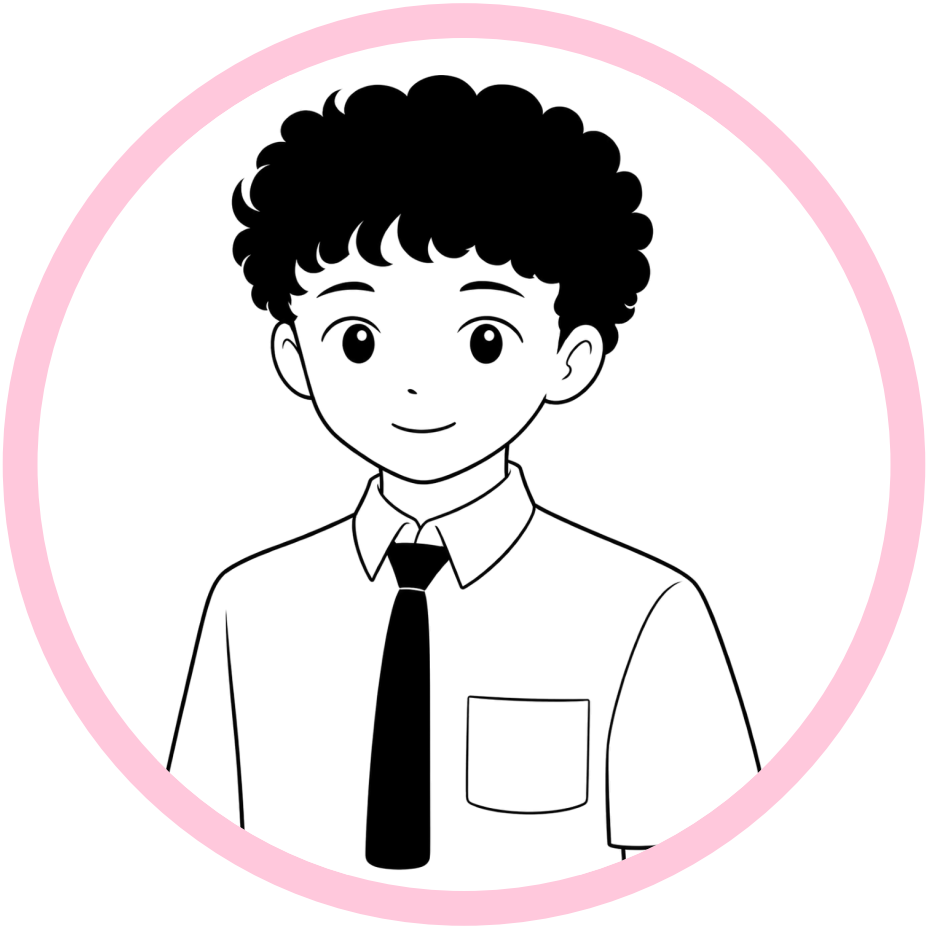
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



EXAM QUESTION PACK

3.2.3.1 FEATURES OF SCIENCE

SCORE	PERCENTAGE
/52	%

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Q1.

Briefly explain **one** reason why it is important for research to be replicated.

_____

_____

_____

_____

(Total 2 marks)

Q2.

A psychodynamic psychologist wished to investigate the function of dreams. He asked five friends to keep a 'dream diary' for a week by writing a descriptive account of their dreams as soon as they woke up in the morning. He interpreted the content of their dreams as an expression of their repressed wishes.

Referring to the study above, explain why psychodynamic psychologists have often been criticised for neglecting the rules of the scientific approach.

(Total 3 marks)

Q3.

A researcher believed that there is a biological basis to aggression in males. She predicted that there would be a significant difference between the levels of the hormone testosterone in aggressive males and the levels of the hormone testosterone in non-aggressive males. In order to test her prediction, the researcher statistically analysed the levels of testosterone in saliva samples from 20 aggressive males and 20 non-aggressive males.

Outline **three** ways in which the study described above could be considered to be scientific.

(Total 3 marks)

Q4.

Explain what is meant by replicability. Why is replicability an important feature of science?

(Total 5 marks)

Q5.

Outline what is meant by *replication* in research. Explain why replication forms an essential part of the scientific approach.

(Total 4 marks)

Q6.

A teacher has worked in the same primary school for two years. While chatting to the children, she is concerned to find that the majority of them come to school without having eaten a healthy breakfast. In her opinion, children who eat 'a decent breakfast' learn to read more quickly and are better behaved than children who do not. She now wants to set

up a pre-school breakfast club for the children so that they can all have this beneficial start to the day. The local authority is not willing to spend money on this project purely on the basis of the teacher's opinion and insists on having scientific evidence for the claimed benefits of eating a healthy breakfast.

(a) Explain why the teacher's personal opinion cannot be accepted as scientific evidence.
Refer to some of the major features of science in your answer.

A psychologist at the local university agrees to carry out a study to investigate the claim that eating a healthy breakfast improves reading skills. He has access to 400 five-year-old children from 10 local schools, and decides to use 100 children (50 in the experimental group and 50 in the control group). Since the children are so young, he needs to obtain parental consent for them to take part in his study.

(6)

(b) The psychologist used a random sampling method. Explain how he could have obtained his sample using this method.

(3)

(c) Explain limitations of using random sampling in this study.

(3)

(d) Explain why it is important to operationalise the independent variable and the dependent variable in this study and suggest how the psychologist might do this.

(5)

(e) The psychologist used a Mann-Whitney test to analyse the data. Give **two** reasons why he chose this test.

(2)

(f) He could have used a matched pairs design. Explain why this design would have been more difficult to use in this study.

(2)

(g) Other than parental consent, identify **one** ethical issue raised in this study and explain how the psychologist might address it.

(2)

(h) The psychologist asks some of his students to conduct a separate observational study at the same time on the same group of children. The aim of this observational study is to test the idea that eating a healthy breakfast affects playground behaviour.

Design an observational study to investigate the effects of a healthy breakfast on playground behaviour. Include in your answer sufficient detail to allow for reasonable replication of the study. You should state the hypothesis you are setting out to test.

In your answer, refer to:

- an appropriate method of investigation
- materials/apparatus and procedure.

Justify your design decisions.

(12)

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(Total 35 marks)

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