9.1 Sexual Selection and Human Reproductive Behaviour: Test Pack

AQA 7182 · about 20 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Outline the concept of anisogamy as it applies to human reproductive biology and mating strategies, naming the two gamete types and one key difference between them. Place your answer in the context of evolutionary pressures on mating behaviour.

(Total for Question 1 is 2 marks)

2 Outline intra-sexual selection and state one behavioural outcome of male-male competition in humans, giving an example linked to mating opportunities.

(Total for Question 2 is 2 marks)

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3 Explain two consequences of anisogamy for male and female mating strategies in humans, relating each consequence to observable mating behaviour.

(Total for Question 3 is 4 marks)

4 Explain two theoretical criticisms of evolutionary explanations of human mating, focusing on determinism and reductionism. For each criticism, explain why it matters for interpreting the theory's claims.

(Total for Question 4 is 6 marks)

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Mark scheme · 9.1 Sexual Selection and Human Reproductive Behaviour: Test Pack

Question 1

names the two gamete types: small motile sperm and large nutrient-rich eggs (ova) oe	**B1**
states a key difference, for example sperm are numerous and cheap to produce while eggs are fewer and energetically costly to produce oe	**B1**

Answer: Anisogamy: reproduction involves two gamete types, small motile sperm and large nutrient-rich eggs; sperm are numerous and 'cheap' to produce while eggs are relatively few and energetically costly.

Question 2

states intra-sexual selection involves competition within one sex, typically males, for access to mates, so traits that help in competition are favoured oe	**B1**
gives a behavioural outcome, e.g. increased aggression, dominance displays, resource accumulation or risk-taking to outcompete rivals oe	**B1**

Answer: Intra-sexual selection is competition within a sex, often male-male competition, favouring traits that help win access to mates. A behavioural outcome is greater aggression or dominance displays, such as competing for status or resources that attract mates.

Question 3

states a plausible consequence for males, e.g. males benefit from seeking multiple mating opportunities because sperm are cheap and reproductive success can increase with number of partners oe	**M1**
explains how this relates to behaviour, e.g. greater male interest in short-term mating or mate quantity strategies oe	**A1**
states a plausible consequence for females, e.g. females invest more in each gamete so are choosier about partners oe	**M1**
explains how this relates to behaviour, e.g. greater female preference for mates who offer resources, protection or parental investment oe	**A1**

Answer: Males: because sperm are cheap, males gain by mating with multiple partners, so they tend to favour short-term mating and seek higher mate quantity. Females: because eggs are costly and female parental investment is high, females are choosier and favour partners who can provide resources, commitment or help with offspring.

Question 4

identifies determinism as a criticism, e.g. the claim that behaviour is fixed by evolutionary pressures oe	**M1**
explains why this is a problem, e.g. it underestimates individual choice, cultural influence and situational flexibility, weakening the explanatory scope of the theory oe	**A1**
identifies reductionism as a criticism, e.g. reducing complex mating behaviour to genetic or reproductive imperatives oe	**M1**
explains the problem, e.g. ignores psychological, social and cultural explanations that interact with biology, so evolutionary accounts may be incomplete or misleading oe	**A1**
may give a brief example illustrating one criticism, e.g. cultural norms shaping mate choice contrary to simple evolutionary predictions oe	**M1**
explains the consequence, e.g. policy or social interpretations based solely on biology risk being simplistic or harmful oe	**A1**

Answer: Determinism critic: evolutionary accounts can imply behaviours are fixed by biology, underestimating free choice, cultural influence and situational flexibility. Reductionism critic: reducing mating behaviour to genetic or reproductive motives ignores psychological and social factors that shape behaviour. Both criticisms matter because they limit the theory's explanatory reach and risk simplistic interpretations of complex human behaviour.

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