



# Markscheme

November 2018

Psychology

Higher and standard level

Paper 1

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## Section A

### Biological level of analysis

1. Explain how **one** principle that defines the biological level of analysis has been demonstrated in **one** example of research (theory or study). [8]

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

The command term “explain” requires candidates to give a detailed account, including reasons or causes, of how one theory or study clearly demonstrates a principle relevant to the biological level of analysis.

Acceptable principles may include, but are not limited to:

- behaviour is, to some extent, genetically based
- animal research may inform our understanding of human behaviour
- there are biological correlates to human behaviour.

Responses should focus on the link between the principle and the theory or study – for example, a specific example of what animal research teaches us about human behaviour.

If a candidate explains more than one principle in relation to one or more theories or studies, credit should be given only to the first principle explained in the first theory or study used.

If a relevant principle and research are described but the link is not explicitly explained, then apply the markbands up to a maximum of [6].

If a candidate explains a relevant principle making no link to an example of research at the biological level of analysis, up to a maximum of [4] should be awarded.

If a candidate makes reference to a study or theory at the biological level of analysis but there is no relevant principle outlined, up to a maximum of [3] should be awarded.

### Section A markbands

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1–3	There is an attempt to answer the question, but knowledge and understanding is limited, often inaccurate, or of marginal relevance to the question.
4–6	The question is partially answered. Knowledge and understanding is accurate but limited. Either the command term is not effectively addressed or the response is not sufficiently explicit in answering the question.
7–8	The question is answered in a focused and effective manner and meets the demands of the command term. The response is supported by appropriate and accurate knowledge and understanding of research.

2. With reference to **one** study, describe how **one** biological factor may affect **one** cognitive process. **[8]**

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

The command term “describe” requires candidates to give a detailed account of how one biological factor may affect one cognitive process.

A specific biological factor must be clearly identified. Possible cognitive processes include, but are not limited to, memory, language acquisition, problem solving, and perception.

Research studies may include but are not limited to:

- Broca’s (1861) or Wernicke’s (1874) studies on the role of damage to specific regions of the brain on language production and language understanding
- Martinez and Kesner’s (1991) investigation of neurotransmission and memory consolidation
- Milner *et al.*’s (1968) case study of HM or Blakemore’s (1988) case study of Clive Wearing, investigating the role of the hippocampus on memory consolidation and retrieval
- Newcomer (1998) or Meaney’s (1988) studies on the role of glucocorticoids (cortisol) on memory impairment.

The focus of the response should be on how the biological factor affects the cognitive process, not solely on describing the study.

If a candidate only describes an appropriate study without describing how one biological factor may affect one cognitive process, apply the markbands up to a maximum of **[3]**.

If a candidate describes how one biological factor may affect one cognitive process without making reference to a relevant study, apply the markbands up to a maximum of **[4]**.

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

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

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

**Section A markbands**

<b>Marks</b>	<b>Level descriptor</b>
<b>0</b>	The answer does not reach a standard described by the descriptors below.
<b>1–3</b>	There is an attempt to answer the question, but knowledge and understanding is limited, often inaccurate, or of marginal relevance to the question.
<b>4–6</b>	The question is partially answered. Knowledge and understanding is accurate but limited. Either the command term is not effectively addressed or the response is not sufficiently explicit in answering the question.
<b>7–8</b>	The question is answered in a focused and effective manner and meets the demands of the command term. The response is supported by appropriate and accurate knowledge and understanding of research.

3. With reference to **one** study, outline the role of situational **and/or** dispositional factors in explaining behaviour. **[8]**

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

The command term “outline” requires candidates to give a brief account of how situational and/or dispositional factors may explain human behaviour.

Answers may refer to attribution theory, self-serving bias, modesty bias or other relevant research to help outline the role of situational and dispositional factors. It would also be appropriate to refer to studies such as Milgram or Zimbardo in support of situational factors.

If a candidate addresses the role of situational and/or dispositional factors in explaining behaviour without referring to an appropriate study, apply the markbands up to a maximum of **[4]**.

If a candidate makes reference to an appropriate study and outlines the role of situational and/or dispositional factors without making an explicit link between the factors and the study, apply the markbands up to a maximum of **[6]**.

If a candidate describes an appropriate study, but does not refer to situational or dispositional factors, apply the markbands up to a maximum of **[3]**.

#### **Section A markbands**

<b>Marks</b>	<b>Level descriptor</b>
<b>0</b>	The answer does not reach a standard described by the descriptors below.
<b>1–3</b>	There is an attempt to answer the question, but knowledge and understanding is limited, often inaccurate, or of marginal relevance to the question.
<b>4–6</b>	The question is partially answered. Knowledge and understanding is accurate but limited. Either the command term is not effectively addressed or the response is not sufficiently explicit in answering the question.
<b>7–8</b>	The question is answered in a focused and effective manner and meets the demands of the command term. The response is supported by appropriate and accurate knowledge and understanding of research.

**Section B assessment criteria****A — Knowledge and comprehension**

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1–3	The answer demonstrates limited knowledge and understanding that is of marginal relevance to the question. Little or no psychological research is used in the response.
4–6	The answer demonstrates limited knowledge and understanding relevant to the question or uses relevant psychological research to limited effect in the response.
7–9	The answer demonstrates detailed, accurate knowledge and understanding relevant to the question, and uses relevant psychological research effectively in support of the response.

**B — Evidence of critical thinking: application, analysis, synthesis, evaluation**

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1–3	The answer goes beyond description but evidence of critical thinking is not linked to the requirements of the question.
4–6	The answer offers appropriate but limited evidence of critical thinking or offers evidence of critical thinking that is only implicitly linked to the requirements of the question.
7–9	The answer integrates relevant and explicit evidence of critical thinking in response to the question.

**C — Organization**

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1–2	The answer is organized or focused on the question. However, this is not sustained throughout the response.
3–4	The answer is well organized, well developed and focused on the question.

## Section B

4. Discuss **one or more** effects of the environment on **one or more** physiological processes. [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 effects of the environment on one or more physiological processes.

Examples of how the environment may affect physiological processes include, but are not limited to the effects of:

- daylight hours on levels of melatonin
- poverty on neuroplasticity
- environmental stressors on physiological stress response
- interaction with the environment and brain development.

Examples of studies include, but are not limited to:

- Maguire *et al.*'s (2000) study on neuroplasticity in the hippocampus of taxi drivers
- Marmot *et al.*'s (1997) Whitehall study on perceived control of workplace stress and cardiovascular health
- Meaney's (1988) study on how environmental stressors lead to hippocampal cell loss in rats
- Rosenzweig and Bennett's (1972) study on stimulating environments and dendritic branching
- Bremner *et al.*'s (2003) study on environmental stressors and the reduction of hippocampal volume.

Discussion of the effects may include, but is not limited to:

- methodological and/or ethical issues
- supporting and contrary findings
- application of the findings
- contributing factors other than the environment affecting physiological processes.

Candidates may discuss one effect of the environment or one physiological process in order to demonstrate depth of knowledge, or may discuss a larger number of effects of the environment or physiological processes in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.



5. Discuss **one or more** ethical considerations related to **one or more** research studies at the cognitive level of analysis.

[22]

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

The command term “discuss” requires candidates to offer a considered and balanced review of one or more ethical considerations related to one or more research studies at the cognitive level of analysis.

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

Discussion of ethical considerations may include, but is not limited to:

- why deception is used
- the need for debriefing
- a cost–benefit analysis approach with regard to ethical considerations
- the meaning of “informed” consent and who has the right to give it
- changes over time in adherence to ethical standards/guidelines
- the importance of minimizing physical and/or psychological pain
- why anonymity/confidentiality of data is important
- whether the study is justified or could it have been conducted in alternative ways.

Candidates that discuss the use of animals in research should use studies that are clearly cognitive and not studies that focus on the effects of biological factors on cognitive processes.

**6. Examine two or more factors influencing conformity.****[22]**

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

The command term “examine” requires candidates to consider how two or more factors influence conformity in a way that uncovers the assumptions and relationships between each of these factors and conformity.

Appropriate factors influencing conformity may include but are not limited to: culture, minority influence, group size, unanimity, confidence, self-esteem, intellectual competence and leadership ability. Candidates may refer to normative influence and informational influence as factors leading to conformity.

Candidates may refer to a number of studies that may include but are not limited to:

- Asch’s (1951, 1952, 1956) studies on the influence of group size, unanimity and the difficulty of the task
- Crutchfield’s (1955) study on intellectual competence, ego strength, leadership ability and authoritarian personality
- Perrin and Spencer’s (1988) study on confidence
- Moscovici *et al.*’s (1969, 1976, 1985) studies on the influence of a minority
- Berry’s (1967) study or Bond and Smith’s study (1996) on cultural differences.
- Abrams (1990) study on the role of social identity.

In order to respond to the command term “examine”, candidates may refer to:

- our inherent need to belong and the role this plays in normative social influence
- that we understand ourselves through social comparison
- our behaviour is influenced by others, even when we believe that we are acting independently.
- gender and cultural considerations – such as the role of cultural dimensions on our behaviour.

Candidates may examine two factors influencing conformity in order to demonstrate depth of knowledge, or may examine a larger number of factors in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.

If a candidate examines only one factor influencing conformity, the response should be awarded up to a maximum of **[5]** for criterion A, knowledge and comprehension, up to a maximum of **[4]** for criterion B, critical thinking, and up to a maximum of **[2]** for criterion C, organization.

If factors influencing obedience or compliance, rather than conformity, are discussed, no marks should be awarded for this discussion. Marks should only be awarded for a discussion of the Stanford Prison Study if the response focuses on relevant factors influencing conformity, for example referent informational influence.

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