

**AQA, OCR, Edexcel**

# GCSE Science

## GCSE Biology

Human Nervous System

Answers

Name:

**M**

**M**

**E**

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Total Marks: /21

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Q1: What sort of signals does the nervous system carry?

A= Electrical signals/ impulses

(1 mark)

Q2: Why does the speed of the nervous system aid human survival?

A= Allows fast reaction to changes in surrounding.

(1 mark)

Q3: Using the labels below state the order signals are passed along the nervous system.

Receptor            Effector            Coordinator            Stimulus

Stimulus → Receptor → Coordinator → Effector

(4 marks)

Q4: What is a bundle of neurones made up of?

A= Nerves

(1 mark)

Q5: Name the components of the CNS.

A= 1 mark for each of the following:

- Brain
- Spinal cord

(2 marks)

Q6: Explain the reflex action if you were to place your hand on a hot radiator.

A= 1 mark for each of the following points:

- Sensory neurone detects heat
  - Motor neurone take signals to CNS
  - CNS take signals to brain
  - Brain processes
  - Response taken back via CNS
  - Motor neurone initial response – e.g. remove hand
- Also accept central nervous system

(6 marks)

Q7: Explain what happens when an impulse arrives at a junction between two neurones.

A= 1 mark for each of the following:

- Chemicals released
- Cross synapse
- Arrive at receptor
- Starts up next neurones electrical impulse

(4 marks)

Q8: Explain why the reflex arc is essential.

A= bypasses conscious thought.

(1 mark)

Q9: What action is both a conscious action and an unconscious action?

A= Breathing

(1 mark)