

Version 1



**General Certificate of Education (A-level)  
January 2013**

**Psychology A**

**PSYA1**

**(Specification 2180)**

**Unit 1: Cognitive Psychology, Developmental  
Psychology and Research Methods**

**Final**

***Mark Scheme***

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 events which all examiners 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 examiner understands and applies it in the same correct way. As preparation for standardisation each examiner 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, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal 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.

Further copies of this Mark Scheme are available from: [aqa.org.uk](http://aqa.org.uk)

Copyright © 2013 AQA and its licensors. All rights reserved.

**Copyright**

AQA retains the copyright on all its publications. However, registered schools/colleges for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to schools/colleges to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

## Section A - Cognitive Psychology and Research Methods

### Question 1 (a)

**AO1 = 2 marks      Knowledge of encoding in memory**

Encoding is the way in which information is stored/put into/processed into memory, eg acoustic, visual, semantic.

1 mark for a very brief explanation (eg how it's stored, or changing its form) or an example (eg acoustic encoding)

2 marks for a brief explanation and an example as above, or for accurate elaboration, eg when information is changed into a form which can be stored.

### Question 1 (b)

**AO2 = 2 marks      Outline of difference**

The capacity of LTM is much larger than STM. (1 mark)

Unlimited capacity in LTM, 7+/- 2 items in STM. (2 marks)

For full marks there must be accurate reference to the capacity of STM, but this may refer to chunks.

### Question 2 (a)

**AO1 = 6 marks      Outline of components**

The central executive has a supervisory function and controls the slave systems. It has limited capacity but can process information from any sensory modality.

The phonological loop is a limited capacity, temporary storage system for holding verbal information in a speech based form.

The visuo-spatial sketchpad is a limited capacity, temporary memory system for holding visual and spatial information.

In each case 1 mark for a brief answer eg the visuo-spatial sketchpad holds visual and spatial information. 2nd mark for accurate elaboration or an example of how it might be used.

Within each component award a maximum of 1 mark for simply naming 1 or more parts eg phonological store (inner ear), articulatory process (inner voice) in the phonological loop, or inner scribe, visual cache in the visuo-spatial sketchpad.

### Question 2 (b)

**AO2 = 3 marks      Application of knowledge**

Participants would find it hard to do two visual tasks at the same time because they would be competing for the same limited resources of the visuo-spatial sketchpad. However, a visual task and a verbal task would use different components.

1 mark for a very brief or slightly muddled explanation eg both visual tasks use the visuo-spatial sketchpad. Further marks for accurate elaboration. For full marks students must refer to both conditions.

### Question 3 (a)

**AO3 = 1 mark                      Knowledge and understanding of research methods**

Volunteer/volunteering or self-selected/self-selecting sample. 1 mark  
Voluntary 0 marks

### Question 3(b)

**AO3 = 2 marks                      Knowledge and understanding of volunteer sampling technique**

A limitation of a volunteer sample is that it is biased/not representative (1 mark) because some people are more likely to volunteer than others (1 mark) or the findings cannot be generalised to a population (1 mark).

1 mark for a very brief or slightly muddled explanation eg it is biased. 2nd mark for accurate elaboration. For 2 marks the answer must relate explicitly to volunteer sampling.

### Question 3 (c)

**AO3 = 2 marks                      Knowledge and understanding of research methods**

IV     The interview, type of interview, method of interview, 'standard interview or/and cognitive interview', whether or not cognitive interview.  
DV     Number of items recalled, recall, what they remembered.

### Question 3 (d)

**AO3 = 2 marks                      Explanation of an advantage**

There is better control because the same film can be used in both conditions. The participants are less likely to show demand characteristics because they take part in only one condition. There are no order effects such as practice or fatigue, because participants take part in one condition. 1 mark for very brief or slightly muddled advantage. 2nd mark for accurate elaboration.

0 marks for simply stating there are different participants in each condition or takes less time.

### Question 3 (e)

**AO3 = 3 marks                      Discussion of whether or not the Psychologist showed awareness of code of ethics when recruiting participants.**

The question asks about recruiting participants, so answers referring to debriefing are not relevant.

There was no deception. Participants knew they would be watching a film of a violent crime and that they would be interviewed about the content by a male police officer before they volunteered. This gave them the opportunity to give informed consent.

Students may argue that the psychologist did not follow BPS guidelines eg because they were not told of their right to withdraw.

1 mark for a very brief or slightly muddled answer, linking a relevant ethical issue to whether or not awareness was shown. Further marks for accurate elaboration/discussion.

Eg He told them what he was going to do. (1 mark) They could give informed consent because he told them what he was going to do. (2 marks) The participants were told that they would be watching a violent crime so they were able to give informed consent. (3 marks)

### Question 3 (f)

**AO2 = 3 marks**      **Application of knowledge to novel situation**

The answer must clearly relate to one or more of the main techniques used in a cognitive interview (other than report everything):-

Context reinstatement  
Recall from a changed perspective  
Recall in reverse order

Some of the main additional features of the enhanced cognitive interview could be relevant, as long as it could be explained to the participant: – eg Encourage to relax

1 mark for identification of a relevant cognitive technique.

1 mark for very brief statement eg “tell me what you saw in reverse order”.

Second mark for appropriate elaboration eg “Tell me what you saw on the film in a different order to how it actually happened.” If instructions are not suitable to be read out maximum

1 mark for this part.

For 3 marks technique and instructions must match.

### Question 3 (g)

**AO3 = 2 marks**      **Knowledge and understanding of research methods**

The researcher might conclude that the cognitive interview was effective because more correct items were recalled, but it did not affect the number of incorrect items recalled.

0 mark - the cognitive interview was effective with no explanation.

1 mark - it was effective because there were more correct items recalled or it was not effective because the number of incorrect items stayed the same.

2 marks - it was effective because there were more correct items recalled **and** the number of incorrect items stayed the same/didn't increase

1 mark for stating there were more correct items recalled with the cognitive interview than with the standard interview **and** the number of incorrect items recalled was the same. (There is no reference to effectiveness).

#### **Question 4**

**AO1 = 4 marks**

**Outline of research into the effects of misleading information on EWT**

**AO2 = 4 marks**

**Evaluation of research into the effects of misleading information on EWT**

Students must select research which relates to misleading information, so research into weapon focus should not be credited.

Students are likely to refer to Loftus and Palmer's (1974) experiment where the verb in the critical question was changed (smashed, collided, bumped, hit or contacted.) Other relevant research would be Loftus and Palmer asking participants "Did you see any broken glass?" and Loftus et al's (1978) study using a red Datsun and Stop or Yield signs.

Research into anxiety and EWT is not relevant unless the student refers to leading questions such as Yuille and Cutshall where the witnesses to a real-life shooting appeared resistant to leading questions.

Research relating to age in relation to misleading information could also be relevant. Eg Warren et al (2005) found children were more likely to be influenced by leading questions than adults.

Credit any relevant research, studies and/or theories.

Evaluation might refer to lack of ecological validity in laboratory studies or lack of control in real life situations. Other methodological issues including sampling, possible replication and corroboration with other studies could be included. Ethical issues could be relevant as could practical applications of the research.

Examiners are reminded this is an 8 mark question. Students can focus on one study in reasonable detail or more than one study in less detail.

<b>AO1</b> <b>Knowledge and understanding</b>	<b>AO2</b> <b>Evaluation/commentary</b>
<p><b>4 marks Accurate and reasonably detailed</b>                      Accurate and reasonably detailed description that demonstrates sound knowledge and understanding of research into misleading information.                      There is appropriate selection of material to address the question</p>	<p><b>4 marks Effective commentary/evaluation</b>                      Effective use of material to address the question and provide informed commentary/evaluation.                      Broad range of issues in reasonable depth or a narrower range in greater depth.</p>
<p><b>3 marks Less detailed but generally accurate</b>                      Less detailed but generally accurate answer that demonstrates relevant knowledge and understanding of research into misleading information.                      There is some evidence of selection of material to address the question</p>	<p><b>3 marks Reasonable commentary/evaluation</b>                      Material is not always used effectively but produces a reasonable commentary/evaluation.                      A range of issues in limited depth, or a narrower range in greater depth.</p>
<p><b>2 marks Basic</b>                      Basic answer that demonstrates some relevant knowledge and understanding of research into misleading information, but lacks detail and may be muddled.                      There is little evidence of selection of material to address the question</p>	<p><b>2 marks Basic commentary/evaluation</b>                      The use of material provides only basic commentary/evaluation demonstrates basic analysis. Superficial consideration of a restricted range of issues.</p>
<p><b>1 mark Very brief and or flawed</b>                      Very brief or flawed answer that demonstrates very little knowledge of research into misleading information.                      Selection of material is largely inappropriate.</p>	<p><b>1 mark Rudimentary commentary/evaluation</b>                      The use of material provides only a rudimentary commentary. Evaluation of research is just discernible or absent.</p>
<p><b>0 marks</b>                      no creditworthy material</p>	<p><b>0 marks</b>                      No creditworthy material</p>

## Section B - Developmental Psychology and Research Methods

### Question 5 (a)

#### AO3 = 4 marks Knowledge and understanding of content analysis

Content analysis is a way of analysing data such as text using coding units such as themes. In this case mothers were asked to write down how their child behaved, so students might suggest.

- Create a checklist/categories
- Relevant example(s) of behaviours eg aggression, crying
- Read through the diaries/mothers' writing/reports
- Counting behaviours or tallying
- Compare before and after day care

Any 1 of these equals 1 mark

Any 2 of these equals 2 marks

For 3 marks any 3 components but must refer to reading diaries/mothers' writing/reports.

For 4 marks any 4 components but must refer to reading diaries/mothers' writing/reports.

ie Max 2 marks if there is no reference to reading diaries.

<b>AO3 Knowledge and understanding of content analysis</b>
<b>4 marks Effective explanation</b> Explanation is accurate, reasonably detailed and demonstrates sound knowledge and understanding of how content analysis could be used. Includes reference to both coding/categorizing and counting.
<b>3 marks Reasonable explanation</b> Explanation is generally accurate but less detailed and demonstrates reasonable knowledge and understanding of how content analysis could be used
<b>2 marks Basic explanation</b> Explanation demonstrates basic knowledge of how content analysis could be used
<b>1 mark Rudimentary explanation</b> Explanation demonstrates rudimentary knowledge of how content analysis could be used
<b>0 Marks</b> No creditworthy material

### Question 5 (b)

#### AO3 = 4 marks Knowledge and understanding of limitations of this investigation

Credit all possible limitations of this investigation such as mothers not having time to write much, or to problems in the analysis such as difficulties deciding on appropriate categories. Other limitations could be demand characteristics, mothers dropping out of the study, bias in recording, lack of control of time spent in day care, nine-month-olds not representative of all young children etc. Also ethical issues such as maintaining confidentiality could be made relevant.

Students may explain one limitation in detail, or more than one in less detail.

<b>A03 Knowledge and understanding of limitations of this investigation</b>
<b>4 marks Effective explanation</b> Explanation is accurate, reasonably detailed and demonstrates sound knowledge and understanding of one or more limitations of this investigation.
<b>3 marks Reasonable explanation</b> Explanation is generally accurate but less detailed and demonstrates reasonable knowledge and understanding of one or more limitations of this investigation.
<b>2 marks Basic explanation</b> Explanation demonstrates basic knowledge of one or more limitations of this investigation.
<b>1 mark Rudimentary explanation</b> Explanation demonstrates rudimentary knowledge of one or more limitations of this investigation.
<b>0 Marks</b> No creditworthy material

**Question 5 (c)**

**AO2 = 2 marks      Application of knowledge**

High-quality day care for nine-month-olds would include appropriate caregiver/children ratio, key worker, appropriate staff training, low staff turnover.

1 mark for naming an appropriate characteristic. 2nd mark for relevant elaboration.

**Question 6 (a)**

**AO2 = 4 marks      Explanation of difference**

Separation behaviour – insecure avoidant seem unconcerned when mother leaves, whereas insecure resistant show intense distress.

Reunion behaviour – insecure avoidant show little reaction when the mother comes back, whereas insecure resistant may cling to their mother, but show ambivalent behaviour towards her.

Other relevant differences are creditworthy.

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

<b>AO2 Explanation of difference</b>
<b>4 marks Effective explanation</b> Explanation accurate, reasonably detailed and demonstrates sound knowledge and understanding of how insecure avoidant is different from insecure resistant.
<b>3 marks Reasonable explanation</b> Explanation is generally accurate but less detailed demonstrates reasonable knowledge and understanding of how insecure avoidant is different from insecure resistant.
<b>2 marks Basic explanation</b> Explanation demonstrates basic knowledge of how insecure avoidant is different from insecure resistant.
<b>1 mark Rudimentary explanation</b> Explanation demonstrates rudimentary knowledge of how insecure avoidant is different from insecure resistant.
<b>0 Marks</b> No creditworthy material or only one attachment type is described

**Question 6 (b)**

**AO3 = 4 marks**

**Knowledge and understanding of research methods**

There are a number of ways in which the strange situation could be evaluated. Children may show characteristics of insecure attachment because they are used to being separated from their mother eg in day care.

The strange situation bases attachment on observation of the relationship between the infant and one caregiver, ignoring other possible attachment figures.

There may be ethical issues in putting children into a stressful situation, although the episodes can be cut short.

The procedure and categories were based on one culture, there may be limitations in using it in cultures where children are treated differently.

Students can point out the difficulties of generating attachment types from the strange situation. Disorganised attachment was added later.

Ecological validity would also be relevant. The study was carried out in controlled conditions and might not be generalised to other situations. The child's behavior when observed may be atypical for various reasons.

Positive criticisms, eg control of room, timings etc would also be relevant.

Students may cover one of these in detail, or more than one in less detail.

<b>AO3 Knowledge and understanding of research methods</b>
<b>4 marks Effective evaluation</b> Sound analysis and effective use of material to evaluate use of the strange situation to investigate type of attachment
<b>3 marks Reasonable/evaluation</b> Reasonable analysis and use of material to evaluate use of the strange situation to investigate type of attachment.
<b>2 marks Basic/evaluation</b> Basic analysis and superficial evaluation of use of the strange situation to investigate type of attachment.
<b>1 mark Rudimentary/evaluation</b> Rudimentary, muddled analysis and or evaluation use of the strange situation to investigate type of attachment.
<b>0 Marks</b> No creditworthy material

**Question 6 (c)**

**AO1 = 6 marks**

**Knowledge and understanding of one of more studies into cultural variations in attachment**

Students may refer to one study in reasonable detail, or more than one in less detail. They may cover methodology, findings and/or conclusions.

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.

Students who report research where infants still attach to their mothers despite receiving care from others eg infants raised on Israeli Kibbutzim can receive full credit.

<b>AO1 Knowledge and understanding of one or more studies into cultural variations in attachment</b>
<b>6 marks Accurate and reasonably detailed</b> Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of one or more studies into cultural variations in attachment. There is appropriate selection of material to address the question
<b>5 - 4 marks Less detailed but generally accurate</b> Generally accurate but less detailed answer that demonstrates relevant knowledge and understanding of one or more studies into cultural variations in attachment. There is some evidence of selection of material to address the question
<b>3 - 2 marks Basic</b> Basic answer that demonstrates some relevant knowledge and understanding of one or more studies into cultural variations in attachment but lacks detail and may be muddled There is little evidence of selection of material to address the question
<b>1 mark Very brief and or flawed</b> Very brief or flawed answer that demonstrates very little knowledge of one or more studies into cultural variations in attachment. Selection of material is largely inappropriate
<b>0 marks</b> No creditworthy material

### Question 7

**AO1 = 6 marks**

**AO2 = 6 marks**

**Outline of research into the effects of failure to form attachment**

**Evaluation of research into the effects of failure to form attachment**

Students are likely to describe cases of isolated children such as the Czech twins or Genie. Relevant studies of institutional care include Hodges and Tizard's longitudinal study of 65 British children from early life to adolescence and Rutter's study of Romanian orphans adopted by British families. Earlier research such as Skodak & Skeels or Spitz & Wolf may also be cited.

Animal research, such as that of Harlow's monkeys, is creditworthy as long as it refers to the effects of failure to form attachment.

Students may evaluate research in terms of methodology, eg strengths & weaknesses of case studies or longitudinal research. Commentary may refer to the fact that the effects of privation may depend on a number of factors including age of child and quality of later care. Practical implications such as how this research has influenced child care practice would also be relevant.

Students who refer to animal research may consider how far the findings can be generalised to humans.

Answers which focus on John (Robertsons' research) are not credit worthy because they refer to disruption not privation.

<b>AO1</b> <b>Knowledge and understanding</b>	<b>AO2</b> <b>Evaluation/Commentary</b>
<p><b>6 marks Accurate and reasonably detailed</b> Accurate and reasonably detailed description that demonstrates sound knowledge and understanding of research into the effects of failure to form attachment. There is appropriate selection of material to address the question.</p>	<p><b>6 marks Effective evaluation</b> Effective use of material to address the question and provide informed evaluation/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 of research into the effects of failure to form attachment. There is some evidence of selection of material to address the question.</p>	<p><b>5 - 4 marks Reasonable evaluation</b> Material is not always used effectively but produces a reasonable evaluation/commentary. Reasonable use of research evidence. 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 of research into the effects of failure to form attachment, but lacks detail and may be muddled. There is little evidence of selection of material to address the question.</p>	<p><b>3 - 2 marks Basic evaluation</b> The use of material provides only a basic evaluation/commentary. Basic use of research evidence. 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 into the effects of failure to form attachment. Selection of information is largely or wholly inappropriate.</p>	<p><b>1 mark Rudimentary evaluation</b> The use of material provides only a rudimentary evaluation. Use of research evidence 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
1a	2		
1b		2	
2a	6		
2b		3	
3a			1
3b			2
3c			2
3d			2
3e			3
3f		3	
3g			2
4	4	4	
<b>Cognitive Totals</b>	<b>12</b>	<b>12</b>	<b>12</b>
5a			4
5b			4
5c		2	
6a		4	
6b			4
6c	6		
7	6	6	
<b>Developmental and Research Methods Totals</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Totals</b>	<b>24</b>	<b>24</b>	<b>24</b>

UMS conversion calculator [www.aqa.org.uk/umsconversion](http://www.aqa.org.uk/umsconversion)