



MARKSCHEME

May 2012

PSYCHOLOGY

Higher Level and Standard Level

Paper 1

9 pages

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SECTION A

Biological level of analysis

1. Describe *one* study related to localization of function in the brain.

[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 one study related to localization of function in the brain. Animal research is also acceptable for this response.

Descriptions should include the aim, method (which may include the sample, research method used and/or the procedure) and results/findings, with a clear link to localization of function. Candidates should clearly identify the specific part of the brain and its function.

If Sperry and Gazzaniga’s study of split-brain patients is described, it is important that the focus be on localization of function.

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

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. Describe *one* ethical consideration related to *one* research study at the cognitive level of analysis. **[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 one ethical consideration in relation to one research study at the cognitive level of analysis. Ethical considerations can be positive (what guidelines could be followed) or negative (what guidelines were not followed).

The focus of the response should be on the ethical consideration and not on the description of a study.

Research studies could include traditional cognitive studies but could also include studies that investigate biological or sociocultural factors that affect cognitive processes. However, responses should clearly relate the study to the cognitive level of analysis.

If a candidate describes more than one ethical consideration in relation to one or more research studies, credit should be given only to the first ethical consideration described in relation to the first research study used.

If a candidate describes an ethical consideration but with no link made to a research study at cognitive level of analysis, a maximum of **[3 marks]** should be awarded.

If a candidate describes a study but there is no link to an ethical consideration, **[0 marks]** should be awarded.

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

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

The command term “outline” requires candidates to give a brief account or summary that clearly illustrates how the selected theory or study is representative of one of the defining principles of the sociocultural level of analysis.

Appropriate principles may include, but are not limited to:

- social and cultural factors influence individual behaviour
- individuals want connectedness with, and a sense of belonging to, others
- individuals construct conceptions of the individual and social self
- individual behaviour is influenced by other people.

Principles should not simply be stated, but a brief outline should clarify its meaning. 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 – *e.g.* how Asch’s conformity study demonstrates social influence on an individual’s behaviour.

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.

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 *one* example of how cognition and physiology interact to affect 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 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 one-directional or bi-directional, but candidates are not required to make the distinction.

Examples of one-directional (that is, one factor influences the other factor) include, but are not limited to:

- the role of acetylcholine or beta-amyloid proteins on Alzheimer’s disease
- the effect of meditation on physiological processes (*e.g.* Davidson, Luders, University of Wisconsin)
- the role of the hippocampus in memory dysfunction and/or creation (*e.g.* Maguire, Milner).

Examples of bi-directional (that is, looking at the true interdependence of both factors) include, but are not limited to:

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

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

5. Discuss the use of technology in investigating *one* cognitive process. [22 marks]

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

The command term “discuss” requires candidates to offer a considered review, supported by appropriate evidence, of the ways in which technology is used in investigating a cognitive process.

Studies referenced should be clearly focused on cognitive functioning.

Examples include, but are not limited to:

- The use of EEG to determine the relationship between brain activity and particular cognitive processes (*e.g.* the sleep-wake relationship) by measuring the type of brain waves associated with various levels of awareness.
- The use of PET scans to monitor changes in brain function during cognitive functioning, *e.g.* Maguire’s use of PET to help clarify the role of the hippocampus in “route recall” in taxi drivers.
- The use of computer-assisted presentation of stimulus material to aid standardization of procedures in cognitive research, *e.g.* the ability to present words at precisely determined intervals, such as in the presentation of a serial word list, or of the words used to demonstrate the Stroop Effect.

Discussion may include, but is not limited to:

- ethical considerations of the use of technology
- efficacy of technology in measuring cognitive processes
- cost/benefit analysis
- issue of reductionism
- comparison of technologies.

The focus of the response should be on the use of technology in investigating cognitive processes. Candidates should not simply evaluate studies in which technology has been used.

If a candidate discusses the use of technology in investigating more than one cognitive process, credit should be given only to the first discussion.

6. Evaluate research (theories and/or studies) on conformity.**[22 marks]**

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

The command term “evaluate” requires candidates to make an appraisal of the strengths and limitations of research on conformity. Although a discussion of both strengths and limitations is required, it does not have to be evenly balanced to gain high marks.

Theories may include, but are not limited to:

- informational social influence
- normative social influence
- social comparison.

A wide range of studies may be considered, including but not limited to:

- Asch
- Moscovici on minority influence
- Berry’s study of the Temne and Inuits.

Evaluation of research may include methodological, cultural, ethical or gender considerations, applications of the theory, comparison to other theories, or contrary findings or explanations.

Candidates may evaluate a smaller number of theories and/or studies in order to demonstrate depth of knowledge, or may evaluate a larger number of theories and/or studies in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.

If a candidate discusses 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.
