

# Markscheme

**May 2016**

**Psychology**

**Higher level and standard level**

**Paper 1**

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## Section A

### Biological level of analysis

1. Describe the function of **one** hormone in human behaviour.

[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 the function of one hormone in human behaviour.

A hormone is defined as a chemical messenger of the endocrine system and is transported by blood to distal target cells. Although hormones may act as neurotransmitters by activating receptor sites within the synapse, it is the origin of the chemical that classifies it as a hormone. Hormones include:

- adrenaline/epinephrine (McGaugh and Cahill, 1995)
- estrogen (Sherwin, 1994)
- glucocorticoids/cortisol (Newcomer, 1999)
- melatonin (Rosenthal, 1987)
- neuropeptide Y (Morgan *et al.*, 2000)
- oxytocin (Baumgartner, 2008)
- testosterone (Booth, 1998)
- vasopressin (Winslow, 1993).

Any aspect of human behaviour (*eg* aggression, depression, stress, sexual interest) is acceptable as long as the response focuses on how the hormone influences the particular behaviour.

Responses that address the influence of neurotransmitters such as dopamine, serotonin, GABA and acetylcholine should not be awarded marks.

If a candidate describes a study using animals but does not explicitly link the study to human behaviour, up to a maximum of [3] should be awarded.

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

### 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. Explain how **one** principle that defines the cognitive level of analysis may be demonstrated in **one** example of research (theory or study). **[8]**

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

The command term “explain” requires candidates to give a detailed account of how one principle that defines the cognitive level of analysis is clearly demonstrated in one relevant theory or study.

Acceptable principles include, but are not limited to:

- mental processes can be scientifically investigated
- internal processes are important mediators between stimuli and responses
- mental representations guide behaviour
- mental processing can be compared to computer function
- cognitive processes are influenced by social and/or cultural factors
- biological factors may affect cognitive processes.

If the principle used is that sociocultural or biological factors can affect cognitive processes the focus of the research should be on the cognitive principle – that is, if a study or theory that is more typically linked to the biological level of analysis or the sociocultural level of analysis is used, the answer must focus on the cognitive aspects of the research. For example, if using the HM study, candidates should focus on memory aspects not physiological ones.

After briefly outlining the principle and giving a brief summary of one study or theory, candidates should make an explicit link between the research and the principle. If a relevant principle and research are identified but are not explicitly linked, then apply the markbands up to a maximum of **[6]**.

If a candidate explains a principle without making reference to research, apply the markbands up to a maximum of **[4]**.

If a candidate only describes a study or theory relevant to the cognitive level of analysis without addressing a principle at the cognitive level of analysis, apply the markbands up to a maximum of **[3]**.

If a candidate explains more than one principle and/or uses more than one example of research, credit should be given only to the first explanation of the first principle and to the first example demonstrating that principle.

## Section A markbands

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

- 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 the role of situational **and** dispositional factors in explaining behaviour. **[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 situational and dispositional factors may explain human behaviour. Although a description of the role of both factors is required, it does not have to be evenly balanced to gain high marks. However, both situational **and** dispositional factors should be clearly linked to a study for the award of high marks.

Answers may clarify that dispositional factors are internal factors (such as personality, intelligence and attitude) and situational factors are external factors (such as group pressure, social norms, weather and culture).

Candidates may make reference to attribution theory, self-serving bias or modesty bias or other relevant research to help describe situational and dispositional factors, and this is appropriate as long as the focus of the answer is on the description of the factors. It would also be appropriate to refer to studies such as Milgram or Zimbardo.

If a candidate describes a relevant study with no link made to dispositional and situational factors, apply the markbands up to a maximum of **[3]**.

If a candidate describes only situational factors or only dispositional factors, apply the markbands up to a maximum of **[4]**.

### Section A markbands

Marks	Level descriptor
<b>0</b>	The answer does not reach a standard described by the descriptors below.
<b>1 to 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 to 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 to 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**

<b>Marks</b>	<b>Level descriptor</b>
<b>0</b>	The answer does not reach a standard described by the descriptors below.
<b>1 to 3</b>	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.
<b>4 to 6</b>	The answer demonstrates limited knowledge and understanding relevant to the question or uses relevant psychological research to limited effect in the response.
<b>7 to 9</b>	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**

<b>Marks</b>	<b>Level descriptor</b>
<b>0</b>	The answer does not reach a standard described by the descriptors below.
<b>1 to 3</b>	The answer goes beyond description but evidence of critical thinking is not linked to the requirements of the question.
<b>4 to 6</b>	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.
<b>7 to 9</b>	The answer integrates relevant and explicit evidence of critical thinking in response to the question.

**C — Organization**

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

## Section B

4. Discuss **one** interaction between cognition and physiology in terms of behaviour. [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, supported by appropriate evidence, 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. The focus of the response, however, must be on the interaction between the cognitive and physiological factors.

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

- the role of acetylcholine or beta-amyloid proteins in Alzheimer’s disease (for example, Lorenzo *et al.* 2000)
- the effect of meditation on physiological processes (for example, Davidson, 2004; Luders *et al.* 2009)
- the role of the hippocampus in memory (for example, Maguire *et al.* 2000; Milner, 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
- stress and immune function (for example, Kiecolt-Glaser *et al.* 1984)
- cognitive appraisal and biological reactions (for example, Lazarus and Folkman, 1975; Speisman, 1964).

Discussion may include, but is not limited to:

- methodological considerations
- the relevance of animal studies
- the issue of reductionism
- supporting and/or contradicting evidence
- ethical considerations
- application of empirical findings.

If a candidate discusses more than one interaction between cognition and physiology in terms of behaviour, credit should be given only to the discussion of the first interaction.



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

[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 model/theory 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/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); Bruner’s Language Acquisition Support System (1983) related to language acquisition
- Flashbulb Memory Theory (Brown and 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)
- Appraisal theory (Lazarus, 1975).

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

- methodological considerations
- cultural and gender considerations
- the accuracy and clarity of the concepts
- contrary findings or explanations
- the productivity of the theory in generating psychological research
- the applications of the empirical findings.

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

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

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

6. Discuss **two or more** factors influencing conformity.

[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 factors influencing 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 and informational conformity.

Candidates may refer to a large 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
- Clark and Maass’s (1988, 1989) studies or 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.

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

- empirical support and contrary findings
- application of empirical findings
- methodological considerations
- gender and cultural considerations
- ethical considerations.

Candidates may discuss two factors influencing conformity 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 a candidate discusses 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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