

Revision Sheet

IGCSE Biology · Unit 20 Human influences on ecosystems

12 vocabulary items · 24 marks of exam questions (6 questions)

Part 1 · Vocabulary review (12 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. | <hr/> | [1] |
| 2. | <hr/> | [1] |
| 3. | <hr/> | [1] |
| 4. | <hr/> | [1] |
| 5. | <hr/> | [1] |
| 6. | <hr/> | [1] |
| 7. | <hr/> | [1] |
| 8. | <hr/> | [1] |
| 9. | <hr/> | [1] |
| 10. | <hr/> | [1] |
| 11. | <hr/> | [1] |
| 12. | <hr/> | [1] |

Part 2 · Exam questions (24 marks, 6 questions) begins on the next page. They are ordered easy to difficult and none of them has been set before.

13 What are **two** reasons for organisms becoming endangered?

- ☐
- 1 habitat destruction
 - 2 monitoring
 - 3 education
 - 4 pollution
 - 5 captive breeding programmes

A 1 and 4 **B** 1 and 5 **C** 2 and 3 **D** 3 and 4

14 What is a description of biodiversity?

- ☐
- A** the number of different animal species that live in an area
- B** the number of different plant species that live in an area
- C** the number of different species that live in an area
- D** the number of individuals of a particular species that live in an area

15 A list of different stages that occur in the process of eutrophication is given.

- ☐
- 1 reduction in dissolved oxygen
 - 2 increase in nitrate ions
 - 3 death of organisms requiring dissolved oxygen
 - 4 growth of producers
 - 5 increased aerobic respiration by decomposers
 - 6 death of producers followed by their decomposition

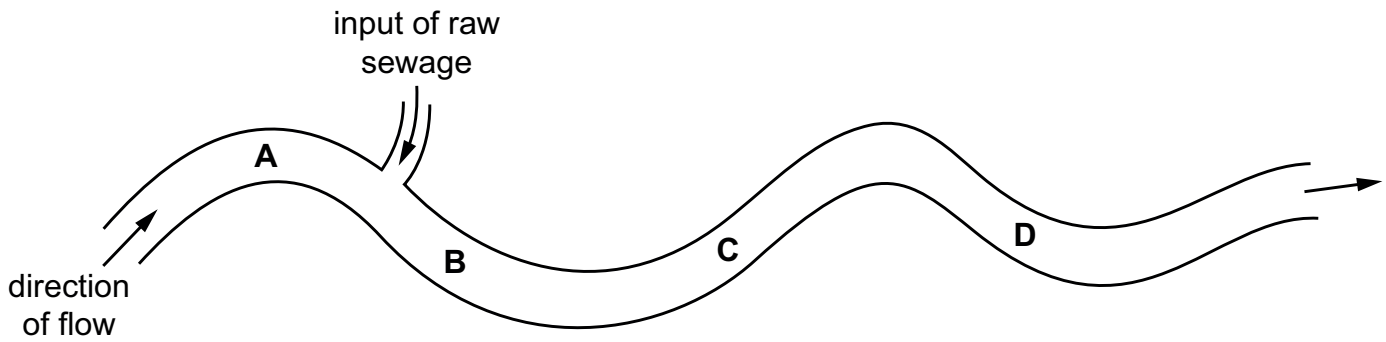
What is the correct order in which these processes occur during eutrophication?

- A** 1 → 3 → 5 → 2 → 6 → 4
- B** 2 → 4 → 1 → 6 → 5 → 3
- C** 2 → 4 → 6 → 5 → 1 → 3
- D** 5 → 1 → 3 → 6 → 2 → 4

16 The bloodworm is an organism that is found in heavily polluted water.

☐ The diagram shows where raw sewage flows into a river.

Where would there be fewest bloodworms?



17 (a) State **one** source of methane gas.

..... [1]

(b) Fig. 8.1 is a graph showing the estimated change in methane concentration in the atmosphere over a thousand-year period.

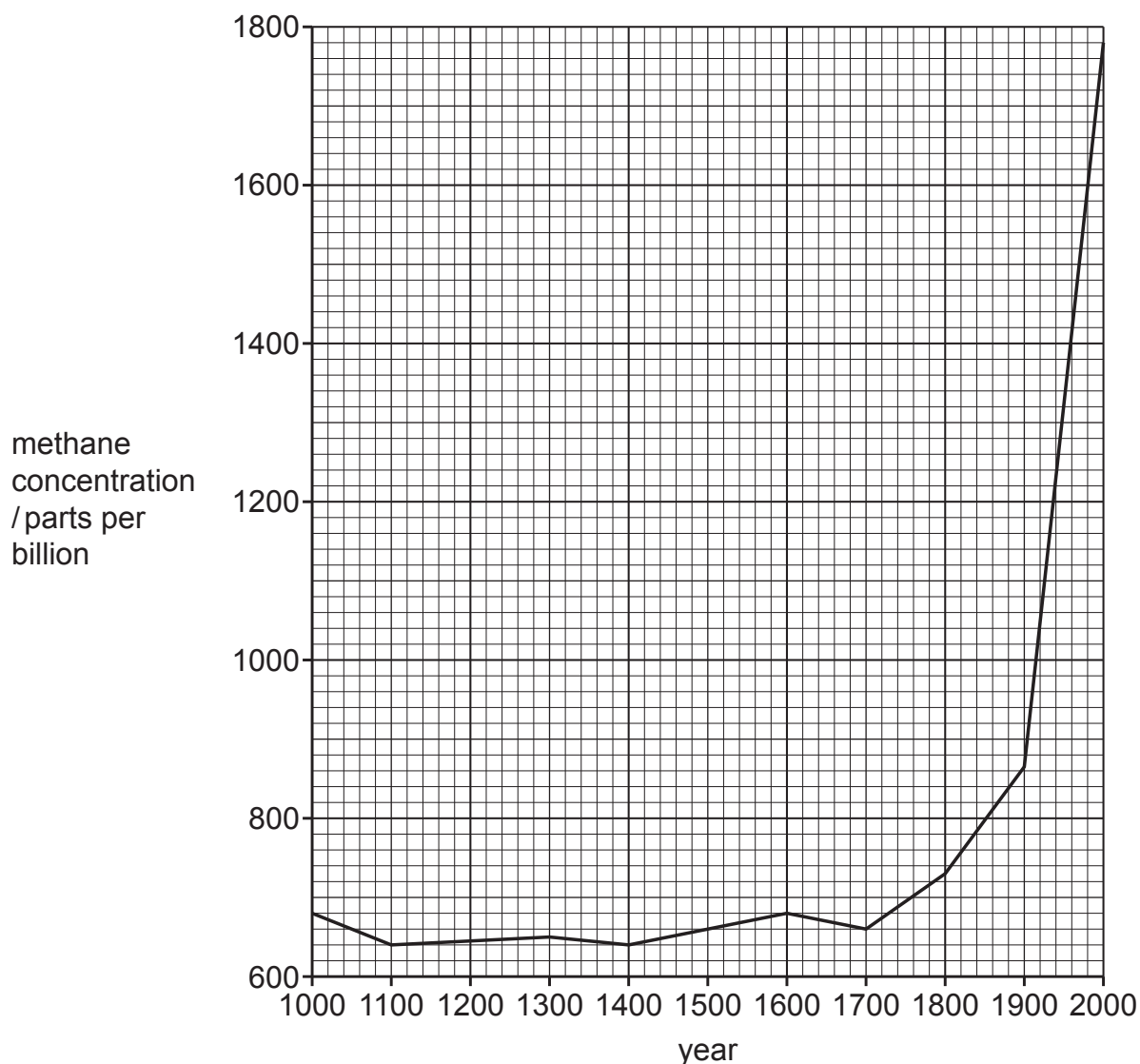


Fig. 8.1

Complete the sentences to describe the changes in methane concentration shown in Fig. 8.1.

The general trend is for methane concentration to

The concentration of methane was the same in the year 1000 and in the year

Over the thousand-year period shown in the graph, the concentration of methane has increased by parts per billion.

[3]

- (c) (i) State **one** process, other than respiration, that releases carbon dioxide into the atmosphere.

..... [1]

- (ii) State **two** effects on the environment of increasing carbon dioxide and methane concentrations in the atmosphere.

1

2 [2]

- (iii) State **one** natural process that removes carbon dioxide from the atmosphere.

..... [1]

- (d) Yeast can be used to produce ethanol for use as a biofuel.

- (i) State the name of the process used by yeast to produce ethanol.

..... [1]

- (ii) Large amounts of ethanol are required as a biofuel.

Maize is a food plant that is also used to produce ethanol as a biofuel.

Maize grown for ethanol production is grown in large-scale monocultures.

Describe the **disadvantages** of growing crop plants such as maize in a large-scale monoculture.

.....

.....

.....

.....

.....

.....

..... [3]

[Total: 12]

- 18** The Mulanje cedar, *Widdringtonia whytei*, is the national tree of Malawi. This species of tree grows naturally only on Mount Mulanje in Malawi. Many of the trees have been overharvested or destroyed by wildfires, resulting in deforestation, as shown in Fig. 5.1.



Fig. 5.1

- (a)** State the genus name of the Mulanje cedar tree.

..... [1]

(b) Explain the undesirable effects of deforestation on habitats that are on mountains, such as Mount Mulanje.

[3]

(c) Scientists in Malawi are working to prevent the extinction of the Mulanje cedar tree in its natural habitat.

Explain the benefits to other organisms on Mount Mulanje of conserving the Mulanje cedar tree in its natural habitat.

[2]

(d) The seeds of many endangered tree species are kept in seed banks.

Suggest why it is important to collect seeds from many individual trees of each species rather than just one tree.

[2]

[Total: 8]