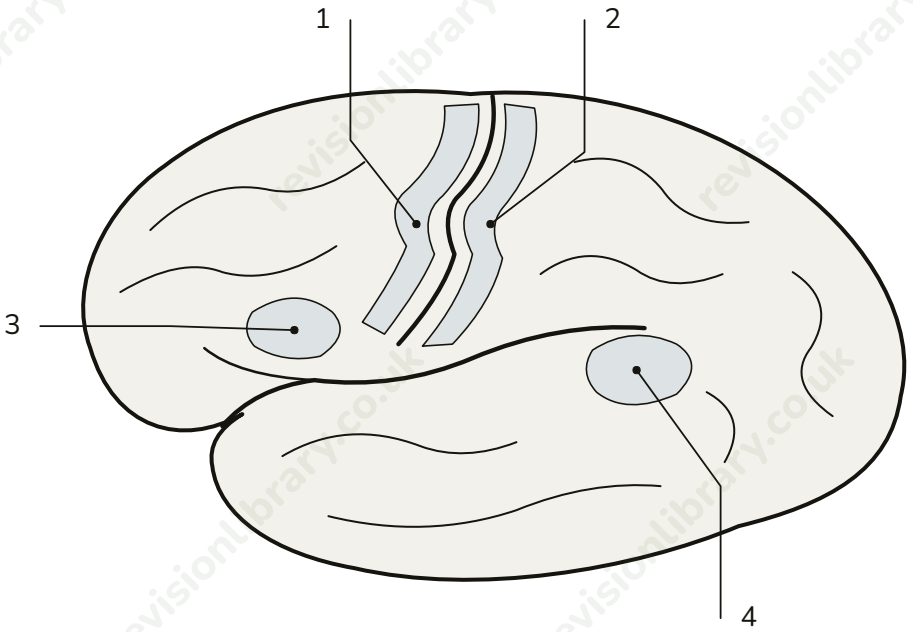
6.6 Localisation of Function and Hemispheric Lateralisation: Test Pack

AQA 7182 · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.



1 Label the four numbered boxes on the left lateral surface of the cerebral hemisphere. Use: 1 motor cortex, 2 somatosensory cortex, 3 Broca's area, 4 Wernicke's area.

(Total for Question 1 is 3 marks)

2 Outline the primary role of the somatosensory cortex in the parietal lobe within the cortical localisation framework.

(Total for Question 2 is 2 marks)

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3 State where the primary visual cortex is located when discussing localisation of function, and give one brief description of its role in vision.

(Total for Question 3 is 3 marks)

4 Explain two differences between Broca's aphasia and Wernicke's aphasia, referring to speech fluency, comprehension and typical localisation.

(Total for Question 4 is 4 marks)

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Mark scheme · 6.6 Localisation of Function and Hemispheric Lateralisation: Test Pack

Question 1

one mark for each correctly placed label, up to three marks: 1 motor cortex; 2 somatosensory cortex; 3 Broca's area; 4 Wernicke's area. Accept the existing common abbreviations, including motor ctx and sensory cortex, oe. **B1**

Answer: 1 motor cortex; 2 somatosensory cortex; 3 Broca's area; 4 Wernicke's area. Any three correctly placed labels earn three marks.

Question 2

states it processes sensory information from the body such as touch, pressure, pain and temperature cao **B1**

may mention somatotopic mapping or that areas with greater sensitivity have larger cortical representation oe **B1**

Answer: Processes bodily sensory information such as touch, pressure, pain and temperature; organised somatotopically, with more cortex for more sensitive body parts.

Question 3

location: primary visual cortex in the occipital lobe, around the calcarine sulcus cao **M1**

role: initial cortical processing of visual information from the retina, including basic features such as orientation and contrast oe **A1**

may mention contralateral representation of visual fields oe **A1**

Answer: Primary visual cortex is in the occipital lobe around the calcarine sulcus; it performs initial cortical processing of visual input, analysing basic features and receiving contralateral visual field information.

Question 4

difference 1: Broca's aphasia is non-fluent, Wernicke's aphasia is fluent oe **M1**

explains why: Broca's affects speech production mechanisms in the left frontal area, making speech effortful; Wernicke's affects posterior temporal areas involved in language formulation oe **A1**

difference 2: comprehension is relatively preserved in Broca's aphasia but impaired in Wernicke's aphasia oe **M1**

explains why: Broca's area damage leaves comprehension networks less affected, while Wernicke's area damage disrupts comprehension processing oe **A1**

Answer: Broca's aphasia is non-fluent and effortful with relatively preserved comprehension, linked to left frontal damage; Wernicke's aphasia is fluent but often meaningless with poor comprehension, linked to posterior left temporal damage.

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