

AQA, OCR, Edexcel

GCSE Science

GCSE Biology

Aerobic Respiration Answers

Name:

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Total Marks: /20

Q1: What is aerobic respiration?

A= 1 mark each point

- Exothermic reaction
- Breaks down oxygen to release energy from cells

(2 marks)

Q2: i) Give the word equation for aerobic respiration.



(Energy
Transferred to
Environment)

A= 1 mark equation / 1 mark energy transferred

(2 marks)

ii) Give the symbol equation for aerobic respiration.



(Energy
Transferred to
Environment)

A= 1 mark equation / 1 mark energy transferred

(2 marks)

Q3: What does the transfer of energy to the environment cause?

A= Slight heat increase

(1 mark)

Q4: Why do girls require less energy per day than boys?

A= Girls on average are smaller

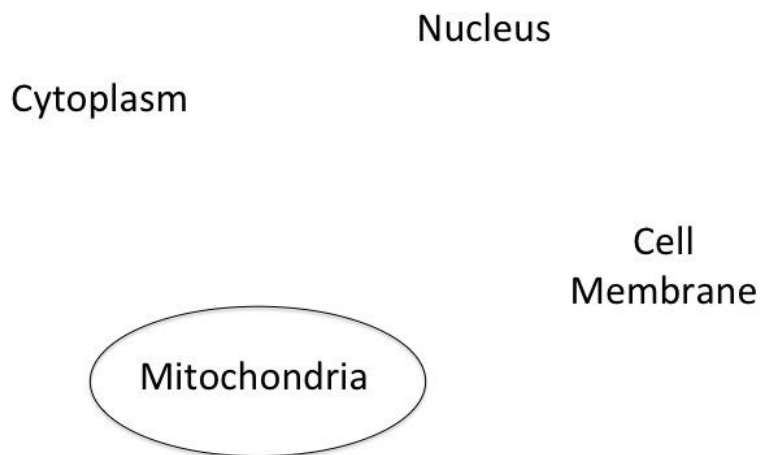
(1 mark)

Q5: Why does having more muscles, mean more aerobic respiration.

A= More mitochondria requiring energy

(1 mark)

Q6: Circle the cell component where aerobic respiration takes place.



(1 mark)

Q7: Explain why a bird requires more food in winter.

A = Loose heat to environment

Accept one of the following:

- Respire more – Maintain heat
- Need to convert more food into energy

(2 marks)

Q8: Explain why you still use energy from respiration when asleep and give an example.

A= (1) All muscle activity requires energy

(1) Involuntary muscles

Accept one of the following:

- Heart Beating
- Breathing
- Digestion
- Brain Activity

(3 marks)

Q9: Explain why plants use aerobic respiration.

A= 1 mark for each point:

- Transfer mineral ions
- Aid growth

(2 marks)

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Q10: i) Students are designing an experiment to show oxygen is converted to carbon dioxide during respiration. How can the students show carbon dioxide is being produced?

A= 1 mark for each point:

- Bubble gas through lime water
- Lime water goes cloudy in presence of carbon dioxide

(2 marks)

ii) Why are the students showing carbon dioxide is produced rather than removing oxygen to show respiration?

A= Unethical

(1 mark)