

Markscheme

November 2021

Psychology

Higher level

Paper 1

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Section A

Biological approach to understanding behaviour

1. Outline neural pruning with reference to **one** relevant study.

[9]

Refer to the paper 1 section A markbands when awarding marks.

The command term “outline” requires candidates to give a brief account of neural pruning with reference to one relevant study.

Relevant studies may include, but are not limited to:

- Draganski *et al.*'s (2004) study investigating the effects of learning juggling on the brain after training and after a period of latency
- Bremner *et al.*'s (2003) study investigating hippocampal atrophy in PTSD
- Maguire *et al.*'s (2000) study suggesting pruning in the anterior hippocampus of experienced taxi drivers
- Squeglia *et al.*'s (2013) study suggesting a negative correlation between cortical thickness in the frontal lobe and age.

An outline of the concept of neural pruning may include:

- the role of long-term potentiation
- the development of children's brains
- a decrease in dendritic branching leading to a decrease in synaptic connections
- neuronal cell death.

If a candidate refers to more than one study, credit should only be given to the first study.

If a candidate outlines neural pruning without making reference to a study, up to a maximum of [5] should be awarded.

If a candidate only describes an appropriate study without outlining neural pruning, up to a maximum of [4] should be awarded.

The response must make a link between neural pruning and the chosen study; however, a link between the study and human behaviour is not required.

Cognitive approach to understanding behaviour

2. Describe schema theory, with reference to **one** relevant study.

[9]

Refer to the paper 1 section A markbands below when awarding marks.

The command term “describe” requires candidates to give a detailed account of schema theory, with reference to one relevant study.

Candidates may refer to relevant aspects of schema theory such as, but not limited to:

- mental representation
- framework of knowledge
- assimilation and accommodation (Piaget)
- the role of past experience
- reconstructive memory
- schema types
- the role of schema in the encoding and retrieval of memory

Relevant studies may include, but are not limited to:

- Bartlett’s (1932) study of “War of the Ghosts”
- Anderson & Pichert’s (1978) study on schema theory and memory retrieval
- Brewer & Treyens’ (1981) study of potential effects of schema on memory.

If a candidate refers to more than one study, credit should be given only to the first study.

If a candidate describes schema theory without making reference to a study, up to a maximum of **[5]** should be awarded.

If a candidate only describes an appropriate study without describing schema theory, up to a maximum of **[4]** should be awarded.

Sociocultural approach to understanding behaviour

3. Outline the influence of culture on behaviour and/or cognition with reference to **one** relevant study.

[9]

Refer to the paper 1 section A markbands when awarding marks.

The command term “outline” requires candidates to give a brief account or summary of the influence of culture on behaviour and/or cognition with reference to one relevant study.

Appropriate topics may include, but are not limited to:

- conformity (Berry, 1967)
- attachment (Van Ijzendoorn and Kroonenberg, 1988)
- aggression in honour cultures (Cohen, 1996)
- abnormal behaviour (Lin and Kleinman, 1988)
- addictive behaviour (Raylu and Oei, 2004)
- memory encoding and recall strategies (Cole and Scribner, 1974)

If a candidate refers to more than one study, credit should be given only to the first study.

If a candidate outlines the influence of culture on behaviour and/or cognition without making reference to a study, up to a maximum of **[5]** should be awarded.

If a candidate only describes an appropriate study without outlining the influence of culture on behaviour and/or cognition, up to a maximum of **[4]** should be awarded.

Section B assessment criteria

A — Focus on the question

To understand the requirements of the question students must identify the problem or issue being raised by the question. Students may simply identify the problem by restating the question or breaking down the question. Students who go beyond this by **explaining** the problem are showing that they understand the issues or problems.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1	Identifies the problem/issue raised in the question.
2	Explains the problem/issue raised in the question.

B — Knowledge and understanding

This criterion rewards students for demonstrating their knowledge and understanding of specific areas of psychology. It is important to credit **relevant** knowledge and understanding that is **targeted** at addressing the question and explained in sufficient detail.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	The response demonstrates limited relevant knowledge and understanding. Psychological terminology is used but with errors that hamper understanding.
3–4	The response demonstrates relevant knowledge and understanding but lacks detail. Psychological terminology is used but with errors that do not hamper understanding.
5–6	The response demonstrates relevant, detailed knowledge and understanding. Psychological terminology is used appropriately

C — Use of research to support answer

Psychology is evidence based so it is expected that students will use their knowledge of research to support their argument. There is no prescription as to which or how many pieces of research are appropriate for their response. As such it becomes important that the research selected is **relevant** and useful in **supporting** the response. One piece of research that makes the points relevant to the answer is better than several pieces that repeat the same point over and over.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	Limited relevant psychological research is used in the response. Research selected serves to repeat points already made.
3–4	Relevant psychological research is used in support of the response, and is partly explained. Research selected partially develops the argument.
5–6	Relevant psychological research is used in support of the response and is thoroughly explained. Research selected is effectively used to develop the argument.

D — Critical thinking

This criterion credits students who demonstrate an inquiring and reflective attitude to their understanding of psychology. There are a number of areas where students may demonstrate critical thinking about the knowledge and understanding used in their responses and the research used to support that knowledge and understanding.

The areas of critical thinking are:

- research design and methodologies
- triangulation
- assumptions and biases
- contradictory evidence or alternative theories or explanations
- areas of uncertainty.

These areas are not hierarchical and not all areas will be relevant in a response. In addition, students could demonstrate a very limited critique of methodologies, for example, and a well-developed evaluation of areas of uncertainty in the same response. As a result, a holistic judgement of their achievement in this criterion should be made when awarding marks.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	There is limited critical thinking and the response is mainly descriptive. Evaluation or discussion, if present, is superficial.
3–4	The response contains critical thinking, but lacks development. Evaluation or discussion of most relevant areas is attempted but is not developed.
5–6	The response consistently demonstrates well developed critical thinking. Evaluation and/or discussion of relevant areas is consistently well developed.

E — Clarity and organisation

This criterion credits students for presenting their response in a clear and organized manner. A good response would require no re-reading to understand the points made or the train of thought underpinning the argument.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1	The answer demonstrates some organization and clarity, but this is not sustained throughout the response.
2	The answer demonstrates organization and clarity throughout the response.

Section B

4. Evaluate **one or more** studies that use an animal model to investigate the relationship between genetics and behaviour. **[22]**

Refer to the paper 1 section B assessment criteria when awarding marks.

The command term “evaluate” requires candidates to make an appraisal by weighing up the strengths and limitations of one or more studies that use an animal model to investigate the relationship between genetics and behaviour.

Although a discussion of both strengths and limitations is required, it does not have to be evenly balanced to gain high marks.

Relevant studies include, but are not limited to:

- Cases *et al.* (1995); Mosienko *et al.* (2012), Van Oortmerssen and Bakker 's (1981) studies of aggression in mice
- Farooqi and Rahilly (2006); Friedman (1950) studies of obesity in rats
- Shmelkov *et al.*'s (2010) study of OCD in mice

Evaluation of the selected research studies may include, but is not limited to:

- methodological and ethical considerations
- potential differences between humans and animals
- the strengths and limitations of a reductionist approach
- supporting and/or contradictory findings
- construct validity with regard to the behaviour studied and the question of anthropomorphism
- the applications of the empirical findings

If the candidate addresses only strengths or only limitations of the study or studies, the response should be awarded up to a maximum of **[3]** for criterion D: critical thinking. All remaining criteria should be awarded marks according to the best fit approach.

5. Discuss **one** cognitive process.

[22]

Refer to the paper 1 section B assessment criteria when awarding marks.

The command term “discuss” requires the candidate to offer a considered review of one cognitive process.

Cognitive processes may include:

- attention
- language
- memory
- perception
- thinking and decision-making

Discussion of a cognitive process may include, but is not limited to:

- the value of a model or theory
- reliability of a cognitive process
- effects of culture
- effects of biological factors
- effects of environmental factors and stress
- methodological and ethical considerations related to the research into the cognitive process.

If a candidate discusses more than one cognitive process, credit should be given only to the first cognitive process discussed.

6. Discuss **one or more** ethical considerations related to research studies investigating individuals and groups.

[22]

Refer to the paper 1 section B assessment criteria when awarding marks.

The command term "discuss" requires candidates to offer a considered review of one or more ethical considerations related to research studies investigating individuals and groups.

Ethical considerations may be positive (what guidelines were followed) or negative (what guidelines were not followed).

Ethical considerations may include, but are not limited to:

- deception
- protection from undue stress or harm
- briefing and debriefing
- right to withdraw
- informed consent
- anonymity

Studies investigating individuals and groups may include, but are not limited to:

- Festinger's (1956) study on cult behaviour
- Sherif's (1954) "Robbers Cave" study investigating the realistic conflict theory
- Zimbardo's (1961) Stanford Prison Experiment
- Milgram's (1961) study of obedience
- Bandura's (1961) study of aggression

Discussion may include, but is not limited to:

- why deception is used
 - the difficulties of ensuring confidentiality in social psychology research
 - the role of informed consent when studying groups
 - decisions as to why certain ethical guidelines were/were not followed
 - changes over time in adherence to ethical standards/guidelines.
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