 1.1**

- What do the abbreviations FEV<sub>1</sub> and PEF<sub>R</sub> stand for?

FEV<sub>1</sub> \_\_\_\_\_

PEFR \_\_\_\_\_

[2]

- The FVC for a person without asthma is shown on Fig. 1.1.

Calculate the difference in FEV<sub>1</sub> between a person with asthma and a person without asthma.

Show the steps in your calculation.

Answer ..... dm<sup>3</sup>[2]

(iii) Outline how PEFR could be calculated from the data in Fig. 1.1.

.....  
..... [1]

2. Fig. 22 shows a phylogenetic tree for the evolution of flowering plants.

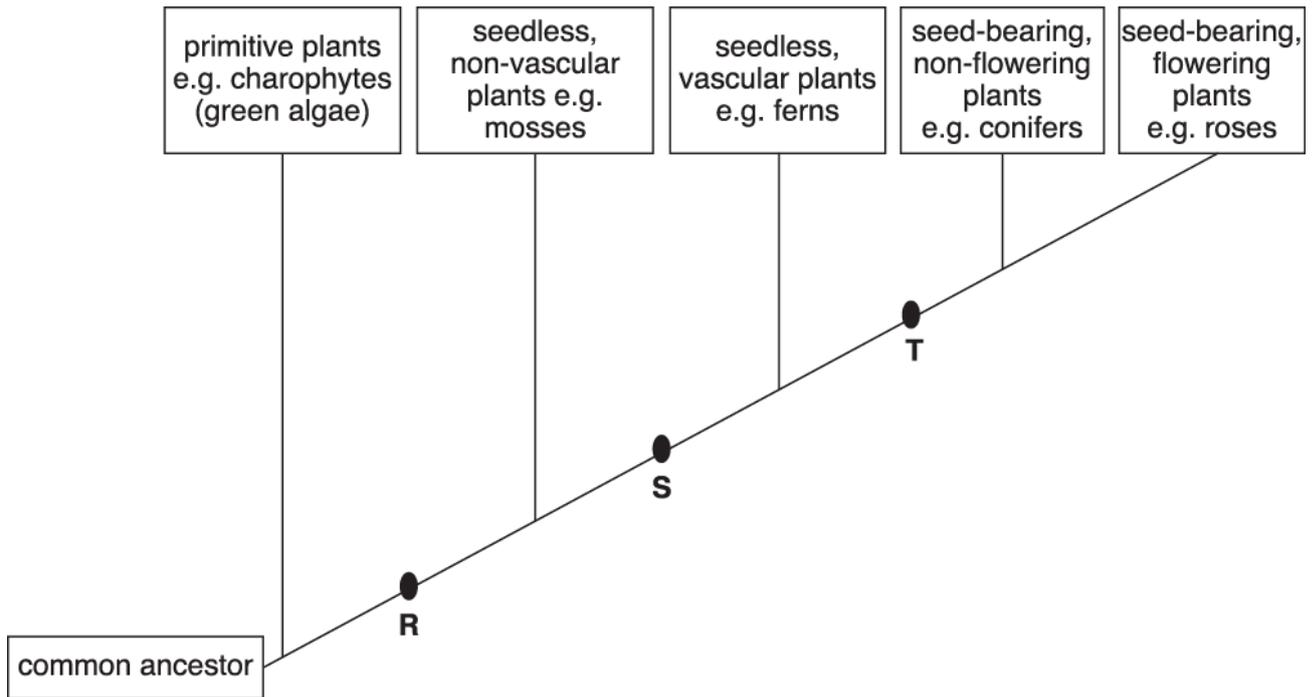


Fig. 22

(i) At which point on the phylogenetic tree, R, S or T, would xylem and phloem tissue have appeared?

----- [1]

(ii) Primitive plants lived in water. As plants evolved they adapted to life on land.

Suggest **one** adaptation that would have enabled primitive plants, such as charophytes, to evolve to living on land.

-----  
-----  
----- [1]

(iii) Why do seed-bearing plants need a transport system?

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3(a). Fig. 26 is a light micrograph of a cross section through lung tissue.

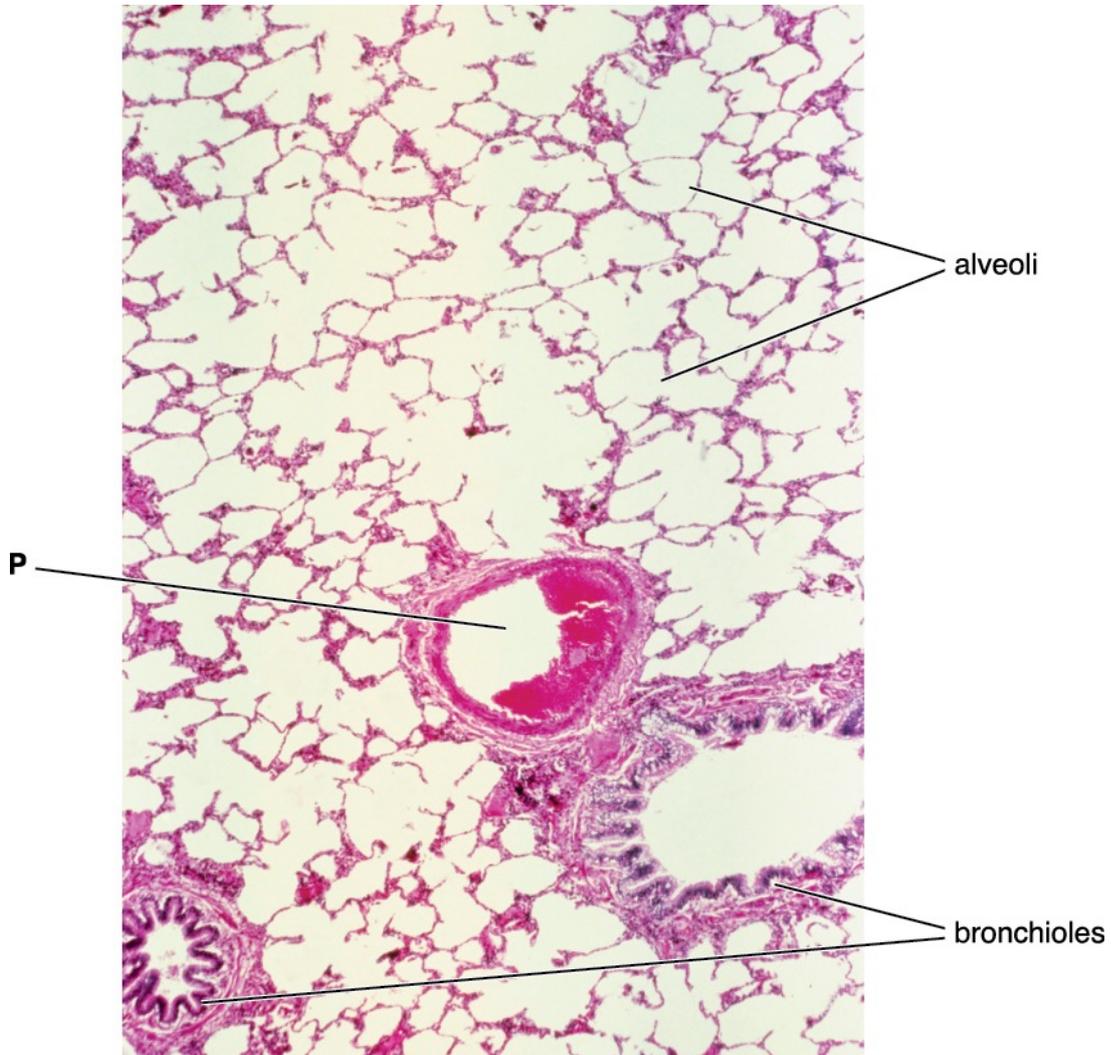


Fig. 26

(i) Identify P labelled on Fig. 26.

----- [1]

(ii) The walls of the alveoli consist of squamous epithelial cells.

How does the structure of these cells differ from the epithelial cells lining bronchioles?

-----  
----- [1]

(iii) Bronchiole walls contain smooth muscle and elastic fibres.

Describe the role of each of these tissues.

smooth muscle \_\_\_\_\_

\_\_\_\_\_

elastic fibres \_\_\_\_\_

\_\_\_\_\_

[2]

(b). Cartilage tissue is found in some areas of the gas exchange system.

Name **one** area of the gas exchange system where cartilage is found **and** describe its role.

\_\_\_\_\_

\_\_\_\_\_

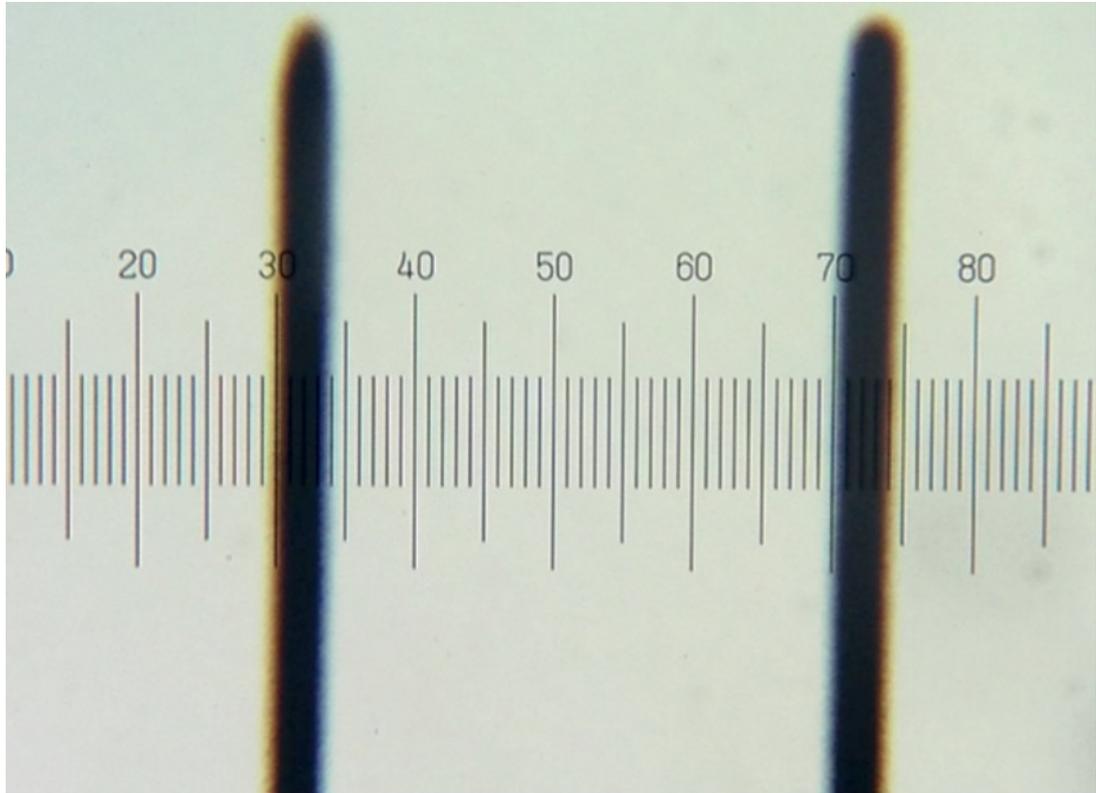
[1]

4(a).

(i) A light microscope was used to observe cells in the lower epidermis of a dicotyledonous leaf.

Fig. 1.2 shows a stage micrometer and an eyepiece graticule.

The division shown on the stage micrometer measures  $10\ \mu\text{m}$ .



**Fig. 1.2**

Calculate the length of one eyepiece graticule unit.

Show your working.

Answer = .....  $\mu\text{m}$  [2]

(ii) Fig. 1.3 shows a stoma, guard cells and epidermal cells in the lower epidermis, as seen with a light

microscope.



**Fig. 1.3**

The magnification is the same as in Fig. 1.2.

Use the value you calculated in (i) to calculate the length of the guard cell between points X and Y.

Answer = .....  $\mu\text{m}$  [2]

(b). *Euphorbia virosa* is a species of cactus that grows in the deserts of Namibia.

It uses the guard cells to close its stomata during the hottest part of the day.

Describe the sequence of events that occur inside guard cells resulting in the opening of stomata during daylight hours **and** suggest why the stomata of *E.virosa* are closed during the hottest part of the day.

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[4]

5(a). Squamous epithelial cells in the alveoli of mammalian lungs facilitate gaseous exchange.

Outline the process of gaseous exchange in the alveoli of mammalian lungs.

*No details of squamous epithelial cells or rate of gaseous exchange are required.*

-----  
-----  
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-----  
-----

[2]

(b). Kartagener syndrome is a genetic disorder that affects the respiratory system.

Children born with Kartagener syndrome commonly have the following symptoms:

- mucus retention
- recurrent infections of the respiratory system
- respiratory distress.

Suggest **one** reason why children with Kartagener syndrome may have '*mucus retention*' and **one** reason why they may have '*recurrent infections of the respiratory system*'.

reason for '*mucus retention*' -----

-----  
-----

reason for '*recurrent infections of the respiratory system*' -----

-----  
-----

[2]

(c). Spirometry measurements can be used to monitor respiratory disorders such as Kartagener syndrome.

Fig. 5.2 shows spirometry measurements taken during exhalation for a normal person and for a person with a respiratory disorder.

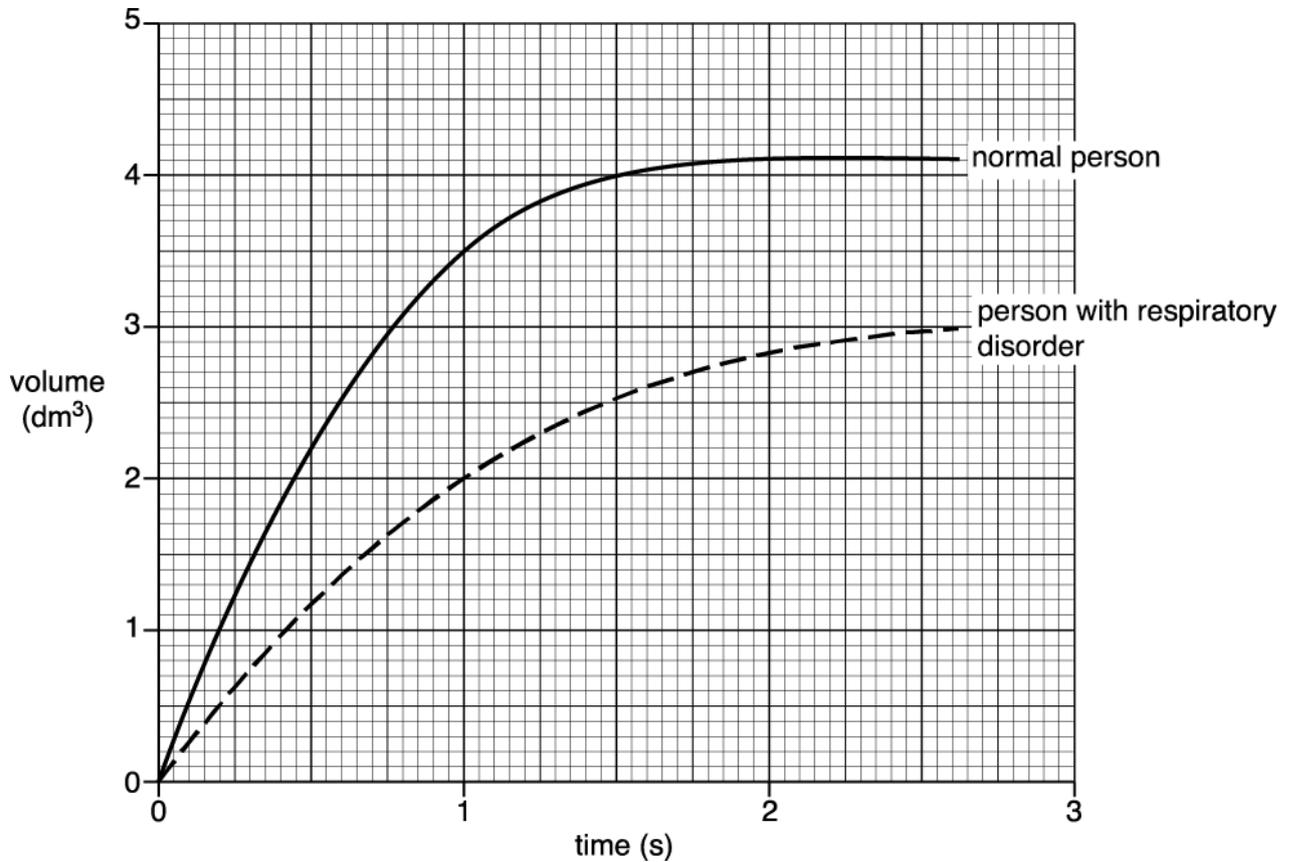


Fig. 5.2

(i) Using the information shown in Fig. 5.2, state the FEV<sup>1</sup> measurement for each person.

Explain the reason for the difference between the two FEV<sup>1</sup> measurements.

FEV<sup>1</sup> normal person ..... dm<sup>3</sup> s<sup>-1</sup>

FEV<sup>1</sup> person with respiratory disorder ..... dm<sup>3</sup> s<sup>-1</sup>

Explanation .....

-----

-----  
----- [2]

(ii) Suggest why FEV<sup>1</sup> measurements should be taken at least four times per year for people with respiratory disorders such as Kartagener syndrome.

-----  
-----  
----- [1]

6. Fig. 5.1 is a diagram showing the structure of part of the human respiratory system. The lungs provide an efficient gaseous exchange surface.

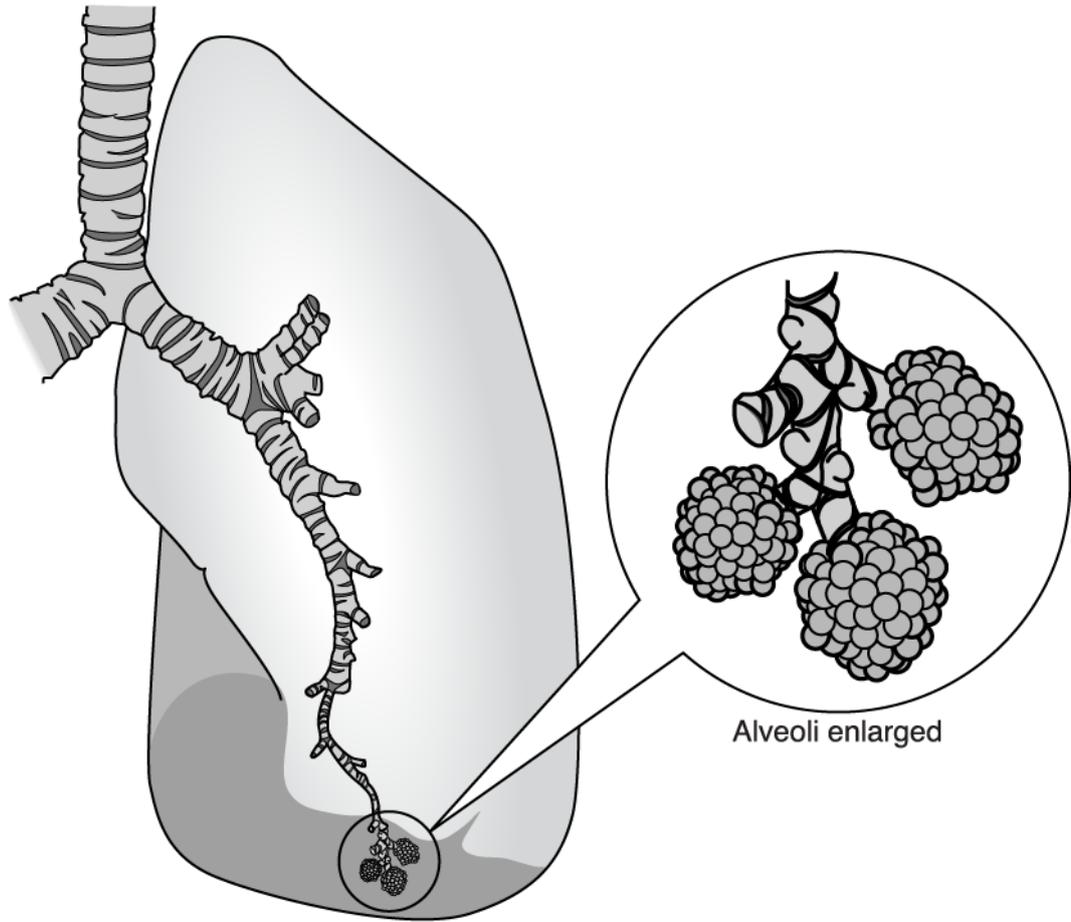


Fig. 5.1

Using Fig. 5.1, explain how the structure of the lungs provides humans with an efficient gaseous exchange surface.



*In your answer, you should use appropriate technical terms, spelled correctly.*

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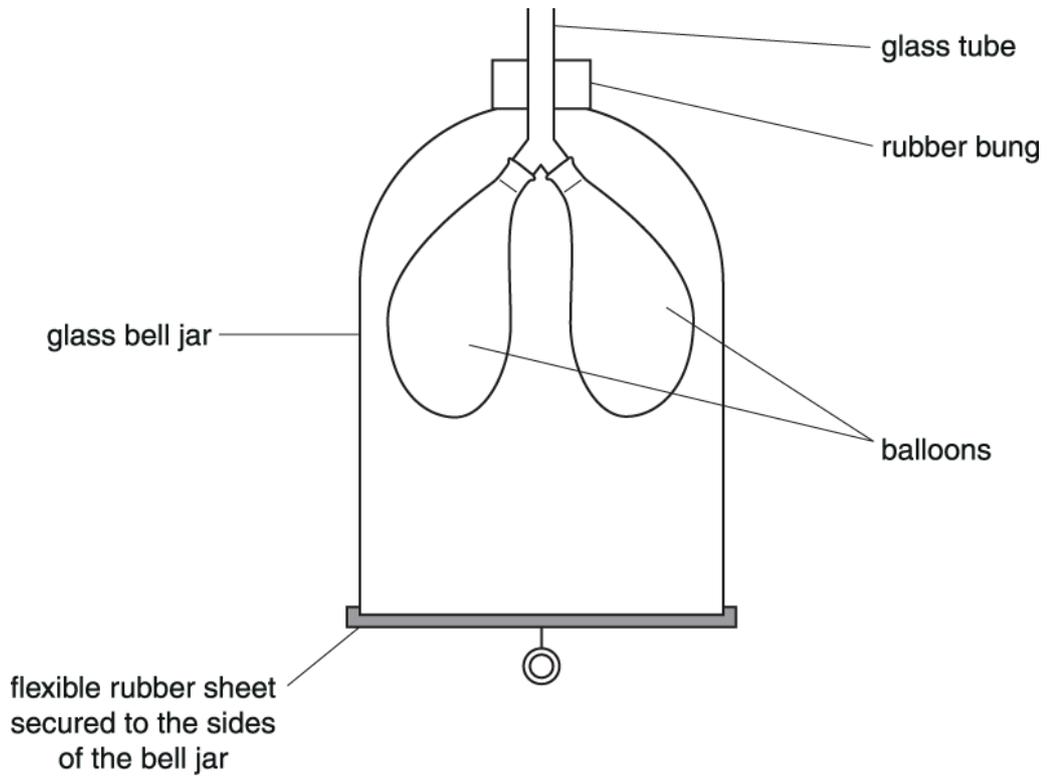
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8. Many teachers use models to demonstrate and explain breathing and lung function in mammals.

Fig. 2.1 is a model of the mammalian chest.



**Fig. 2.1**

When the rubber sheet is pulled down the balloons expand.

Explain why the balloons expand.

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**[3]**

9(a). Medical practitioners can measure parameters such as PEF<sub>R</sub> and FEV<sub>1</sub> to assess lung function in their patients.

Explain the terms PEF<sub>R</sub> and FEV<sub>1</sub>

PEF<sub>R</sub>

---

---

FEV<sub>1</sub>

---

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[2]

(b). Table 24 gives details of a 22-year-old male.

Weight (Kg)	Height (cm)	PEFR (dm <sup>3</sup> min <sup>-1</sup> )	FEV <sub>1</sub> (dm <sup>3</sup> )
110	175	400	2.9

Table 24

FEV<sub>1</sub> values can be compared to a predicted value calculated using the formula below:

$$FEV_1 = ((4.3 \times \text{height in metres}) - (0.029 \times \text{age in years})) - 2.49$$

Calculate the predicted value of FEV<sub>1</sub> for this male and suggest what can be concluded about his health.

Show your working and give your answer to one decimal place.

Answer = ..... dm<sup>3</sup>

-----  
----- [3]

(c). Expired air resuscitation (EAR) is a first-aid procedure used when a person stops breathing.

When EAR is carried out on a small child the First Aider will cover both the mouth and nose of the patient, rather than just the mouth.

State one **other** way in which the procedure must differ when being carried out on a small child.

-----

----- [1]

10(a) The process of gas exchange involves several specialised cell types.

Fig. 37.1 shows a human bronchiole and surrounding alveoli under a light microscope. Two cell types are labelled R and S.

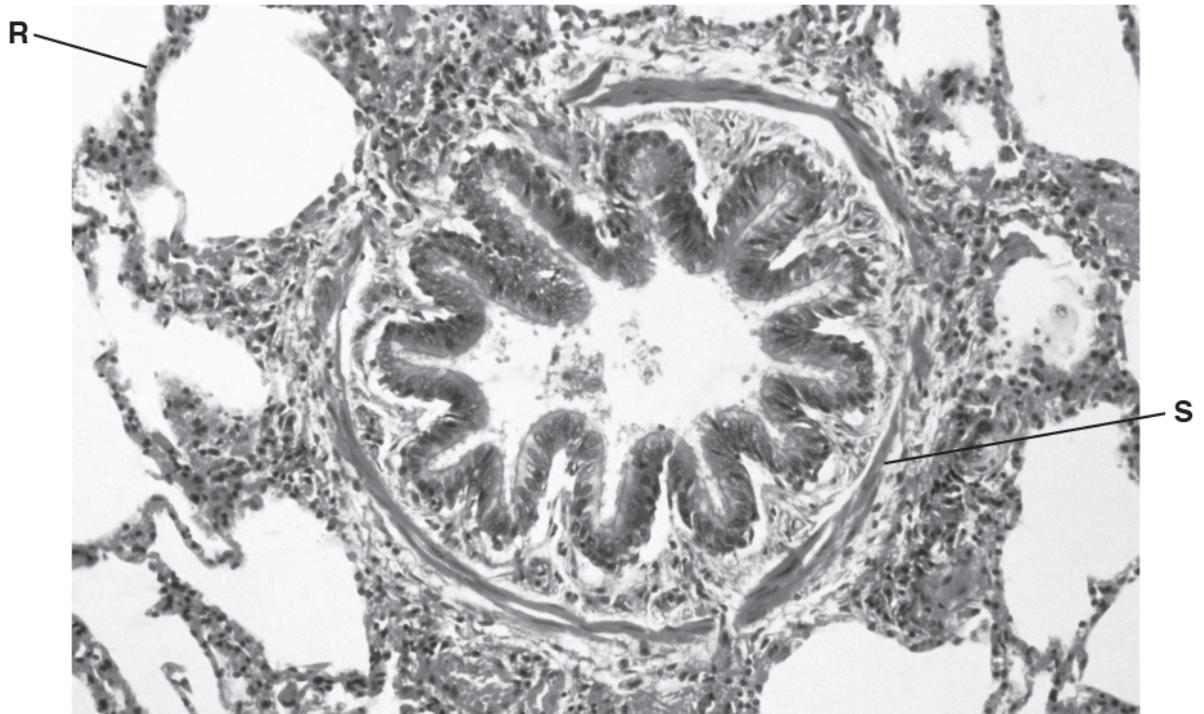


Fig. 37.1

Complete the table below by inserting, for each cell type:

- the **precise** name
- **one** role in gas exchange.

Cell type	Name	Role
R	..... ..... .....	..... ..... .....
S	..... ..... .....	..... ..... .....

[4]

(b). A health campaign was launched to help people to give up cigarette smoking.

Fig. 37.2 is a graph that featured in the campaign.

Lung function is represented as a percentage of FEV<sub>1</sub> at the age of 25 years.

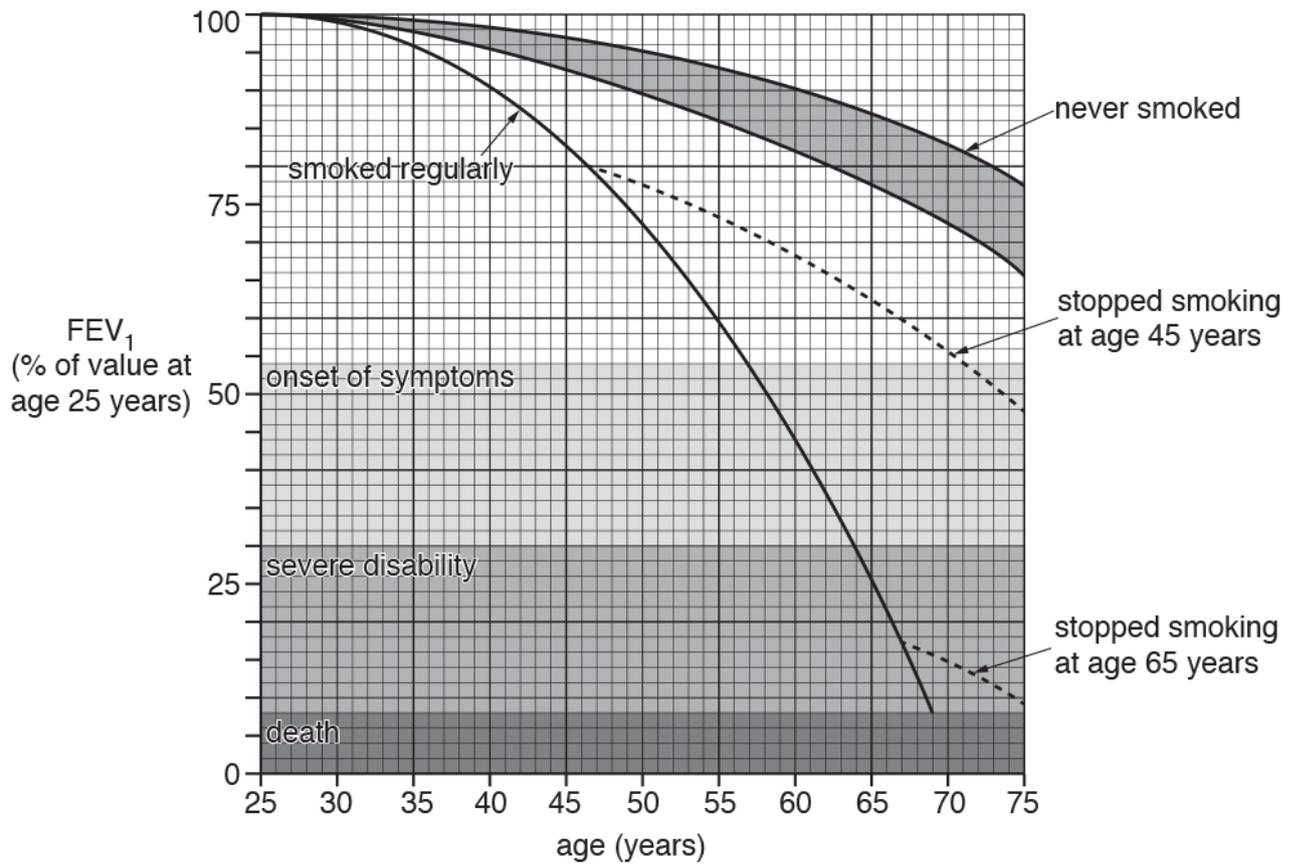


Fig. 37.2

(i) The health campaign claimed that giving up cigarette smoking improves quality of life and prevents smoking-related death.

Evaluate this claim using the data from the graph in Fig. 37.2.

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[3]

(ii) During the campaign, doctors warned that the graph in Fig. 37.2 could not accurately predict the lung function of **individual** cigarette smokers over time.

Suggest **two** reasons why.

1 -----  
-----  
2 -----  
-----

[2]



### Mark Scheme

Question			Answer/Indicative content	Marks	Guidance
1		i	Forced expiratory volume in first second (of exhaling) (1)  Peak expiratory flow rate (1)	2	
		ii	3.5 – 1.8 (1) 1.7 (1)	2	
		iii	<i>idea that</i> PEFR will be the slope of (the steepest part of) the line	1	
			<b>Total</b>	<b>5</b>	
2		i	<b>S ✓</b>	1	<p><b>Examiner's Comments</b></p> <p>AO1 and AO2 were addressed in this question which had a plant theme in an evolutionary context.</p> <p>The majority of candidates were able to correctly identify <b>S</b> as the point at which xylem and phloem tissues would appear on the phylogenetic tree and were also able to suggest a suitable adaptation.</p>
		ii	waxy cuticle (to prevent water loss) ✓ roots (for obtaining water) ✓ gas exchange structures ✓	1 max	<p><b>CREDIT</b> named gas exchange structures e.g. correct references to stomata or lenticels <b>IGNORE</b> chloroplasts</p> <p><b>Examiner's Comments</b></p> <p>AO1 and AO2 were addressed in this question which had a plant theme in an evolutionary context.</p> <p>The majority of candidates that would have enabled primitive plants to live on land; with '<i>development of roots</i>' being the most common correct response.</p>

### Mark Scheme

Question			Answer/Indicative content	Marks	Guidance
		iii	large and multicellular ✓ have small SA:V ✓ <i>idea that</i> diffusion distance is large and diffusion is too slow to meet need ✓	3 max	<p><b>Examiner's Comments</b></p> <p>AO1 and AO2 were addressed in this question which had a plant theme in an evolutionary context.</p> <p>The majority of some candidates understood that as plants evolved they would need a transport system as they would become too large/multicellular, or would have a lower SA:V ratio. However, many responses did not portray this idea and credit was not given for statements such as, '<i>it would be needed to transport nutrients</i>'.</p>
			<b>Total</b>	<b>3</b>	

### Mark Scheme

Question			Answer/Indicative content	Marks	Guidance
3	a	i	lumen of, blood vessel / arteriole / artery ✓	1	<p><b>IGNORE</b> capillary</p> <p><b>Examiner's Comments</b></p> <p>This question provided a straightforward end to the question paper with short answers involving AO1 recall or straightforward AO2 'suggest' style questions. Timing issues were the most likely cause of 'no responses' for some of the question parts.</p> <p>The label line on the diagram was indicating the lumen of the blood vessel which was required to gain the mark point.</p>
		ii	<p>(squamous epithelial cells) do not have cilia ✓</p> <p>(squamous epithelial cells) are flattened ✓</p> <p>(squamous epithelial cells) have fewer mitochondria ✓</p>	1 max	<p><b>CREDIT</b> ORA for epithelial cells lining bronchioles</p> <p><b>ACCEPT</b> thinner</p> <p><b>Examiner's Comments</b></p> <p>This question provided a straightforward end to the question paper with short answers involving AO1 recall or straightforward AO2 'suggest' style questions. Timing issues were the most likely cause of 'no responses' for some of the question parts.</p> <p>There were few correct responses to required knowledge of the different types of epithelial cell present in the respiratory system and good responses gave either '<i>lack of cilia</i>' or '<i>flattened, thin cells</i>' as a difference for squamous epithelial cells.</p>

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
	iii	<p><i>smooth muscle</i> contracts to, control / adjust / reduce lumen size ✓</p> <p><i>elastic fibres</i> allow, stretch / recoil <b>OR</b> allow lumen to, dilate / return to usual size ✓</p>	2	<p><b>Examiner's Comments</b></p> <p>This question provided a straightforward end to the question paper with short answers involving AO1 recall or straightforward AO2 'suggest' style questions. Timing issues were the most likely cause of 'no responses' for some of the question parts.</p> <p>There were some confident responses seen when describing the roles of elastic tissue and smooth muscle in the bronchioles. However, there is still some confusion over the correct terms to use and some candidates confused 'expand' with 'relax' or 'contract' with 'stretch'. There was also some ambiguity as to the 'stretching of the bronchioles' which could suggest that the bronchioles were lengthening rather than the lumen of the bronchiole being widened.</p>
	b	<p>(wall of) trachea OR bronchus <b>AND</b> support / prevents (airway) collapse ✓</p>	1	<p><b>IGNORE</b> references to shape and flexibility <b>DO NOT CREDIT</b> cartilage increases flexibility</p> <p><b>Examiner's Comments</b></p> <p>This question provided a straightforward end to the question paper with short answers involving AO1 recall or straightforward AO2 'suggest' style questions. Timing issues were the most likely cause of 'no responses' for some of the question parts.</p> <p>There were few correct responses was accessible to the ability range with '<i>trachea</i>' and '<i>needed for support or to prevent collapse</i>' being the most common correct responses.</p>
		<b>Total</b>	<b>5</b>	

### Mark Scheme

Question			Answer/Indicative content	Marks	Guidance
4	a	i	0.25 ( $\mu\text{m}$ ) ✓✓	2	<p><b>Correct answer = 2 marks</b>  <b>ACCEPT</b> 0.23 – 0.28            1/36 – 44 = 1 mark            x 10 = 1 mark</p> <p><b><u>Examiner's Comments</u></b></p> <p>This was a straightforward magnification calculation but many candidates did not score any marks. Not all candidates showed their working contrary to the instructions given in the question. It is worth pointing out that there was evidence that a lot of candidates used the IAM formula but most were not able to interpret the answers correctly, they clearly didn't really understand the formula and were not able to appreciate how unlikely it was that some of the answers they obtained were correct. Many candidates forgot to multiply by 10 and therefore lost a mark.</p>
		ii	5 ( $\mu\text{m}$ ) ✓✓	2	<p><b>Correct answer = 2 marks</b>  <b>ACCEPT</b> 4.6 – 5.6            20 (eye piece graticule units) = 1 mark            x (b)(i) = 1 mark            If answer given is incorrect <b>allow 1 mark</b> for ECF</p> <p><b><u>Examiner's Comments</u></b></p> <p>More candidates gained marks in (ii), often thanks to an error carried forward from the previous question. However, the comments made about (i) could equally apply here.</p>

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
	b	<p>potassium ions (<math>K^+</math>) actively transported into the (cytoplasm of the) guard cells ✓  decreases water potential (inside cell) ✓  water moves in, by osmosis / down water potential gradient ✓  outer walls (of guard cells) are thinner ✓  <b>✓ORA</b>  resulting in, curved shape / AW ✓</p> <p style="text-align: right;"><b>3 Max</b></p> <p><i>idea of water loss too great</i> ✓</p> <p>transpiration would occur too quickly ✓</p> <p style="text-align: right;"><b>1 Max</b></p>	4 Max	<p><b>ACCEPT</b> <math>K^+</math> ions pumped into guard cells</p> <p><b>ACCEPT</b> towards the more negative water potential</p> <p><b>ACCEPT</b> prevent dehydration</p> <p><b>IGNORE</b> references to evaporation</p> <p><b><u>Examiner's Comments</u></b></p> <p>The most common correct answer was about plants not losing too much water, with many candidates talking about deserts being dry and plants dehydrating. Very few attempted an explanation of the mechanism of guard cell opening and of those that did, quite a few failed to name the ion used as potassium. Candidates who wrote about the cells swelling often gave no further detail such as the unequal thickness of the cell wall or bending of the cell.</p>
		<b>Total</b>	<b>8</b>	

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance	
5	a	<p>(gases move) by diffusion down a concentration gradient;</p> <p>oxygen (from alveoli) into capillary / blood / AW  <b>AND</b>                      carbon dioxide from capillary / blood / AW (into alveoli);</p>	2	<p><b>BOTH NEEDED FOR ONE MARK</b></p> <p><b>ACCEPT</b> correct terms for detail of location of respiratory gases in blood.</p> <p><b>Examiner's Comments</b></p> <p>This topic has been tested several times over various sessions but still descriptions of gas exchange were frequently confused or partially incomplete.</p> <p>In part candidates still refer to oxygen entering and carbon dioxide leaving the lungs or diffusion into and out of 'the lungs' with no reference to the alveoli as the structure where gas exchange occurs.</p>	
	b	<p><i>reason for mucus retention</i>                      cilia not functioning correctly / AW  <b>OR</b>                      goblet cells producing too much mucus;</p> <p><i>reason for recurrent infections of respiratory system</i> bacteria / pathogens / viruses / microorganisms are not removed;</p>	2	<p>e.g. ciliated cells damaged / cilia missing / fewer cilia / fewer or no ciliated cells</p> <p><b>Examiner's Comments</b></p> <p>Most candidates were able to answer this part in terms of changes to the ciliated epithelial cells.</p>	
	c	i	<p>FEV<sub>1</sub> for normal person is 3.5  <b>AND</b>                      FEV<sub>1</sub> for person with a respiratory disorder is 2.0;</p> <p><i>idea that</i> blocked / damaged , airways reduce flow of air out of lungs;</p>	2	<p><b>BOTH FEV<sub>1</sub> values needed for 1 mark</b></p> <p><b>Examiner's Comments</b></p> <p>Part (i) was a good discriminator with only more able candidates getting the calculation correct and explaining their findings. Common misconceptions referred to changes to tidal volume or vital capacity.</p>



### Mark Scheme

Question			Answer/Indicative content	Marks	Guidance
7			(organ) system ;	1	<p><b>DO NOT CREDIT</b> specific named system unless given as example</p> <p><b>Mark the first answer for each question part.</b> If the answer is correct and a further answer is given that is incorrect or contradicts the correct answer then = 0 marks</p> <p><b>Examiner's Comments</b></p> <p>This term was well known to the majority of candidates.</p>
			<b>Total</b>	<b>1</b>	

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
8		<p>1 volume, inside / of, jar increases ;</p> <p>2 pressure inside, jar / balloons, decreases ;</p> <p>3 to below pressure in atmosphere ;</p> <p>4 (therefore) air, moves / pushed / forced, into, balloons / glass tube ;</p>	3 max	<p><b>DO NOT ALLOW</b> marks for use of just 'oxygen' in place of 'air' throughout question 2</p> <p><b>IGNORE</b> references to chest / lungs</p> <p><b>CREDIT</b> idea of creating a pressure gradient (between balloon and exterior) <b>IGNORE</b> hydrostatic <b>Note:</b> 'makes pressure in jar lower than atmosphere' = 2 marks</p> <p><b>ACCEPT</b> flows / enter / fills <b>DO NOT CREDIT</b> suction / drawn / pulled in / diffuse in / taken in</p> <p><b>IGNORE</b> <i>just</i> into bell jar</p> <p><b>Examiner's Comments</b></p> <p>Candidates were asked to explain why the balloons expand when the rubber sheet is pulled down. This question is answered by very simple physics. Many candidates were able to score all three marks within two lines of clear succinct text. Other candidates clearly need to gain a better understanding of the simple physics and consider their response before starting to write. Some candidates described how air is inhaled into the lungs rather than applying their knowledge to the model. These candidates must be encouraged to read the question carefully.</p>
		<b>Total</b>	<b>3</b>	

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
9	a	<p><i>PEFR</i> the maximum rate at which air is forcibly exhaled ✓</p> <p><i>FEV<sub>1</sub></i> the volume of air that can be forcibly breathed out in ,one second / first second ✓</p>	2	<p><b>IGNORE</b> amount of air</p> <p><b>Examiner's Comments</b> This question addressed mainly <b>AO1</b> and <b>AO2</b>. Candidates were required to demonstrate their mathematical skills by performing a calculation in the context of respiratory parameters such as <b>PEFR</b> and <b>FEV<sub>1</sub></b>.</p> <p><b>Q24(a)</b> These standard definitions often prove challenging for candidates and few correct responses were seen for both.</p>
	b	<p>4.4 (dm<sup>3</sup>) ✓✓</p> <p><i>conclusion</i> FEV<sub>1</sub> is lower than predicted value so could have respiratory problem ✓</p>	3	<p>If answer not given to one decimal place allow 1 mark for correct working i.e. (7.525 – 0.638) – 2.49 <b>OR</b> 4.397</p> <p><b>ALLOW</b> named respiratory problem e.g. asthma</p> <p><b>Examiner's Comments</b> In <b>Q24(b)</b> over half of the candidates correctly calculated the <b>FEV<sub>1</sub></b> value for two marks. In cases where candidates had not given their response to one decimal place one mark was awarded for the correct calculation. Unfortunately, few candidates offered a creditworthy conclusion for the final mark of this question.</p>

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
	c	small puffs of air ✓ OR head not tilted back as far ✓	1	IGNORE references to CPR on a small child <b>Examiner's Comments</b> Good responses to part Q24(c) commented on the fact that it was not necessary to tilt a child's head back as far during expired air resuscitation (EAR) or that it was important to only give small breaths. It is important that candidates read questions carefully as many candidates described differences when giving CPR or repeated that you should cover both the mouth and nose which was in the question stem. All such responses could not be credited.
		<b>Total</b>	<b>6</b>	

### Mark Scheme

Question		Answer/Indicative content			Marks	Guidance
10	a	Cell type	Name	Role	1	<p>ALLOW septal cells</p> <p>DO NOT ALLOW contraction of bronchiole</p> <p><b><u>Examiner's Comments</u></b></p> <p>Many candidates were able to identify the squamous epithelial cell and describe the role. The smooth muscle cell proved more difficult to identify and for those who could there was some confusion about the role of this cell type. Some candidates incorrectly linked the contraction of smooth muscle to the regular ventilation process.</p>
		R	<u>squamous</u> epithelial (cell) ✓	surface for gas exchange ✓ secretion of (pulmonary) surfactant ✓		
		S	<u>smooth</u> muscle (cell) ✓	control of airflow / constriction / dilation, of lumen (of bronchiole) ✓		

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
	b i	<p>delays onset of, symptoms / disability ✓</p> <p>comparison of data to illustrate mp1 ✓</p> <p>giving up at 65 years does not improve quality of life (already severe disability) ✓</p> <p>cannot prove any influence on smoking-related death since cause of death not recorded ✓</p>	3	<p><b>ALLOW</b> the earlier the age when giving up, the better the quality of life</p> <p><b>ALLOW</b> those already disabled do not recover</p> <p><b>Examiner's Comments</b></p> <p>Although candidates were asked to evaluate a claim made about giving up smoking, many candidates wrote at length about non-smokers and regular smokers. This made their answers too long and often caused them to miss out on marks. Candidates should remember to quote data to support their answer in an evaluation question.</p> <p><b>Exemplar 11</b></p> <p>(i) The health campaign claimed that giving up cigarette smoking improves quality of life and prevents smoking-related death.</p> <p>Evaluate this claim using the data from the graph in Fig. 37.2.</p> <p>For people that stopped smoking aged 45 there onset of symptoms reduced from age 57 to 71 which is a big increase, however people that stopped age 65, have already gone past symptoms disability so it just gives them around 7 years more to live. The earlier you stop the more it improves quality of life.</p> <p>This candidate starts their answer clearly by referring to the two different ages that smokers could give up and gains the full marks in just six lines of text.</p>

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
	ii	<p>any 2 from:</p> <p>person may not begin smoking at age 25 ✓            number of cigarettes per day not recorded ✓            graph does not exceed age 75 ✓            other respiratory conditions / named example e.g. asthma or COPD, affect FEV1 , not accounted for ✓            smokers may, lie / forget to report symptoms ✓</p> <p>data based on mean values ✓</p>	max 2	<p><b>ACCEPT</b> any reference to variation in <u>individuals</u>.</p> <p><b>Examiner's Comments</b></p> <p>Most candidates scored at least one mark here. Candidates stated correctly that individuals would have different starting FEV values but did not appreciate that the graph shows the change in FEV as a % of the FEV at 25 and so this would have been taken into account.</p> <p><b>Exemplar 12</b></p> <p>1 ... some people have different sized lungs therefore have as smaller FEV 100% value anyway</p> <p>2 each individual will have smoked different numbers of cigarettes per day and how often they smoke</p> <p>This response demonstrates the error described above as well as one correct response.</p>
	c	<p>any 3 from:</p> <p>tilt head back (to open airway) ✓            check airway for / remove, obstructions ✓            pinch nose and seal mouth ✓            blow (gently) into mouth until chest rises ✓            wait for chest to fall and then repeat ✓            check pulse after two breaths ✓            repeat if pulse present / if not present, perform cardiopulmonary resuscitation / CPR ✓</p>	max 3	<p><b>Examiner's Comments</b></p> <p>Several candidates described CPR rather than expired air resuscitation.</p>
<b>Total</b>			<b>12</b>	