

**AS
PSYCHOLOGY
7181/2**

Paper 2 Psychology in context

Mark scheme

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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.

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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's 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 **two or more** functions of the peripheral nervous system.

[4 marks]

Marks for this question AO1 = 4

Level	Marks	Description
2	3–4	There is a clear description of two or more functions of the peripheral nervous system with some accurate detail. The answer is generally coherent with effective use of appropriate terminology.
1	1–2	There is limited or partial description of two or more functions of the peripheral nervous system. The answer lacks coherence and use of appropriate terminology. OR one function of the peripheral nervous system at Level 1/2.
	0	No relevant content.

Possible content:

- the peripheral nervous system (consists of the autonomic nervous system and somatic nervous system and) is responsible for transmitting messages to and from the central nervous system
- the somatic nervous system is responsible for transmitting information from sense organs to the central nervous system and transmitting information from the central nervous system to effectors such as muscles
- the autonomic nervous system (consists of the sympathetic nervous system and the parasympathetic nervous system and) is responsible for transmitting information to and from internal bodily organs
- the sympathetic nervous system works alongside the endocrine system to bring about physiological arousal in the fight or flight response
- the parasympathetic nervous system works alongside the endocrine system to return the body to its resting state in the rest and digest response.

0 2

Use your knowledge of genotype **and** phenotype to explain possible reasons why Ellie and Lucy had different scores.

[4 marks]**Marks for this question AO2 = 4**

Level	Mark	Description
2	3–4	The explanation of possible reasons why Ellie and Lucy had different scores using knowledge of genotype and phenotype is clear with some accurate detail. The answer is generally coherent with effective use of appropriate terminology.
1	1–2	The explanation of possible reasons why Ellie and Lucy had different scores using knowledge of genotype and/or phenotype has limited detail. The answer lacks coherence and use of appropriate terminology.
	0	No relevant content.

Possible content:

- Ellie and Lucy have identical genes which code for different aspects of intelligence because they are identical twins with the same genotype
- the twins' genotypes are not expressed in their outward behaviour/scores on the test.
- Ellie and Lucy's phenotypes are different as they achieved different scores on the intelligence test suggesting Ellie might be more intelligent/better at intelligence tests than Lucy
- Ellie and Lucy's phenotypes might be influenced by environmental factors such as different teachers at school or different learning experiences which could account for their different scores

Credit other relevant application.

0 3

Choose **two** glands in the endocrine system and explain the functions of **each** gland.
[4 marks]

Marks for this question AO1 = 4

Award **up to 2 marks** for **each** gland as follows:

2 marks for a clear and coherent explanation of the function of a gland

1 mark for a muddled/limited explanation.

Possible content:

- the pituitary gland controls the release of hormones from all other glands, eg it produces adrenocorticotrophic hormone (ACTH) which is involved in the stress response by stimulating the production and release of cortisol from the adrenal glands
- the thyroid gland produces thyroxine which aids heart and digestive functioning, metabolism, brain development, bone health and muscle control
- the adrenal gland produces adrenaline which triggers the fight or flight response and increases heart rate, breathing rate, contracts blood vessels etc
- the testes produce testosterone which controls the development of male physical features such as development of male genitalia, facial and body hair growth, deepening of the voice etc. Also involved in development of masculine gender
- the ovaries produce oestrogen which controls the development of female physical features such as development of female genitalia, breast development, menstruation, etc. Also involved in development of feminine gender
- the pancreas produces insulin which maintains normal blood glucose levels by allowing cells to absorb glucose from the blood. Also involved in the breakdown of fat and protein.

Credit accurate functions of other glands.

Note: No marks for simply naming glands.

0 4

Describe and evaluate the cognitive approach in psychology.

[12 marks]**Marks for this question AO1 = 6 and AO3 = 6**

Level	Marks	Description
4	10–12	Knowledge of the cognitive approach is accurate and generally well detailed. Evaluation is effective. Minor detail and/or expansion is sometimes lacking. The answer is clear and coherent. Specialist terminology is used effectively.
3	7–9	Knowledge of the cognitive approach is evident but there are occasional inaccuracies/omissions. There is some effective evaluation. The answer is mostly clear and organised. Specialist terminology is mostly used appropriately.
2	4–6	Limited knowledge of the cognitive 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	1–3	Knowledge of the cognitive 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:

- behaviour is influenced by thoughts that can be both conscious and non-conscious – internal mental processes
- schema are the mental representations of experience and knowledge and understanding
- mental processes are a form of information processing which can be compared to that of a computer
- models can be used to provide testable theories about mental processing and these can be studied scientifically and inferences made
- cognition and biological processes can be integrated leading to cognitive neuroscience as a way forward to understanding human behaviour
- methodology – use of controlled experimentation – inference about mental processes on the basis of observed behaviour.

Possible evaluation:

- uses controlled experimentation so has scientific rigour
- the computer analogy is mechanistic which struggles to explain the irrationality seen in emotive responses
- the use of controlled environments lacks ecological validity meaning we may not get an understanding of how cognitive processes such as memory work in real life
- problems with inference such as subjective interpretation
- research from other approaches indicates factors other than internal mental events as causes of behaviour which are overlooked by the approach
- oversimplistic – the focus is often on individual mental processes and often does not explain how different mental processes work together
- real life application such as development of effective treatments such as CBT, to improving the reliability of eyewitness testimony etc
- comparisons with other approaches.

Credit other relevant material.

Section B

Psychopathology

0 5

Which of the following is **not** a cognitive characteristic of phobias?

[1 mark]

Marks for this question AO1 = 1

Answer = **D (Severe anxiety)**

0 6 . 1

Referring to the statements in **Figure 1** above, briefly outline **two** definitions of abnormality.

[4 marks]

Marks for this question AO1 = 2 and AO2 = 2

Award **up to 2 marks** for **each** definition of abnormality as follows:

1 mark for outlining one relevant definition of abnormality

PLUS

1 mark for explaining how the statement(s) in **Figure 1** are designed to assess the definition of abnormality outlined.

Possible content:

- failure to function adequately – where an individual fails to cope with the demands of everyday life. Failure to maintain eye contact could be an example of no longer conforming to interpersonal rules which is one way someone can fail to function adequately/experiencing severe distress would prevent someone from coping so would be failing to function adequately/not washing yourself and skipping meals could be an example of an individual not coping so they could be failing to function adequately
- deviation from social norms – where an individual fails to behave in a socially acceptable way. Failure to maintain eye contact, not washing yourself and skipping meals all deviate from social norms
- deviation from ideal mental health – where an individual fails to meet the criteria for good mental health. Failure to maintain eye contact may be an example of lack of environmental mastery and therefore deviating from ideal mental health. Often feeling distressed could represent a failure to resist stress and therefore deviating from ideal mental health
- statistical infrequency – a behaviour which is rare/uncommon. Often feeling distressed would be rare and therefore statistical infrequent.

0 6 . 2 Briefly evaluate **one** definition of abnormality.

[3 marks]

Marks for this question AO3 = 3

3 marks for a clear and coherent evaluation of one definition of abnormality.

2 marks for an evaluation of one definition of abnormality with some clarity and/or coherence

1 mark for a limited or muddled evaluation of one definition of abnormality.

Possible content:

- deviation from social norms – eccentric behaviours are not necessarily abnormal; social norms vary with time and with culture
- statistical infrequency – fails to account for behaviour that is statistically rare but desirable; some disorders are not statistically rare; issue of who decides where the cut-off point is
- failure to function adequately – many mental disorders do not cause personal distress; some behaviours are maladaptive but not a sign of psychological abnormality
- deviation from ideal mental health – the criteria are too demanding – most people would be judged abnormal based on this definition; many of the criteria reflect Western cultural norms of psychological ‘normality’.

Credit other relevant evaluation including positive evaluations.

0 6 . 3

The psychologist completed her research and submitted it to be peer reviewed.
Briefly explain **two** reasons why conducting a peer review might improve psychological research.

[4 marks]

Marks for this question AO3 = 4

Award **up to 2 marks** for **each** reason why as follows:

2 marks for a clear and coherent explanation of why conducting a peer review might improve the research

1 mark for a muddled/limited explanation.

Possible content:

- would guarantee high quality of the written investigation through the suggestion of possible improvements
- would ensure quality data analysis for example by suggesting collection of more data or a different type of analysis
- would ensure that the research is appropriate for publication, eg suitable terminology and language used for the target audience and changed if required, check work is original (not copied/plagiarised)
- would ensure that the research is credible and thus maintaining the reputation of the institution and securing future funding for research.

Credit other relevant content.

0 7Describe **one** biological explanation for obsessive compulsive disorder (OCD).**[4 marks]****Marks for this question AO1 = 4**

Level	Marks	Description
2	3–4	There is a clear description of one biological explanation for OCD with some accurate detail. The answer is generally coherent with effective use of appropriate terminology.
1	1–2	There is limited or partial description of one biological explanation for OCD. The answer lacks coherence and use of appropriate terminology.
	0	No relevant content.

Possible content:**Genetic Explanations**

- genetic vulnerability to OCD
- specific candidate genes, eg gene 9, COMT gene, SERT gene, 5HT1-D beta gene
- OCD appears polygenic with up to 230 genes involved.

Neural Explanations

- low levels of neurotransmitters, eg serotonin may be removed too quickly from the synapse before impulses have been passed on
- communication within certain areas of the brain (eg the basal ganglia system) is disturbed and might account for the repetitive behaviours seen in OCD
- abnormal activity in the orbital frontal cortex/thalamus related to impaired decision making
- abnormal functioning of the parahippocampal gyrus related to the regulation of unpleasant emotions.

Credit other relevant material.

Credit responses which have presented genetic and neural explanations as one, eg a genetic basis to neurochemical/structural differences.

0 8

Describe and evaluate cognitive behaviour therapy (CBT) as a treatment for depression.

[8 marks]**Marks for this question AO1 = 4 and AO3 = 4**

Level	Marks	Description
4	7–8	Knowledge of cognitive behaviour therapy is accurate with some detail. Evaluation is effective. Minor detail and/or expansion is sometimes lacking. The answer is clear and coherent. Specialist terminology is used effectively.
3	5–6	Knowledge of cognitive behaviour therapy is evident but there are occasional inaccuracies/omissions. There is some effective evaluation. The answer is mostly clear and organised. Specialist terminology is mostly used appropriately.
2	3–4	Limited knowledge of cognitive behaviour therapy 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	1–2	Knowledge of cognitive behaviour therapy 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:

- knowledge of different types of CBT, eg Beck's cognitive therapy, Ellis's rational emotive behaviour therapy etc
- attempt to change/modify negative schema/irrational thoughts to alleviate the symptoms of depression
- 'Thought-catching' – identification of irrational thoughts
- diary records to monitor events and identify situations in which negative thinking occurs so these can be targeted
- challenge/dispute irrational thoughts through vigorous empirical and/or logical argument
- 'Patient as scientist' – generate hypotheses to test validity of irrational thoughts (reality testing)
- homework assignments to test the client's hypothesis/negative thinking and evaluate the evidence
- reinforcement of positive thoughts
- cognitive restructuring.

Possible evaluation:

- use of evidence to support or contradict the effectiveness of cognitive behaviour therapy, eg March et al
- attempts to address the underlying cause as it assumes the root cause is irrational thought processes
- success may be due to the therapist-patient relationship not CBT techniques
- requires commitment and motivation which may be a problem for depressed patients
- overemphasis on the patient's present circumstances and largely ignores past events
- may minimise the importance of person's social circumstances
- relies on patient self-reporting their thoughts which may be unreliable and difficult to verify
- credit critical comparison with alternative treatments, eg antidepressants.

Credit other relevant material.

Section C

Research Methods

0 9

Outline what is meant by an aim. Write a suitable aim for this study.

[2 marks]

Marks for this question AO1 = 1 and AO2 = 1

Award marks as follows:

1 mark for a clear outline of what is meant by an aim, eg a general statement of the purpose of the study/a general statement about what the researcher intends to study.

1 mark for a clear aim for this study, eg to investigate whether/to see if sleep affects productivity.

Do not accept hypotheses or general predictive statements.

1 0

The psychologist analysed the results of the study using the sign test.

Explain **two** reasons why it was appropriate to use the sign test in this situation.
Refer to the description of the study in your answer.

[4 marks]

Marks for this question AO2 = 4

Award **up to 2 marks** for **each** reason as follows:

2 marks for a clear explanation of why the sign test would be appropriate

1 mark for a muddled/limited explanation.

Possible content:

- there are two sleep conditions and the psychologist is looking for a difference in productivity between them (the difference between the two sleep conditions is significant and not down to chance)
- as the participants categorise their productivity as 'more', 'less' or 'the same' it is categorical/nominal data
- as the participants take part in both the 4 hour and 8 hour sleep conditions (day 1 and day 2), it is related/repeated measures design.

1 1

Use the data in **Table 1** to calculate the value of S using the sign test. Explain how you calculated this figure.

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

Award **one** mark for **each** of the following:

- S = 6
- ignore any nil differences (ignore the participants with the same productivity)
- the value of the category with the least number of cases is S (compare the number of participants who were 'more' and 'less' productive)

1 2

Briefly explain how the psychologist would carry out a pilot study in this case.

[2 marks]**Marks for this question AO3 = 2**

2 marks for a clear explanation of how the psychologist would carry out a pilot study in this case.

1 mark for a muddled/limited explanation.

Possible content:

- select a small number of students to take part in the pilot before the follow-up study
- prepare some simple mathematical problems and write some instructions
- test the small sample under two conditions within the sleep laboratory.

Credit other relevant content.

1 3

Should the hypothesis for the follow-up study be directional or non-directional? Explain your answer.

[2 marks]**Marks for this question AO2 = 2**

Award marks as follows:

1 mark for correctly identifying the type of hypothesis as directional.

1 mark for an explanation of why it should be directional, eg previous research has shown that more sleep leads to better problem solving/the original study showed that more sleep leads to better productivity so expect/predict the same direction of results/outcome.

1	4
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Write a suitable experimental hypothesis for the follow-up study.

[3 marks]

Marks for this question AO2 = 3

3 marks for a clearly stated and appropriate directional operationalised hypothesis: People will take less time to solve 10 simple mathematical problems correctly after they have had six hours' sleep than after they have had two hours' sleep.

2 marks for a statement with both conditions of the IV and the DV present but either the IV or DV is not fully operationalised.

1 mark for a muddled statement with both the IV and DV present but neither is fully operationalised OR for a clearly stated directional operationalised hypothesis which explicitly refers to different groups of participants.

0 marks for expressions of aim/questions, for correlational/non-directional/null hypotheses or for statements with only the IV or DV or one condition of the IV present.

Accept directional hypothesis expressed in the other direction.

1	5
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Identify **one** extraneous variable that could have affected the results of the follow-up study.

Suggest why it would have been important to control this extraneous variable **and** how the psychologist could have controlled it.

[3 marks]

Marks for this question AO2 = 3

Award marks as follows:

1 mark for a suggestion of an appropriate variable, eg difficulty of the mathematical problems, quality of the sleep gained, environmental conditions (eg room temperature, other distractions in the room etc), boredom/fatigue/practice.

Accept other appropriate suggestions.

1 mark for an explanation of why it should be controlled, eg if the mathematical problems in one condition were easier than those in the other condition then participants would record a quicker time due to the relative difficulty of the mathematical problems and not the amount of sleep they got.

1 mark for a practical description of how it could be controlled, eg the researcher would need to standardise the 20 mathematical problems to ensure they are of similar difficulty and then allocate 10 to each condition.

Note: these three marks should match so that the variable that has been identified is then explained and dealt with providing a coherent response.

1 6

Explain how the psychologist could have used random sampling to select the students in the follow-up study.

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

3 marks for a clear and coherent explanation of how to use random sampling in the follow-up study.

2 marks for an explanation of how to use random sampling in the follow-up study with some clarity and/or coherence.

1 mark for a limited or muddled explanation of how to use random sampling.

Possible content:

- the psychologist would get a complete list/register of all the students who attended the university
- they would add each name to a piece of paper/allocate each name a number
- they would add the names to a large container and draw out 20 pieces of paper/use a computer randomised programme to select 20 numbers
- their participants would be the 20 names on the pieces of paper drawn out/they would convert the 20 numbers back to names and these would be the participants.

1 7

Briefly explain **one** problem with using random sampling in the follow-up study.

[2 marks]**Marks for this question AO2 = 2**

2 marks for a clear explanation of a problem related to the follow-up study.

1 mark for a muddled/limited explanation.

Possible content:

- does not guarantee a representative sample of the student population, eg many might be from similar courses/same gender/the follow-up study only has 20 participants
- may not be able to access a list of university students
- there are large numbers of students at university/some may refuse to take part/some may be hard to contact so it will be more time consuming.

Credit other relevant content.