



**General Certificate of Education**

**Psychology 1181**

*Specification A*

**Unit 1 (PSYA1) Cognitive Psychology,  
Developmental Psychology  
and Research Methods**

**Mark Scheme**

*2010 series - June examination*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

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## SECTION A: COGNITIVE PSYCHOLOGY AND RESEARCH METHODS

**Question 1****AO1 = 3 marks      Correct labelling**

- A      Sensory memory
- B      Long-term memory
- C      Rehearsal loop

1 mark for each correct answer.

**Question 2****AO1 = 5 marks      Appropriate description of strategies for memory improvement.**

Candidates may select strategies based on visual imagery such as method of loci or peg word method; those based on organisation such as creating hierarchies or mind maps; acronyms eg ROYGBIV to remember colours of the rainbow or acrostics eg My Very Easy Method Just Speeds Up Naming Planets to remember the order of planets; deep processing, chunking, rehearsal etc.

Context and state dependent recall could be credit-worthy as long as the candidate makes their answer relevant to memory improvement. The cognitive interview could be used.

Any strategy which could lead to memory improvement in short or long term memory should be credited.

Candidates who describe only one memory strategy cannot access the top band.

Simply naming one or more relevant strategies will be awarded a maximum of one mark.

The word mnemonic is not creditworthy.

<b>AO1 Knowledge and understanding</b>
<b>5 marks Accurate and reasonably detailed</b> Accurate and reasonably detailed answer that demonstrates relevant knowledge and understanding of two or more memory improvement strategies.
<b>4 – 3 marks Less detailed but generally accurate</b> Less detailed but generally accurate answer that demonstrates relevant knowledge and understanding of one or more memory improvement strategies.
<b>2 marks Basic</b> Basic answer that demonstrates some relevant knowledge but lacks detail and may be muddled.
<b>1 mark Very brief/flawed</b> Very brief or flawed answer demonstrating very little knowledge.
<b>0 marks</b> No creditworthy material.

**Question 3 a****AO3 = 2 marks      Appropriate non directional hypothesis**

0 marks for a directional hypothesis.

1 mark if not operationalised, eg "Age affects memory." "There will be a difference between the two conditions."

2 marks for eg "There will be a difference in how many numbers are correctly recalled by children and adults." "Children and adults have different short-term memory spans. "Or "The capacity of short-term memory is different for adults and children.

Candidates may write a hypothesis where the IV is how many numbers are in the list and the DV is the number of participants who can recall that digit span.

Eg As numbers in the list increase, recall changes. 1 mark

As the number of random numbers in the list increases, the number of participants recalling the list correctly, changes. 2 marks

**Question 3 b****AO3 = 2 marks      Appropriate explanation.**

The experiment uses adults in one condition and children in the other so it would be impossible to use a repeated design unless the researchers waited for the children to grow into adults.

Given the nature of this experiment, demand characteristics and order effects are inappropriate.

1 mark for a brief explanation. A further mark for elaboration. Eg Can compare the two different groups to see who is better. 0 marks (because this relates to all experimental designs).

They needed to have different people in each condition. 1 mark

They needed to have different people in each condition based on age. 2 marks

They needed to have children in one group and adults in the other. 2 marks

**Question 3 c****AO3 = 2 marks      Identification of modes**

Children      6

Adults      7

1 mark for each correct answer.

**Question 3 d****AO3 = 3 marks      Interpretation of graph**

The frequency distribution shows that there is a difference in results between the two age groups. Adults recalled more digits than children. However, the difference is small and some children recalled more digits than some adults. Candidates might refer to the modal scores being different while the range is the same.

Any credit worthy material should be credited.

1 mark for a very brief answer eg identifying there is a difference between adults and children and/or adults score more than children. Further marks for more detail as above.

**Question 3 e****AO2 = 2 marks      Application of knowledge to a novel situation**

Other research has suggested the capacity of short-term memory is  $7 \pm 2$ . The results do support this as the range is from 5 – 9.

1 mark for a brief or muddled explanation eg capacity is 5 – 9/other research has similar findings.

2<sup>nd</sup> mark for elaboration as above.

Candidates will be credited for reference to research such as Jacobs which found STM increases with age. However, reference to such research is not a requirement.

**Question 4****AO1 = 4 marks      Outline of method**

It is likely that candidates will refer to the experiment by Peterson and Peterson (1959). They presented participants with a consonant trigram. Although Peterson and Peterson is the most likely study, answers need not refer to an identifiable study to receive credit. Rehearsal was prevented by asking them to count backwards in threes from a specified number. After intervals of 3, 6, 9, 12, 15 or 18 seconds participants were asked to stop counting and to repeat the trigram. The % of trigrams correctly recalled was recorded for each time interval.

Duration has also been investigated in a similar way using single words or sets of words.

Research relating to word length effect in the phonological loop would be creditworthy. Any acceptable way of investigating duration of STM should be credited.

1 mark for a brief answer, eg reference to trigrams in a duration study.

3 further marks for elaboration.

For full marks all three elements should be covered.

**Question 5 a****AO2 = 4 marks      Application of knowledge to a novel situation.**

The main techniques used in the cognitive interview are summarised below.

*Context reinstatement* - trying to mentally recreate an image of the situation, including details of the environment, such as the weather conditions and the individual's emotional state including their feelings at the time of the incident.

*Recall from changed perspective* – trying to mentally recreate the situation from different points of view eg describing what another witness present at the scene would have seen.

*Recall in reverse order* – the witness is asked to recall the scene in a different chronological order eg from the end to the beginning.

*Report everything* – the interviewer encourages the witness to report all details about the event, even though these details may seem to be unimportant.

1 mark for naming one relevant technique.

2 marks for naming two or more relevant techniques or for a very brief outline of how one technique could be used.

Further marks for elaboration. Candidates who refer to only one technique should include more detail than those who refer to more than one.

3 or 4 marks can be awarded if the outline could relate to this event.

**Question 5 b****AO2 = 6 marks      Application of knowledge to a novel situation.**

Candidates must refer to research where the anxiety component is clear.

Candidates might refer to the Yerkes-Dodson law which suggests moderate anxiety is associated with better recall than very high or very low anxiety. In this case friends and relatives might show worse recall than other people in the crowd.

Laboratory based research has generally shown impaired recall in high anxiety conditions. In Loftus's (1979) weapon focus experiment more participants correctly identified a person when they were holding a pen (49%) than when they were holding a knife covered in blood (33%). Loftus and Burns (1982) found participants who saw a violent version of a crime where a boy was shot in the face had impaired recall for events leading up to the incident.

However, in a real life study Yuille and Cutshell (1986) found witnesses 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.

There is a range of acceptable answers to this question and marks should be given for effective use of the material.

Answers which do not make explicit reference to this event should be awarded a maximum of 4 marks.

**6 marks Effective explanation**

Accurate and reasonably detailed explanation of how anxiety might affect eye-witness testimony of this event that demonstrates sound knowledge and understanding of relevant research.

**5 - 4 marks Less detailed but generally accurate**

Less detailed but generally accurate explanation of how anxiety might affect eye-witness testimony of this event that demonstrates knowledge and understanding of relevant research.

**3 - 2 marks Basic**

Basic explanation of how anxiety might affect eye-witness testimony of this event has that demonstrates some knowledge of relevant research but detail may be muddled.

**1 mark Very brief/flawed**

Very brief or flawed explanation of how anxiety might affect eye-witness testimony of this event has that demonstrates very little knowledge of relevant research.

**0 marks**

No creditworthy information

**Question 5 c****AO3 = 3 marks      Application of validity**

Candidates are likely to refer to the fact that in real life settings research has high validity because the findings can be generalised to other similar situations. It is therefore more likely to be relevant eg to eyewitness testimony in court cases. There are often real consequences/emotional impact in real life which do not occur in laboratory investigations.

In a laboratory participants may show demand characteristics because they know they are in an experiment. This is less likely in real world settings.

Answers which refer to advantages of laboratory research or disadvantages of real world research are not relevant and should not receive credit.

1 mark for a brief explanation eg higher ecological validity.

Further marks for some elaboration as above.

## SECTION B – DEVELOPMENTAL PSYCHOLOGY AND RESEARCH METHODS

### Question 6 a

#### **AO1 = 2 marks      Knowledge of characteristics of insecure attachment**

Candidates may refer to different types of insecure attachment, but this is not necessary. Answers may focus on the infants' exploration behaviour, behaviour towards a stranger or behaviour when re-united with their mother.

Eg

- Insecurely attached infants ignore their mother. (1 mark)
- Doesn't pay much attention to their mother when she returns to them. (1 mark)
- Avoidant (1 mark)
- Resistant (1 mark)
- Ambivalent (1 mark)

Characteristics which could relate to insecure attachment should be credited even if they are contradictory. Eg cries a lot when left, 1 mark; doesn't cry when left, 1 mark.

### Question 6 b

#### **AO3 = 3 marks      Identification of method and outline of disadvantage**

This is a volunteer/self-selected/voluntary sample.

Only people who read this newspaper could take part. The participants have chosen to take part, so it is a biased sample. Findings cannot be generalised to a wider population.

Volunteer sample or self-selected sample    1 mark

Candidates can receive credit for a correct outline of a relevant disadvantage of volunteer sampling even if they have not identified the correct sampling method.

1 mark for a brief disadvantage. Eg It is biased.

2<sup>nd</sup> mark for some elaboration eg It is a biased because only some people who read the newspaper respond and they may not be typical of all readers.

### Question 6 c

#### **AO3 = 3 marks      Identification of relevant ethical issue and a way of dealing with it**

Any relevant issue should be credited.

Likely ethical issues include informed consent, right to withdraw or confidentiality.

1 mark for identification of a relevant ethical issue

1 mark for a brief mention of a way of dealing with an ethical issue. Further mark for elaboration.

Eg Confidentiality (1 mark) Keep the participants details private. (1 mark) The psychologists should not use the participant's names in published work, or allow them to be identified in any way. (2 marks)

**Question 6 d**

**AO3 = 4 marks**

For each advantage and disadvantage 1 mark for stating an advantage/disadvantage. 2<sup>nd</sup> mark for clear elaboration. Eg an advantage of using a questionnaire is that the data is easier to analyse. 1 mark

Eg An advantage of using a questionnaire is that it is more likely to produce quantitative data which is easier to analyse. 2 marks

Candidates may refer to this study, but this is not necessary.

**Question 7 a**

**AO3 = 2 marks**

**Advantage of observation**

Credit advantages of different types of observation (eg covert) even if this is not explicit in the answer.

The researcher is able to look at the way people really behave. If people are unaware they are being watched they will not be susceptible to demand characteristics.

1 mark for brief reference to an advantage eg it's real behaviour.

2<sup>nd</sup> mark for some accurate/effective elaboration. Eg it looks at real behaviour rather than what people say they would do.

**Question 7 b**

**AO1 = 4 marks**

**Outline of what relevant research has shown**

Candidates may refer to one research study in reasonable detail, or more than one in less detail. Answers should focus on what the research has shown.

Van Ijzendoorn and Kroonenberg found secure attachments were the most common in all cultures studied. The lowest % of secure attachments 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.

Candidates may also refer to Takahashi who found high levels of resistant attachment in Japanese infants or to research relating to infants raised on Israeli kibbutzim. Reference to individualistic or collectivist cultures could also be relevant.

Accept any relevant research.

1 mark for brief reference to what research has shown eg secure attachment is most common in all cultures.

Further marks for elaboration.

**Question 8 a**

**AO2 = 2 marks**

**Identification of forms of day care**

Nursery, childminder, nanny, crèche, playgroup, au pair, play school, pre-school.

As Ali requires full-time care a playgroup would not be suitable on its own. However, it could be combined with another form of day care so should be credited.

Grandparents, babysitter, children's centre, public care, private care. 0 marks

1 mark for each appropriate form of day care.



**Question 8 b****AO2 = 4 marks      Application of knowledge to novel situation**

Candidates may refer to the importance of an attachment figure. This might be provided in a home-based setting by a nanny or childminder, or in a nursery setting by a key worker. Some research has suggested day care can have a positive effect on children's social development but some has linked day care with aggressive behaviour. The quality of care provided is an important factor and candidates may suggest looking for well qualified staff, high adult child ratio etc.

1 mark for a brief answer eg look for high quality care.

3 further marks for elaboration as above.

**Question 9****AO1 = 6 marks      Description of relevant research****AO2 = 6 marks      Commentary on and evaluation of the research**

Candidates may refer to research studies in this question. Any relevant research can be credited, but it must relate to the effects of institutional care. Koluchova's study of the twins and Curtis's study of Genie are not relevant.

Hodges and Tizard studied 65 children brought up in a children's home until they were around four years old. Almost all of the adopted children and some of the restored children formed close attachments to their parents, but they had difficulties with peer relationships and were more attention seeking than controls.

Rutter studied Romanian children who had been placed in institutions before being adopted by UK families. Children who spent longer in the institutions were more likely to show long term effects.

Other research such as Spitz, Goldfarb, Robertson or Freud and Dann would also be relevant. Candidates might refer to Bowlby's work such as maternal deprivation hypothesis or the internal working model but this would need to relate to the effects of institutionalisation. Such research could be credited as AO1 or AO2, according to how it is used by the candidate.

Commentary may include reference to the quality of care provided in the institution, or the effect such research has had on child care practice. Evaluation may refer to methodology. There is lack of control in all of the research as naturally occurring situations are used. Some children may have been placed in an institution because they had some pre-existing problems.

<b>A01</b> <b>Knowledge and understanding</b>	<b>A02</b> <b>Application of knowledge and understanding</b>
<p><b>6 marks Accurate and reasonably detailed</b> Accurate and reasonably detailed description that demonstrates sound knowledge and understanding. There is appropriate selection of material to address the question. Presentation of information is clear and coherent.</p>	<p><b>6 marks Effective evaluation</b> Effective use of material to address the question and provide informed commentary. Effective evaluation of research. 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><b>5-4 marks Less detailed but generally accurate</b> Less detailed but generally accurate description that demonstrates relevant knowledge and understanding. There is some evidence of selection of material to address the question. Information is presented in an appropriate form.</p>	<p><b>5-4 marks Reasonable evaluation</b> Material is not always used effectively but produces a reasonable commentary. Reasonable evaluation of research. 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><b>3-2 marks Basic</b> Basic description 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. Information is not presented in an appropriate form.</p>	<p><b>3-2 marks Basic evaluation</b> The use of material provides only a basic commentary. Basic evaluation of research. 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><b>1 mark Very brief/flawed</b> Very brief or flawed description that demonstrates very little knowledge or understanding of research. Selection and presentation of information is largely or wholly inappropriate.</p>	<p><b>1 mark Rudimentary evaluation</b> The use of material provides only a rudimentary commentary. Evaluation of research is just discernible or absent. Expression of ideas poor, few specialist terms used, errors of grammar, punctuation and spelling often obscure the meaning.</p>
<p><b>0 marks</b> No creditworthy material presented.</p>	<p><b>0 marks</b> No creditworthy material presented.</p>

**ASSESSMENT OBJECTIVES**

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

6a	2		
6b			3
6c			3
6d			4
7a			2
7b	4		
8a		2	
8b		4	
9	6	6	
Developmental and Research Totals	12	12	12
Totals	24	24	24