6.1 Divisions of the Nervous System: Central and Peripheral: 10-minute Pack

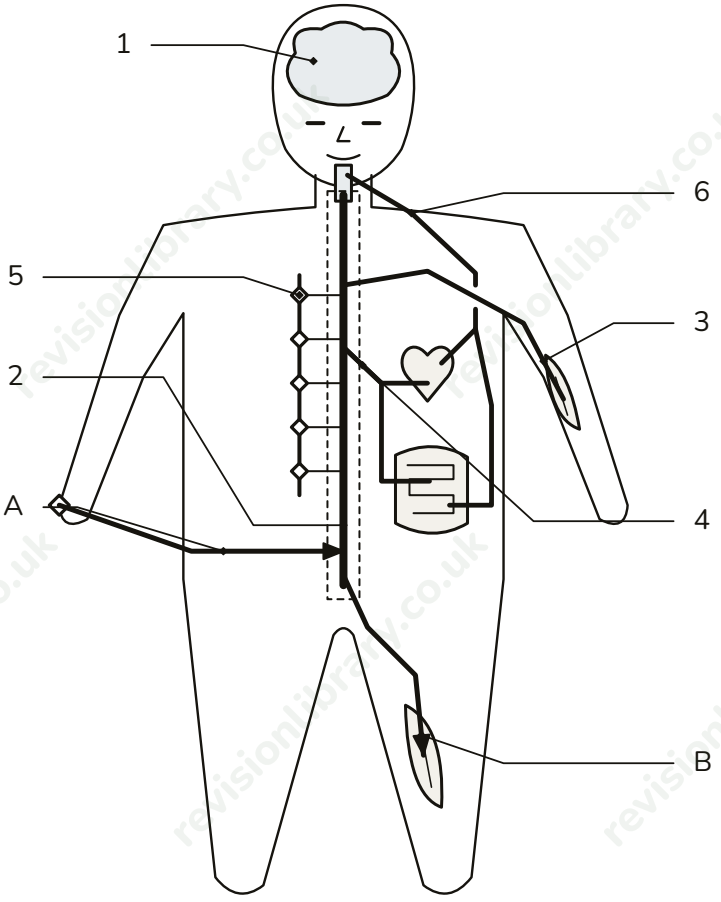
AQA 7182 · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

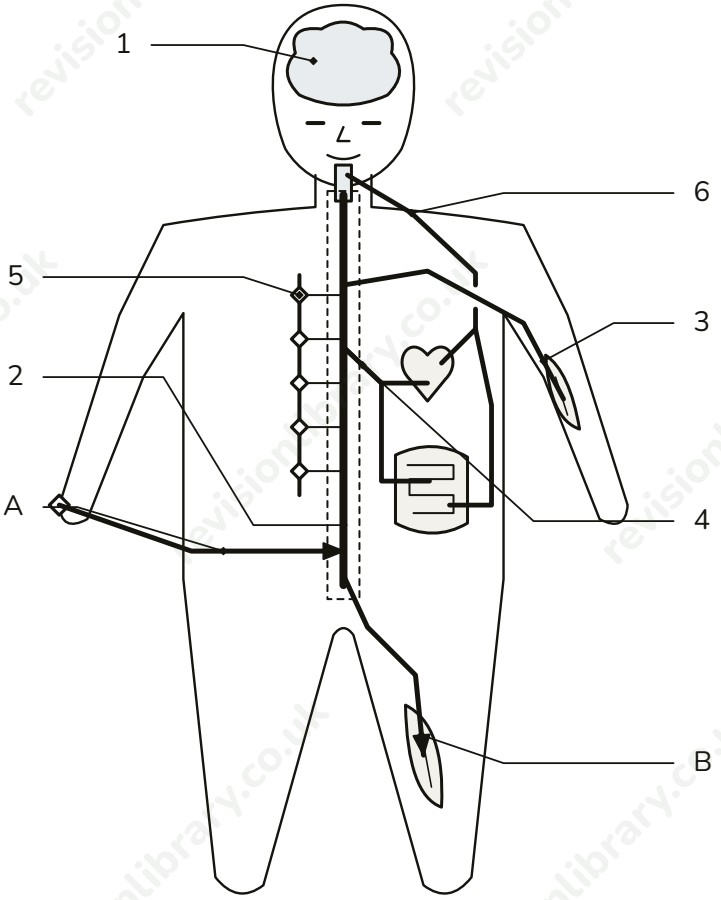
1 A simple labelled diagram shows the human nervous system in outline, with six numbered labels. The labels are positioned at: 1 at the top of the skull region, 2 down the centre of the back within the vertebral column, 3 on nerves leading to a left arm muscle, 4 on nerves leading to the heart and gut, 5 on a chain of ganglia running alongside the spinal cord, 6 on cranial nerve fibres emerging from the brainstem. For the diagram context above, give the name of the structure labelled 1 in the diagram.



(Total for Question 1 is 1 mark)

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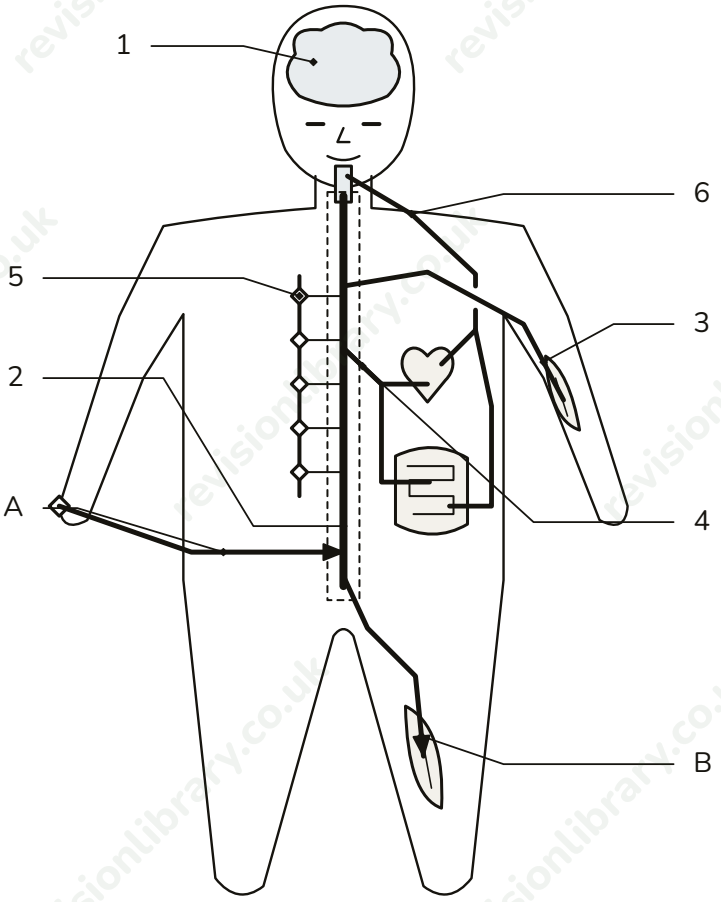
2 On the nervous system diagram, give the name of the structure labelled 2, shown running inside the vertebral column.



(Total for Question 2 is 1 mark)

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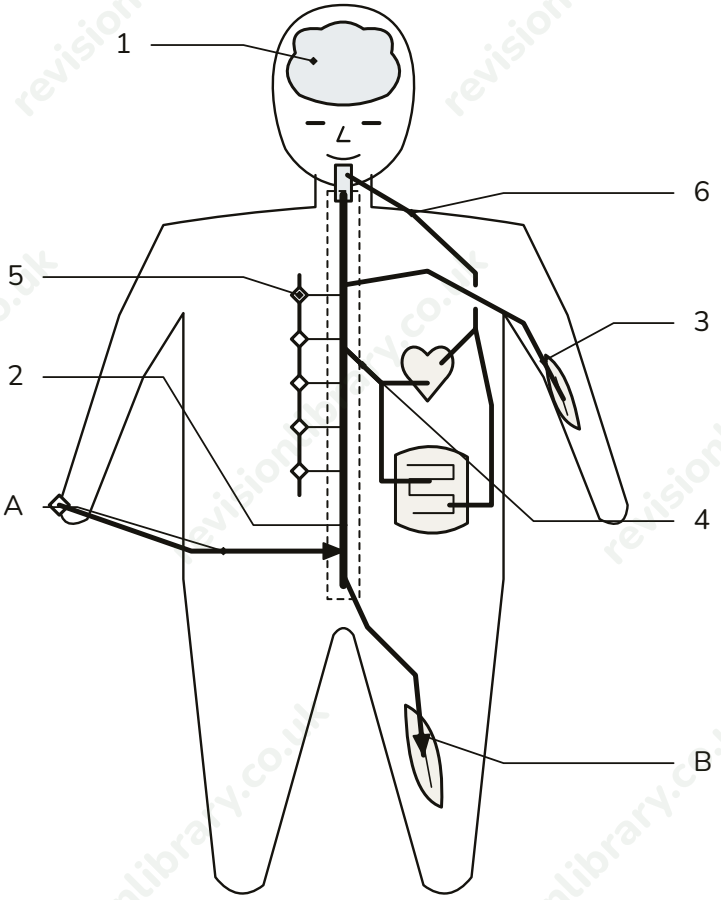
3 On the nervous system diagram, an arrow labelled A points from a skin receptor into the spinal cord. Identify the pathway this arrow represents within the somatic nervous system and give one example of the type of information it carries to the CNS.



(Total for Question 3 is 1 mark)

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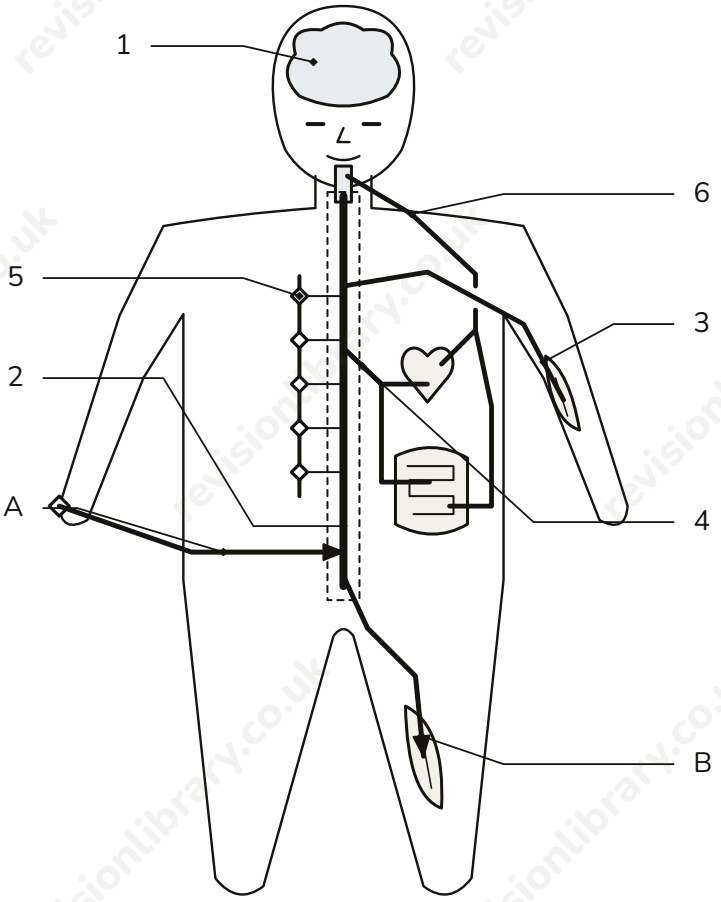
4 On the diagram context, an arrow labelled B runs from the spinal cord out to a muscle in the leg. Identify the pathway this arrow represents and name the type of muscle it supplies.



(Total for Question 4 is 1 mark)

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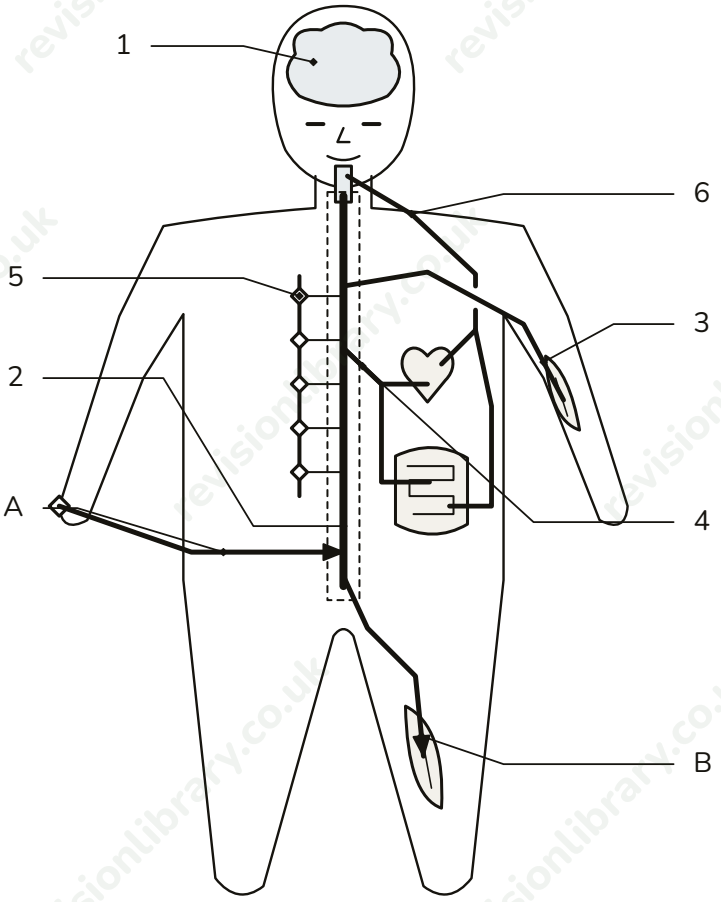
5 In the diagram context, label 3 is on nerves leading to a skeletal muscle in the arm. State which division of the peripheral nervous system these nerves belong to and one function of that division in relation to muscles.



(Total for Question 5 is 2 marks)

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6 Label 5 in the diagram context marks a chain of small ganglia running alongside the spinal cord. Name the autonomic branch this chain belongs to and state its typical general effect on the body.



(Total for Question 6 is 2 marks)

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Mark scheme · 6.1 Divisions of the Nervous System: Central and Peripheral: 10-minute Pack

Question 1

brain or central nervous system: brain cao **B1**

Answer: Brain

Question 2

spinal cord cao **B1**

Answer: Spinal cord

Question 3

sensory (afferent) pathway of the somatic nervous system oe; e.g. carries touch, pain, temperature or proprioceptive information to the CNS oe **B1**

Answer: A sensory (afferent) somatic pathway; it carries information such as touch, pain, temperature or proprioceptive signals to the CNS.

Question 4

motor (efferent) pathway of the somatic nervous system oe; supplies skeletal (voluntary) muscle cao **B1**

Answer: A motor (efferent) somatic pathway supplying skeletal (voluntary) muscle.

Question 5

identifies the somatic nervous system oe **M1**

states a function: transmits sensory information to the CNS or carries motor commands to skeletal muscles (either is acceptable) oe **A1**

Answer: Somatic nervous system; it carries sensory information to the CNS and/or transmits motor commands to skeletal muscles.

Question 6

identifies the sympathetic nervous system oe **M1**

states general effect: prepares the body for arousal or action, e.g. increases heart rate and mobilises energy oe **A1**

Answer: Sympathetic nervous system; it prepares the body for action, increasing arousal such as raising heart rate and mobilising energy.

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