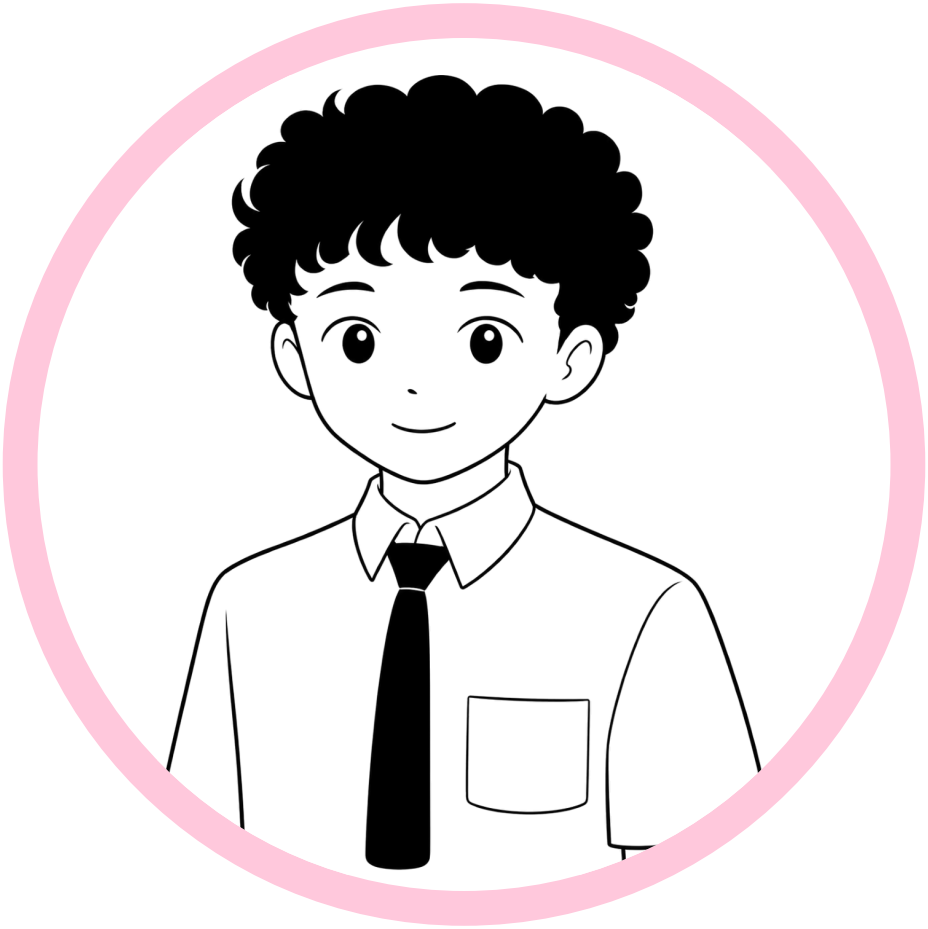
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



MARK SCHEME

3.2.1 THE BIOLOGICAL APPROACH

SCORE	PERCENTAGE
/32	%

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Q1.

[AO1 = 6 AO3 = 10]

Level	Mark	Description
4	13-16	Knowledge of the behaviourist approach is accurate and generally well detailed. Comparison with the biological approach is thorough and effective. Minor detail and / or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	9-12	Knowledge of the behaviourist approach is evident but there are occasional inaccuracies / omissions. Comparison with the biological approach is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	5-8	Limited knowledge of the behaviourist approach is present. Focus is mainly on description. Any comparison with the biological approach is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-4	Knowledge of the behaviourist approach is very limited. Comparison with the biological approach is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content - outline:

- basic assumptions of the behaviourist approach
- the concept / theory of classical conditioning
- Pavlov's research
- the concept / theory of operant conditioning
- Skinner's research.

Possible comparisons:

- focus on environmental causes and experience vs focus on internal influences (nature vs nurture). Discussion of the interactionist approach
- approaches to treatment (e.g. flooding vs drug therapy)
- use of scientific methods
- the issue of determinism
- the issue of reductionism
- use of animal experiments and extrapolation
- contrasting implications (e.g. blame, responsibility and social stigma).

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Note - Use of topic examples to illustrate and elaborate on comparison points should be credited.

Credit other relevant information.

[16]

Q2.

[AO2 = 4]

Level	Marks	Description
2	3 – 4	Explanation is clear and coherent, showing sound understanding of genotype and phenotype/environmental factor. The material is applied appropriately. There is effective use of terminology.
1	1 – 2	The explanation shows some understanding of genotype and phenotype/environmental factor. Application is not always appropriate. The answer lacks clarity and coherence. Use of terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- the genetic test reveals the genotype not the phenotype
- John's genotype will only reveal his set of genes (not their interaction with the environment)
- a genetic test will only reveal if he is predisposed to suffering Alzheimer's disease but will not reveal whether he will develop/suffer from the disorder
- environmental factors may contribute to the disorder (it depends on an interaction between inherited factors and the environment.

Credit other relevant material.

Note: merely defining genotype and/or phenotype is not creditworthy.

Q3.

[AO2 = 4]

Level	Marks	Description
2	3 – 4	Understanding of genotype and phenotype applied to the data is clear. The answer is generally coherent with effective use of terminology.
1	1 – 2	There is limited/partial understanding genotype and phenotype applied to the data. The answer may lack coherence. Use of terminology may be either absent or inappropriate. Or – only genotype or phenotype has been applied. Or 1 mark for basic understanding of genotype AND phenotype.

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	0	No relevant content.

Possible Content:

- The genotype for tooth decay is the same for all the twin pairs as they are all MZ/identical so for each pair their teeth would be expected to decay in exactly the same way.
- The fact that some twin pairs have different decay to each other (52) indicates their phenotypes differ and something other than genes affected tooth decay e.g. diet/brushing teeth.

Expect to find this content embedded in the application.

Q4.

[AO2 = 4]

Level	Marks	Description
2	3 – 4	Knowledge of genotype and phenotype is clear. Explanation of how these affect personality is clear. The answer is generally coherent with effective use of terminology.
1	1 – 2	There is limited / partial knowledge and explanation. Knowledge is clear but the explanation is missing or inaccurate. The answer lacks accuracy and detail. Use of terminology is either absent or inappropriate.
	0	No relevant content.

Possible Content:

- Holly and Rita have identical genotype as they are MZ twins.
- They have the predisposition to develop the same personalities as each other unless another factor(s) intervenes.
- For them to have developed different personalities over time, this must have been influenced by being in different environments.
- Their phenotypes – personalities achieved – are different, presumably because Rita was encouraged to be sociable and lively and Holly was not.

Q5.

[AO1 = 1]

B

Q6.

[AO1 = 1]

D

Q7.

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(a) **[AO1 = 1]**

Genotype: refers to the genes an individual possesses / an individual's genetic make-up.

(b) **[AO1 = 1]**

Phenotype: refers to the observable traits or characteristics shown by the individual; these traits / characteristics are due to the combined effect of genes and environment.

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Q1.

Overall this question was well answered with some impressive responses. Students appeared to be well prepared, demonstrating good, detailed knowledge of classical and operant conditioning and of Pavlov and Skinner's research, with stronger students outlining general assumptions upon which the approach is founded. Some schools / colleges appear to be teaching all the learning approaches together rather than distinguishing between the behaviourist approach and social learning theory therefore many students incorrectly included the social learning theory in their outline of the behaviourist approach.

The comparisons given were variable. Whilst there were some excellent, well discussed and effective comparisons, weaker students exposed their limited knowledge of the approaches and terminology in the inappropriate comparisons given. A worrying number of students claimed that the biological approach does not use animals in their research and poses no ethical issues. Furthermore, some claimed the behaviourist approach focusses on free will and is subjective and unscientific in its methodology. Understanding of reductionism was often limited and nature and nurture were frequently muddled. The most successful comparisons tended to focus their discussion around determinism and comparing and contrasting explanations and treatments for phobias. Unfortunately, many students provided pre-learned essays, focussing on outlining and evaluating the approaches, as opposed to providing effective comparison. This meant that students often wasted time providing a wealth of material which lacked relevance but could have easily been rearranged to provide effective comparison.

Q2.

This question was quite poorly answered, with almost two thirds of students failing to achieve level 2, mainly due to weak application. Most students understood the difference between genotype and phenotype, but many did not go on to discuss the interaction with the environment and the diathesis-stress argument convincingly. Students wasted a lot of time providing definitions of genotype and phenotype, mentioning characteristics, such as eye colour, and discussing recessive genes, missing the general focus of the question. Some students failed to apply their knowledge appropriately, simply paraphrasing content from the stem as opposed to engaging with the material and applying their knowledge effectively.

Overall, there was a relatively poor understanding of genotype and phenotype. The most common error regarding genotype involved trying to relate John's genotype to his mother. With regard to phenotype, many students mistakenly suggested that John's phenotype should be tested. Schools and colleges should therefore ensure that students fully understand these terms in a psychological context.

Q3.

Many students had some understanding of genotype and phenotype but struggled to apply their knowledge to this novel scenario about 'fillings'. Even some sound answers had an imprecise use of terminology, especially references to monozygotic (MZ) twins or identical twins as having 'similar' genes or having 'almost identical' genes. Many students failed to appreciate that all identical twins have identical genes and that all people exhibit traits that are a function of both genetic and environmental influences. Instead, they suggested that the data could be explained as either a result of genes or of phenotype.

Q7.

Most answers were correct, although students struggled with *phenotype*, often not referring to the interaction of both environment and genes.