

SMART EXAM RESOURCES
0654 COORDINATED SCIENCES [DOUBLE AWARD]
TOPIC QUESTIONS – BIOLOGY [PAPER 2- MCQ]
19.3-Eutrophication-Set-1

1.

The list shows changes that occur in a lake which is polluted by nitrogen-containing fertiliser.

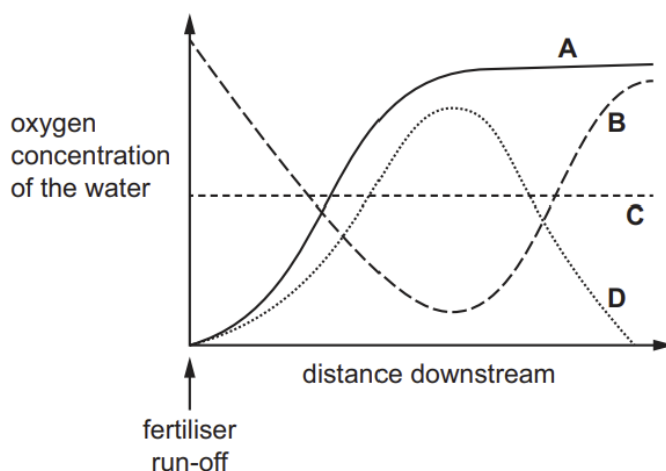
- 1 decomposers feed on plants
- 2 growth of algae increases on the lake's surface
- 3 oxygen levels decrease in the lake
- 4 underwater plants die

In which order do these changes occur?

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

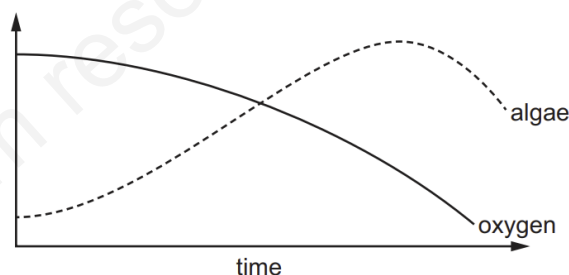
2.

Which line shows how the oxygen concentration of the water changes after excess fertiliser has entered a stream?



3.

When fertiliser is washed into lakes, it leads to changes in the oxygen concentration and the population of algae.



Which statement explains the change in oxygen over time?

- A The algae use up the oxygen for photosynthesis.
- B Decomposer bacteria use up the oxygen for respiration.
- C Nitrates react with the oxygen.
- D The algae use up the oxygen for respiration.

4.

Some of the stages of eutrophication are listed.

- 1 death of organisms requiring dissolved oxygen in water
- 2 increased availability of nitrate and other ions
- 3 increased decomposition after death of producers
- 4 reduction in dissolved oxygen

What is the correct order of these stages in eutrophication?

- A 2 → 1 → 4 → 3
- B 2 → 3 → 4 → 1
- C 3 → 2 → 4 → 1
- D 3 → 4 → 1 → 2

5.

What is the overuse of nitrogen-containing fertilisers most likely to cause?

- A acid rain
- B deforestation
- C eutrophication
- D global warming

6.

What decreases as a result of eutrophication?

- A** aerobic respiration by decomposers
- B** decomposition of dead producers
- C** dissolved oxygen in the water
- D** growth of producers

7.

What causes eutrophication?

- A** combustion of fossil fuels
- B** cutting down of forests
- C** discarded plastic rubbish
- D** overuse of nitrogen-containing fertiliser

8.

Which row is correct for eutrophication?

	source of nitrates	effects of nitrates on producers	result of increase in decomposers
A	fertilisers	increase growth	carbon dioxide decreases
B	fertilisers	decrease growth	oxygen increases
C	sewage	decrease growth	carbon dioxide increases
D	sewage	increase growth	oxygen decreases

9.

Which row shows an effect of a human activity on the environment?

	activity	effect
A	cutting down forests	acid rain
B	cutting down forests	eutrophication
C	overuse of fertilisers	acid rain
D	overuse of fertilisers	eutrophication

10.

Putting too much fertiliser on soil can lead to eutrophication in water.

Which substance, dissolved in water, is reduced in concentration as a result of eutrophication?

- A carbon dioxide
- B ions
- C nitrogen
- D oxygen

A) A

B) B

C) C

D) D

11.

13 Which flowchart correctly shows the stages of eutrophication?

