

Markscheme

November 2016

Psychology

Higher level and standard level

Paper 1

This markscheme is **confidential** and for the exclusive use of examiners in this examination session.

It is the property of the International Baccalaureate and must **not** be reproduced or distributed to any other person without the authorization of the IB Assessment Centre.

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 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 may be inherited
- 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 a relevant theory or study are provided, but no explicit link is made between them, a maximum of **[6]** should be awarded.

If a candidate explains a 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 no relevant principle is stated/identified, 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 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 how **one** biological factor may affect **one** cognitive process, with reference to **one** research study.

[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 affects one cognitive process.

Possible cognitive processes include, but are not limited to: memory, language acquisition, problem solving, attention, decision-making and perception.

Research studies may include, but are not limited to:

- Broca’s (1861) and Wernicke’s (1874) studies of localization of function investigating language production and language understanding
- Martinez and Kesner’s (1991) investigation of neurotransmission and memory
- Milner *et al.*’s (1968) and Blakemore’s (1988) case studies of HM and Clive Wearing, investigating the role of the hippocampus on memory
- Bruce and Young’s (1986) investigations into specific brain areas and face recognition
- biological changes caused by Alzheimer’s disease leading to dementia (Lorenzo *et al.* 2000; Kensiger and Corkin, 2003).

The focus of the response should be on the description of how one biological factor affects one cognitive process, not only on the description of the study.

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 description of the first biological factor.

If a candidate refers to more than one cognitive process, credit should be given only to the description of 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 social learning theory with reference to **one** relevant study.

[8]

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

The learning outcome “describe” requires candidates to give a detailed account of social learning theory in relation to one relevant study.

The main aspects of social learning theory may include:

- imitation of models
- observational learning
- the role of attention, retention, motivation and reproduction
- the role of vicarious reinforcement and/or punishment.

Responses may refer to studies such as, but not limited to:

- Bandura *et al.*'s studies on aggression
- Totten (2003) observational learning of violent behaviour towards girlfriends
- Sprafkin *et al.* (1975) on children's prosocial behaviour and television model
- Fagot *et al.* (1992) on parental influences on gender development.

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

If a candidate only describes an appropriate study without describing the theory, up to a maximum of **[3]** should be awarded.

If a candidate describes social learning theory without making reference to a study, up to a maximum of **[4]** 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.

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. To what extent does genetic inheritance influence behaviour?

[22]

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

The command term “to what extent” requires candidates to consider the merits of the principle that genetic inheritance influences behaviour.

Candidates may choose a single behaviour (such as intelligence, depression or obesity), or they may choose a number of behaviours and take a more holistic approach.

In order to address the command term “to what extent”, candidates may address:

- the interaction of genes with the environment
- strengths and limitations of genetic research
- alternative explanations – i.e. cognitive and sociocultural explanations.

Examples of relevant studies include, but are not limited to:

- Heston’s (1966), Gottesman’s (1991) and Kety *et al.*’s (1975) studies examining the genetic inheritance of schizophrenia
- Kendler *et al.* (2006), Caspi *et al.* (2003) and Nurnberger and Gershon (1982) on the possible genetic factors involved in depression
- Garn *et al.* (1981) and Stunkard *et al.* (1990) examining obesity and genetic factors
- Bouchard *et al.* (1990), Scarr and Weinberg (1977), and Plomin and Petrill (1977) examining IQ and genetic inheritance.

Explanations of the role of genetic inheritance may refer to concordance rates, specific research regarding the properties of specific genes, or findings from twin and adoption studies. If a candidate makes reference to research from evolutionary psychology, the focus of the response must be on how genetic inheritance influences the behaviour.

5. Evaluate **one** theory of how emotion may affect **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 the strengths and limitations of one theory demonstrating the influence of emotion on 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.

Responses may focus on any cognitive process that is affected by emotion, such as perception, attention, memory, problem solving or decision-making.

Examples of theories include, but are not limited to:

- Brown and Kulik’s flashbulb memory theory
- Bower’s theory of state-dependent cues
- Frank’s emotional precommitment model of decision making
- Loftus’s theory of weapon focus
- McGinnies’s perceptual defence research.

Evaluation of the selected theory includes, but is not limited to:

- degree of empirical support
- methodological considerations
- cultural and gender considerations
- contrary findings or explanations
- accuracy and clarity of the concepts
- application and/or usefulness of the empirical findings.

The focus of the response should be on the evaluation of the theory of how emotion may affect one cognitive process and not just on an evaluation of the studies. Responses that only evaluate studies and not the theory itself, should be awarded up to a maximum of [6] for criterion B, critical thinking.

If a candidate evaluates more than one theory, credit should be given only to the first evaluation, unless the other theory or theories are clearly used to evaluate the main theory; for example, used to illustrate the strengths and/or limitations of the main theory.

If a candidate discusses 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 why **two** particular research methods are used to investigate behaviour at the sociocultural 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 why two particular research methods are used at the sociocultural level of analysis.

Research methods may include, but are not limited to, two of the following:

- case studies
- correlational studies
- experiments (laboratory, field or natural/quasi)
- interviews
- observations
- surveys/questionnaires

Candidates may address the different ways in which a research method is done – for example, a covert or naturalistic observation – but the focus should be on the nature of the research method itself.

Discussion about why the methods are used might refer to the appropriateness of the methods for the aim, issues of validity and reliability, sample choice and size, ease and cost of the procedure and the generalizability of findings. Candidates may address the strengths of the methods as well as how they reflect the principles of the sociocultural level of analysis, that is, candidates could make clear how the selected research methods underpin one or more principles of the level of analysis.

Examples of research studies could include, but are not limited to:

- Festinger’s (1956) covert observation studying cult behaviour
- Bandura’s (1961, 1963, 1965) laboratory experiments investigating social learning theory
- Hofstede’s (1973) use of questionnaires to study cultural differences in the workplace
- Sherif’s (1954) “Robber’s Cave” field experiment investigating the realistic conflict theory.

If a candidate discusses more than two research methods, credit should be given only to the first two discussions. Candidates may address other research methods and be awarded marks for these as long as they are clearly used to discuss one or both of the two main research methods in the response.

If a candidate discusses only one research method, 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 a candidate discusses two types of experiments (e.g. field and laboratory), interviews (e.g. semi-structured and focus groups) or observations (e.g. covert and participant), this is considered a single research method.