

AQA, OCR, Edexcel

GCSE Science

GCSE Biology

Adaptations Answers

Name:

M M E

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Total Marks: /21

Q1: Explain why organisms have adaptations.

A= Allow survival in a habitat

(1 mark)

Q2: What are the 3 types of adaptations organisms can have?

A= 1 mark for each point:

1. Structural
2. Behavioural
3. Functional

(3 marks)

Q3: i) What is an extremophile?

A= Organism adapted to extreme environments

(1 mark)

ii) Give an example of an extremophile and how they are adapted to their environment.

A= Accept any of the following extremophile and example:

- High temperature – Bacteria
- High salt – Bacteria
- Low temperature – Bacteria
- Acidic conditions - Bacteria

(2 marks)

Q4: What are the main problems of animals living in the cold and how do arctic animals overcome this habitat?

A= 2 marks for any 2 of the following points and 2 marks for corresponding example.

- Low external temperature – need to keep warm/ larger animals retain heat
- Smaller thin skin areas – eg ears / Retain heat
- Heat loss – Blubber/ Extra fat under skin/ Fur coat
- Camouflage – Snow – white animals

(4 marks)

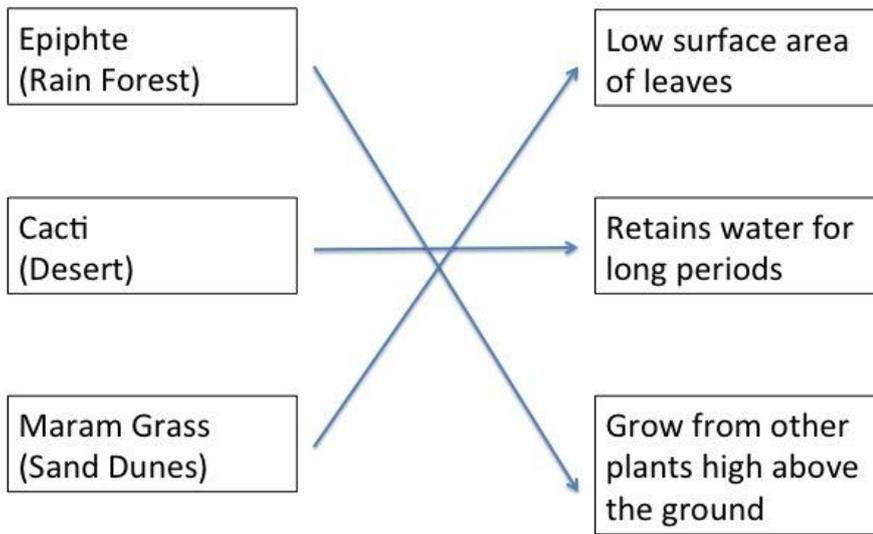
Q5: Survival in the desert is difficult due to the harsh climate and animals must adapt. Using a camel as an example, discuss what adaptations the camel has to survive in the desert.

A= Accept any 6 of the following points:

- Little sweating/ Prevent water loss
- Cope with extreme temperature changes
- Large fat store
- Take water from food
- Take large amounts of water to store
- Thick fur – for low temperatures / night/winter
- Temperature regulation
- Activity when cooler
- Large ears – Reduce heat
- Large feet – movement on sand
- Large surface area : Volume

(6 marks)

Q6: Below are 3 species from 3 very different habitats. Draw a line to the correct adaptation from the species and environment.



A= award 1 mark for each correct line.

(3 marks)

Q7: Broom lives in woodland with high competition for water. What does the reduction of stomata enable the plant to do in order to survive?

A= Reduces water loss

(1 mark)

Q8: How do cacti prevent animals from eating them?

A= Spines/ Prickly

(1 mark)