

The Brain (A2 Only) – Questions by Topic

Q1.

Briefly evaluate research using split brain patients to investigate hemispheric lateralisation of function.

(Total 4 marks)

Q2.

Josie is twelve. Last year she was involved in a serious road accident and suffered head injuries that caused problems with speech and understanding language. Now, a year later, Josie has recovered most of her language abilities.

Using your knowledge of plasticity and functional recovery of the brain after trauma, explain Josie's recovery.

(Total 4 marks)

Q3.

Lotta's grandmother suffered a stroke to the left hemisphere, damaging Broca's area and the motor cortex.

(a) Using your knowledge of the functions of Broca's area and the motor cortex, describe the problems that Lotta's grandmother is likely to experience.

(4)

(b) Lotta worries that because of her grandmother's age she will not be able to make any recovery.

Using your knowledge of plasticity and functional recovery of the brain after trauma, explain why Lotta might be wrong.

(4)

(Total 8 marks)

Q4.

Discuss what research has shown about localisation of function in the brain.

(Total 8 marks)

Q5.

Robert suffered a stroke at the age of 55. After the stroke he was paralysed down his right side, though he could move his left arm and leg easily. Robert could clearly understand what was said to him, but was unable to produce any speech.

Discuss how knowledge of hemispheric lateralisation and language centres in the brain has helped our understanding of cases such as Robert's. Refer to Robert's case in your answer.

(Total 16 marks)