01. 0610_w17_qp_23 Q: 39

What is a direct result of deforestation?

A decreased leaching of mineral salts

B increased loss of soil

C increased production of methane

D increased recycling of important minerals

---

02. 0610_s16_qp_21 Q: 39

Which effect is **least** likely to occur as a result of deforestation?

A an increase in biodiversity

B an increase in soil erosion

C an increase in the level of carbon dioxide in the atmosphere

D an increased risk of flooding

21.3 Pollution

03. 0610_m21_qp_22 Q: 39

When nitrates enter a lake they cause rapid growth of algae on the surface of the water. This causes the following changes in the lake:

1 The concentration of dissolved oxygen in the water decreases.

2 Fish and other aquatic animals die.

3 Aerobic respiration in decomposers increases.

4 Producers die and decomposition increases.

In which order do these changes occur?

A $1 \rightarrow 2 \rightarrow 4 \rightarrow 3$

B $3 \rightarrow 1 \rightarrow 2 \rightarrow 4$

C $4 \rightarrow 2 \rightarrow 3 \rightarrow 1$

D $4 \rightarrow 3 \rightarrow 1 \rightarrow 2$

---

04. 0610_s21_qp_21 Q: 40

Which hormones can cause the feminisation of male fish?

A adrenaline and progesterone

B adrenaline and testosterone

C oestrogen and progesterone

D oestrogen and testosterone

---

05. 0610_s21_qp_22 Q: 40

The process of eutrophication begins with the increased availability of nitrate ions and other ions in water.

The processes involved in eutrophication are listed.

1 increased aerobic respiration by decomposers

2 increased death of producers due to lack of light

3 rapid growth of producers

4 oxygen concentration in the water decreases and more organisms die

What is the correct sequence?

A $3 \rightarrow 2 \rightarrow 1 \rightarrow 4$

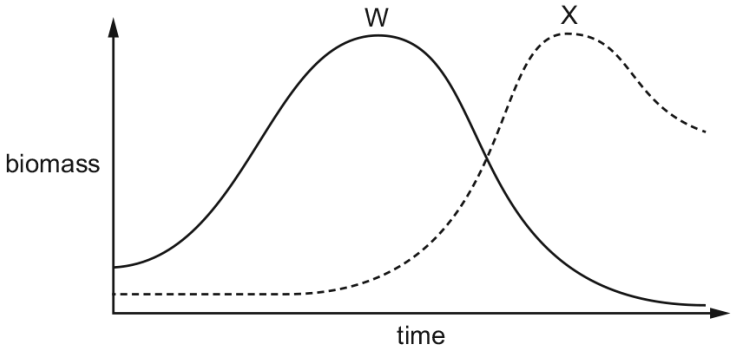
B $3 \rightarrow 4 \rightarrow 2 \rightarrow 1$

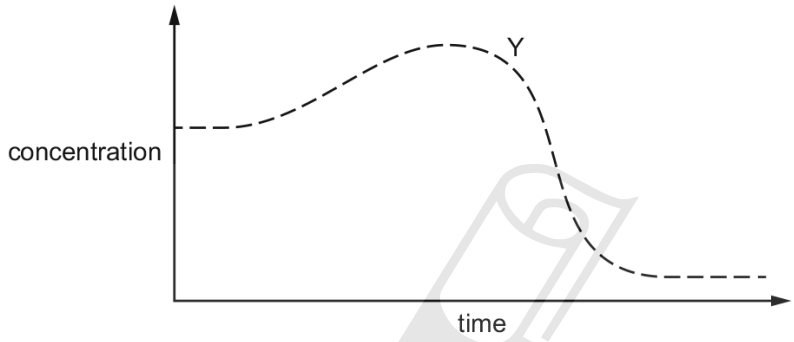
C $4 \rightarrow 1 \rightarrow 2 \rightarrow 3$

D $4 \rightarrow 1 \rightarrow 3 \rightarrow 2$

06. 0610_w21_qp_21 Q: 40

The graphs show changes that occur in a lake during the process of eutrophication.





What are the labels for W, X and Y?

	W	X	Y
A	decomposers	producers	oxygen
B	decomposers	producers	sulfur dioxide
C	producers	decomposers	oxygen
D	producers	decomposers	sulfur dioxide

07. 0610_w21_qp_22 Q: 40

If the nitrate concentration in a lake increases, fish may die due to the events listed.

1 increased aerobic respiration by decomposers

2 increased decomposition of dead producers

3 increased growth of producers

4 reduction in dissolved oxygen

Which sequence of events would lead to the death of the fish?

A $1 \rightarrow 3 \rightarrow 2 \rightarrow 4$

B $2 \rightarrow 1 \rightarrow 4 \rightarrow 3$

C $3 \rightarrow 2 \rightarrow 1 \rightarrow 4$

D $3 \rightarrow 4 \rightarrow 1 \rightarrow 2$

---

08. 0610_p20_qp_20 Q: 39

Modern technology has resulted in the production and use of insecticides.

Which statement is a **false** description of insecticides?

A Insecticides can affect food chains.

B Insecticides can cause pollution.

C Insecticides improve yields.

D Insecticides target weeds.

---

09. 0610_p20_qp_20 Q: 40

Which of these measures will help to prevent acid rain?

A avoiding the use of non-recyclable plastics

B filtering sulfur dioxide in power station chimneys

C reducing methane emissions in industry and agriculture

D using alkaline fertilisers on fields

---

10. 0610_s20_qp_21 Q: 40

When a river is polluted by fertiliser, the following processes may occur.

1 increased aerobic respiration of decomposers

2 increased growth of producers

3 decreased oxygen concentration in the water

What is the correct sequence for these processes?

A $1 \rightarrow 2 \rightarrow 3$ **B** $1 \rightarrow 3 \rightarrow 2$ **C** $2 \rightarrow 1 \rightarrow 3$ **D** $2 \rightarrow 3 \rightarrow 1$

---

11. 0610_w20_qp_22 Q: 40

The hormones from the female contraceptive pill can pollute water courses.

What effect do they have?

A decrease the amount of oxygen for fish

B decrease the sperm count of men

C increase the growth of producers

D increase the number of decomposers

---

12. 0610_w20_qp_23 Q: 39

The table shows some of the processes that occur during eutrophication.

Which row shows the correct increase or decrease of each process?

	nitrate ion availability in the water	light availability in the water	rate of respiration by decomposers	oxygen availability in the water
A	increases	decreases	decreases	increases
B	increases	decreases	increases	decreases
C	decreases	increases	increases	increases
D	decreases	increases	decreases	decreases

---

13. 0610_m19_qp_22 Q: 40

Which list correctly describes the sequence of events in the eutrophication of a river or lake?

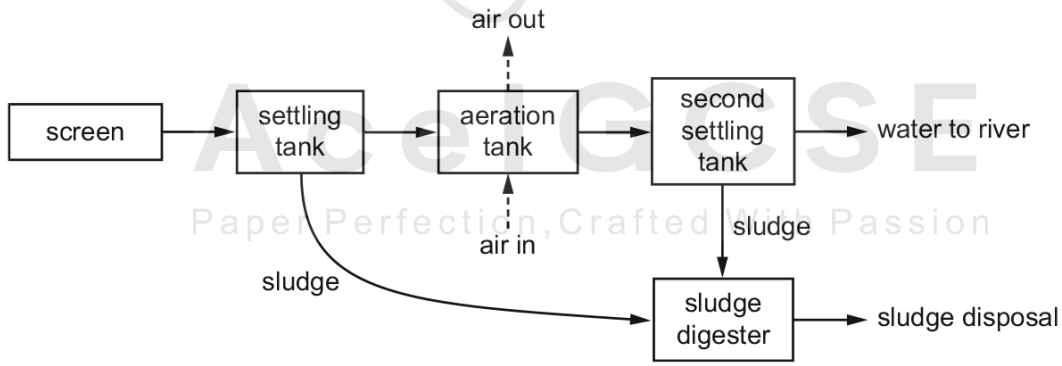
A	B
1 decreased growth of plants	1 increased growth of plants
2 dead plants decompose	2 dead plants decompose
3 increase in anaerobic bacteria	3 increase in aerobic bacteria
4 decrease in dissolved oxygen	4 decrease in dissolved oxygen

C	D
1 decreased growth of plants	1 plants die
2 dead plants decompose	2 dead plants decompose
3 decrease in anaerobic bacteria	3 decrease in aerobic bacteria
4 increase in dissolved oxygen	4 increase in dissolved oxygen

---

14. 0610_s19_qp_22 Q: 36

The diagram shows how sewage is treated.



Why is air bubbled through the aeration tank?

A to encourage microorganisms to reproduce quickly

B to float the sludge

C to settle the sludge

D to stop microorganisms from reproducing too quickly

---

15. 0610_s19_qp_22 Q: 39

Evidence shows that some aquatic organisms have been feminised.

What is the most likely cause of this?

A increased nitrates running off farmland into the rivers

B female hormones excreted by women taking contraceptive pills

C infectious diseases in the fish

D decreasing levels of oxygen in the rivers

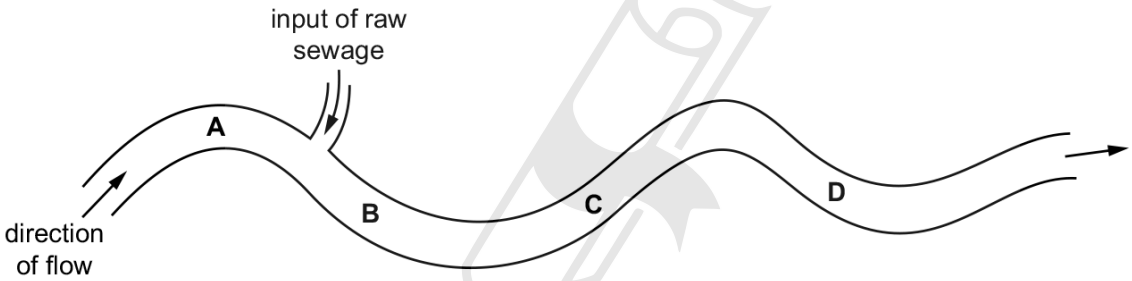
---

16. 0610_w19_qp_21 Q: 40

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?



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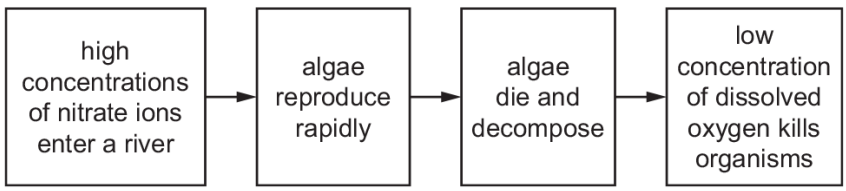
17. 0610_m18_qp_22 Q: 39

The flow diagram shows a process that can occur as a result of pollution in a river.



Which term describes the process shown in the flow diagram?

A aerobic respiration

B eutrophication

C nitrogen cycle

D photosynthesis

---

18. 0610_s18_qp_21 Q: 40

When nitrates enter a lake they cause rapid growth of algae on the surface of the water. This causes the following changes in the lake:

1 a decrease in the concentration of dissolved oxygen in the water

2 fish and other aquatic animals die

3 an increase in aerobic respiration by decomposers

4 producers die and decomposition increases

In which order do these changes occur?

A $1 \rightarrow 2 \rightarrow 4 \rightarrow 3$

B $3 \rightarrow 1 \rightarrow 2 \rightarrow 4$

C $4 \rightarrow 2 \rightarrow 3 \rightarrow 1$

D $4 \rightarrow 3 \rightarrow 1 \rightarrow 2$

---

19. 0610_s18_qp_22 Q: 40

Since 1970 sulfur dioxide emissions have dropped by 95% in some parts of the world.

What is the main reason for the reduction in emissions?

A fewer coal-powered power stations

B increase in wind turbines

C less cars on the road

D less industry

---

20. 0610_s18_qp_23 Q: 39

How does eutrophication lead to the death of aquatic organisms?

A algae not releasing enough oxygen

B algae respiring instead of photosynthesising

C decomposer bacteria lowering oxygen concentration in the water

D poisoning due to carbon dioxide accumulation in the water

---

21. 0610_w18_qp_21 Q: 40

Pieces of plastic between 1 μm and 1 mm in size are called microplastics. Microplastics are put into some face creams and are produced during clothing manufacture. They can now be found in increasing quantities in oceans all over the world.

As well as their small size, which other property of microplastics make them dangerous to living organisms?

A They are lightweight.

B They are non-biodegradable.

C They are non-reactive.

D They are toxic.

---

22. 0610_w18_qp_22 Q: 39

The statements describe some of the events that occur during eutrophication.

What is directly responsible for the increase in bacteria?

A a decrease in dissolved oxygen concentration

B an increase in nitrate concentration

C an increase in the population of algae

D an increase in the death of producers

---

23. 0610_w18_qp_23 Q: 40

The increased availability of nitrates in rivers and lakes can result in the death of fish.

Which statement explains why fish die in rivers and lakes containing a high concentration of nitrates?

A The increase in water plants stops the fish swimming.

B There is an increase in anaerobic respiration by plants.

C There are fewer water plants for fish to eat.

D There is an increase in aerobic respiration by decomposers.

---

24. 0610_m17_qp_22 Q: 39

How does cutting down trees contribute to the greenhouse effect?

A There will be less carbon dioxide absorbed.

B There will be less oxygen absorbed.

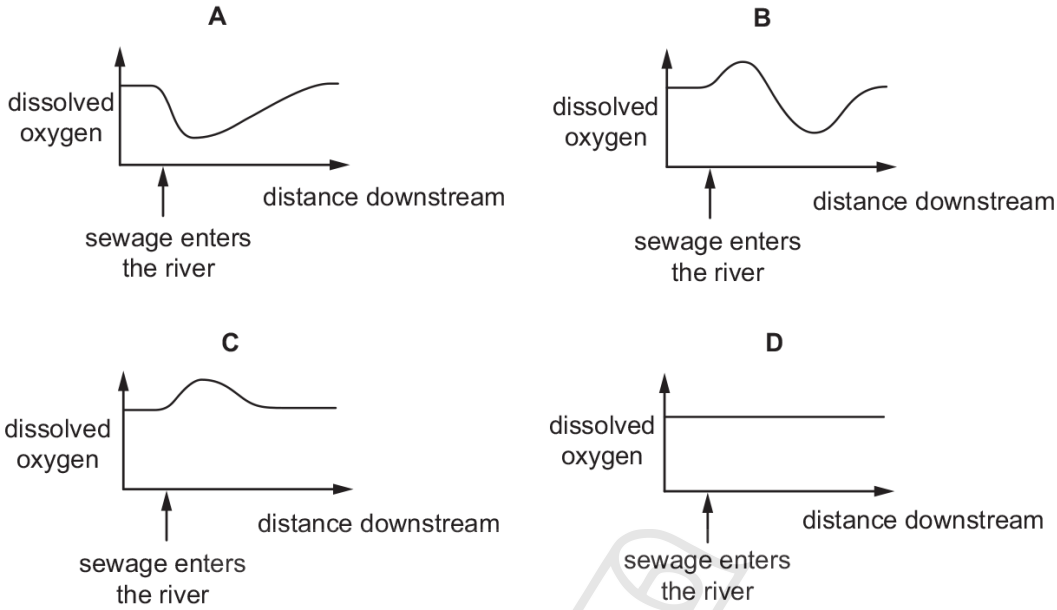
C There will be less shade from trees.

D The soil will become dry.

---

25. 0610_m17_qp_22 Q: 40

Which graph shows the effect of pollution by untreated sewage on the amount of oxygen dissolved in a river?



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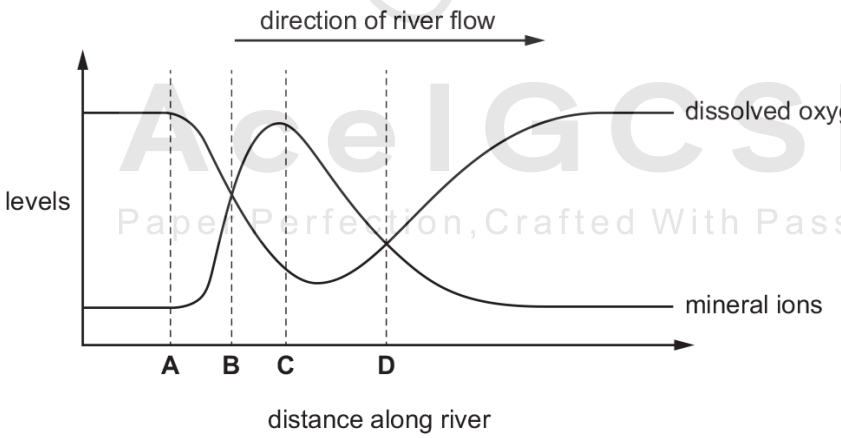
26. 0610_s17_qp_21 Q: 40

The graph shows the levels of dissolved oxygen and mineral ions in a river.

At which point does raw sewage enter the river?



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27. 0610_w17_qp_21 Q: 40

Some examples of the waste products of human activity are discarded household rubbish, excess fertiliser, industrial chemicals and untreated sewage.

Which of these can **both** cause increased growth of aquatic plants?

A chemical waste and discarded household rubbish

B discarded household rubbish and excess fertiliser

C excess fertiliser and untreated sewage

D untreated sewage and chemical waste

---

28. 0610_m16_qp_22 Q: 40

The careless use of nitrogenous fertiliser near rivers and lakes can cause eutrophication.

This results in the death of fish.

What is the direct cause of the death of the fish?

A Decomposers reduce the amount of dissolved oxygen in the water.

B Nitrates are toxic to plants.

C The rapid growth of producers uses up all the available nutrients.

D The sudden increase in the number of bacteria increases the spread of disease.

---

29. 0610_p16_qp_20 Q: 39

Modern technology has resulted in the production and use of insecticides.

Which statement is a **false** description of insecticides?

A Insecticides can affect food chains.

B Insecticides can cause pollution.

C Insecticides improve yields.

D Insecticides target weeds.

---

30. 0610_p16_qp_20 Q: 40

Which of these measures will help to prevent acid rain?

A avoiding the use of non-recyclable plastics

B filtering sulfur dioxide in power station chimneys

C reducing methane emissions in industry and agriculture

D using alkaline fertilisers on fields

---

31. 0610_s16_qp_22 Q: 40

A large amount of herbicide is applied to a field. However, some of the herbicide is washed into a nearby lake.

What is the effect of the herbicide on the weeds in the field and on the plants in the lake?

	weeds in field	plants in lake
A	less growth	less growth
B	less growth	more growth
C	more growth	less growth
D	more growth	more growth

---

32. 0610_s16_qp_23 Q: 39

When a river is polluted by fertiliser, the following processes may occur.

1 increased aerobic respiration of decomposers

2 increased growth of producers

3 decreased oxygen concentration in the water

What is the correct sequence for these processes?

A $1 \rightarrow 2 \rightarrow 3$ **B** $1 \rightarrow 3 \rightarrow 2$ **C** $2 \rightarrow 1 \rightarrow 3$ **D** $2 \rightarrow 3 \rightarrow 1$

---

33. 0610_w16_qp_22 Q: 40

When raw sewage is discharged into a stream, what is a result of eutrophication?

A decreased oxygen concentration caused by decreased bacterial activity

B decreased oxygen concentration caused by increased bacterial activity

C increased oxygen concentration caused by decreased bacterial activity

D increased oxygen concentration caused by increased bacterial activity

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SN	Paper	Q. No.	Answer
01	0610_w17_qp_23	39	B
02	0610_s16_qp_21	39	A
03	0610_m21_qp_22	39	D
04	0610_s21_qp_21	40	C
05	0610_s21_qp_22	40	A
06	0610_w21_qp_21	40	C
07	0610_w21_qp_22	40	C
08	0610_p20_qp_20	39	D
09	0610_p20_qp_20	40	B
10	0610_s20_qp_21	40	C
11	0610_w20_qp_22	40	B
12	0610_w20_qp_23	39	B
13	0610_m19_qp_22	40	B
14	0610_s19_qp_22	36	A
15	0610_s19_qp_22	39	B
16	0610_w19_qp_21	40	A
17	0610_m18_qp_22	39	B
18	0610_s18_qp_21	40	D
19	0610_s18_qp_22	40	A
20	0610_s18_qp_23	39	C
21	0610_w18_qp_21	40	B
22	0610_w18_qp_22	39	D
23	0610_w18_qp_23	40	D
24	0610_m17_qp_22	39	A
25	0610_m17_qp_22	40	A
26	0610_s17_qp_21	40	A
27	0610_w17_qp_21	40	C
28	0610_m16_qp_22	40	A
29	0610_p16_qp_20	39	D
30	0610_p16_qp_20	40	B
31	0610_s16_qp_22	40	A
32	0610_s16_qp_23	39	C
33	0610_w16_qp_22	40	B