6.10 Evaluating Biopsychology: Reductionism, Determinism and Methodology: 10-minute Pack

AQA 7182 · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 A lab study isolates rats to study circadian rhythm changes after dim light exposure, and attributes behavioural changes purely to altered melatonin secretion. Give one evaluative criticism based on biological reductionism.

(Total for Question 1 is 3 marks)

2 A study of stroke patients links damage in one brain region to loss of language function, and the authors claim this proves a single localisation for language. Outline one methodological critique based on evidence from biopsychology.

(Total for Question 2 is 3 marks)

3 Taylor et al.'s tend-and-befriend critique suggests fight-or-flight research based on male samples may be gender biased. In a novel biopsy study of cortisol response using only male students, state a practical change to reduce gender bias.

(Total for Question 3 is 2 marks)

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Mark scheme · 6.10 Evaluating Biopsychology: Reductionism, Determinism and Methodology: 10-minute Pack

Question 1

identifies reductionism: explaining complex behaviour solely in terms of hormones (melatonin) oe **M1**

explains a limitation, e.g. ignores psychological, social or environmental factors that also influence behaviour oe **A1**

explains why this matters, e.g. oversimplified explanations reduce ecological validity and limit intervention approaches oe **A1**

Answer: This is biologically reductionist: it reduces behaviour to melatonin changes and ignores psychological and environmental influences, so the explanation may be incomplete and less useful for wider contexts.

Question 2

identifies methodological limitation: brain-damage studies are often correlational and lack experimental control oe **M1**

explains that other damaged areas or individual differences might contribute, so the link is not necessarily causal oe **A1**

notes that plasticity and network interactions can mean language functions are supported by distributed systems, challenging strict localisation oe **A1**

Answer: Brain-damage studies are correlational and may not show causation; damage elsewhere or individual brain differences and plasticity mean language may be distributed rather than located in a single region.

Question 3

states a practical change, e.g. include female participants or use a mixed-sex sample oe **B1**

explains briefly why, e.g. allows testing of sex differences and avoids assuming male responses generalise to females oe **B1**

Answer: Include female participants or use a balanced mixed-sex sample so potential sex differences in cortisol response and alternative stress responses can be examined rather than assumed.

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