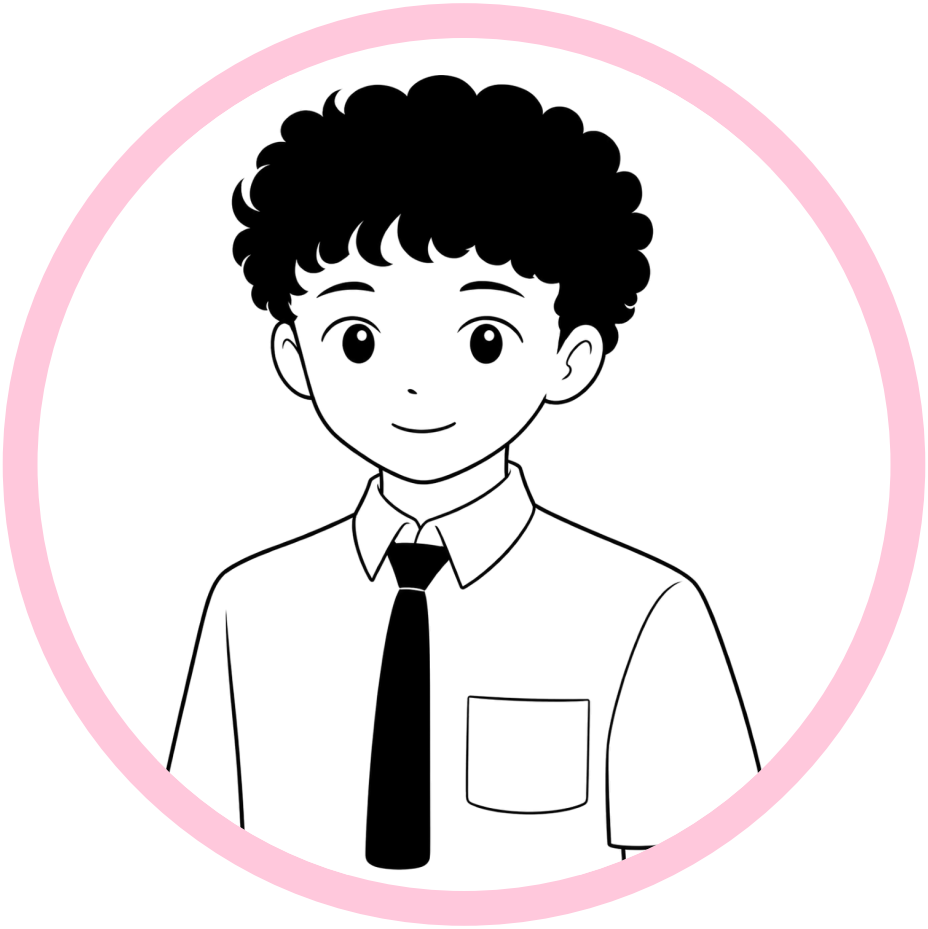
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



MARK SCHEME

3.3.9 BIOLOGICAL EXPLANATIONS OF OFFENDING

SCORE	PERCENTAGE
/40	%

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Q1.

[AO3 = 6]

Level	Mark	Description
3	5-6	Evaluation is effective and appropriate. Minor detail and / or expansion of argument is sometimes lacking. Answer is clear, coherent and focused. Specialist terminology is used effectively.
2	3-4	Evaluation is sometimes effective, mostly clear and focused. Specialist terminology is sometimes used appropriately.
1	1-2	Evaluation is very limited and lacks clarity. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible evaluation points:

- important role in shift away from theories based on feeble-mindedness, wickedness and demonic possession
- forerunner of more scientific biological explanations
- use of evidence to support / refute the atavistic explanation
- biological determinism – racial undertones, discrimination and eugenic implications
- emphasised the criminal stereotype
- use of evidence to support / refute the explanation.

Credit other relevant material.

[6]

Q2.

[AO3 = 16]

Level	Marks	Description
4	13 – 16	Knowledge of biological explanations of offending behaviour is accurate and generally well detailed. Discussion is thorough. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and/or expansion of argument sometimes lacking.
3	9 – 12	Knowledge of biological explanations of offending behaviour is evident. There are occasional inaccuracies. Discussion is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge of biological explanations of offending behaviour is present. Focus is mainly on description. Any

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		discussion is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge of biological explanations of offending behaviour is limited. Discussion is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Possible content:

- Genetic explanations, focusing on 'criminal' genes such as the MAOA gene (which controls levels of brain serotonin) linked to criminal aggression
- Brain pathology explanations, possibly liked to genes and/or early abuse; examples include the relationship between psychopathy and abnormalities of frontal lobe and amygdala function
- Credit biological aspects of Eysenck's theory – cortical underarousal

Possible discussion points:

- Evidence from MZ/DZ twin studies and family studies looking at genetic factors
- Findings support a genetic involvement in criminal behaviour but concordance rates in MZ twins are not high and leave plenty of room for non-genetic environmental factors
- Brain scanning studies that show pathology in brains of criminal psychopaths, but cannot conclude whether these abnormalities are genetic or signs of early abuse
- Some evidence from genome-wide association studies for particular genetic factors linked to criminal psychopathy, but little replication
- Counter-evidence for environmental factors in offending behaviour; socio-economic status, social learning theory
- General nature of 'offending behaviour' – some specific forms may be more 'biological' than others eg physical aggression

Credit other relevant information.

Q3.

[AO1 = 2]

Up to 2 marks for a biological explanation for offending. Likely content: genetics / heritability – DNA, pro-bands, concordance rates, degrees of relatedness, evidence eg twin / adoption studies; atavistic form – offenders as genetic throwbacks; somatotype theory – the mesomorph characteristics; neurological explanations – role of the limbic system and amygdala; the maturation retardation hypothesis; reduced pre-frontal lobe volume; chromosomal explanation – XYY theory and testosterone.
One mark for a brief outline (not just naming).
Two marks for an elaborated outline.

Q4.

Marks for this question: AO1 = 6, AO3 = 10

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Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Comparison is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Comparison is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any comparison is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Comparison is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Marks for outline of two explanations (can have two explanations from within one category eg two biological).
Likely content:
Biological explanations – genetics; twin / adoption evidence; neurological mechanisms eg amygdala, frontal lobe volume / activity, brain maturation retardation hypothesis (APD); chromosomal XYY; credit also early theories such as atavistic form and somatotype. Eysenck: combination of high neuroticism and high extraversion; psychoticism. Psychodynamic: role of the superego; types of criminal superego (Blackburn 1993); maternal deprivation (Bowlby 1951); role of defence mechanisms.
Social learning theory: modelling; vicarious reinforcement; observation; imitation; differential association theory (Sutherland 1939).

AO3

Marks for comparison of the two explanations. Points will depend on the explanations chosen but might include: determinism – biological versus environmental determinism; reductionism; relative ability to explain certain types of crime better than others; role of parents and wider society; implications eg blame and opportunities for reform; quality of evidence for each explanation; theoretical foundations.
Credit use of evidence where relevant to explanations.

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Q1.

This question was well answered, with many students presenting issues such as scientific racism and use of evidence. Evaluations varied immensely in terms of clarity and coherence.

Q3.

As ever, this was a very popular topic. This question was generally well done, with many students scoring the full two marks.

Q4.

The majority of students could offer useful outlines for this question, however, little effective comparison was in evidence. More usually each explanation was evaluated separately in turn. As a consequence, many students who ought to have done better were limited to a maximum of six marks.