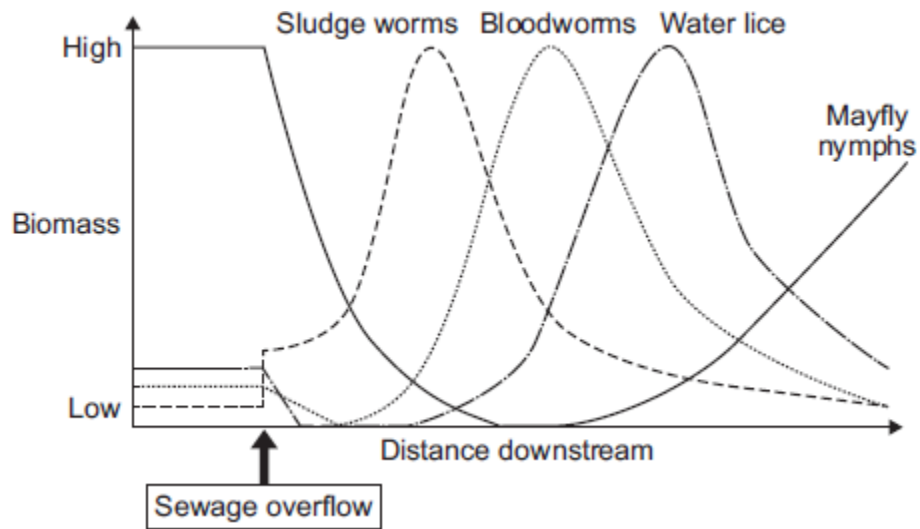


Graph Q: change in invertebrates found downstream of sewage overflow



(i) Describe the patterns shown in **Graph P**.

(4)

(ii) Describe the relationship between dissolved oxygen and the survival of mayfly nymphs in **Stream Z**. Suggest a reason for the pattern you have described.

(3)

(c) Many microorganisms are present in the sewage overflow.

Explain why microorganisms cause the level of oxygen in the water to decrease.

(2)

(Total 13 marks)

5.

(a) Describe **three** ways in which large-scale deforestation in tropical areas has **increased** the concentration of carbon dioxide in the atmosphere.

1. _____

2. _____

3 _____

(3)

(b) Suggest **two** reasons why deforestation also causes a reduction in biodiversity.

(2)

(c) Scientists are thinking of new ways to try to repair the damage done by deforestation.

One way is by carbon sequestration.

(i) What is **carbon sequestration**?

(1)

(ii) Suggest **one** way in which carbon can be sequestered.

(1)

(Total 7 marks)

6.

The number of fish in the oceans is decreasing.

The table below shows information about the mass of fish caught by UK fishermen between 2002 and 2010.

Year	Mass of fish caught by UK fishermen from ALL SOURCES in thousands of tonnes	Mass of fish caught by UK fishermen from SUSTAINABLE SOURCES in thousands of tonnes	Percentage of fish caught from sustainable sources
2002	690.0	427.8	62.0
2004	655.0	396.6	60.5
2006	619.0	386.0	62.4
2008	589.0	436.1	74.0
2010	611.5	465.0	

(a) (i) Calculate the percentage of fish caught from sustainable sources in 2010.

_____ %

(2)

(ii) Describe the pattern in the table above for the mass of fish caught from all sources.

Suggest reasons for this pattern.

(4)

(iii) Suggest why the percentage of fish caught from sustainable sources is increasing.

(1)

(b) Give **two** methods of maintaining fish stocks at a sustainable level.

1. _____

2. _____

(2)

(c) The image below shows a fish farm.



In a fish farm, large numbers of fish are grown in cages in the sea.

Why do fish in the cages grow faster than fish of the same species that are free in the sea?
You should refer to energy in your answer.

(4)
(Total 13 marks)