6.6 Localisation of Function and Hemispheric Lateralisation: 10-minute Pack

AQA 7182 · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Describe the primary function of the motor cortex in the frontal lobe as taught in the localisation of function topic.

(Total for Question 1 is 2 marks)

2 State three key findings from Sperry's split-brain experiments about hemispheric differences in language and non-verbal processing.

(Total for Question 2 is 3 marks)

3 Outline the location and one function of the primary auditory cortex in the temporal lobe as part of cortical localisation.

(Total for Question 3 is 3 marks)

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Mark scheme · 6.6 Localisation of Function and Hemispheric Lateralisation: 10-minute Pack

Question 1

states that the motor cortex controls voluntary movement of skeletal muscles cao	**M1**
refers to somatotopic organisation or the motor homunculus oe	**A1**

Answer: The motor cortex controls voluntary movement of skeletal muscles; it is organised somatotopically so different cortical areas control different body parts.

Question 2

finding 1: left hemisphere (right visual field) can name and verbally identify objects cao	**B1**
finding 2: right hemisphere (left visual field) has difficulty naming verbally but can recognise or select the object by touch or draw it with the left hand cao	**B1**
finding 3: the two hemispheres can process information independently after the corpus callosum is cut, producing dissociations in ability cao	**B1**

Answer: Left hemisphere can name and verbally identify stimuli from the right visual field; right hemisphere cannot name left-field stimuli but can recognise or draw them non-verbally; the hemispheres can act independently after callosotomy.

Question 3

location: primary auditory cortex in the superior temporal gyrus of the temporal lobe cao	**M1**
function: basic processing of auditory information such as pitch and volume oe	**A1**
may mention that auditory input is received from both ears, with some contralateral bias oe	**A1**

Answer: Primary auditory cortex is in the superior temporal gyrus of the temporal lobe; it processes basic auditory features such as pitch and volume and receives input from both ears.

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