

# Markscheme

**May 2021**

**Psychology**

**Standard level**

**Paper 1**

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**Section A markbands**

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

## Section A

### Biological approach to understanding behaviour

1. With reference to **one** study, outline the effect of **one** agonist **or one** antagonist on human behaviour.

[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 effect of one agonist or one antagonist on human behaviour.

An agonist is a molecule that can bind and activate a receptor to induce a biological reaction. Candidates may either use an example of an endogenous agonist, such as a neurotransmitter, or an exogenous agonist, such as a drug. Antagonists inhibit the activation of receptor sites.

Relevant studies should demonstrate the effect of the chosen agonist or antagonist. Relevant research includes, but is not limited to:

- Rasmusson and Dadar (1979), Antonova et al (2011); Rogers and Kesner (2003) – scopolamine and its effects on spatial memory consolidation
- Martinez and Kesner (1991) – physostigmine as an ACh agonist in the consolidation of spatial memory
- Leyton (2013) – alcohol as a dopamine agonist and increased activity in the nucleus accumbens
- Guo et al (2014) – dopamine / Romach et al (1999) – dopamine antagonist
- Crockett et al (2010) – SSRIs as a serotonin agonist in the study of prosocial behaviour
- any study of an effect of a neurotransmitter on human behavior.

If a candidate outlines the effect of one agonist or antagonist without reference to a relevant study, award up to a maximum of [5].

If a candidate addresses a relevant study but does not outline the effect of one agonist or antagonist, award up to a maximum of [4].

Animal research may be used to describe an effect of an agonist or antagonist, but the response must then be linked to human behaviour. If there is no explicit link to human behaviour, a maximum of [6] should be awarded.

If a candidate outlines the effect of more than one agonist or antagonist, credit should be given only to the first agonist or antagonist.

## Cognitive approach to understanding behaviour

2. Describe **one** study investigating how **one** bias in thinking and decision-making influences human behaviour. [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 study investigating biases in thinking and decision-making on human behaviour.

Candidate responses should include information related to the aim, procedure, findings and conclusion(s) of the study. Information relevant to a description includes, but is not limited to:

- the aim of the study linked to a cognitive bias.
- a description of the research method used
- description of the design and identification of the IV and DV of an experiment.
- use of terminology to classify an observation (e.g. covert, participant, naturalistic) or an interview (structured, semi-structured, focus group)
- description of the use of triangulation in a case study
- identification of the sample that was used; however, precise sample sizes are not required
- controls used by the researcher
- materials used in the study
- the conclusions drawn from the findings with regard to a bias. Candidates do not need to state the statistical results.

Relevant studies may include, but are not limited to:

- Anchoring bias: English and Mussweiler (2001), Tversky and Kahnemann (1974)
- Availability heuristic: Tversky and Kahneman (1973) – participants recalled more famous names than non-famous names as they were more readily 'available' in their memory.
- Confirmation bias: Chapman (1969), Stone (1997), Darley and Gross (1983), Wason (1960).
- Framing effect: Tversky and Kahnemann (1986)
- 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.
- Representativeness heuristic: Tversky and Kahnemann (1973)

If a candidate addresses one bias in thinking and decision-making but does not describe a study, award up to a maximum of **[3]**.

If a candidate describes more than one study, credit should be given only for the first description.

### Sociocultural approach to understanding behaviour

3. Describe **one** study investigating enculturation.

[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 study investigating enculturation.

Candidate responses should include information related to the aim, procedure, findings and conclusion(s) of the study. Information relevant to a description includes, but is not limited to:

- the aim of the study linked to enculturation
- a description of the research method used
- description of the design and identification of the IV and DV of an experiment.
- use of terminology to classify an observation (e.g. covert, participant, naturalistic) or an interview (structured, semi-structured, focus group)
- description of the use of triangulation in a case study
- identification of the sample that was used; however, precise sample sizes are not required
- controls used by the researcher
- materials used in the study
- the conclusions drawn from the findings with regard to enculturation. Candidates do not need to state the statistical results

Relevant studies may include, but are not limited to:

- Fagot et al (1974) and Sroufe et al. (1993) on enculturation of gender roles
- Odden and Rochat (2004) on enculturation of fishing, household chores and the hierarchical system in Samoa
- Greenfield (2006) on enculturation of weaving techniques
- Demorest et al (2008)—the influence of enculturation on musical memory
- Kim and Omizo (2006)—enculturation, acculturation and identity
- Keller et al (2008) Verbal interaction of German and Cameroonian mothers with their infants

If a candidate addresses enculturation but does not describe a relevant study, award up to a maximum of [4].

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

**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.

<b>Marks</b>	<b>Level descriptor</b>
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.

<b>Marks</b>	<b>Level descriptor</b>
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.



<b>Marks</b>	<b>Level descriptor</b>
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.

<b>Marks</b>	<b>Level descriptor</b>
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** research methods used when investigating the relationship between the brain 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 research methods used when investigating the relationship between the brain and behaviour. Although a discussion of both strengths and limitations is required, it does not have to be evenly balanced to gain high marks.

Behaviour may include cognitive processes.

Research methods used when investigating the brain and behaviour include, but are not limited to:

- true experiments (Crockett et al., 2015; Draganski et al., 2003; Antonova, 2011)
- quasi experiments (Maguire, 2000; Sharot, 2007)
- case studies (HM, Milner, 1966; Tierney et al., 2001)

As part of their response, candidates may address results of studies that use technologies (eg MRI, fMRI, PET); however, the focus of the evaluation must be on the chosen research method(s).

Evaluation may include, but is not limited to:

- the ability to determine causality
- the ability to replicate the research and establish reliability
- ecological validity
- ethical considerations in the use of deception
- holistic vs reductionist approaches to the study of behaviour
- internal validity – the ability to control for extraneous variables through double-blind techniques, random allocation, placebo groups
- potential generalizability of findings

If the candidate addresses only strengths or only limitations, the response should be awarded up to a maximum of **[3]** for criterion D: critical thinking.

5. Discuss schema theory in relation to cognitive processing. **[22]**

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

The command term “discuss” asks candidates to offer a considered review of how schema theory contributes to an understanding of cognitive processing.

Psychological studies investigating schema theory include but are not limited to:

- Anderson and Pichert’s (1978) study on the effect of schema processing on memory encoding and retrieval
- Bartlett’s (1932) schema processing as part of reconstructive memory
- Loftus and Palmer’s (1974) study on reconstructive memory
- Brewer and Treyens’s (1981) study on the role of office schemas on recall
- Bransford and Johnson’s (1972) study on contextual conditions for encoding and recall.

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

- applications of schema theory – for example, CBT. It is a robust theory that has many applications across many fields of psychology.
- implications of the findings in our understanding of cognitive processing
- the inability to observe schema: Cohen (1993) argued that the concept of schema is too vague and hypothetical to be useful
- methodological considerations.

6. Discuss **one or more** ethical considerations related to research studies investigating cultural origins of behaviour and/or cultural origins of cognition. [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 ethical considerations related to research studies investigating the cultural origins of behaviour and/or cognition. The focus of the response should be on the ethical considerations related to relevant research into cultural origins of behaviour and/or cognition.

Ethical considerations may be positive (which guidelines were followed) or negative (which guidelines were not followed). There are a number of ethical considerations which may be discussed. These include, but are not limited to:

- deception
- protection from physical and/or mental harm
- briefing and debriefing
- right to withdraw from a study
- informed consent
- anonymity
- confidentiality.

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

- Studies on conformity – Bond and Smith (1996), Berry and Katz (1967)
- Studies on cultural dimensions – Hofstede (1973), Finkelstein (2010), Eylon and Au (1999), Kulkofsky et al (2011), Petrova et al (2007), Levine and Norenzayan (1996), Chen et al (2005)
- Studies on culture and attachment – Van Ijzendoorn and Kroonenberg (1988); Sagi et al (1985)
- Studies on culture and addictive behaviour – Raylu and Oei (2004); Brady (1995)
- Studies on cultural origins of cognition – Williams and Williams (2010), Lamm et al (2017)
- Studies on cultural differences in cognitive skills – Vygotsky (1978), Cole and Scribner (1974), Chiu (1972); Briley, Morris and Simonson (2005)
- Studies on cultural demands and memory – Bartlett (1932), Misty and Rogoff (1994), Rogoff and Waddell (1982)

Critical discussion may include, but is not limited to:

- the considerations of conducting research in a different culture
- the justification of how ethical considerations were resolved – for example, why was deception used?
- how ethical considerations may limit the ability to carry out research
- using a cost/benefit analysis when undertaking research
- 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.