

# Markscheme

**November 2021**

**Psychology**

**Standard level**

**Paper 1**

© International Baccalaureate Organization 2021

All rights reserved. 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 the prior written permission from the IB. Additionally, the license tied with this product prohibits 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, whether fee-covered or not, is prohibited and is a criminal offense.

More information on how to request written permission in the form of a license can be obtained from <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

© Organisation du Baccalauréat International 2021

Tous droits réservés. 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 préalable de l'IB. De plus, la licence associée à ce produit interdit toute utilisation 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, moyennant paiement ou non, est interdite et constitue une infraction pénale.

Pour plus d'informations sur la procédure à suivre pour obtenir une autorisation écrite sous la forme d'une licence, rendez-vous à l'adresse <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

© Organización del Bachillerato Internacional, 2021

Todos los derechos reservados. 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 la previa autorización por escrito del IB. Además, la licencia vinculada a este producto prohíbe el uso 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—, ya sea incluido en tasas o no, está prohibido y constituye un delito.

En este enlace encontrará más información sobre cómo solicitar una autorización por escrito en forma de licencia: <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

**Section A markbands**

<b>Marks</b>	<b>Level descriptor</b>
<b>0</b>	<ul style="list-style-type: none"> <li>• The answer does not reach a standard described by the descriptors below.</li> </ul>
<b>1–3</b>	<ul style="list-style-type: none"> <li>• The response is of limited relevance to or only rephrases the question.</li> <li>• Knowledge and understanding is mostly inaccurate or not relevant to the question.</li> <li>• The research supporting the response is mostly not relevant to the question and if relevant only listed.</li> </ul>
<b>4–6</b>	<ul style="list-style-type: none"> <li>• The response is relevant to the question, but does not meet the command term requirements.</li> <li>• Knowledge and understanding is accurate but limited.</li> <li>• The response is supported by appropriate research which is described.</li> </ul>
<b>7–9</b>	<ul style="list-style-type: none"> <li>• The response is fully focused on the question and meets the command term requirements.</li> <li>• Knowledge and understanding is accurate and addresses the main topics/problems identified in the question.</li> <li>• The response is supported by appropriate research which is described and explicitly linked to the question.</li> </ul>

## Section A

### Biological approach to understanding behaviour

1. Outline neural pruning with reference to **one** relevant study.

[9]

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

The command term “outline” requires candidates to give a brief account of neural pruning with reference to one relevant study.

Relevant studies may include, but are not limited to:

- Draganski *et al.*'s (2004) study investigating the effects of learning juggling on the brain after training and after a period of latency
- Bremner *et al.*'s (2003) study investigating hippocampal atrophy in PTSD
- Maguire *et al.*'s (2000) study suggesting pruning in the anterior hippocampus of experienced taxi drivers
- Squeglia *et al.*'s (2013) study suggesting a negative correlation between cortical thickness in the frontal lobe and age.

An outline of the concept of neural pruning may include:

- the role of long-term potentiation
- the development of children's brains
- a decrease in dendritic branching leading to a decrease in synaptic connections
- neuronal cell death.

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

If a candidate outlines neural pruning without making reference to a study, up to a maximum of **[5]** should be awarded.

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

The response must make a link between neural pruning and the chosen study; however, a link between the study and human behaviour is not required.

## Cognitive approach to understanding behaviour

2. Describe schema theory, with reference to **one** relevant study.

**[9]**

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

The command term “describe” requires candidates to give a detailed account of schema theory, with reference to one relevant study.

Candidates may refer to relevant aspects of schema theory such as, but not limited to:

- mental representation
- framework of knowledge
- assimilation and accommodation (Piaget)
- the role of past experience
- reconstructive memory
- schema types
- the role of schema in the encoding and retrieval of memory

Relevant studies may include, but are not limited to:

- Bartlett’s (1932) study of “War of the Ghosts”
- Anderson & Pichert’s (1978) study on schema theory and memory retrieval
- Brewer & Treyens’ (1981) study of potential effects of schema on memory.

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

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

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

### Sociocultural approach to understanding behaviour

3. Outline the influence of culture on behaviour and/or cognition with reference to **one** relevant study.

[9]

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

The command term “outline” requires candidates to give a brief account or summary of the influence of culture on behaviour and/or cognition with reference to one relevant study.

Appropriate topics may include, but are not limited to:

- conformity (Berry, 1967)
- attachment (Van Ijzendoorn and Kroonenberg, 1988)
- aggression in honour cultures (Cohen, 1996)
- abnormal behaviour (Lin and Kleinman, 1988)
- addictive behaviour (Raylu and Oei, 2004)
- memory encoding and recall strategies (Cole and Scribner, 1974)

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

If a candidate outlines the influence of culture on behaviour and/or cognition without making reference to a study, up to a maximum of **[5]** should be awarded.

If a candidate only describes an appropriate study without outlining the influence of culture on behaviour and/or cognition, 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.



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

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

## Section B

4. Discuss how **one or more** hormones **and/or one or more** pheromones affect 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 how one or more hormones and/or one or more pheromones affect behaviour.

The effect of hormones/pheromones may be discussed in relation to any type of behaviour such as, but not limited to:

- attraction
- aggression
- trust
- emotional response
- attachment.

Relevant studies may include, but are not limited to:

- Lundstrom and Olsson’s (2005) study on effects of androstadienone on women's attraction to men
- Wedekind *et al.* (1995) investigating mate preference based on genetic makeup in relation to immune system functioning
- Doucet's *et al.*'s (2009) study on maternal behaviour.
- Saxton *et al.*'s (2008) study on how androstadienone modulates women's attributions of men's attractiveness.
- Radke *et al.*'s (2015) study investigating the effects of testosterone on women’s responses to angry faces
- Wagels *et al.*'s (2017) study showing that testosterone reduced desired personal distance from aggressive humans
- Albert *et al.*'s (1986) Testosterone and aggression in mice
- Baumgartner *et al.*'s (2008) study on the role of oxytocin on trust in economic behaviour.
- McGaugh and Cahill’s study on adrenaline and flashbulb memory

Critical discussion may include, but is not limited to:

- methodological and/or ethical considerations related to research investigating how hormones and/or pheromones affect human behaviour including the ambiguity of research evidence.
- to what extent pheromones have an effect on human behaviour
- how the findings of the research have been interpreted and applied
- implications of the findings
- supporting and/or contradictory evidence
- the value of animal research.

Animal research may be used to describe the effect of pheromones and hormones, but the response must then be linked to human behaviour. If there is no explicit link to human behaviour the response should be awarded up to a maximum of [3] for criterion D.

5. Discuss **one** cognitive process.

[22]

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

The command term “discuss” requires the candidate to offer a considered review of one cognitive process.

Cognitive processes may include:

- attention
- language
- memory
- perception
- thinking and decision-making

Discussion of a cognitive process may include, but is not limited to:

- the value of a model or theory
- reliability of a cognitive process
- effects of culture
- effects of biological factors
- effects of environmental factors and stress
- methodological and ethical considerations related to the research into the cognitive process.

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

6. Discuss **one or more** ethical considerations related to research studies investigating individuals and groups.

[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 ethical considerations related to research studies investigating individuals and groups.

Ethical considerations may be positive (what guidelines were followed) or negative (what guidelines were not followed).

Ethical considerations may include, but are not limited to:

- deception
- protection from undue stress or harm
- briefing and debriefing
- right to withdraw
- informed consent
- anonymity

Studies investigating individuals and groups may include, but are not limited to:

- Festinger's (1956) study on cult behaviour
- Sherif's (1954) "Robbers Cave" study investigating the realistic conflict theory
- Zimbardo's (1961) Stanford Prison Experiment
- Milgram's (1961) study of obedience
- Bandura's (1961) study of aggression

Discussion may include, but is not limited to:

- why deception is used
  - the difficulties of ensuring confidentiality in social psychology research
  - the role of informed consent when studying groups
  - decisions as to why certain ethical guidelines were/were not followed
  - changes over time in adherence to ethical standards/guidelines.
-