

Markscheme

November 2023

Psychology

Standard level

Paper 1

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Section A markbands

Marks	Level descriptor
0	<ul style="list-style-type: none"> • The answer does not reach a standard described by the descriptors below.
1–3	<ul style="list-style-type: none"> • The response is of limited relevance to or only rephrases the question. • Knowledge and understanding is mostly inaccurate or not relevant to the question. • The research supporting the response is mostly not relevant to the question and if relevant only listed.
4–6	<ul style="list-style-type: none"> • The response is relevant to the question, but does not meet the command term requirements. • Knowledge and understanding is accurate but limited. • The response is supported by appropriate research which is described.
7–9	<ul style="list-style-type: none"> • The response is fully focused on the question and meets the command term requirements. • Knowledge and understanding is accurate and addresses the main topics/problems identified in the question. • The response is supported by appropriate research which is described and explicitly linked to the question.

Section A

Biological approach to understanding behaviour

1. Describe the role of **one** hormone in the study of human behaviour, with reference to **one** relevant study. **[9]**

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

The command term “describe” requires candidates to give a detailed account of the role of one hormone in human behaviour.

Responses should make a clear link between the role of the hormone(s) and human behaviour.

Examples of how hormones influence human behaviour could include, but are not limited to:

- Radke *et al.*'s (2015) study investigating the effects of testosterone on aggression
- McGaugh and Cahill's (1995) study on adrenaline and memory
- Newcomer *et al.*'s (1999) study on cortisol and memory
- Baumgartner *et al.*'s (2008) study on the role of oxytocin on trust
- Ronay and von Hippel's (2010) study on testosterone and risk taking.

If a candidate describes the role of more than one hormone, credit should be given only to the first hormone described.

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

If a candidate describes the role of one hormone without making reference to a study, up to a maximum of **[5]** should be awarded.

If a candidate only describes a relevant study without describing the role of the hormone in the study of human behaviour, up to a maximum of **[4]** should be awarded.

Responses referring to research conducted on animals are acceptable as long as they are linked to human behaviour.

Cognitive approach to understanding behaviour

2. With reference to **one** relevant study, describe the effect of emotion on **one** cognitive process.

[9]

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

The command term “describe” requires candidates to give a detailed account of the effect of emotion on one cognitive process with reference to one relevant study.

Responses may focus on any cognitive process that is affected by emotion, for example, memory or decision-making.

Relevant studies may include, but are not limited to:

- Brown and Kulik’s (1977), Neisser and Harsh’s (1992) studies related to flashbulb memory
- Yuille and Cutshall’s (1986) study on emotion and accuracy of flashbulb memories
- Nutt and Lam’s (2011), Fisher and Craik’s (1977) studies of state-dependent memory
- Bechara et al.’s (1999); Denes-Raj and Epstein’s (1994) studies of emotion and decision-making
- McGaugh and Cahill’s (1995) study on the role of emotion in the creation of memories.

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

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

If a candidate addresses the effect of emotion on one cognitive process without including a relevant study, a maximum of **[5]** should be awarded for the response.

If a candidate describes a relevant study but does not describe the effect of emotion on one cognitive process, up to a maximum of **[4]** should be awarded.

Sociocultural approach to understanding behaviour

3. Describe **one** research method used in **one** study related to cultural origins of behaviour and/or cultural origins of cognition.

[9]

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

The command term “describe” requires candidates to give a detailed account of one research method used in one study related to cultural origins of behaviour and/or cultural origins of cognition.

In order to address the cultural origins of behaviour and/or cognition, candidates may describe research on cultural dimensions, enculturation, acculturation, or globalization.

Relevant research methods may include, but are not limited to:

- Naturalistic observations: Fagot (1974)
- Quasi-experiments: Berry (1967) on conformity; Cole & Scribner (1974) on chunking in memory; Kearins (1981) on memory
- Questionnaires: Parker et al (2001) on abnormal behaviour; Kulkofsky et al. (2011) on flashbulb memory.

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

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

If a candidate describes a research method 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 a research method, 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. Discuss **one or more** techniques used to study the brain in relation to behaviour. [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 the way in which techniques are used to study the brain in relation to behaviour.

Techniques used to study the brain include, but are not limited to:

- fMRI
- MRI
- EEG
- CAT/CT
- PET.

Relevant studies include, but are not limited to:

- Corkin (1997) using MRI to investigate the effect of damage to HM’s medial temporal lobes and the effect on memory
- Draganski *et al.* (2004) using MRI to investigate the effects of learning juggling on the brain
- Maguire *et al.* (2000) using MRI to investigate neuroplasticity in taxi drivers
- Gilbertson *et al.*’s (2002) study using MRI to compare hippocampal volume in twins in relation to PTSD
- Brefczynski-Lewis *et al.* (2007) using fMRI to investigate the effect of meditation on the brain
- Sharot (2007) using fMRI to investigate the neural basis of flashbulb memories
- Ogden (2005) using CT to investigate the effect of brain damage on hemineglect
- Bert *et al.* (2011) using PET/CT in diagnosis of dementia
- Dement and Kleitman (1957) using EEG to measure stages of sleep.

Discussion may include, but is not limited to:

- how brain imaging has changed the way we study the brain – eg improved ethical standards
- the reasons why different techniques are used
- evaluation of the techniques
- ethical considerations in the use of the techniques
- applications of the research – eg the limitations of correlational research
- researcher biases in the interpretation of brain scans.

The focus of the response should be on the discussion of how the techniques are used to study the brain.

Candidates may discuss one brain imaging technique in order to demonstrate depth of knowledge, or may discuss more than one brain imaging technique in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.

5. Discuss **one or more** biases in thinking and/or decision-making. [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 the influence of biases in thinking and/or decision-making.

Thinking and decision-making are closely related cognitive processes and candidates do not need to make a distinction between the two.

Candidates may address examples of biased thinking and/or decision-making in relation to specific aspects of human behaviour or address behaviour in general. Both approaches are equally acceptable.

Examples of biased thinking and/or decision-making may include, but are not limited to:

- specific biases (eg confirmation, optimism, selective attention)
- illusory correlation
- effects of framing
- heuristics (eg anchoring, availability, representativeness).

Relevant studies may include, but are not limited to:

- studies on heuristics: Strack and Mussweiler (1997) and Englich and Mussweiler (2001) on anchoring bias; Tversky and Kahneman (1981) on framing effects; Tversky and Kahneman (1973) on availability heuristic; Tversky and Kahneman (1973) on representativeness heuristic.
- confirmation bias: Chapman (1969), Stone (1997), Darley and Gross (1983), Wason (1960).
- halo effect: Dion et al (1972), Zebrowitz and McDonald (1991)
- illusory correlation: Hamilton and Gifford (1976), Snyder and Schwann (1978)
- matching bias: Wason (1968), Cox and Griggs (1982) – participants use the language of the rule to choose which cards to turn over.

Discussion may include, but is not limited to:

- Applications of findings – for example, in marketing or in understanding health-related behaviour
- Cultural and gender considerations
- Difficulties in studying cognitive processes – for example isolation of variables and measuring cognition; artificial nature of experimental research
- Explanations of why cognitive biases occur – for example linking to Dual Process Theory
- Implications of the findings
- Methodological and ethical considerations.

Candidates may discuss one bias in thinking or decision making in order to demonstrate depth of knowledge, or may discuss more than one bias in thinking and/or decision making in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.

6. Discuss the formation of stereotypes and/or the effect(s) of stereotypes on human behaviour. **[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 the formation of stereotypes and/or the effect(s) of stereotypes on human behaviour.

Candidates may address the effect of stereotypes in relation to specific aspects of human behaviour or address the effect of stereotypes on behaviour in general. Both approaches are equally acceptable.

Explanations for the formation of stereotypes may include, but are not limited to:

- Grain of truth hypothesis (Campbell, 1967)
- Illusory correlation: Hamilton and Gifford (1976)
- Social Identity Theory: Hilliard and Liben (2010); Johnson, Schaller and Mullen (2000), Park and Rothbart (1982).

Effects of stereotypes on human behaviour may include, but are not limited to:

- Memory distortion (eg Allport and Postman, 1947; Martin and Halvorson, 1983)
- Misdiagnosis in mental health (eg Zhang, 1998; Van Ryn and Burke, 2000)
- Stereotype threat (eg Steele and Aronson, 1995; Spencer *et al.*, 1999; Shih *et al.*, 1999)
- Prejudice and discrimination against individuals (eg Duncan, 1976; Buckhout, 1974; Gibbins, 1969).

Relevant discussion points may include, but are not limited to:

- methodological considerations
- cultural considerations
- ethical considerations, including the social sensitivity of this research
- implications of the findings, including how these may be used in an ethical way
- contrasting explanations.

Candidates may discuss only the formation of stereotypes or only the effect(s) of stereotypes. Both approaches are equally acceptable. If a candidate addresses both formation and effect(s) of stereotypes, the response does not need to be equally balanced in order to access marks in the top bands.
