



MARKSCHEME

May 2014

PSYCHOLOGY

Higher and Standard Level

Paper 1

11 pages

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SECTION A

Biological level of analysis

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

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

The command term “outline” requires candidates to give a brief account of an appropriate principle and show how this principle is clearly demonstrated in a study or theory relevant to the biological level of analysis.

Acceptable principles may include, but are not limited to:

- patterns of behaviour can be inherited
- animal research may inform our understanding of human behaviour
- there are biological correlates to behaviour; emotions and behaviours are products of the anatomy and physiology of our nervous and endocrine systems
- biological factors interact with cognitive, environmental, social and cultural factors in producing behaviour.

Candidates are not required to give an in-depth account of the theory or study, but must focus on the link between the principle and the theory or study – for example, how Bouchard’s correlational study demonstrates that intelligence may be inherited.

After outlining the principle and giving a brief summary of one study or theory, candidates should make an explicit link between the principle and the theory or study.

If a relevant principle and research are identified but not explicitly linked, apply the markbands up to a maximum of **[6 marks]**.

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

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

If a candidate outlines a theory or study relevant to the biological level of analysis but there is no principle outlined, apply the markbands up to a maximum of **[3 marks]**.

Section A markbands

Marks Level descriptor

- 0** The answer does not reach a standard described by the descriptors below.
- 1 to 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 to 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 to 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.

Cognitive level of analysis

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

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 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) and 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.* (1968) and Blakemore’s (1988) case studies of HM and 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 the explanation of how one biological factor affects one cognitive process, not on the description of the study.

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

If a candidate explains 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 marks]**.

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

Marks Level descriptor

- 0** The answer does not reach a standard described by the descriptors below.
- 1 to 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 to 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 to 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.

Sociocultural level of analysis

3. Describe *one* effect of stereotypes on *one* behaviour.

[8 marks]

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

The command term “describe” requires candidates to give a detailed account of the effect of stereotypes on behaviour. A clear link should be made between the effect of stereotypes and human behaviour.

Effects may include, but are not limited to:

- The impact of stereotype threat on intellectual performance as shown in Steele and Aronson’s study (1995)
- Stereotypes may lead to prejudice and discrimination against individuals as demonstrated in studies such as Gibbins (1969), Buckhout (1974), Duncan (1976)
- Stereotypes lead to selective attention and memory of information that confirms the stereotype (confirmation bias)
- Misdiagnosis in mental health due to gender and cultural bias (Zhang, 1998).

Candidates may describe the formation of stereotypes but the focus of the response must be on the effect of stereotypes on a particular behaviour.

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

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

Section A markbands

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 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 to 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 to 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.

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 to 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 to 6	The answer demonstrates limited knowledge and understanding relevant to the question or uses relevant psychological research to limited effect in the response.
7 to 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 to 3	The answer goes beyond description but evidence of critical thinking is not linked to the requirements of the question.
4 to 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 to 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 to 2	The answer is organized or focused on the question. However, this is not sustained throughout the response.
3 to 4	The answer is well organized, well developed and focused on the question.

SECTION B**4. Discuss how cognition and physiology interact to affect *one* behaviour.****[22 marks]**

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 way in which cognition and physiological processes interact to affect behaviour.

In discussing interaction, examples may be either uni-directional (that is, one factor influences the other factor) or bi-directional (that is, looking at the true interdependence of both factors), but candidates are not required to make the distinction.

Uni-directional interactions include, but are not limited to:

- the role of acetylcholine or beta-amyloid proteins in treating Alzheimer’s disease
- the effect of meditation on physiological processes (for example, Davidson, 2004; Luders *et al.*, 2009)
- the role of the hippocampus in memory dysfunction and/or creation (for example, Maguire *et al.*, 2000; Milner and Scoville, 1957).

Bi-directional interactions include, but are not limited to:

- models of emotions (for example, LeDoux, Schachter and Singer)
- Ramachandran and Hirstein (1998) on perception and pain in phantom limb syndrome
- positive feedback loops to explain psychological disorders (for example, panic attacks, depression, eating disorders).

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

- methodological considerations
- the relevance of animal studies
- the value of correlational research
- the issue of reductionism.

If a candidate discusses how cognition and physiology interact to affect more than one behaviour, credit should be given only to the discussion of the first behaviour.

5. Evaluate *one* model or theory of *one* cognitive process.

[22 marks]

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 theory or model related to one cognitive process. Although a discussion of both strengths and limitations is required, it does not have to be evenly balanced to gain high marks. Candidates are not required to distinguish between a model and a theory.

Cognitive processes include, but are not limited to: memory, perception, language, or decision making.

A wide variety of models or theories may be presented which may include, but are not limited to:

- Working Memory Model (Baddeley and Hitch, 1974); Levels of Processing (Craik and Lockhart, 1972); The Multi-Store Model (Atkinson and Shiffrin, 1968, 1971)
- Chomsky’s LAD theory (1957, 1968); Skinner’s Learning Theory (1957); Bruner’s Language Acquisition Support System (1983) related to language acquisition
- Flashbulb Memory Theory (Brown & Kulik, 1977)
- Gregory’s Constructivist Theory (1972, 1980); Gibson’s Theory of Direct Perception (1966, 1979) related to perception
- Schema theory relevant to cognitive processes such as memory or decision making (Bartlett, 1932; Loftus, 1974).

Evaluation of the selected model or theory may include, but is not limited to:

- degree of empirical support
- methodological considerations
- contrary findings or explanations
- involvement of other factors (for example, social or biological)
- application to real life.

If a candidate evaluates more than one model or theory, credit should be given only to the first model or theory. However, a candidate may address other theories or models and be awarded marks for this as long as these theories or models are clearly used to evaluate the main theory addressed in the response.

If a candidate addresses only strengths or only limitations, the response should be awarded up to a maximum of **[5 marks]** for criterion B, critical thinking, and up to a maximum of **[2 marks]** for criterion C, organization. Up to full marks may be awarded for criterion A, knowledge and comprehension.

6. Discuss factors influencing conformity.

[22 marks]

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 the influence of specific factors on conformity.

Appropriate factors influencing conformity may include but are not limited to: cultural dimensions, minority influence, group size, unanimity, confidence, self-esteem, intellectual competence, and in-group membership.

Candidates may refer to a large number of studies such as, but not limited to:

- Asch’s studies (1951, 1952, 1956) on the influence of group size, unanimity and the difficulty of the task
- Crutchfield’s studies (1955) on intellectual competence, ego strength, leadership ability and authoritarian personality
- Moscovici *et al.*’s studies (1969, 1976, 1985) on the influence of a minority
- Berry’s study (1967) or Smith and Bond’s study (1993) on cultural differences
- Abrams (1990) study on the role of social identity.

Discussion may address issues such as, but not limited to:

- cultural differences
- empirical support and contrary findings
- applications of the empirical findings
- methodological considerations.

Candidates may discuss a smaller number of factors in order to demonstrate depth of knowledge, or may discuss a larger number of factors in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.

If factors influencing obedience, rather than conformity, are discussed, no marks should be awarded for this discussion.