



A-LEVEL

Psychology Specification A

PSYA1 – Cognitive Psychology, Developmental Psychology and
Research Methods

Mark scheme

Specification 2180
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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 Assessment Writer.

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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Section A Cognitive Psychology and Research Methods

Question 1

Select from the list below the phrase that describes the independent variable and the phrase that describes the dependent variable in this study.

- A** The number of words correctly recalled
- B** The number of words in list A and list B
- C** The number of participants
- D** Presence or absence of music
- E** Type of music used

Write the appropriate letter, **A**, **B**, **C**, **D** or **E** in each box to complete the table below.

[2 marks]

AO3 = 2 marks **Correct identification of variables**

Type of variable	Letter
Independent Variable	D
Dependent Variable	A

0 marks if student writes more than one letter in a box

Question 2 (a)

Describe the multi-store model of memory.

[6 marks]

AO1 = 6 marks **Knowledge and understanding of the MSM**

Atkinson and Shiffrin's (1968) multi-store model of memory (MSM) makes a distinction between the separate stores of sensory, short-term and long-term memory.

Likely features include:

- It is a structural model
- STM and LTM are unitary stores
- Information passes from store to store in a linear way
- Rehearsal is needed to pass information from STM to LTM
- Each store has its own characteristics in terms of encoding, capacity and duration
- Explanations of forgetting are different for each store

Students may include a diagram. If this is accurately labelled and sufficiently detailed this can potentially receive the full 6 marks, as long as the answer includes both components (e.g. STM/LTM) and processes (e.g. rehearsal).

AO1 Knowledge and understanding of the MSM
6 marks - Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of the MSM. There is appropriate selection of material to address the question.
5-4 marks - Less detailed but generally accurate Generally accurate but less detailed answer that demonstrates relevant knowledge and understanding of the MSM. There is some evidence of selection of material to address the question.
3-2 marks - Basic Basic answer that demonstrates some relevant knowledge and understanding but lacks detail and may be muddled. There is little evidence of selection of material to address the question.
1 mark - Very brief and or flawed Very brief or flawed answer that demonstrates very little knowledge Selection of material is largely inappropriate.
0 marks - no creditworthy material

Question 2 (b)

Explain **two** limitations of the multi-store model of memory.

[4 marks]

AO2 = 4 marks Limitations of MSM

Likely limitations include an emphasis on rote rehearsal as a mechanism for transfer from STM to LTM even though this is not a very effective means of transfer, and transfer often occurs with no rehearsal. Students may also refer to case studies, such as that of Clive Wearing who lost episodic but not procedural memory suggesting there may be more than one type of LTM. Reference to the simple nature of STM in the MSM compared to the WMM would also be relevant.

AO2 Explanation of 2 limitations
4 marks - Effective explanation Explanation accurate, reasonably detailed and demonstrates sound knowledge and understanding of 2 limitations of the MSM
3 marks - Reasonable explanation Explanation of 1 limitation of the MSM is accurate, reasonably detailed and demonstrates sound knowledge and understanding Or Explanation of 2 limitations of the MSM is generally accurate, but less detailed and demonstrates reasonable knowledge and understanding.
2 marks - Basic explanation Explanation of 1 limitation of the MSM is generally accurate, but less detailed and demonstrates reasonable knowledge and understanding. Or Explanation of 2 limitations of the MSM demonstrates basic knowledge and understanding.
1 mark - Rudimentary explanation Explanation of 1 or 2 limitations of the MSM demonstrates rudimentary knowledge.
0 Marks - No creditworthy material

Question 3

Marsha was walking to work when she saw a knife attack. The victim was badly injured. Marsha was the only witness to the knife attack.

Explain how a police officer could use **one or more** cognitive interview techniques to find out what Marsha could recall about the attack.

[4 marks]

AO2 = 4 marks Application of knowledge of the Cognitive Interview

Note – There is a breadth/depth trade off here. Accurate answers which apply 1 technique in detail can be awarded full marks, as can answers which apply 4 techniques more briefly.

The main techniques used in the cognitive interview could be:-

- Asking Marsha to mentally recreate an image of the situation, including details of the environment, such as the weather conditions, and her emotional state including how she was feeling at the time of the incident - context reinstatement
- Trying to mentally recreate the situation from different points of view. Although Marsha was the only witness she could be asked to imagine what another witness present at the scene would have seen - recall from a changed perspective.
- Marsha would be asked to describe the attack in a different chronological order eg from the knife attack to when she left her house - recall in reverse order.
- The police officer could encourage Marsha to report all details about the event, even though these details may seem unimportant to her - report everything.

The main additional features of the enhanced cognitive interview are:-

Encourage Marsha to relax and speak slowly

Offer comments to help clarify Marsha's statements

Adapt questions to suit Marsha's understanding

Maximum 2 marks for an answer which has no explicit application to the scenario.

Maximum 1 mark for simply naming one or more cognitive interview techniques.

AO2 Application of knowledge the cognitive interview
4 marks - Effective Explanation demonstrates effective analysis of unfamiliar material. The selection and application of psychological knowledge to the cognitive interview is appropriate and effective. There is explicit reference to the scenario.
3 marks - Reasonable Explanation demonstrates reasonable analysis of unfamiliar material. The selection and application of psychological knowledge to the cognitive interview is mostly appropriate. There is explicit reference to the scenario.
2 marks - Basic Explanation demonstrates basic analysis of unfamiliar material. The selection and application of psychological knowledge to the cognitive interview is sometimes appropriate. There is no explicit reference to the scenario.
1 mark - Very brief/flawed Explanation demonstrates rudimentary analysis of unfamiliar material. The selection and application of psychological knowledge to the cognitive interview is muddled and/or mostly inappropriate. One or more techniques simply named.
0 marks - No creditworthy material

Question 4

Outline **one** research study of the effect of anxiety on eye-witness testimony. In your answer you should include details of what participants were asked to do and the results of the study.

[6 marks]**AO1 = 6 marks Knowledge of one relevant study**

All studies which relate to both **anxiety** and **eyewitness testimony** must be credited. However, laboratory studies where participants watched slides or films of car accidents (eg Loftus and Palmer 1974) were not investigating the effect of anxiety.

In work by Johnson & Scott and Loftus on weapon focus participants were asked to look at 50 photographs and select the one of a man they had seen earlier. Participants who had overheard a low key discussion and saw the man holding a pen with grease on his hands correctly identified him 49% of the time. Participants who heard a hostile discussion and breaking glass and saw the man holding a knife covered in blood correctly identified him 33% of the time.

Loftus and Burns (1982) found participants who watched a violent version of a crime where a boy was shot in the face had impaired recall for events leading up to the accident.

However, in a real life study Yuille and Cutshall (1986) interviewed witnesses and found those who had been most distressed at the time of a shooting gave the most accurate account five months later. Also Christianson and Hubinette (1993) found victims of genuine bank robberies were more accurate in their recall than bystanders.

AO1 Knowledge and Understanding
6 marks - Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of one study of anxiety and EWT including reference to both procedure and findings.
5-4 marks - Less detailed but generally accurate Generally accurate but less detailed answer that demonstrates relevant knowledge and understanding of one study of anxiety and EWT including reference to both procedure and findings.
3-2 marks - Basic Basic answer that demonstrates some relevant knowledge and understanding of procedure and/or findings of one study of anxiety and EWT, but lacks detail and may be muddled
1 mark - Very brief and or flawed Very brief or flawed answer that demonstrates very little knowledge of one study of anxiety and EWT.
0 marks - no creditworthy material

Question 5

Explain **one** possible limitation of research into the effect of anxiety on eye-witness testimony.

[2 marks]

AO2 = 2 marks Explanation of one limitation

The limitation must be appropriate for research into the effect of anxiety on eye-witness testimony. Students may refer to possible ethical issues such as distress or lack of informed consent. Lack of ecological validity in laboratory experiments or lack of control in field research would also be relevant as would the inconsistency of research findings in the area.

1 mark for a very brief or slightly muddled answer, e.g. participants might be distressed or results are inconsistent.

2 marks for accurate elaboration e.g. Participants might be distressed by being shown unpleasant images such as a boy being shot in the face. (2 marks)

Results are inconsistent. Weapon focus studies show identification was worse in the knife condition than the pen condition but victims of a bank robbery showed the best recall. (2 marks)

Question 6

Psychologists have used case studies to investigate processes such as memory. Outline strengths **and/or** limitations of using case studies in psychological research.

[4 marks]

AO3 = 4 marks Knowledge and Understanding of Research Methods

Case studies are based on real life situations so have the advantage of realism. When used to investigate human behaviour they allow situations to be studied which could not be set up deliberately for ethical reasons. Because no two cases are the same they cannot be replicated and the findings cannot be generalised to other people. Merely stating a characteristic of case studies eg in-depth research is not credit worthy.

AO3 Application of knowledge of research methods
4 marks - Effective outline of strengths and/or limitations Outline demonstrates sound outline of at least one strength and / or limitation of using case studies in psychological research.
3 marks - Reasonable outline of strengths and/or limitations Outline demonstrates reasonable outline of at least one strength and / or limitation of using case studies in psychological research.
2 marks - Basic outline of strengths and/or limitations Outline demonstrates basic outline of at least one strength and / or limitation of using case studies in psychological research.
1 mark - Rudimentary outline of strengths and/or limitations Outline demonstrates rudimentary, muddled outline of at least one strength and / or limitation of using case studies in psychological research.
0 Marks - No creditworthy material

Question 7 (a)

Outline an appropriate memory improvement strategy for use in this experiment.

[2 marks]

AO2 = 2 marks Application of knowledge

Any memory strategy that could be used for learning a list of 10 words would be credit-worthy.

- Strategies based on visual imagery such as peg word method. In this case the first word could be associated with bun, the second with shoe etc.
- Narrative chaining would involve making up a story using the words.
- Method of loci would involve mentally placing each of the words in a known location.
- Acronyms or acrostics could be made relevant by using the first letter of each word.

Chunking is not an appropriate strategy for learning a list of words. However, students may use the term “chunking” but outline organisation which is creditworthy.

Simply naming “mnemonic”, narrative chaining, method of loci, etc should not be credited.

1 mark for a very brief/slightly muddled outline e.g. use the words to make up a story.

2 marks for accurate elaboration e.g. imagine each of the words along a well-known route and retrace your steps to cue recall.

Question 7 (b)

Write an appropriate operationalized directional hypothesis for this experiment.

[2 marks]

AO3 = 2 marks Knowledge and understanding of research methods

0 marks for a non-directional hypothesis or a correlational hypothesis

1 mark for a directional hypothesis e.g. condition 1 will be better than condition 2.

2 marks for an appropriate directional hypothesis where both variables are operationalized e.g.

Participants who use a memory improvement strategy will recall more words than participants who do not.

Question 7 (c)

Explain why it would be appropriate to do a pilot study before carrying out this experiment.

[4 marks]

AO3 = 4 marks Knowledge and Understanding of research methods

There is a depth/breadth trade off. Students may cover one point in detail or more than one in less detail. A pilot study could be used to check aspects of the research such as whether participants understand standardised instructions, whether timings are adequate etc. so that changes could be made before the main study. Given the classroom context of the question, saving money is not creditworthy.

AO3 Application of knowledge of research methods
4 marks – Effective explanation Explanation is accurate, reasonably detailed and demonstrates sound knowledge and understanding of why it would be appropriate to use a pilot study in this experiment.
3 marks - Reasonable explanation Explanation is generally accurate but less detailed and demonstrates reasonable knowledge and understanding of why it would be appropriate to use a pilot study in this experiment.
2 marks - Basic evaluation Explanation demonstrates basic knowledge of why it would be appropriate to use a pilot study.
1 mark - Rudimentary evaluation Explanation demonstrates rudimentary knowledge of why it would be appropriate to use a pilot study.
0 Marks - No creditworthy material

Section B Developmental Psychology and Research Methods

Question 8 (a)

What is meant by the term 'secure attachment'?

[2 marks]

AO1 = 2 marks Knowledge of secure attachment

Secure attachment is the optimal form of attachment between an infant and caregiver. It is associated with sensitive caregiving and related to healthy emotional development.

Students may describe behaviours displayed by infants in the strange situation e.g. willing to explore, some stranger anxiety and positive reunion behaviour.

1 mark for a very brief or slightly muddled answer e.g. a strong emotional bond.

2nd mark for accurate elaboration e.g. a strong emotional bond between an infant and caregiver.

Question 8 (b)

Explain **one** strength of using the 'Strange Situation' in attachment research.

[2 marks]

AO2 = 2 marks One strength of using the strange situation in attachment research

The strange situation uses standardised procedures; therefore attachment styles can be reliably compared between different children and across different cultures.

It also means that studies can be reliably replicated.

Credit any appropriate strength.

1 mark for a very brief or slightly muddled answer e.g. it can be used to compare attachment in different cultures.

2nd mark for accurate elaboration e.g. it can be used to compare attachment in different cultures because it uses standardised procedures.

Question 8 (c)

Describe how behaviour in the ‘Strange Situation’ would be different for a child who shows insecure-resistant attachment and a child who shows insecure-avoidant attachment.

[4 marks]**AO2 = 4 marks Description of difference**

- Separation behaviour e.g. insecure-avoidant show little concern when mother leaves, whereas insecure-resistant show intense distress.
- Reunion behaviour e.g. insecure avoidant show little reaction when the mother comes back, whereas insecure resistant may cling to their mother, but show ambivalent behaviour towards her.
- Reaction to stranger e.g. insecure-avoidant reject comfort by stranger or show no concern at presence of stranger, whereas insecure resistant show distress in the presence of stranger.
- Exploration behaviour e.g. insecure-avoidant explore more than insecure resistant.

Students may describe one difference in detail, or more than one in less detail.

In the unlikely event of a student describing differences in the parents’ behaviour, the answer should be marked on its merits.

AO2 Description of difference
4 marks - Effective description Description accurate, reasonably detailed and demonstrates sound knowledge and understanding of how insecure-avoidant behaviour is different from insecure-resistant behaviour.
3 marks - Reasonable description Description is generally accurate but less detailed and demonstrates reasonable knowledge and understanding of how insecure-avoidant behaviour is different from insecure-resistant behaviour.
2 marks - Basic description Description demonstrates basic knowledge of how insecure-avoidant behaviour is different from insecure-resistant behaviour.
1 mark - Rudimentary description Description demonstrates rudimentary knowledge of how insecure-avoidant behaviour is different from insecure-resistant behaviour.
0 Marks - No creditworthy difference

Question 8 (d)

Describe findings from research into cultural variations in attachment.

[4 marks]

AO1 = 4 marks Description of relevant findings

Students may refer to findings from one research study in reasonable detail, or more than one in less detail.

Much of the research has used the strange situation. Van Ijzendoorn and Kroonenberg's meta-analysis found secure attachment was the most common in all cultures studied. The lowest % of secure attachment was shown in China, and the highest in Great Britain. Avoidant attachment was more common in West Germany but rare in Israel and Japan. Variation within cultures was 1.5 times greater than the variation between cultures. Students may also refer to Takahashi who found high levels of resistant attachment in Japanese infants. Research relating to infants raised on Israeli Kibbutzim is also credit-worthy.

AO1 Knowledge of findings of research into cultural variations in attachment
4 marks - Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge of findings of research into cultural variations in attachment. There is appropriate selection of material to address the question
3 marks - Less detailed but generally accurate Generally accurate but less detailed answer that demonstrates relevant knowledge of findings of research into cultural variations in attachment. There is some evidence of selection of material to address the question
2 marks - Basic Basic answer that demonstrates some relevant knowledge of findings of research into cultural variations in attachment. There is little evidence of selection of material to address the question
1 mark - Very brief and/or flawed Very brief or flawed answer that demonstrates very little knowledge of findings of research into cultural variations in attachment. Selection of material is largely inappropriate
0 marks - No creditworthy findings

Question 9 (a)

Explain how the psychologist could obtain a random sample of 10 children from the nursery to take part in her research.

[2 marks]

AO3 = 2 marks Knowledge and understanding of research methods

Put the names of all the children aged from 12 to 18 months who attend the nursery into a container and pull out the number required in an unbiased way.

Give a number to all the children aged from 12 to 18 months who attend the nursery and select the numbers required in an unbiased way by using random number tables or a random number generator on a computer.

0 marks for defining a random sample e.g. every member of the population has an equal chance of being chosen.

1 mark for a very brief or slightly muddled answer e.g. put all the names into a hat or pull ten names out of a hat.

2nd mark for accurate elaboration which includes how the selection would take place.

Question 9 (b)

The psychologist chose to use a random sample rather than a volunteer sample in this study. Give **one** advantage of using a random sample rather than a volunteer sample.

[2 marks]

AO3 = 2 marks Knowledge and understanding of research methods

A random sample is likely to be more representative of the target population than a volunteer sample.

1 mark for a very brief or slightly muddled answer eg a volunteer sample is biased.

2 marks for clear elaboration as above.

Question 9 (c)

'The Strange Situation' is used to investigate attachment between an infant and a parent.

How might a parent show demand characteristics in the 'Strange Situation'?

[2 marks]

AO3 = 2 marks Knowledge and understanding of research methods

In the strange situation the parent might change their behaviour and be more attentive to the child than they normally would.

1 mark for a very brief or slightly muddled answer e.g. a parent might behave differently.

2 marks for accurate elaboration as above.

Question 9 (d)

The British Psychological Society provides ethical guidance on planning, carrying out and reporting research. Explain some of the ethical issues that the psychologist would need to consider in research using the 'Strange Situation'.

[6 marks]

AO3 = 6 marks Knowledge and understanding of research methods

The focus of this question is on explaining ethical issues. However, ways of dealing with these issues could be creditworthy.

Possible ethical issues include

- Distress of the children when separated from their caregiver. This could be dealt with by cutting short the period of separation.
- Distress to the mother caused by being categorised as having an insecure attachment and/or being labelled as an insensitive mother.
- Confidentiality. Parents would not want the identity of their child to be known outside the study. This could be dealt with by not using names and avoiding photographs which might identify the children.
- Deception. Parents might not know the full implications of taking part in this study. They may know the child is being observed. They may not realise that their relationship with their child is being assessed.
- Right to withdraw at any time. This will include removing a distressed child during the study or the removal of data after the study has been completed.
- Debriefing. The psychologist would need to plan what information to include in the debrief.

Credit all relevant ethical issues.

AO3 Knowledge and understanding of research methods
6 marks - Effective explanation Explanation is accurate, reasonably detailed and demonstrates sound knowledge and understanding of at least two possible ethical issues
5 - 4 marks - Reasonable explanation Explanation is generally accurate but less detailed and demonstrates reasonable knowledge and understanding of at least two possible ethical issues
3 - 2 marks - Basic explanation Explanation demonstrates basic knowledge of two or more possible ethical issues or reasonable knowledge of one.
1 mark - Rudimentary explanation Explanation demonstrates rudimentary knowledge of two or more possible ethical issues or basic knowledge of one.
0 Marks - No creditworthy material

Question 10

Outline **and** evaluate Bowlby's theory of attachment.

[12 marks]

AO1 = 6 marks

Outline of Bowlby's theory of attachment

AO2 = 6 marks

Evaluation of Bowlby's theory of attachment

AO1

Bowlby's theory of attachment suggests attachment is important for a child's survival. Attachment behaviours in both babies and their caregivers have evolved through natural selection. Infants are innately programmed to form an attachment. This is a biological process and takes place during a critical period. The role of social releasers, such as crying and smiling, is emphasised. The child's relationship with a PCG provides an internal working model which influences later relationships. This concept of monotropy suggests that there is one relationship which is more important than all the rest.

AO2

Evaluation of Bowlby's explanation could relate to criticisms of the critical period (later changed to sensitive period) and monotropy (e.g. Schaffer & Emerson's research on multiple attachments). Students might refer to imprinting and the problems of generalising from birds to humans. Positive references to the influential nature of Bowlby's work would be relevant, eg Hazan & Shaver's support for the continuity hypothesis. Practical applications in the care of young children eg a decline in institutional care is also creditworthy.

AO1 - Knowledge and understanding	AO2 - Evaluation/Commentary
<p>6 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of Bowlby's theory of attachment. There is appropriate selection of material to address the question.</p>	<p>6 marks Effective Evaluation/Commentary Commentary/evaluation demonstrates sound analysis and effective use of a range of material to evaluate Bowlby's theory. Broad range of issues and/or evidence in reasonable depth, or a narrower range in greater depth. Clear expression of ideas, good range of specialist terms, few errors of grammar, punctuation and spelling.</p>
<p>5-4 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant knowledge and understanding of Bowlby's theory of attachment. There is some evidence of selection of material to address the question.</p>	<p>5-4 marks Reasonable evaluation Commentary/evaluation demonstrates reasonable analysis and use of material to evaluate Bowlby's theory A range of issues and/or evidence in limited depth, or a narrower range in greater depth. Reasonable expression of ideas, a range of specialist terms, some errors of grammar, punctuation and spelling.</p>

<p>3-2 marks - Basic Basic answer that demonstrates some relevant knowledge and understanding of Bowlby's theory of attachment, but lacks detail and may be muddled. There is little evidence of selection of material to address the question.</p>	<p>3-2 marks Basic evaluation Commentary/evaluation demonstrates basic analysis and superficial evaluation of Bowlby's theory. Superficial consideration of a restricted range of issues and/or evidence. Expression of ideas lacks clarity; some specialist terms used; errors of grammar, punctuation and spelling detract from clarity.</p>
<p>1 mark - Very brief and/or flawed Very brief or flawed description that demonstrates very little knowledge of Bowlby's theory of attachment. Selection of information is largely inappropriate.</p>	<p>1 mark Rudimentary evaluation Commentary/evaluation demonstrates rudimentary, muddled analysis and/or evaluation of Bowlby's theory. Expression of ideas poor; few specialist terms used; errors of grammar, punctuation and spelling often obscure the meaning.</p>
<p>0 marks - No creditworthy material</p>	<p>0 marks - No creditworthy material</p>

Assessment Objectives

QUESTION	AO1 MARK	AO2 MARK	AO3 MARK
1			2
2a	6		
2b		4	
3		4	
4	6		
5		2	
6			4
7a		2	
7b			2
7c			4
Cognitive Totals	12	12	12

8a	2		
8b		2	
8c		4	
8d	4		
9a			2
9b			2
9c			2
9d			6
10	6	6	
Developmental and Research Totals	12	12	12
Totals	24	24	24