Diploma Programme
Programme du diplôme
Programa del Diploma

Markscheme

May 2022

Psychology

Higher level

Paper 1

12 pages

Section A markbands

Marks	Level descriptor
0	• The answer does not reach a standard described by the descriptors below.
1–3	• The response is of limited relevance to or only rephrases the question. • Knowledge and understanding is mostly inaccurate or not relevant to the question. • The research supporting the response is mostly not relevant to the question and if relevant only listed.
4–6	• The response is relevant to the question, but does not meet the command term requirements. • Knowledge and understanding is accurate but limited. • The response is supported by appropriate research which is described.
7–9	• The response is fully focused on the question and meets the command term requirements. • Knowledge and understanding is accurate and addresses the main topics/problems identified in the question. • The response is supported by appropriate research which is described and explicitly linked to the question.

Section A

Biological approach to understanding behaviour

1. Describe neuroplasticity, with reference to **one** relevant study. **[9]**

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

The command term "describe" requires candidates to give a detailed account of neuroplasticity with reference to one relevant study.

Descriptions of neuroplasticity may show conceptual understanding of long-term potentiation, neurogenesis and/or synaptic pruning. Responses should indicate how the neural connections in the brain change as a result of a behaviour or cognitive process. Animal research is acceptable.

When describing the study, the relevant area of the brain where neuroplasticity is observed should be identified.

Relevant studies may include, but are not limited to:

- Bremner *et al*.'s (2008) study on plasticity of the human brain in post-traumatic stress disorder
- Draganski's (2004) study of neuroplasticity and learning in jugglers
- Luby *et al.*'s (2012) study of maternal support and hippocampal development
- Maguire *et al*.'s (2000) study showing structural change in the hippocampi of taxi drivers
- Rosenzweig, Bennett and Diamond's (1972) study on the role of environmental factors on neuroplasticity.

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

As the question is focused only on the physiological process of neuroplasticity, it is not necessary to focus on a behaviour; studies of cortical mapping are appropriate.

If a candidate describes neuroplasticity without making reference to a relevant study, up to a maximum of **[5]** should be awarded.

If a candidate only describes an appropriate study without describing neuroplasticity, up to a maximum of **[4]** should be awarded.

Cognitive approach to understanding behaviour

2. Describe **one** model of memory, with reference to **one** relevant study. **[9]**

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

The command term "describe" requires candidates to give a detailed account of one model of memory.

Relevant models of memory may include, but are not limited to:
- Flashbulb memory theory
- Levels of processing
- Multi-store model of memory
- Schema theory
- Working memory model

Relevant studies may include, but are not limited to:
- Baddeley and Hitch's (1974) studies on the evidence of working memory
- Bartlett's (1932) study of the role of schema on memory storage
- Brown and Kulik's (1977) study of flashbulb memory
- Craik and Lockhart's (1975) study of the levels of processing model
- Peterson and Peterson (1959) on the role of rehearsal and memory consolidation
- Murdock's (1962) or Glanzer & Cunitz's (1966) studies on the serial position effect
- Studies of brain damage to support the theory: Milner's (1966) study of HM; Warrington and Shallice's (1974) study of KF.

Although it is acceptable for candidates to include a drawing of the model, the written description of the model is assessed on its own merits.

If a candidate describes more than one model of memory or more than one study, credit should be given only to the first model of memory or study described.

If a candidate describes one model of memory without making reference to a relevant study, up to a maximum of **[5]** should be awarded.

If a candidate only describes an appropriate study without describing a model of memory, up to a maximum of **[4]** should be awarded.

Sociocultural approach to understanding behaviour

3. Describe social identity theory, with reference to **one** relevant study. **[9]**

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

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

Responses should identify the key concepts of SIT which include, but are not limited to:
- social categorization (in-group/out-group)
- social identification
- social comparison.

Studies related to social identity theory may include, but are not limited to:
- Abrams’s (1990) study on the role of social identity on levels of conformity
- Cialdini *et al.*’s (1976) "Basking in Reflected Glory" study
- Drury el al’s (2009) study of helping behaviour
- Levine’s (2005) study of helping behaviour
- Tajfel’s studies on social groups and identities
- Sherif *et al.*’s (1961) "Robbers Cave" study

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

If a candidate describes social identity theory without making reference to a relevant study, up to a maximum of **[5]** should be awarded.

If a candidate only describes an appropriate study without describing social identity theory, up to a maximum of **[4]** should be awarded.

Section B assessment criteria

A — Focus on the question

To understand the requirements of the question students must identify the problem or issue being raised by the question. Students may simply identify the problem by restating the question or breaking down the question. Students who go beyond this by **explaining** the problem are showing that they understand the issues or problems.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1	Identifies the problem/issue raised in the question.
2	Explains the problem/issue raised in the question.

B — Knowledge and understanding

This criterion rewards students for demonstrating their knowledge and understanding of specific areas of psychology. It is important to credit **relevant** knowledge and understanding that is **targeted** at addressing the question and explained in sufficient detail.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	The response demonstrates limited relevant knowledge and understanding. Psychological terminology is used but with errors that hamper understanding.
3–4	The response demonstrates relevant knowledge and understanding but lacks detail. Psychological terminology is used but with errors that do not hamper understanding.
5–6	The response demonstrates relevant, detailed knowledge and understanding. Psychological terminology is used appropriately

C — Use of research to support answer

Psychology is evidence based so it is expected that students will use their knowledge of research to support their argument. There is no prescription as to which or how many pieces of research are appropriate for their response. As such it becomes important that the research selected is **relevant** and useful in **supporting** the response. One piece of research that makes the points relevant to the answer is better than several pieces that repeat the same point over and over.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	Limited relevant psychological research is used in the response. Research selected serves to repeat points already made.
3–4	Relevant psychological research is used in support of the response, and is partly explained. Research selected partially develops the argument.
5–6	Relevant psychological research is used in support of the response and is thoroughly explained. Research selected is effectively used to develop the argument.

D — Critical thinking

This criterion credits students who demonstrate an inquiring and reflective attitude to their understanding of psychology. There are a number of areas where students may demonstrate critical thinking about the knowledge and understanding used in their responses and the research used to support that knowledge and understanding.

The areas of critical thinking are:
- research design and methodologies
- triangulation
- assumptions and biases
- contradictory evidence or alternative theories or explanations
- areas of uncertainty.

These areas are not hierarchical and not all areas will be relevant in a response. In addition, students could demonstrate a very limited critique of methodologies, for example, and a well-developed evaluation of areas of uncertainty in the same response. As a result, a holistic judgement of their achievement in this criterion should be made when awarding marks.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	There is limited critical thinking and the response is mainly descriptive. Evaluation or discussion, if present, is superficial.
3–4	The response contains critical thinking, but lacks development. Evaluation or discussion of most relevant areas is attempted but is not developed.
5–6	The response consistently demonstrates well developed critical thinking. Evaluation and/or discussion of relevant areas is consistently well developed.

E — Clarity and organisation

This criterion credits students for presenting their response in a clear and organized manner. A good response would require no re-reading to understand the points made or the train of thought underpinning the argument.

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1	The answer demonstrates some organization and clarity, but this is not sustained throughout the response.
2	The answer demonstrates organization and clarity throughout the response.

Section B

4. Evaluate **one** technique used to study the brain in relation to behaviour. **[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 technique used to study the brain in relation to behaviour. Although a discussion of both strengths and limitations is required, it does not have to be evenly balanced to gain high marks.

Brain imaging techniques may include, but are not limited to: CT scans, EEG, fMRI, MRI, PET.

Relevant studies may include, but are not limited to:
- Corkin's (1997) MRI of patient HM
- Eisenberger et al's (2003) study of rejection using an fMRI
- Fisher, Aron and Brown's (2005) study using fMRI to investigate dopamine and love.
- Harris and Fiske's (2006) study of response to out-groups using fMRI
- Maguire's (2000) study of hippocampal neuroplasticity in taxi drivers using MRI
- Raine *et al.*'s (1997) study of murderers using PET
- Sharot *et al.*'s (2007) study of flashbulb memories using fMRI.

Evaluation of the selected techniques may include, but is not limited to:
- ecological validity versus internal validity
- generally small sample sizes
- how brain imaging has changed the way we study the brain – *eg* improved ethical standards
- invasive elements of some techniques
- limitations of correlational research
- researcher biases in the interpretation of brain scans

The focus of the response should be on the evaluation of the technique used to study the brain. Although an understanding of how the technique works may be beneficial, it is not required for marks in the top band.

If a candidate evaluates more than one technique, credit should be given only to the first technique evaluated.

If the candidate addresses only strengths or only limitations, the response should be awarded up to a maximum of **[3]** for criterion D: critical thinking. All remaining criteria should be awarded marks according to the best fit approach.

5. Discuss **one or more** studies of the positive and/or negative effects of technologies on cognitive processes. **[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 one or more studies of the positive and/or negative effects of technologies on cognitive processes.

Candidates may discuss the effects of technologies on one or more specific cognitive processes (such as memory, thinking and decision-making, perception, attention and/or language) or on cognitive processes in general. Both approaches are equally acceptable.

Studies may include, but are not limited to:

- Bavelier *et al.* (2011), Small *et al.* (2011) on decision-making
- Blacker *et al.* (2014), McAvinue *et al.* (2013), and Pei-Chi Ho, Szu-Ming Chung and Yi-Hua Lin's (2012) studies on video games and working memory
- Kaspersky Lab (2015) on digital amnesia
- Mueller and Oppenheimer (2014) and Hembrooke and Gay's (2003) studies on the role of laptops in memory
- Rosen *et al.*'s (2011) study on digital distraction and memory
- Sparrow (2011) on the Google effect.

Critical discussion points may include, but are not limited to:

- ecological versus internal validity
- implications of the research
- the measurement of cognitive processes
- the recency of the research and its lack of reliability
- sampling biases (*eg* gender, culture, age)
- potential participant and researcher biases.

6. Discuss **one or more** cultural influences on human cognition and/or 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 one or more cultural influences on human cognition and/or behaviour.

It is not necessary for candidates to make a distinction between cognition and behaviour.

Studies investigating cultural influences on cognition and/or behaviour may include, but are not limited to:

- acculturation (Lueck and Wilson, 2010; Kraeh *et al*., 2016; Torres *et al.*, 2012)
- attachment (Van Ijzendoorn and Kroonenberg, 1988; Sagi *et al*., 1985)
- conformity (Bond and Smith, 1996; Berry, 1967)
- cultural norms (Odden and Rochat, 2004; Fagot, 1974)
- flashbulb memories (Kulkofsky *et al.*, 2011)
- The effects of education on memory (Cole and Scribner, 1974; Kearins, 1981).
- Pro-social behaviour (Moghaddam *et al.*, 1993; Levine *et al.*, 2001)
- Cognitive development (Li *et al.*, 1999)

Critical discussion may include, but is not limited to:

- ecological versus internal validity
- use of quasi-experimental research
- sampling biases and the ecological fallacy
- lab versus field experiments
- operationalization of “culture” as a construct
- emic versus etic approaches to studying cultural influences

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