

Markscheme

May 2017

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.

The following are the annotations available to use when marking responses.

Annotation	Explanation
	Unclear
	Incorrect Point
	Good Response/Good Point
IR	Irrelevant
AQ	Answers the Question
CKS	Clear Knowledge Shown
NAQ	Not Answered Question
	Apply to blank pages
	On-page comment text box (for adding specific comments)
	Highlight (can be expanded)
TNCE	Theory is Not Clearly Explained
CON	Contradiction
DEV	Development
D	Description
DET	Relevant Detail
EG	Example
EVAL	Evaluation
EXC	Excellent Point
GP	Good Point
	Wavy Underline Tool
NE	Not Enough
VL	Very Limited
WKAR	Weak Argument

You **must** make sure you have looked at all pages. Please put the  annotation on any blank page, to indicate that you have seen it.

Section A

Biological level of analysis

1. Describe **one** effect of neurotransmission on 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 that clearly illustrates one effect of neurotransmission on human behaviour.

Examples of responses include, but are not limited to:

- the role of serotonin in depression
- the role of acetylcholine in memory
- the role of dopamine in addiction
- the role of noradrenaline (norepinephrine) in attention.

Studies may be presented, but the focus of the response should be on the effects of neurotransmission on behaviour and not on the description of a study.

Animal research may be used to describe an effect of neurotransmission, but the response must then be linked to human behaviour. If there is no explicit example of a link to human behaviour, a maximum of [5] may be awarded.

If a candidate describes more than one effect of neurotransmission, credit should be given only to the first effect described. If a candidate describes one effect that involves several neurotransmitters (for example, Fisher on the role of neurotransmission in human attraction) this would be acceptable as the focus of the question is on neurotransmission.

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]

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).

Ethical considerations which may be discussed 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.

Research studies could include studies that investigate biological or sociocultural factors that affect cognitive process. However, responses should clearly relate the study to the cognitive level of analysis and must focus on the cognitive aspects of the research.

Responses should make a clear link between the study at the cognitive level of analysis and the ethical consideration. If there is no explicit link between the study and the ethical consideration, award up to a maximum of **[6]**.

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. Candidates may briefly refer to another ethical consideration or considerations but this should only be in the context of **one** ethical consideration that is explicitly described.

If a candidate describes one ethical consideration without making reference to one research study from the cognitive level of analysis, the response should be awarded up to a maximum of **[4]**.

If a candidate describes a study but one ethical consideration is not explicitly addressed, 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.

Sociocultural level of analysis

3. Describe **one** explanation for the formation of stereotypes.

[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 one explanation for the formation of stereotypes.

Research explaining the formation of stereotypes may include but is not limited to:

- Tajfel’s (1969) social categorization theory (stereotypes acting as cognitive schemas in information processing)
- Campbell’s (1967) theory of gatekeepers and the grain of truth hypothesis
- Hamilton and Gifford’s (1976) illusory correlation theory
- conformity to dominant social representations (Rogers and Frantz, 1962)
- realistic conflict theory (Sherif)
- social identity theory (Tajfel and Turner)
- the Princeton trilogy studies.

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

Whether a theory and/or a study is presented, a clear link to the formation of stereotypes must be made for full marks to be awarded.

If a candidate only presents a relevant study without making reference to the formation of stereotypes, 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.

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 the use of **one or more** brain imaging technologies in investigating the relationship between biological factors and behaviour. [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 the use of one or more brain imaging technologies in investigating the relationship between biological factors and behaviour.

Brain imaging technologies could include, but are not limited to:

- CT (computerized tomography)
- PET (positron emission tomography)
- MRI (magnetic resonance imaging)
- fMRI (functional magnetic resonance imaging)
- EEG (electroencephalography).

Candidates may refer to studies such as:

- Corkin (1997) using MRI to investigate the effect of damage to HM’s medial temporal lobes and the effect on memory formation.
- Brefczynski-Lewis et al.’s (2007) study to investigate the effect of meditation on the brain using fMRI.
- Maguire *et al.*’s (2000) study using MRI scans to investigate spatial ability and neuroplasticity in taxi drivers.
- Ogden’s (2005) study using CT scans to investigate the effect of brain damage on hemineglect.

Discussion may include, but is not limited to:

- how brain imaging technologies have changed and furthered the study of behaviour
- differences in why and how different technologies are used
- evaluation of the techniques (for example, cost/benefit analysis, reductionism)
- ethical and methodological considerations in the use of the technology.

The focus of the response must be on how brain imaging technology is used to understand the relationship between biological factors and behaviour. Although an understanding of how the technology functions may be included, it is not required for top marks to be awarded.

Candidates may discuss one brain imaging technology in order to demonstrate depth of knowledge, or may discuss more than one brain imaging technology in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.

Candidates may address one biological factor, or more than one. Both approaches are equally acceptable.

5. Discuss how social and/or cultural factors affect **one** cognitive process. [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 how social and/or cultural factors affect one cognitive process. As the concepts of *social* and *cultural* factors are arguably very much related, a distinction between the two is not necessary.

Candidates should give a considered review of the way in which social and/or cultural factors affect how people process information, for example, memory, thinking, perception, attention, decision-making or language.

Examples of appropriate factors include, but are not limited to:

- the effect of cultural norms and past experience on memory (Bartlett, 1932)
- the effect of social identity on formation of flashbulb memories (Luminet and Curci, 2009)
- the effect of schooling on encoding strategies (Cole and Scribner, 1974)
- the effect of cultural upbringing on memories of self (Wang, 2006)
- the effect of poverty on cognitive processing, in particular free recall tasks (Mani, 2013; Pollitt, 1995)
- the role of environmental factors on perception (Deregowski, 1972; Segall et al.’s carpentered world hypothesis, 1966).

Discussion of the cultural and/or social factors may include, but is not limited to:

- Methodological considerations
- Empirical support and contrary findings
- Application of empirical findings.

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

If a candidate discusses only one social and/or cultural factor, the response should be awarded up to a maximum of [5] for criterion A and a maximum of [2] for criterion C.

Candidates may discuss a small 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.

6. Discuss the role of **one or more** cultural dimensions on human behaviour. **[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 the role of one or more cultural dimensions on human behaviour.

Cultural dimensions include, but are not limited to:

- power distance: the way people perceive power differences and how they react to power relations
- individualism versus collectivism: how much people define themselves apart from their group memberships
- masculinity versus femininity: differences between “masculine” and “feminine” cultures
- uncertainty avoidance: society’s tolerance for uncertainty and ambiguity
- long-term versus short-term orientation (Confucian dynamism): time perspective in a society for the gratification of people’s needs
- monochronous versus polychronous time orientation: another form of time perspective in which punctuality, deadlines, and future orientation affect behaviour.

It is important that candidates make a link between cultural dimension(s) and human behaviour, demonstrating how the selected cultural dimensions affect human behaviour. For example, when discussing the role of individualism and collectivism, responses may address human behaviour such as conformity, attribution, compliance or depression. When discussing the role of masculinity and femininity, responses may refer to gender roles, competitiveness, materialism or human relationships. When discussing the role of Confucian dynamism, responses may refer to how it affects management leadership, creative behaviour, identification with workplace, perseverance, and/or respect for tradition.

If a candidate addresses one or more cultural dimensions but does not explicitly link any of these to human behaviour, the response should be awarded up to a maximum of **[5]** for criterion A, knowledge and comprehension, up to a maximum of **[3]** for criterion B, critical thinking, and up to a maximum of **[2]** for criterion C, organization.

Discussion may include but is not limited to:

- methodological and ethical issues
- empirical evidence
- application of the findings
- alternative explanations.

Candidates may discuss one cultural dimension in order to demonstrate depth of knowledge, or may discuss a larger number of cultural dimensions in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.
