5.3 The Behaviourist Approach: Operant Conditioning and Skinner's Research

AQA 7182 · about 50 minutes · Write-in edition

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Define operant conditioning.

(Total for Question 1 is 2 marks)

2 Outline positive reinforcement and give a pet example.

(Total for Question 2 is 2 marks)

3 Outline negative reinforcement and give an everyday example.

(Total for Question 3 is 2 marks)

4 Outline punishment and give a school example.

(Total for Question 4 is 2 marks)

5 Classify slot machine schedule and explain persistence.

(Total for Question 5 is 3 marks)

6 Identify one application of operant conditioning.

(Total for Question 6 is 1 mark)

7 Classify pigeon peck -> food pellet.

(Total for Question 7 is 1 mark)

8 Classify tidying to stop being told off.

(Total for Question 8 is 1 mark)

9 Classify expulsion after cheating.

(Total for Question 9 is 1 mark)

10 Identify continuous versus partial reinforcement.

(Total for Question 10 is 2 marks)

11 Explain two limitations of operant conditioning.

(Total for Question 11 is 4 marks)

12 Discuss the strengths and limitations of operant conditioning as an explanation of behaviour. In your answer, refer to real-world applications such as token economies and to theoretical criticisms such as the role of cognition and free will. You should include both supporting evidence and counterarguments.

(Total for Question 12 is 12 marks)

13 Describe Skinner's procedure and findings.

(Total for Question 13 is 6 marks)

Mark scheme · 5.3 The Behaviourist Approach: Operant Conditioning and Skinner's Research

Question 1

states operant conditioning is learning through the consequences of behaviour oe **B1**

states behaviour is strengthened by reinforcement or weakened by punishment oe **B1**

Answer: Operant conditioning is learning in which behaviour is shaped by its consequences; behaviours that are reinforced are more likely to occur again and behaviours that are punished are less likely to occur.

Question 2

states positive reinforcement is receiving a reward after a behaviour which increases the likelihood of the behaviour recurring oe **B1**

gives an example, e.g. giving a dog a treat when it sits oe **B1**

Answer: Positive reinforcement is when a reward is presented after a behaviour, increasing the chance the behaviour will be repeated; for example, giving a dog a treat when it sits.

Question 3

states negative reinforcement is the removal of an aversive stimulus after a behaviour which increases the likelihood of that behaviour recurring oe **B1**

gives an example, e.g. fastening a seatbelt to stop a car alarm, or turning off an alarm clock oe **B1**

Answer: Negative reinforcement is the removal of an unpleasant stimulus after a behaviour, which increases the chance the behaviour will occur again; for example, fastening a seatbelt to stop a car alarm.

Question 4

states punishment is the presentation of an aversive stimulus or removal of a positive stimulus to reduce the likelihood of a behaviour recurring oe **B1**

gives an example, e.g. a pupil given detention for being disruptive, reducing the disruptive behaviour oe **B1**

Answer: Punishment is applying an unpleasant consequence or taking away a positive one to reduce a behaviour; for example, giving a pupil detention to discourage disruptive behaviour.

Question 5

identifies variable ratio schedule (reinforcement after an unpredictable number of responses) cao **M1**

explains that the unpredictability maintains high response rates oe **A1**

explains that variable ratio schedules produce high resistance to extinction, which helps explain why gambling behaviour persists oe **A1**

Answer: This is a variable ratio schedule: reinforcement occurs after an unpredictable number of responses. Because rewards are unpredictable, response rates stay high and behaviour shows strong resistance to extinction, explaining the persistence of gambling.

Question 6

identifies a valid application, e.g. token economy systems in prisons or psychiatric hospitals, where tokens are given for desirable behaviour and exchanged for privileges oe **B1**

Answer: Token economy systems in institutions, where desirable behaviours are reinforced with tokens that can be exchanged for rewards.

Question 7

positive reinforcement: a reward (food) is given after the behaviour, increasing the likelihood of the pecking behaviour oe **B1**

Answer: Positive reinforcement, because the peck is followed by a food reward which increases the chance the pigeon will peck the key again.

Question 8

negative reinforcement: an aversive stimulus (being told off) is removed following the behaviour, so the behaviour is more likely to recur oe **B1**

Answer: Negative reinforcement, because the child removes the aversive stimulus (the reprimand) by tidying, so tidying is reinforced and more likely to recur.

Question 9

punishment: presentation of an aversive consequence (expulsion) following the behaviour to reduce the likelihood of cheating recurring oe **B1**

Answer: Punishment, because the expulsion is an aversive consequence intended to reduce the likelihood of cheating in the future.

Question 10

continuous reinforcement: behaviour is reinforced every time it occurs oe **B1**

partial (intermittent) reinforcement: behaviour is reinforced only on some occasions; partial reinforcement typically produces greater resistance to extinction oe **B1**

Answer: Continuous reinforcement gives a reward every time a behaviour occurs. Partial or intermittent reinforcement rewards only some responses, and behaviours on partial schedules tend to persist longer and resist extinction.

Question 11

identifies a limitation, such as it ignores internal mental processes/cognition oe	**M1**
explains implication, e.g. cannot fully explain learning that occurs without reinforcement or insight learning, reducing its explanatory power for complex human behaviour oe	**A1**
identifies a second limitation, such as it underestimates the role of free will and individual differences or it may rely on extrinsic rewards that do not transfer to intrinsic motivation oe	**M1**
explains implication, e.g. behaviour changed by external rewards may not persist when rewards stop and the theory may not account for motivated, voluntary actions, limiting its practical long-term usefulness oe	**A1**

Answer: Limitation 1: Operant conditioning downplays internal mental processes. This limits its ability to explain learning that involves insight or internal planning, reducing its explanatory power for complex human behaviours. Limitation 2: It underestimates free will and individual differences and often relies on extrinsic rewards. This means behaviours learned through external reinforcement may not persist when rewards are removed, and the approach may not predict voluntary or internally motivated actions well.

Question 12

Level 4 Knowledge of operant conditioning is accurate and detailed. Discussion is thorough and balanced, evaluating strengths and limitations with well developed chains of reasoning that include empirical support and implications. Real-world applications and theoretical criticisms are used interactively to support judgements. Specialist terminology is used effectively and the answer is coherent and well structured.	**10-12**
Level 3 Knowledge is clear with some detail. Discussion includes strengths and limitations with some evaluation, supported by evidence or examples. Application to real-world examples and reference to cognition or free will is present but may be less fully developed. The answer is organised and mostly clear.	**7-9**
Level 2 Knowledge is present but limited. Discussion is basic or one sided, with limited evidence and few developed implications. Reference to applications or criticisms may be brief or superficial. Structure and use of terminology are inconsistent.	**4-6**
Level 1 Very limited knowledge. Answer may be a list of points with little or no development. Evaluation is minimal or missing. Specialist terminology is largely absent and the answer lacks clarity.	**1-3**
Level 0 No creditable content.	**0**

Indicative content:

- AO1: Operant conditioning defined as learning through consequences: positive reinforcement, negative reinforcement and punishment, and the role of schedules of reinforcement (continuous, fixed ratio, variable ratio, fixed interval, variable interval).
- AO1: Skinner's experimental work with rats and pigeons in the Skinner box demonstrated that behaviours followed by reinforcement increase in frequency, and that partial reinforcement schedules produce greater resistance to extinction.
- AO3 Strength: Useful real-world applications such as token economies in prisons, psychiatric units and schools where tokens reinforce desirable behaviour; evidence of practical behaviour change supports the applied value of the approach.
- AO3 Strength: Operant principles underpin many behaviour-change programmes and technologies, for example behaviour modification, education reward systems and aspects of behavioural therapies; these have measurable outcomes, showing predictive and practical utility.
- AO3 Limitation: The approach ignores internal mental processes and cognition; learning that involves insight, latent learning or goal-directed planning is not easily explained by simple reinforcement contingencies, reducing explanatory completeness.
- AO3 Limitation: Emphasis on external rewards may undermine intrinsic motivation; behaviours learnt for extrinsic rewards may not generalise or persist when rewards are removed, limiting long-term effectiveness.
- AO3 Limitation: Ethical and practical problems with punishment, including side effects such as avoidance, aggression or conditioned fear, reduce the desirability of punishment as a behaviour-change tool.
- AO3 Counterargument: Some cognitive features can be integrated with operant accounts, for example by recognising that organisms may form expectations about consequences, and modern applied work often combines reinforcement with cognitive strategies.
- AO3 Balance and judgement: Conclude by weighing strong practical utility and empirical support against theoretical limitations and ethical concerns, and suggest operant conditioning is valuable for many applied contexts but is not a complete explanation of all human learning and behaviour.

Question 13

describes the Skinner box setup: a small chamber containing a lever or key, a dispenser for food pellets, and mechanisms for delivering stimuli and recording behaviour oe	**M1**
states that animals were placed in the box and learned to perform an action, such as pressing a lever or pecking a key, to obtain a reward oe	**M1**
describes reinforcement delivery: food pellet presented immediately after the response as positive reinforcement, or an aversive stimulus removed as negative reinforcement oe	**M1**
states key finding that behaviour that is reinforced increases in frequency, and that schedules of reinforcement affect how quickly behaviour is acquired and how resistant it is to extinction oe	**A1**
mentions that punishment decreases behaviour but does not eliminate the tendency to perform it and may produce side effects such as avoidance oe	**A1**
concludes Skinner argued that behaviour is shaped by its consequences, supporting a behaviourist account of learning oe	**A1**

Answer: Skinner used a controlled chamber with a lever or key and a food dispenser. Animals learned to press the lever or peck the key to receive food pellets, demonstrating positive reinforcement; removal of aversive events also reinforced behaviour as negative reinforcement. He found reinforced behaviours increased in frequency, partial reinforcement produced greater resistance to extinction, and punishment tended to suppress but not necessarily eliminate behaviour. Skinner concluded behaviour is shaped by its consequences.