



1. Tigers are predators.



(a) Describe how the named structures help tigers survive.

(i) Pointed teeth

.....  
.....  
**(1)**

(ii) Large muscular back legs

.....  
.....  
**(1)**

(iii) Striped coat

.....  
.....  
**(1)**



(b) A species of tiger used to be found on Java, a large island near Australia. Suggest **two** reasons why this tiger is now extinct.

.....

.....

.....

.....

.....

.....

(2)

Q1

(Total 5 marks)



2. When certain substances are in excess, they can become pollutants and cause environmental problems.

Draw one straight line from each pollutant to the environmental problem it causes.

**pollutant**

**environmental problem**

carbon dioxide ●

sulphur dioxide ●

CFCs ●

● acid rain

● global warming

● ozone depletion

● eutrophication

(Total 3 marks)

Q2



3. Willow trees grow faster than most other trees and can grow in waterlogged soil. Waterlogged soil stops air getting to their roots.



(a) Use words in the box to complete the sentences.

carbon dioxide	diffusion	leaves	
oxygen	respiration	photosynthesis	roots

Willow trees absorb light for .....

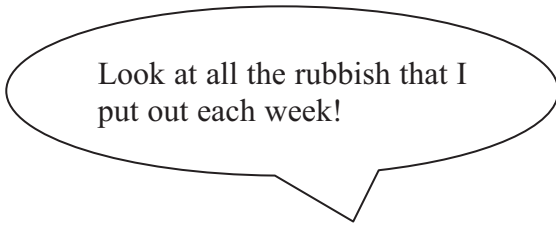
They absorb most water through their .....

Oak trees do not grow very well in waterlogged soils because their roots cannot absorb enough .....

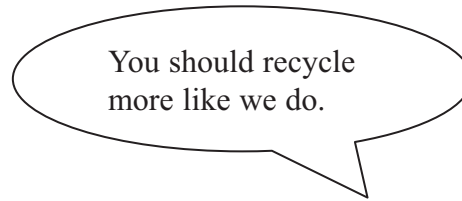
**(3)**



(b) Bob has three willow trees in his garden.  
He trims the trees often because they grow quickly.  
Bob meets his neighbour when he is putting his rubbish out to be collected.



Bob



Neighbour

(i) Bob decides to compost his willow cuttings at home.  
Suggest how composting waste helps the environment.

.....  
.....

(1)

(ii) Bob's neighbour recycles paper.  
State one reason why **all** paper cannot be recycled.

.....  
.....

(1)

(Total 5 marks)

Q3



4. Write either **yes** or **no** in each box to complete the table.  
The first row has been done for you.

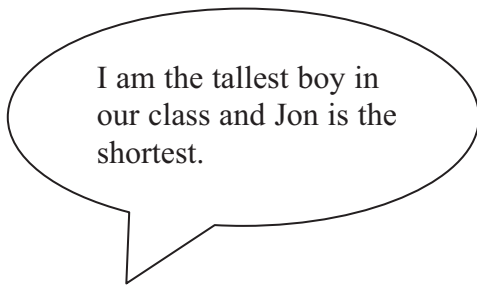
	aerobic respiration	anaerobic respiration
provides energy	yes	yes
(a) uses oxygen		
(b) uses glucose		
(c) produces lactic acid		

(Total 3 marks)

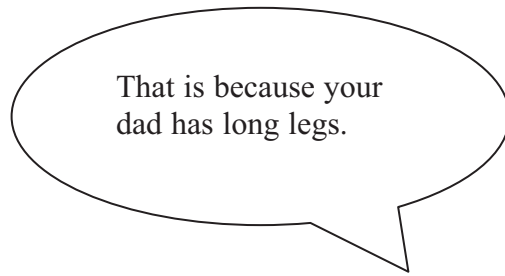
Q4



5. Colin and Freddie were discussing the height of boys in their class.



Colin



Freddie

They measured the heights of the boys in their class to the nearest centimetre. The table shows their results.

152	165	187	157
166	174	196	166
175	179	184	163

(a) What is the range of boys height in this class?

answer = ..... cm  
(1)

(b) Height is influenced by a number of factors. State **two** factors that influence height.

1 .....

2 .....

(2)

(c) Name the type of cell division that takes place in humans for growth to occur.

.....

(1)

(Total 4 marks)

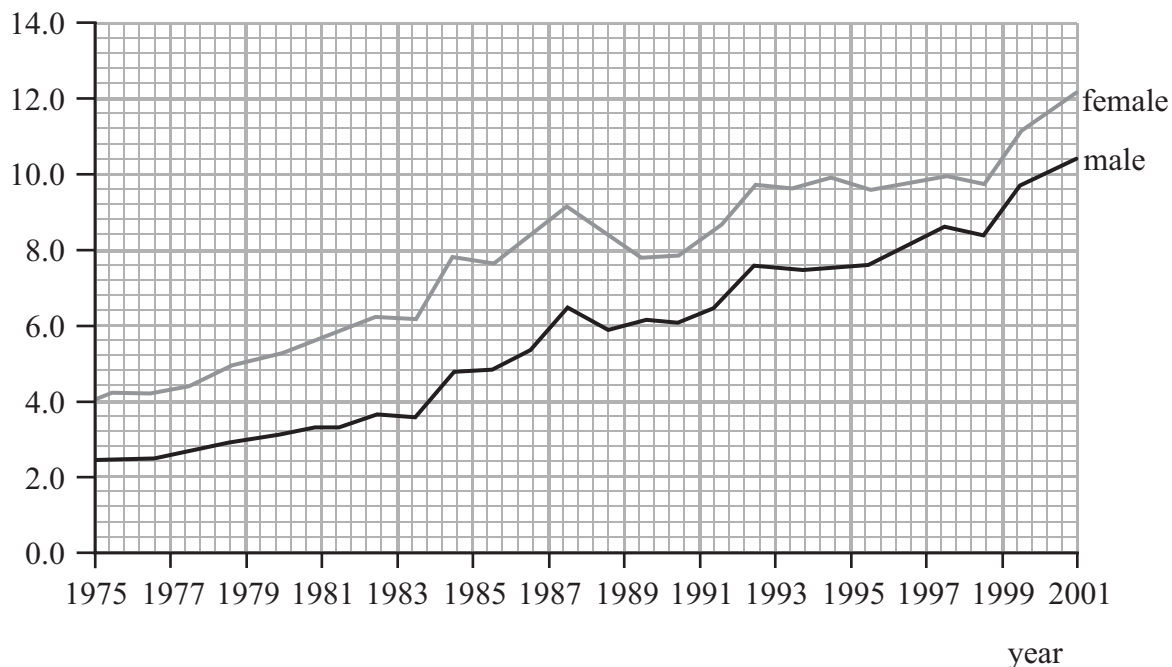
Q5





6. The graph shows changes in the number of cases of skin cancer in males and females from 1975 to 2001.

skin cancer cases per 100 000 population



(a) Compare the pattern of skin cancer cases in males and females from 1975 to 2001.

.....

.....

.....

.....

(2)

(b) The occurrence of skin cancer is a living indicator.  
State another example of a living indicator that could be used to monitor air pollution.

.....

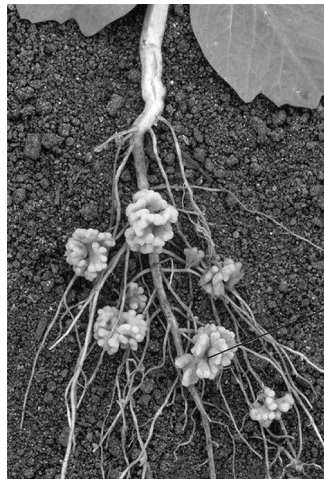
(1)

(Total 3 marks)

Q6



7. Pea plants have root nodules that contain bacteria.



root nodules

Wally Eberhart, Visuals Unlimited/Science Photo Library

(a) Explain how the root nodules help the pea plant to grow.

.....  
.....  
.....  
.....  
.....  
.....

(2)

(b) When the pea plant dies, compounds containing nitrogen are released into the soil. Explain how these compounds containing nitrogen are cycled through the environment.

.....  
.....  
.....  
.....  
.....  
.....

(2)



(c) Farmers use compounds containing nitrogen as fertilisers. Describe the effects of overuse of these fertilisers on rivers.

.....

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.....

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.....

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(3)

Q7

(Total 7 marks)

**TOTAL FOR PAPER: 30 MARKS**

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