

AQA, OCR, Edexcel

GCSE Science

GCSE Biology

Abiotic and Biotic Factors
Answers

Name:

M M E

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Total Marks: /22

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Q1: Explain what a biotic factor is.

A= Non living factor affecting communities

(1 mark)

Q2: Give 3 examples of abiotic factors.

A= Accept any 3 of the following:

- Light intensity
- Temperature
- Moisture levels
- Soil pH/ Mineral content
- Wind intensity
- CO₂ levels – Plants
- Oxygen levels - animals

(3 marks)

Q3: Describe how temperature can be a limiting factor in plant growth and the effect seen in animals.

A= 1 mark for each of the following points:

- Reduces photosynthesis
- Small plants
- Limits number of animals

(3 marks)

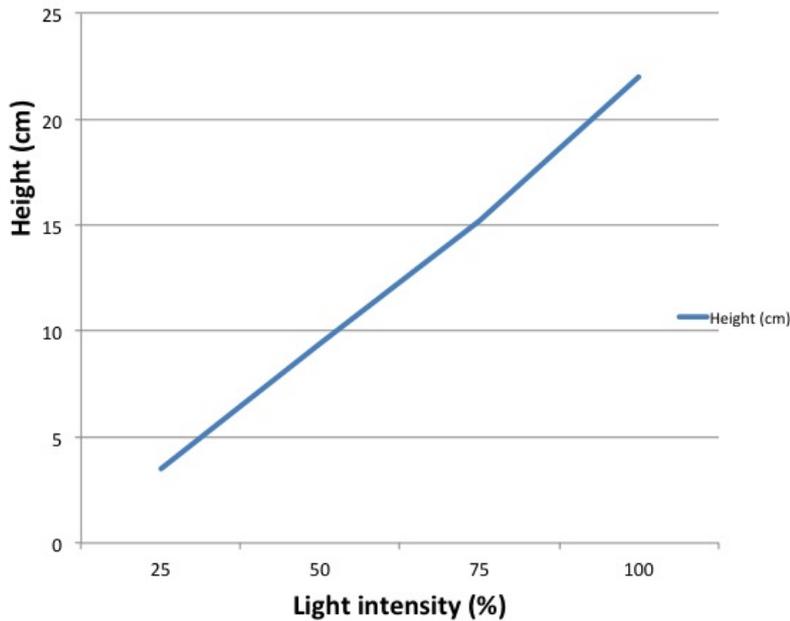
Q4: Give an example of an abiotic factor affecting the type of fish seen in deep water.

A= Accept any of the following:

- Light intensity
- Low oxygen
- Low temperature

(1 mark)

Q5: The graph below shows the growth seen in a plant exposed to varying light levels.



i) Describe the results seen in the graph above.

A= 1 mark for each of the following points

- Low growth at low light intensity
- Full growth at high light intensity

(2 marks)

i) From the information shown in the graph what can be concluded from the graph?

A= Light intensity is an inhibiting factor

(1 mark)

Q6: Give an explanation of a biotic factor.

A= A living factor affecting a community

(1 mark)

Q7: Give 2 examples of biotic factors.

A= Accept any 2 of the following:

- Food availability
- New pathogens/ Parasites
- New predators
- Inter specific competition

(2 marks)

Q8: A new animal pathogen has been detected in an ancient oak woodland. Explain the possible affects on the communities present in the Oak woodland.

A= Accept any 2 of the following:

- Animals have no resistance
- Decrease in population numbers
- Remove species from communities

(2 marks)

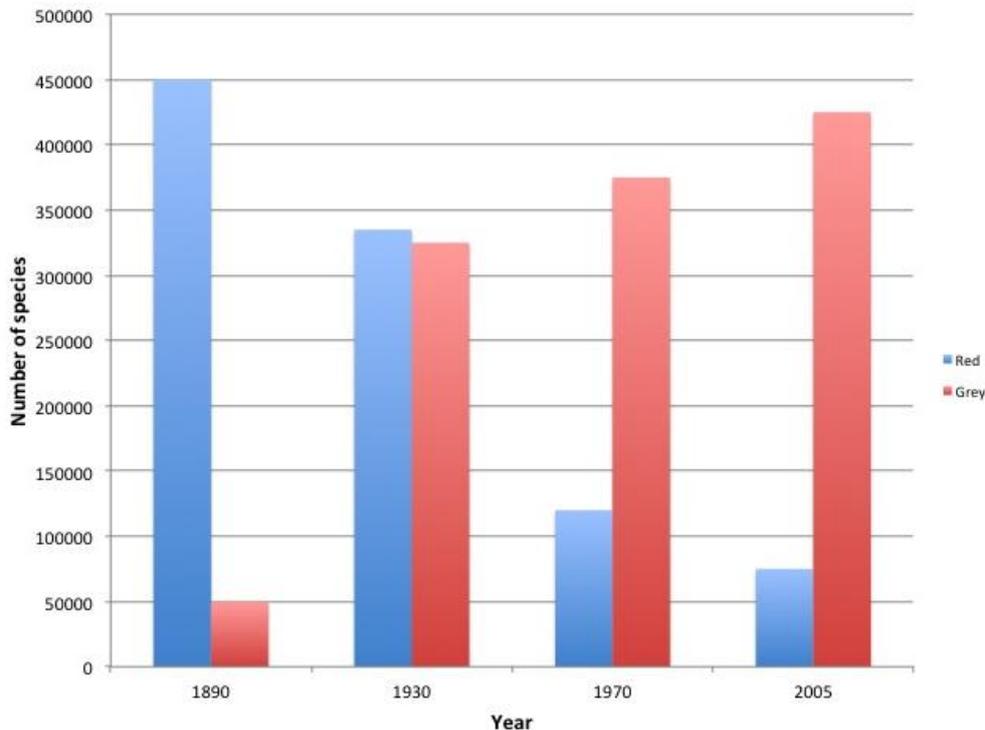
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Q9: Explain the term interspecific competition.

A= Competition between species

(1 mark)

Q10: i) Using the graph below explain the interspecific competition between red and grey squirrels.



A= 1 mark for each of the following points:

- 1890 – few greys – just introduced
- 1930 – reds starting to decrease
- 1970 – low reds/ grey main species
- 2005 – critical red levels / grey have out competed reds

(4 marks)

ii) Due to the increase in grey squirrels, protection schemes for red squirrels have been put in place.

Give an example of how schemes are working to protect red squirrel populations.

A= Accept 1 of the following:

- Culling
- Protected Woodland
- Increase Red habitats

(1 mark)