

Full Higher Separate content. ★ = Higher Tier. ◆ = Separate Science only.

**Q1. Describe the pathway of a reflex arc from stimulus to response.**

[4 marks]

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**Q2. Name THREE regions of the brain and state the function of each.**

[3 marks]

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★ HIGHER TIER

**Q3. ★ Describe TWO methods scientists use to investigate brain function.**

[3 marks]

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Total: 10 marks

**Q1 (4 marks)**

*Describe the pathway of a reflex arc from stimulus to response.*

- Stimulus detected by receptor [1]
- Sensory neurone → CNS [1]
- Relay neurone in spinal cord [1]
- Motor neurone → effector → response (bypasses brain → fast) [1]

**Q2 (3 marks)**

*Name THREE regions of the brain and state the function of each.*

- Cerebral cortex: conscious thought, memory, language [1]
- Cerebellum: coordination and balance [1]
- Medulla: automatic functions (breathing, heart rate) [1]

**Q3 (3 marks) [★ HT]**

*★ Describe TWO methods scientists use to investigate brain function.*

- MRI scanning: shows active brain regions (blood flow) during specific tasks [1]
- Studying patients with brain damage: linking damage to specific area with loss of function [1]
- Electrical stimulation during surgery: observe patient response [1] — any 2