

Pollution: practice questions

6 questions • 19 marks • mark scheme at the back

For Cambridge IGCSE Biology 0610 (and 0970, which has the same content). **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 19

1 Describe the effects of untreated sewage on a river.

[3 marks]

2 **Supplement**

[5 marks]

Excess fertiliser from fields is washed into a lake. Explain how this can cause the death of fish in the lake.

3 Plastic waste is non-biodegradable. (a) State what is meant by non-biodegradable. [1] (b) Describe two effects of plastic waste on aquatic ecosystems. [2]

[3 marks]

4 Describe two effects of non-biodegradable plastics on land.

[2 marks]

5 Which activity releases methane into the atmosphere?

[1 mark]

- A. ☐ Burning petrol in cars
- B. ☐ Cattle digesting food
- C. ☐ Photosynthesis in forests
- D. ☐ Making cement

6 Describe the sources of carbon dioxide and methane, and explain how they cause the enhanced greenhouse effect and climate change.

[5 marks]

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [3]

- contains nitrates / ions so algae and plants grow quickly (1)
- contains organic matter so decomposers / bacteria use oxygen (1)
- less oxygen so fish and other animals die (1)
- may contain disease-causing microorganisms / pathogens (1)
- Max 3
- ignore 'pollutes the river' unqualified

2. [5] **Supplement**

- increased nitrate / ion availability (1)
- producers / algae grow faster (1)
- algal bloom blocks light so plants below die (1)
- increased decomposition (of dead producers) (1)
- increased aerobic respiration by decomposers / bacteria (1)
- dissolved oxygen falls (1)
- fish die as they need dissolved oxygen (1)
- Max 5
- reject algae use up the oxygen

3. [3]

- (a) cannot be broken down by microorganisms / decomposers (1)
- (b) animals swallow plastic, which blocks the gut / they starve (1)
- animals become tangled and drown / cannot move or feed (1)
- plastic breaks into small pieces that enter food chains (1)
- Max 2 for part (b)

4. [2]

- landfill sites fill up as plastic does not rot (1)
- animals eat plastic or become trapped (1)
- builds up in soil / releases harmful chemicals (1)
- Max 2

5. [1]

B B (1)

6. [5]

- carbon dioxide from burning fossil fuels / burning forests (1)
- methane from cattle / rice paddies / landfill (1)
- Earth re-radiates energy as infrared radiation (1)
- gases trap this heat in the atmosphere; more gases means more heat trapped (1)
- average temperature rises, causing climate change (1)
- reject reference to the ozone layer