Revision Sheet

IGCSE Biology · Unit 19 Organisms and their environment

10 vocabulary items · 32 marks of exam questions (6 questions)

Part 1 · Vocabulary review (10 items). The terms this unit is examined on most. Mark it yourself from the answer key.

Section A · Chinese to English

Write the English word.

1. _____ [1]

2. _____ [1]

3. _____ [1]

4. _____ [1]

5. _____ [1]

6. _____ [1]

7. _____ [1]

8. _____ [1]

9. _____ [1]

10. _____ [1]

Part 2 · Exam questions (32 marks, 6 questions) begins on the next page. They are ordered easy to difficult and none of them has been set before.

11 What is the main source of energy input to biological systems?

A glucose

B oxygen

C plants

D the Sun

12 Which organisms remove nitrate ions from soil?

A denitrifying bacteria and nitrogen-fixing bacteria in root nodules

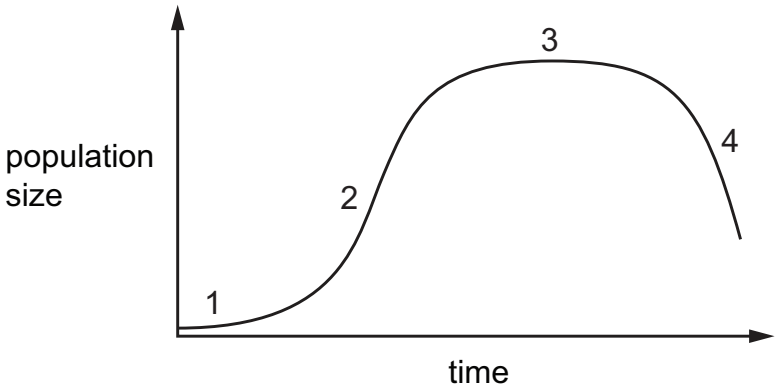
B denitrifying bacteria and plants

C nitrifying bacteria and plants

D nitrogen-fixing bacteria in root nodules

13 A few yeast cells were placed in a container of nutrient solution.

The graph shows how their population size changed over time.



Which row shows when the reproduction rate was greater than the death rate for the numbered phases on the graph?

	reproduction rate greater than death rate			
	1	2	3	4
A	✓	✓	✓	✗
B	✓	✓	✗	✗
C	✓	✗	✗	✗
D	✗	✓	✓	✓

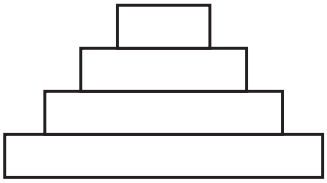
key

✓ = yes

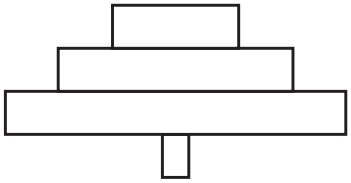
✗ = no

14 Which diagram shows a pyramid of biomass for a forest?

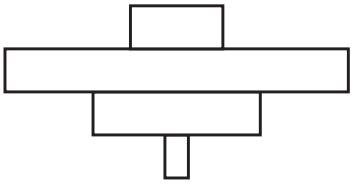
A



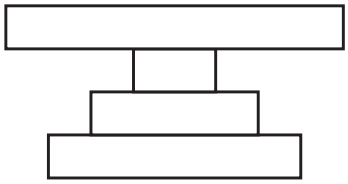
B



C



D



15 Fig. 6.1 is a diagram representing part of the carbon cycle.

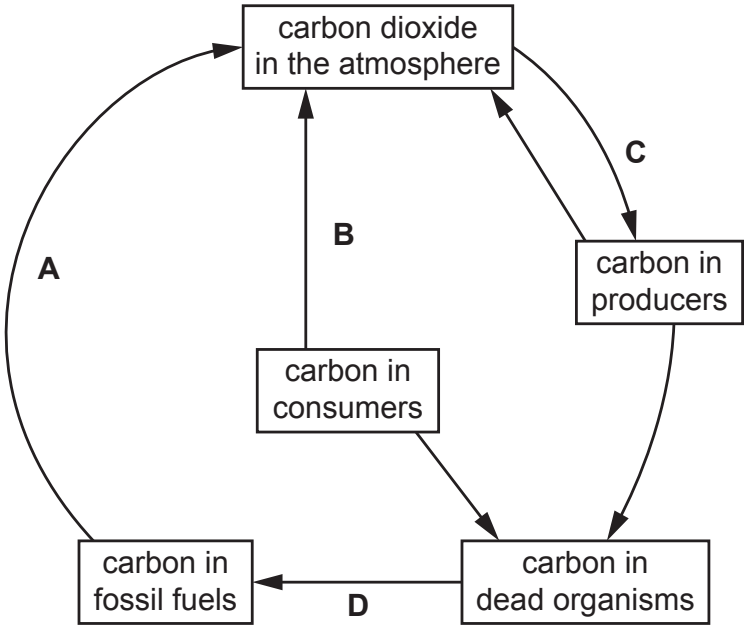


Fig. 6.1

(a) Using the information in Fig. 6.1, identify the number of processes that remove carbon dioxide from the atmosphere.

..... [1]

(b) The boxes on the left show letters representing processes in Fig. 6.1.

The boxes on the right show the names of some processes.

Draw lines to link each letter to the correct process.

Draw **four** lines.

letter in Fig. 6.1	**process**
	combustion
A	
	decomposition
B	
	formation of fossil fuel
C	
	photosynthesis
D	
	respiration

[4]

(c) Energy is transferred through feeding in food webs.

(i) Draw an arrow **on Fig. 6.1** to represent the process of herbivores feeding. [1]

(ii) State the principal source of energy in most food webs.

..... [1]

(d) Explain why fossil fuels **cannot** be described as a sustainable resource.

.....

.....

.....

.....

.....
[2]

(e) Deforestation can cause an increase in the carbon dioxide concentration in the atmosphere.

State **two other** undesirable effects of deforestation.

1 .....

2 .....
[2]

(f) Adding extra carbon dioxide to the atmosphere causes an enhanced greenhouse effect.

(i) State the usual concentration of carbon dioxide in the atmosphere.

..... % [1]

(ii) State **one other** pollutant that causes an enhanced greenhouse effect.

..... [1]

[Total: 13]

16 Fig. 5.1 shows a food web from a desert ecosystem.

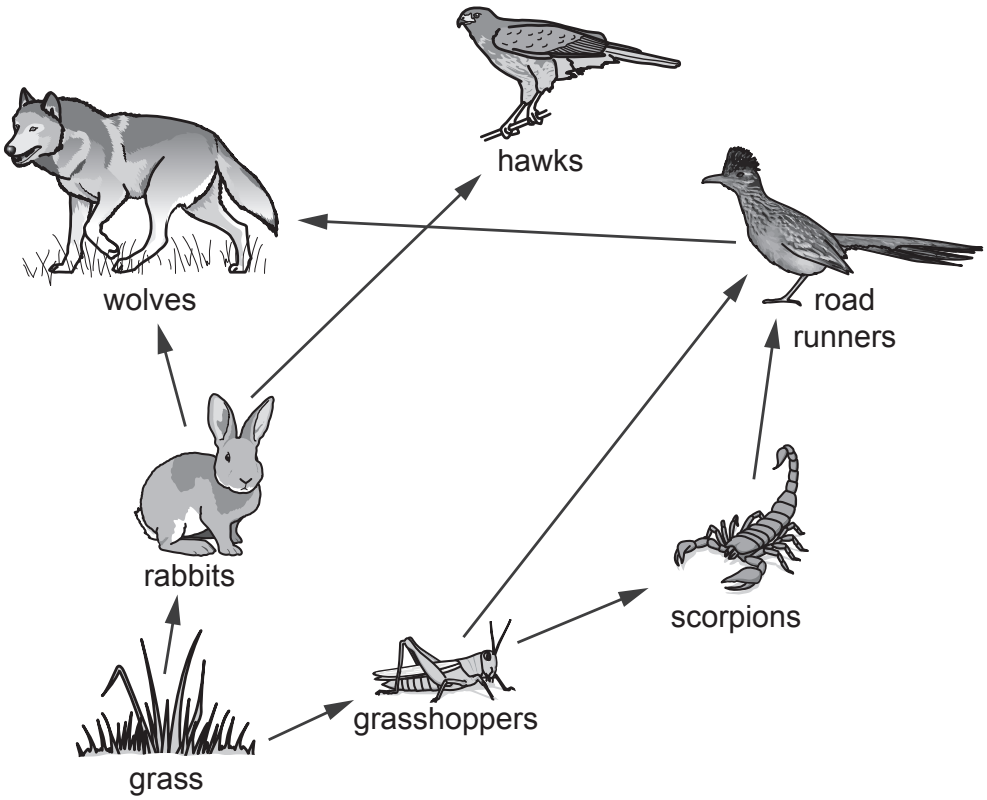


Fig. 5.1 (not to scale)

(a) Identify, on Fig. 5.1:

a quaternary consumer .....

a herbivore .....

an organism that is both a secondary and tertiary consumer .....

an organism that is in trophic level one. .....

[4]

(b) A food chain from the food web is shown:

grass → rabbits → wolves

(i) Sketch the pyramid of biomass for this food chain.

Label the pyramid with the name of each species.

[2]

(ii) State the principal source of energy for food webs.

..... [1]

(iii) Humans harvest rabbits.

The road runner population could increase or decrease as a result of humans overharvesting rabbits.

Explain how both changes in the road runner population could occur.

.....

.....

.....

.....

.....

.....

..... [3]

(c) The population of hawks has decreased significantly in the past 20 years. One cause of this decrease is insecticides used in farming.

(i) Explain why farmers use insecticides.

.....

.....

..... [2]

(ii) Suggest **three** other ways that humans may cause the population of birds such as hawks to decrease.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

[Total: 15]