

Markscheme

November 2020

Psychology

Higher level

Paper 1

No part of this product may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without written permission from the IB.

Additionally, the license tied with this product prohibits commercial use of any selected files or extracts from this product. Use by third parties, including but not limited to publishers, private teachers, tutoring or study services, preparatory schools, vendors operating curriculum mapping services or teacher resource digital platforms and app developers, is not permitted and is subject to the IB's prior written consent via a license. More information on how to request a license can be obtained from <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

Aucune partie de ce produit ne peut être reproduite sous quelque forme ni par quelque moyen que ce soit, électronique ou mécanique, y compris des systèmes de stockage et de récupération d'informations, sans l'autorisation écrite de l'IB.

De plus, la licence associée à ce produit interdit toute utilisation commerciale de tout fichier ou extrait sélectionné dans ce produit. L'utilisation par des tiers, y compris, sans toutefois s'y limiter, des éditeurs, des professeurs particuliers, des services de tutorat ou d'aide aux études, des établissements de préparation à l'enseignement supérieur, des fournisseurs de services de planification des programmes d'études, des gestionnaires de plateformes pédagogiques en ligne, et des développeurs d'applications, n'est pas autorisée et est soumise au consentement écrit préalable de l'IB par l'intermédiaire d'une licence. Pour plus d'informations sur la procédure à suivre pour demander une licence, rendez-vous à l'adresse suivante : <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

No se podrá reproducir ninguna parte de este producto de ninguna forma ni por ningún medio electrónico o mecánico, incluidos los sistemas de almacenamiento y recuperación de información, sin que medie la autorización escrita del IB.

Además, la licencia vinculada a este producto prohíbe el uso con fines comerciales de todo archivo o fragmento seleccionado de este producto. El uso por parte de terceros —lo que incluye, a título enunciativo, editoriales, profesores particulares, servicios de apoyo académico o ayuda para el estudio, colegios preparatorios, desarrolladores de aplicaciones y entidades que presten servicios de planificación curricular u ofrezcan recursos para docentes mediante plataformas digitales— no está permitido y estará sujeto al otorgamiento previo de una licencia escrita por parte del IB. En este enlace encontrará más información sobre cómo solicitar una licencia: <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

Section A markbands

Marks	Level descriptor
0	<ul style="list-style-type: none"> • The answer does not reach a standard described by the descriptors below.
1–3	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 **one** twin or kinship study. [9]

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

The command term “describe” requires candidates to give a detailed account or summary of one twin or kinship (family) study.

The description of the study should include the aim, procedure, results, and the conclusions of the study. Examples of twin or kinship studies may include, but are not limited to:

- Skre *et al.*'s (1993) twin study investigating genetic influences on anxiety disorders
- Holland *et al.*'s (1988) twin study investigating genetic influence on anorexia
- Kendler *et al.*'s (2006) twin study investigating a genetic influence on depression
- The “Minnesota Twin Study”, eg, Bouchard *et al.*'s (1990) study into genetic influences in intelligence
- Tobi *et al.*'s (2018) Dutch Hunger Winter study on epigenetics, obesity, and heart disease
- True *et al.*'s (1993) twin study investigating genetic influences on PTSD symptoms among U.S. Vietnam veterans
- Weissman *et al.*'s (2005) kinship study of MDD
- Yehuda *et al.*'s (2000, 1998) kinship studies investigating symptoms of PTSD among adult children of Holocaust survivors.

Candidates are not required to state exact concordance rates in order to be awarded full marks.

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

Cognitive approach to understanding behaviour

2. With reference to **one** study, outline **one** model of memory. **[9]**

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 of one memory model.

Relevant models may include, but are not limited to:

- Flashbulb memory theory
- Levels of processing model
- 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
- 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.

If a candidate outlines one model of memory without reference to one study, award up to a maximum of **[5]**.

If a candidate addresses a relevant study without outlining a model of memory, award up to a maximum of **[4]**.

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

Sociocultural approach to understanding behaviour

3. Describe one study investigating cultural norms. [9]

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

The command term “describe” requires candidates to give a detailed account of a study investigating cultural norms.

The description of the study should include the aim, procedure, results, and conclusions of the study.

Relevant studies may include, but are not limited to:

- Berry and Katz’s (1967) study on cultural norms as a factor in conformity
- Cole and Scriber (1974) on education norms and memory strategies
- Fagot (1978), Wood (2002) on enculturation of gender norms.
- Finkelstein (2010) the effect of individual and collectivism on reasons for volunteer behaviour
- Miller *et al.*’s (1990) study on the impact of cultural norms and moral values on the perception of social responsibility
- Odden and Rochat (2004) on social cognitive theory and development of cultural norms

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

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. With reference to research investigating the brain, discuss the role of animal research in understanding 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 animal research in investigating the brain and behaviour. A clear link between animal research and the understanding of human behaviour must be made.

Research that can be used to support the discussion may include, but is not limited to:

- Meaney et al (2000) on the role of cortisol on the hippocampus with regard to memory
- Rogers and Kesner (2003) on the role of acetylcholine in formation of spatial memories
- Klein (2008) on the role of exercise on neuroplasticity in rats
- Rosenzweig, Bennett, and Diamond’s (1972) study on the effect social interaction and the development of rats’ brains
- Weiskrantz’s (1956) study of amygdalar lesioning and the fear response in rhesus monkeys
- Lashley (1929) study on localization of memory in mice.

Discussion points may include, but are not limited to:

- Alternatives to animal research
- Justifications for using animals over human participants in research
- Key differences between animal and human physiology and behaviour
- methodological considerations and generalizability of animal research
- Operationalization of variables in animal research (e.g. studies of effects of stress on the brain)

The use of animal studies that focus on hormones or genes that explicitly discuss the role of the brain in behaviour is an acceptable approach to the question. Candidates may discuss one or more behaviours. Both approaches are equally acceptable.

5. Discuss the influence of technology on **one or more** 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 the influence of technology on cognitive processes.

Technology is a broad term that includes the use of computers, the Internet and social media, mobile phones, video games, and virtual reality.

Relevant studies may include, but are not limited to:

- Sparrow et al.'s (2011) study of transactive memory
- Rosen et al (2011, 2013) on the effect of multi-tasking on memory recall
- Mueller and Oppenheimer (2014) on computer assisted notetaking and memory
- Storm et al (2016) on the Google effect
- Blacker et al (2014) on the effect of video games on visual working memory
- Swing et al (2010) on the effect of screen time on attention
- Kaspersky Lab's (2015) study on digital amnesia.

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

- The balance between ecological and internal validity in evaluating research
- Biological explanations of why technology may affect cognitive processes
- The difficulty of establishing causal relationships
- Issues of researcher bias
- Linking research to cognitive models of processes - e.g. the working memory model
- Researcher and participant biases

Candidates may discuss the effect of technology on one cognitive process to demonstrate depth of knowledge, or discuss the effects on more than one cognitive process to demonstrate breadth of knowledge. Both approaches are equally acceptable.

6. Discuss the formation of stereotypes and/or the effect(s) of stereotypes 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 formation of stereotypes and/or the effect(s) of stereotypes on human behaviour.

Candidates may address the effect of stereotypes in relation to specific aspects of human behaviour or address the effect of stereotypes on behaviour in general. Both approaches are equally acceptable.

Explanations for the formation of stereotypes may include, but are not limited to:

- Grain of truth hypothesis (Campbell, 1967)
- Illusory correlation: Hamilton and Gifford (1976)
- Social Identity Theory: Hilliard and Liben (2010); Johnson, Schaller and Mullen (2000), Park and Rothbart (1982)
- Social cognitive theory: gatekeepers, personal experience, media

Effects of stereotypes on human behaviour may include, but are not limited to:

- Memory distortion (Allport and Postman (1947); Martin and Halvorson (1983)
- Misdiagnosis in mental health (Zhang, 1998; Van Ryn and Burke, 2000)
- Stereotype threat (Steele and Aronson, 1995; Shih et al, 1999)
- Prejudice and discrimination against individuals (eg Duncan, 1976; Buckhout, 1974; Gibbins, 1969)

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

- contrary findings or explanations (Shewach et al., 2019)
- cultural considerations
- methodological considerations

Candidates may discuss only the formation of stereotypes or only the effect(s) of stereotypes. Both approaches are equally acceptable.

If a candidate addresses both formation and effect(s) of stereotypes, the response does not need to be equally balanced in order to access marks in the top bands.

Candidates may address one potential effect of stereotypes in order to demonstrate depth of knowledge or may address more than one potential effect of stereotypes in order to demonstrate breadth of knowledge. Both approaches are equally acceptable.
