

**AQA, OCR, Edexcel**

**GCSE Science**

# **GCSE Biology**

Response to Exercise Answers

Name:

**M M E**

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Total Marks: /22

Q1: explain the structure of muscles.

A= Protein Fibres

(1 mark)

Q2: How do muscles store glucose?

A= Glycogen

(1 mark)

Q3: Explain why glycogen needs to be quickly converted to glucose.

A= 1 mark for each of the following points:

- Response to exercise
- Aerobic respiration
- Energy needed for muscles to contract

(3 marks)

Q4: Why does carbon dioxide need to be removed efficiently?

A= prevent lactic acid build-up.

(1 mark)

Q5: Muscle fibres 'twitch' at different rates depending on the action. Explain the differences in respiration between fast and slow twitch muscles and what type of action is suited to each type.

A= 1 mark for each of the following points:

Slow twitch

- Aerobic respiration
- Endurance

Fast twitch

- Anaerobic respiration
- Sprinting

(4 marks)

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Q6: Explain the changes that take place in the body during exercise.

A= Accept any 6 of the following:

- Heart rate increases
- Arteries dilate
- Increased blood flow
- Increased cellular respiration
- Increased breathing rate
- Increased oxygen uptake
- Carbon Dioxide removal
- Conversion of glycogen to glucose

(6 marks)

Q7: Describe the breathing rate of an unfit person.

A= 1 mark for each of the following points:

- Rapid increase
- Long recovery time

(2 marks)

Q8: Explain the differences in heart rate between a fit and an unfit person when at rest.

A= 1 mark for each point:

- Lower resting heart rate in fit person
- Large amount of blood pumped in a fit person
- Lower pulse rate in a fit person
- Lower breathing rate in a fit person

Can also accept all points with the correct opposite for an unfit person.

(4 marks)