



A-level PSYCHOLOGY 7182/2

Paper 2 Psychology in context

Mark scheme

June 2025

Version: 1.0 Final



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

No student should be disadvantaged on the basis of their gender identity and/or how they refer to the gender identity of others in their exam responses.

A consistent use of 'they/them' as a singular and pronouns beyond 'she/her' or 'he/him' will be credited in exam responses in line with existing mark scheme criteria.

Further copies of this mark scheme are available from aqa.org.uk

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Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A**Approaches in psychology**

0 1 Describe how Skinner investigated the effect of reinforcement on behaviour.

[4 marks]

Marks for this question: AO1 = 4

Level	Marks	Description
2	3–4	Knowledge of how Skinner investigated the effect of reinforcement on behaviour is clear and detailed. The answer is generally coherent and accurate with appropriate use of specialist terminology.
1	1–2	Knowledge of how Skinner investigated the effect of reinforcement on behaviour is limited/muddled. Use of specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- conducted experiments with rats/pigeons
- isolated in a highly controlled environment/Skinner box
- animal deliberately kept underweight
- rats were rewarded with food pellet for pressing a lever/pigeons rewarded with food pellet for pecking a disc (positive reinforcement)
- rats/pigeons had to press lever/peck disc to avoid an unpleasant stimulus, eg an electric shock (negative reinforcement)
- varied schedules of reinforcement
- measured response rate
- credit alternative research by Skinner, eg conditioning of pigeons to play ping-pong
- credit knowledge of how Skinner studied spontaneous recovery, generalisation, discrimination and behaviour-shaping.

Credit other relevant content.

- | | |
|---|---|
| 0 | 2 |
|---|---|
- Outline how evolution might influence behaviour. Give an example from a topic in psychology.

[4 marks]**Marks for this question: AO1 = 3, AO2 = 1****Outline:****3 marks:** for a clear and coherent outline with some detail of how evolution might influence behaviour.**2 marks:** for a less detailed outline which lacks some clarity and/or coherence.**1 mark:** for a limited/muddled outline.**Possible content:**

- a genetically determined behaviour that enhances survival/reproduction will be selected naturally
- those with the behaviours are more likely to survive, reproduce and pass these behaviours on/those without them do not
- the behaviours become more/less prevalent in future generations.

Plus:**1 mark:** for an example clearly linked to evolution.**Possible examples:**

- Bowlby suggested attachments are innate and give a survival advantage
- the fight or flight response is adaptive and gives a survival advantage
- there are genes linked to OCD and it is beneficial to survival to be cautious about germs
- it makes evolutionary sense to have a fear of heights/snakes/the dark as it ensures survival.

Credit other relevant content/examples.

Note - the outline and example may be intertwined.

0 3

Describe and evaluate the psychodynamic approach in psychology.

[16 marks]**Marks for this question: AO1 = 6, AO3 = 10**

Level	Marks	Description
4	13–16	Knowledge of psychodynamic approach is accurate and generally well detailed. Evaluation is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	9–12	Knowledge of psychodynamic approach is evident but there are occasional inaccuracies/omissions. Evaluation is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	5–8	Limited knowledge of psychodynamic approach is present. Focus is mainly on description. Any evaluation is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1–4	Knowledge of psychodynamic approach is very limited. Evaluation is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- the concept of the unconscious and role of unconscious in behaviour
- tripartite structure of the personality – id, ego, superego
- psychosexual stages of development
- conflicts – Oedipus and Electra
- defence mechanisms
- psychodynamic approach to therapy – psychoanalysis.

Possible evaluation:

- psychodynamic/psychoanalytic therapy as a treatment for mental health issues
- explanatory power in relation to many psychological topics
- socially sensitive, eg mental health issues may be blamed on parents
- testing of unconscious concepts is unfalsifiable
- lack of scientific rigour
- subjectivity – unconscious thoughts can only be inferred from behaviour or reported thoughts/experiences
- use of evidence to support or contradict the psychodynamic approach, eg studies into the effectiveness of psychotherapy, eg De Maat, et al. (2009), case studies of people who are unable to recall upsetting events, eg Gagnepain, et al. (2014) on suppression, Little Hans
- generalisability problems due to reliance on case studies
- lacks temporal validity, eg emphasis on sexual instincts out of date in modern society
- gender bias, eg the imbalance in explanation for male and female development
- emphasis on psychic determinism as opposed to freewill
- comparison with other approaches focused on the value of the psychodynamic approach.

Credit other relevant information.

Section B**Biopsychology**

0 4 Name **one** type of neuron and briefly explain its function.

[2 marks]

Marks for this question: AO1 = 2

1 mark: for naming one type of neuron – Sensory, Motor or Relay (interneuron).

Plus

1 mark: for a clear and coherent explanation of the function of the named neuron.

Possible content:

- sensory neurons: carry messages from the PNS to the CNS; carry information about changes in external and internal environments to the CNS
- motor neurons: carry nerve impulses from the CNS (brain and spinal cord) to effectors (muscles/glands); transmit signals to muscle cells or glands
- relay neurons: carry nerve impulses between sensory/motor/other relay neurons; allow information to pass straight through the spinal cord (spinal reflex).

Note - the function must relate to the type of neuron named.

Credit other relevant content/types of neuron.

0 5

Using an example of a hormone, outline the function of the endocrine system.

[4 marks]**Marks for this question: AO1 = 4**

Level	Marks	Description
2	3–4	Using an example of a hormone, the outline of the function of the endocrine system is clear and accurate with some detail. The answer is generally coherent with appropriate use of specialist terminology.
1	1–2	Outline of the function of the endocrine system is present but lacks detail/accuracy. The example is either inappropriate/muddled or absent. The answer as a whole is not clearly expressed. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- to regulate cell or organ activity within the body and control vital physiological processes in the body, such as heart rate, blood pressure, appetite, sleep and body temperature
- to release hormones/chemical messengers from glands into the bloodstream which then bind with specific receptors in order to regulate the activity of cells or organs in the body
- to release hormones/chemical messengers that regulate biological processes including metabolism, growth and development, reproduction, mood, and response to stress
- adrenaline (produced by the adrenal gland) triggers the fight or flight response and increases heart rate, breathing rate, contracts blood vessels etc
- thyroxine (produced by the thyroid gland) increases heart rate and metabolic rates
- oestrogen (produced by the ovaries) controls the development of female physical features such as the development of female genitalia, breast development, menstruation, etc
- testosterone (produced by the testes) controls the development of male physical features such as the development of male genitalia, facial and body hair growth, deepening of the voice etc.

Note - Maximum 1 mark for only naming a hormone.

Credit other relevant content/examples.

0 6

Explain the process of synaptic transmission. Refer to excitation in your answer.

[4 marks]**Marks for this question: AO1 = 4**

Level	Marks	Description
2	3–4	Knowledge of the process of synaptic transmission with reference to excitation is detailed, clear and accurate with use of appropriate specialist terminology.
1	1–2	Knowledge of the process of synaptic transmission with reference to excitation is incomplete/partly accurate. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- electrical impulses/action potentials reach the presynaptic terminal
- electrical impulses/action potentials trigger release of neurotransmitters from the vesicles
- neurotransmitters diffuse across the synaptic cleft/gap
- these bind with receptors on the postsynaptic membrane
- some neurotransmitters are excitatory others are inhibitory
- the process of summation
- excitation involves stimulation of postsynaptic receptors/depolarisation of the postsynaptic membrane
- the postsynaptic cell is more likely to fire (if the net effect of summation is excitatory/if the charge reaches the threshold).

Credit other relevant content

Note - for 4 marks explanation must describe the process (beginning, middle and end) and must refer to excitation.

Note – up to full marks can be awarded for a well annotated diagram – direction of transmission should be made clear.

0 7

Explain how functional magnetic resonance imaging (fMRI) might be used to study Sam's memory.

[6 marks]**Marks for this question: AO2 = 6**

Level	Marks	Description
3	5–6	Application of knowledge of how fMRI might be used to study Sam's memory is clear and has some detail. The answer is generally coherent with appropriate use of specialist terminology.
2	3–4	Application of knowledge of how fMRI might be used to study Sam's memory is evident but lacks clarity. Specialist terminology is used appropriately on occasions.
1	1–2	Very brief and/or muddled application of knowledge of how fMRI might be used to study Sam's memory. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- fMRI could be used to map Sam's brain activity/localisation of function
- Sam would be asked to carry out short-term memory/cognitive tasks while in an fMRI scanner
- eg ask Sam to read a list of words/letters (accept other visual STM tasks) and recall them immediately
- eg play Sam a list of words/numbers and recall them immediately
- the fMRI detects changes in blood oxygenation/flow and produces a 3D image of the activity in different parts of Sam's brain
- when an area of Sam's brain is more/less active it consumes more/less oxygen and more/less blood flows to that area
- this would show where Sam's brain is active/inactive during the visual STM task
- reference to comparing brain activity during different STM tasks.

Credit other relevant content.

0 8

Discuss what research has shown about hemispheric lateralisation.

[8 marks]**Marks for this question: AO1 = 3, AO3 = 5**

Level	Marks	Description
4	7–8	Knowledge of what research has shown about hemispheric lateralisation is accurate with some detail. Discussion is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5–6	Knowledge of what research has shown about hemispheric lateralisation is evident but there are occasional inaccuracies/omissions. Discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3–4	Limited knowledge of what research has shown about hemispheric lateralisation is present. Focus is mainly on description. Any discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1–2	Knowledge of what research has shown about hemispheric lateralisation is very limited. Discussion is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- hemispheric lateralisation research has shown that certain functions are principally governed by one side of the brain
- findings from research studies, eg Leborgne (Tan), Sperry, Lelong, Kim Peek, Fink, Hallingam et al, etc.
- Broca's discovery that the speech production area was in the left hemisphere
- Wernicke's discovery that the area for understanding language was in the left hemisphere

Possible discussion:

- research evidence used to support or contradict the concept of hemispheric lateralisation, eg Sperry (1968), Gazzaniga (1998), patient JW in Turk et al. (2002)
- research oversimplifies hemispheric lateralisation: hemispheres are constantly communicating; plasticity allows for compensation across hemispheres, eg Danelli et al 2013
- functions such as language are too complex to be assigned to just one area and instead involve networks of brain regions
- lateralisation patterns shift with age with most tasks becoming less lateralised in healthy adulthood
- issues generalising findings from case studies or from 'atypical' patients, eg participants in the split brain research.

Credit other relevant information.

Section C**Research methods****0 9**

Explain why a non-directional hypothesis is appropriate in this case.

[2 marks]**Marks for this question: AO2 = 2**Award one mark for **each** of the following bullet points:

- there were conflicting findings (in previous research) / research does not provide clear findings (so it should be non-directional)
- the researcher cannot predict the outcome of the experiment.

Note – For full marks to be awarded there must be explicit reference to the type of learning (face-to-face/online)

1 0

Write an appropriate hypothesis for this study.

[3 marks]**Marks for this question: AO2 = 3**

3 marks: for a clearly stated and appropriate non-directional hypothesis with both the IV and DV operationalised: There will be a (significant) difference in the multiple-choice test scores between students who complete online learning and those who complete face-to-face learning.

2 marks: a clear non-directional statement which has both the IV and the DV but only one variable operationalised **OR** for a non-directional statement with both the IV and the DV operationalised that lacks clarity.

1 mark: for a non-directional statement with the IV and the DV but neither is fully operationalised.

0 marks: for expressions of aim/questions/correlational hypotheses **OR** statements with only the IV or DV **OR** only one condition of the IV present **OR** for a directional hypothesis.

Note - Credit can be awarded for an appropriate null hypothesis.

1 1Which **one** of the following best describes the sampling method used in this study?**[1 mark]****Marks for this question: AO2 = 1**Answer **D** – Volunteer

1 2 Evaluate the sampling method the researcher used in this study.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3–4	Evaluation is clear and coherent. Application is effective. There is effective use of specialist terminology.
1	1–2	Evaluation is limited/muddled. Application is limited/not made explicit. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- students will be happy and willing to participate so will be more likely to complete the three-hour learning session and test
- requires minimal input from the researcher as the researcher only puts an advert in the online forum and waits for students to volunteer
- might provide a biased/unrepresentative sample as it would only include students who were part of that online forum which would not necessarily reflect the population as they are all of a similar age/academic level/may have good memories/enjoy online learning/the type of student who volunteers may have differing traits to the general population, for example they may be more extrovert and so may prefer face-to-face learning.

Credit other relevant content.

1 3 What do the median **and** range values in **Table 1** suggest? Justify your answer.

[4 marks]

Marks for this question: AO2 = 4

Median:

1 mark – The median shows that Group 1 (online learning) is more effective (than Group 2 (face-to-face) learning). Accept alternative wording.

Plus

1 mark – median (score on the multiple-choice test) is higher in Group 1 (online learning) (than Group 2 (face-to-face)). Accept alternative wording.

Range:

1 mark – The range shows that student scores (on the multiple-choice test) are more spread out in Group 2 (face-to-face) (than in Group 1 (online learning)). Accept alternative wording.

Plus

1 mark – range is greater in Group 2 (face-to-face) (than Group 1 (online learning)). Accept alternative wording.

Note – 0 marks for just stating the data from the table.

Note – Justifications are not creditworthy in isolation.

1 4 Suggest an appropriate label for **each** axis of the bar chart.

[2 marks]

Marks for this question: AO2 = 2

1 mark for **each** bullet point:

- online (learning) and face-to-face (learning)
- median (multiple-choice test) score.

- 1 5** Identify an appropriate statistical test to analyse the data collected in this study. Explain **three** reasons for your choice.

[7 marks]

Marks for this question: AO2 = 7

1 mark: for Mann-Whitney OR unrelated t-test (if this does not contradict data type).

Plus

For **each** of the following bullet points award:

2 marks: for a clear and coherent reason linked to the study.

1 mark: for a limited/partial reason.

Possible content:

- the study is comparing the difference in multiple-choice test scores/difference between online and face-to-face learning so the researcher needs a test of difference
- the students either experienced online or face-to-face learning so the design was unrelated/independent groups/measures
- scores on the multiple-choice test are not standardised/the difference between each score is not fixed/can be ranked so the data is ordinal (justifying Mann-Whitney) OR scores on the multiple-choice test are standardised/the difference between each score is fixed so the data is interval (justifying unrelated t-test)

Note - appropriate reason(s) can be credited even if an incorrect test is named, or no test is given.

Note - where more than three reasons are given, only the first three should be marked.

- 1 6** Explain what is meant by 'significant at $p < 0.01$ ' in the context of this study.

[3 marks]

Marks for this question: AO2 = 3

3 marks: for a clear and coherent explanation with context and reference to 'less than 1%' (accept similar wording e.g. more than 99% confident).

2 marks: for an explanation that does not contain one of the requirements for 3 marks (clarity/context/reference to less than 1%).

1 mark: for a muddled / limited explanation.

Possible content:

- there is less than 1% likelihood/probability that the difference in multiple-choice test scores between online and face-to-face learning was due to chance/due to something other than the type of learning
- the null hypothesis can be rejected/the experimental/alternative hypothesis can be accepted.

Credit other relevant content.

Note – 'the difference between the results of the two groups was significant' is provided in the stem and not creditworthy

1 7Outline **one** change the researcher could have made to deal with this issue.**[2 marks]****Marks for this question: AO3 = 2****2 marks:** for a clear, coherent outline of a change the researcher could have made with appropriate elaboration.**1 mark:** for a limited / muddled outline.**Possible changes:**

- repeated measures design: all the participants could be tested in both conditions; using counterbalancing/leaving time/using a different test
- matched pairs: the participants could be matched on key characteristics which might affect the DV, with one member of each pair taking part in each condition/group
- random allocation: the participants could be randomly assigned to the conditions by a lottery/hat/random number generator.

Note – A maximum of 1 mark should be awarded for responses which only name the change (e.g. repeated measures/matched pairs/random allocation)**1 8**Explain **one or more** possible implications of the findings of this study for the economy.**[4 marks]****Marks for this question: AO2 = 4**

Level	Marks	Description
2	3–4	Explanation of economic implication(s) of the findings of this study is mostly clear and appropriate.
1	1–2	There is limited/partial explanation of the economic implication(s) of the findings of this study. The answer may lack coherence.
	0	No relevant content.

Possible application:

- schools may employ fewer teachers, reduces cost of wages/pensions being paid/reduces tax revenue
- schools/parents may purchase more laptops/computers/learning software
- children learning online may result in parent(s) having to supervise at home, reducing the contribution to the economy by the non-working parent
- provides employment opportunities for software writers of the learning materials
- a lot more pupils can be online than a classroom can accommodate
- online learning reduces heating/building costs of schools and transport costs.

Credit other relevant material.

1 9Explain how the researcher's study illustrates **one or more** features of science.**[4 marks]****Marks for this question: AO2 = 4**

Level	Marks	Description
2	3–4	Explanation of how the researcher's study illustrates one or more features of science is mostly clear and accurate. Application is effective with appropriate use of specialist terminology.
1	1–2	There is limited/partial explanation of how the researcher's study illustrates one or more features of science. Application is limited/not made explicit. Use of specialist terminology may be either absent or inappropriate.
	0	No relevant content.

Possible content:

- the researcher is hypothesis testing/has generated a hypothesis based on previous (peer reviewed) scientific evidence
- it uses the empirical method, evidence was collected through direct observation/experience/it used the experimental method
- replicable as controlled, clear procedure with operationalised variables
- objective as the score on the multiple-choice test is quantifiable/measurable
- other variables that may have affected effectiveness of learning have been controlled, eg same learning time/materials to learn/multiple-choice test
- the variables being investigated (online vs face-to-face learning and effectiveness of learning) have been operationalised.

Credit other relevant content.

Note – No marks can be awarded just for naming features of science in isolation

2 0

Design a study to investigate students' experiences of online learning.

In your answer you will gain credit for providing appropriate details of the following:

- the type of self-report technique that will be used, with justification
- an example of **one** relevant question that could be used to collect qualitative data, with justification
- how you would ensure the ethical treatment of participants
- how content analysis could be used to analyse the qualitative data.

[12 marks]**Marks for this question: AO2 = 6, AO3 = 6**

Level	Marks	Description
4	10–12	Suggestions are generally well detailed and practical, showing sound understanding of designing research. All four elements are present. Justifications are appropriate. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and/or explanation sometimes lacking.
3	7–9	Suggestions are mostly sensible and practical, showing some understanding of designing research. At least three elements are present. There is some appropriate justification. The answer is mostly clear and well organised. Specialist terminology is mostly used effectively.
2	4–6	Some suggestions are appropriate for designing research, but others are impractical or inadequately explained. At least two elements are addressed. Justifications are partial, muddled, or absent. The answer lacks clarity, accuracy and organisation on occasions.
1	1–3	Knowledge of designing research is limited. The whole answer lacks clarity, has many inaccuracies and is poorly organised.
	0	No relevant content.

Four elements of design to be credited:

- type of self-report technique – questionnaires (eg postal/mobile phone), diaries, interviews (eg structured/unstructured) and why this would be appropriate, eg high response rate, anonymity, reducing social desirability bias, avoidance of leading questions, participants can ask interviewer questions if unsure, interviewer can add further questions to explore responses
- example question – question should produce qualitative data and is relevant to students' experiences of online learning, eg how did you feel/what did you like about the online learning etc, with justification, eg it is an open-ended question/the students can describe their experiences in detail
- ethical considerations, eg gaining informed consent, respect, right to withdraw, confidentiality, anonymity etc
- details of how content analysis could be carried out, eg relevant coding units/categories/themes, converting qualitative data into quantitative data.

Note – Where more than one question is presented as their example of a relevant question that could be used to collect qualitative data, mark the first question given in the response.

Credit other relevant content.