8.5 Biological, Environmental and Psychic Determinism and the Scientific Approach: Test Pack

AQA 7182 · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Classify the following described cause of behaviour in a clinical context: Yusuf has a rare variant of the MAOA gene that some researchers link with impulsive aggression. Which type of determinism best describes this cause?

(Total for Question 1 is 1 mark)

2 Identify one legal implication of endorsing a determinist account of criminal behaviour in a UK court context, and explain briefly how such an argument might be used in mitigation.

(Total for Question 2 is 4 marks)

3 Outline environmental determinism in the context of behaviourist theory, and give one example of a learning mechanism that could explain behaviour.

(Total for Question 3 is 2 marks)

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4 Explain briefly how a researcher might use twin studies to support a biological determinist claim about intelligence in a population study.

(Total for Question 4 is 3 marks)

5 Explain how the use of controlled laboratory experiments supports the scientific emphasis on causal explanations in psychology, with a brief example relevant to environmental determinism.

(Total for Question 5 is 3 marks)

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Mark scheme · 8.5 Biological, Environmental and Psychic Determinism and the Scientific Approach: Test Pack

Question 1

Biological determinism, genetic cause cao **B1**

Answer: Biological determinism.

Question 2

identifies a legal implication, e.g. challenges to moral responsibility or intent (mens rea) in mitigation oe **M1**

explains how a determinist argument might be used, e.g. defence counsel arguing that biological factors reduced the defendant's capacity to form intent, seeking reduced sentence or psychiatric disposal oe **A1**

identifies a limit such as courts still require culpability and may reject deterministic mitigation without clear causal evidence oe **M1**

explains why this limit matters, e.g. because weak or correlational scientific evidence may not persuade a jury or judge to reduce responsibility oe **A1**

Answer: A legal implication is that determinist accounts can challenge assessments of moral responsibility or mens rea. In mitigation a defence might argue that biological factors reduced capacity to form intent, seeking a lesser sentence or psychiatric treatment. However, courts still require convincing causal evidence and may not accept weak correlational claims, so deterministic arguments do not automatically remove responsibility.

Question 3

defines environmental determinism as behaviour shaped by external environments and learning processes, not innate biology oe **M1**

gives one learning mechanism, e.g. classical conditioning, operant conditioning with reinforcement or modelling/observational learning oe **A1**

Answer: Environmental determinism, in the behaviourist view, holds that behaviour is a product of conditioning and experience; for example, operant conditioning by reinforcement can increase the likelihood of a behaviour repeating.

Question 4

states that twin studies compare concordance rates for monozygotic and dizygotic twins oe **M1**

explains that higher concordance in monozygotic twins suggests genetic influence on the trait oe **A1**

may note that the method attempts to control shared environment to isolate genetic contribution oe **A1**

Answer: Twin studies compare concordance for monozygotic and dizygotic twins; if identical twins show higher similarity in intelligence than non identical twins, this supports a genetic influence, since the studies attempt to hold shared environment constant.

Question 5

states that controlled experiments manipulate an IV and measure a DV while controlling extraneous variables to infer causal relationships oe **M1**

gives a relevant example, e.g. lab study manipulating reinforcement schedule to test its effect on behaviour oe **A1**

explains how control increases confidence that the IV caused the observed change, supporting scientific causal claims oe **A1**

Answer: Controlled experiments manipulate an IV and measure a DV while holding other variables constant, allowing causal claims; for example, a lab study that varies reinforcement schedules and measures response rates shows how reinforcement causes changes in behaviour, supporting environmental determinist causal explanations.

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