



General Certificate of Education

Psychology 1181

Specification A

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

Mark Scheme

2011 series - June examination

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SECTION A COGNITIVE PSYCHOLOGY AND RESEARCH METHODS

Question 1 a**AO1 = 2 marks Correct identification**

- B Duration (short term memory)
 C Encoding (short term memory)

1 mark for each correct answer.

Question 1 b**AO1 = 4 marks Knowledge of model.**

Candidates may describe the original 1974 version of the model or include later additions such as the episodic buffer.

The working memory model replaced the idea of a unitary STM. It suggests a system involving active processing and short-term storage of information.

Key features include the central executive, the phonological loop (consisting of two components, the phonological store and the articulatory control process), and the visuo-spatial sketch pad.

For 4 marks candidates should refer to components and the relationship between them eg central executive as a control system of slaves.

Candidates may include a diagram. If this is accurately labelled and sufficiently detailed, this can potentially receive the full 4 marks.

AO1 Knowledge of the working memory model
4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge of the model.
3 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant knowledge of the model.
2 marks Basic Basic answer that demonstrates some relevant knowledge of the model, but lacks detail and may be muddled.
1 mark Very brief/flawed Very brief or flawed answer demonstrating very little knowledge of the model eg simply naming one or more components.
0 marks No creditworthy material

Question 1 c

AO2 = 2 marks Explanation of limitation

Likely limitations include: little is known about how the central executive works; evidence from brain studies suggesting the central executive is not unitary; it fails to account for musical memory because we are able to listen to instrumental music without impairing performance on other acoustic tasks.

Simply stating the model does not explain LTM is not creditworthy. However stating the link between WM and LTM is not fully explained is legitimate.

Stating the model is too simple (with no accurate elaboration) is not creditworthy.

1 mark for identification eg the central executive is too simplistic. A further mark for accurate elaboration.

Question 2 a

AO3 = 2 marks Appropriate directional hypothesis

0 marks for a non-directional or correlational hypothesis.

The DV in this experiment is number of pictures correctly identified. Hypotheses where the DV is incorrect (eg number of participants who identified 10 pictures) = 0 marks.

1 mark if not fully operationalised, eg Participants who used the memory improvement strategy did better.

2 marks Participants who use a memory improvement strategy will correctly identify more pictures/objects than participants who do not use a memory improvement strategy.

Question 2 b

AO3 = 1 mark Explanation of independent groups design

In an independent groups design a different group of participants is used in each condition.

1 mark = Different participants/people in each condition/group.

Different/separate groups

Random allocation to groups/conditions

0 marks = Different/separate conditions

Independent participants/people

Different experiments

Question 2 c

AO3 = 2 + 2 marks Strength and limitation

Strength

The participants are naïve because they take part in only one condition, so are less likely to show demand characteristics. There are no order effects such as practice or fatigue because participants take part in one condition.

Limitation

Individual variation, because there are different participants in each condition. More participants are needed than if a repeated measures design was used.

In each case 1 mark for very brief or slightly muddled strength or limitation, 2nd mark for appropriate elaboration of explanation.

0 marks for simply stating there are different participants in each condition.

Question 2 d

AO3 = 3 marks **Explanation for using pilot study**

A pilot study is used to check aspects of the research such as whether participants understand standardised instructions, whether timings are adequate etc. It allows the researcher to try out the study with a few participants so that adjustments can be made before the main study, so saving time and money.

1 mark for a very brief explanation. Further marks for appropriate elaboration or identification of other reasons. Eg

To check it works. 1 mark

To check the standardised instructions are clear. 2 marks

To check the standardised instructions are clear enough for the participants to understand what they are required to do in the experiment. 3 marks

This question requires an explanation of why a pilot study was used, so a description of what a pilot study is (small scale study carried out before the main research) is not creditworthy on its own. Candidates do not have to refer to a specific aspect of this experiment.

However, to gain full marks the answer must be relevant, so reference to checking sound levels for example would not be relevant.

Question 2 e

AO3 = 2 marks **Explanation of standard deviation**

The standard deviation (spread of scores) is larger in the condition with the memory improvement strategy.

Candidates who use the word 'range' to suggest spread should be credited.

1 mark The standard deviation is larger in the condition with the memory improvement strategy.

2 marks The data shows the dispersion or spread of scores is larger in the condition with the memory improvement strategy.

Question 2 f**AO2 = 4 marks****Application of knowledge to novel situation**

The strategy must be relevant for this experiment. Chunking would be unacceptable unless related to a technique such as organisation.

Candidates may select strategies based on visual imagery such as peg word method. In this case the doll could be associated with bun, the apple with shoe. Acronyms or acrostics could be made relevant by using the letters D, A etc.

Any memory strategy could be creditworthy as long as the answer is relevant to the stem. Simply naming “mnemonic” should not be credited.

AO2 Application of memory improvement strategy
4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge of a relevant strategy.
3 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant knowledge of a relevant strategy.
2 marks Basic Basic answer that demonstrates some relevant knowledge of a strategy, but lacks detail and may be muddled.
1 mark Very brief/flawed Very brief or flawed answer demonstrates some relevant knowledge of a strategy. The answer may simply name a relevant identifiable strategy eg peg words, method of loci, organisation.
0 marks No creditworthy material.

Question 3**AO1 = 6 marks****Outline of relevant research**

Candidates must select research which relates to both age of witness and eye-witness testimony. There is a wide range of research which could be selected. Candidates might describe a limited range of research in some detail, or describe a wider range in less detail. Some of the research is contradictory, so unsubstantiated statements such as “memory declines with age” should not be credited.

Candidates may refer to research with older and younger adults eg Anastasi & Rhodes (2006) used participants aged 18 – 78 years and found evidence for own age bias. Warren et al (2005) found older children were more likely to be influenced by leading questions than adults.

Research relating to cognitive interviews are relevant only if there is some reference to age; eg Gruneberg & Morris (1992) found the accuracy of children’s recall is as good as adults if the context of the original event is reinstated.

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

AO2 = 6 marks**Evaluation of relevant research**

Evaluation in relation to lack of ecological validity in laboratory studies or lack of control in real life situations would be relevant. Candidates might refer to the problem of own age bias which could be a factor in research using identification of college aged photographs. Ethical issues could be relevant as could practical applications of research.

Commentary on the contradictory nature of the research and the implications of this for court cases would also be creditworthy.

Candidates may refer to a number of issues in reasonable depth or elaborate on a more restricted range of issues.

AO2	Application of knowledge and understanding
6 marks Effective evaluation	<p>Effective use of material to address the question and provide informed evaluation.</p> <p>Effective use of research evidence.</p> <p>Broad range of issues and/or evidence in reasonable depth, or a narrower range in greater depth.</p> <p>Clear expression of ideas, good range of specialist terms, few errors of grammar, punctuation and spelling.</p>
5-4 marks Reasonable evaluation	<p>Material is not always used effectively but produces a reasonable evaluation.</p> <p>Reasonable use of research evidence.</p> <p>A range of issues and/or evidence in limited depth, or a narrower range in greater depth.</p> <p>Reasonable expression of ideas, a range of specialist terms, some errors of grammar, punctuation and spelling.</p>
3-2 marks Basic evaluation	<p>The use of material provides only a basic evaluation.</p> <p>Basic use of research evidence.</p> <p>Superficial consideration of a restricted range of issues and/or evidence.</p> <p>Expression of ideas lacks clarity; some specialist terms used; errors of grammar, punctuation and spelling detract from clarity.</p>
1 mark Rudimentary evaluation	<p>The use of material provides only a rudimentary evaluation.</p> <p>Use of research evidence is just discernible or absent.</p> <p>Expression of ideas poor; few specialist terms used; errors of grammar, punctuation and spelling often obscure the meaning.</p>
0 marks	No creditworthy material presented.

SECTION B DEVELOPMENTAL PSYCHOLOGY AND RESEARCH METHODS

Question 4 a

AO2 = 3 marks **Application of knowledge**

Ben is likely to be insecurely attached. Anya is showing characteristics of insensitive mothering because she is responding to her own needs rather than those of Ben.

0 marks Secure attachment

1 mark Insecure attachment (Credit avoidant, resistant, ambivalent or disorganised. Credit Type A, C or D)

Further marks for brief reference to Anya's behaviour (1 mark) 2nd mark for accurate elaboration of Anya's behaviour as above.

Question 4 b

AO2 = 3 marks **Application of knowledge**

The psychologist would observe Ben's behaviour with his mother, when she leaves the room, when a stranger enters room, when the stranger plays with child, when child is alone and when mother returns.

1 mark for a very brief outline eg just naming observation of Ben's behaviour.

Two further marks for elaboration.

Question 5 **Total 4 marks**

AO1 = 4 marks **Description of what research has shown**

Candidates may refer to what one research study has shown 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 percentage 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. Candidates 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 creditworthy.

AO1
Knowledge and understanding
<p>4 marks Accurate and reasonably detailed knowledge of what research has shown</p> <p>Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of research into cultural variations in attachment.</p> <p>There is appropriate selection of material to address the question.</p>
<p>3 marks Less detailed but generally accurate knowledge of what research has shown</p> <p>Less detailed but generally accurate answer that demonstrates relevant knowledge and understanding of research into cultural variations in attachment.</p> <p>There is some evidence of selection of material to address the question.</p>
<p>2 marks Basic knowledge of what research has shown</p> <p>Basic answer that demonstrates some relevant knowledge and understanding of research into cultural variations in attachment but lacks detail and may be muddled.</p> <p>There is little evidence of selection of material to address the question.</p>
<p>1 mark Very brief/flawed knowledge of what research has shown</p> <p>Very brief or flawed answer demonstrating very little knowledge of research into cultural variations in attachment.</p> <p>Selection and presentation of information is largely inappropriate.</p>
<p>0 marks</p> <p>No creditworthy material.</p>

Question 6 a**AO3 = 2 marks****Way of dealing with the ethical issue**

Confidentiality could be maintained by making sure individuals are not identifiable when reporting the case study. This could be done by using a different name or initials, avoid publishing details of address, schools etc.

1 mark for identification of a relevant way.

2nd mark for some elaboration (which could be an example) or for identification of a second way of maintaining confidentiality.

Question 6 b**AO2 = 2 marks****Application of knowledge**

Psychologists may use psychological tests eg IQ testing. They could observe his behaviour in different situations. They might interview people, such as family members, to find out the circumstances of his early life.

1 mark for simply naming any appropriate techniques such as IQ test, observation or interviews.

2nd mark for some elaboration.

Question 6 c**AO3 = 4 marks****Knowledge of research methods**

The main limitation is that each individual, and their experience, is unique and the results cannot therefore be generalised to others. Evidence from an individual's past may be difficult to verify. Researchers may get to know the individual well, which may lead to loss of objectivity.

Although description of specific case studies is not relevant, candidates may refer to examples as part of an explanation of limitations.

AO3 Knowledge of limitations of case studies
4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge of at least one limitation.
3 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant knowledge of at least one limitation.
2 marks Basic Basic answer that demonstrates some relevant knowledge of one or more limitations, but lacks detail and may be muddled.
1 mark Very brief/flawed Very brief or flawed answer demonstrating very little knowledge of limitations.
0 marks No creditworthy material.

Question 7 a**AO3 = 1 mark****Interpretation of graph**

10 children.

Question 7 b**AO3 = 2 marks****Knowledge of research methods**

Number of aggressive acts shown during a 10 minute observation. Aggression score on a questionnaire completed by parents.

1 mark for brief or slightly muddled answer, eg ask children's mothers how aggressive they are.

2nd mark for accurate elaboration, eg ask children's mothers how aggressive they are on a scale from 1 to 10.

Question 7 c

AO3 = 3 marks

Knowledge of research methods

This is a correlational study, not an experiment, and correlation does not prove a causal relationship. Children who are already aggressive may be put into day care for longer, or another variable, such as parents' divorce, may contribute to high scores for both time in day care and aggression.

1 mark eg correlation doesn't prove cause or simply stating that aggression may be a result of other factors.

2 further marks for accurate elaboration as above.

Credit any explanation that focuses on causal inference.

An alternative approach is to argue that some research contradicts this claim. 1 mark for there is contradictory evidence and further marks for accurate reference to relevant research.

0 marks for reference to media exaggeration or individual children.

Question 8

AO1 = 4 marks

Knowledge of research into effects of day care

Generally the effects of day care on peer relationships are positive. Eg Field (1991) found the more time children spend in day care, the more friends they had. The EPPE project (2003) looked at large numbers of children in different types of pre-school provision and found high quality care was associated with greater sociability with other children. However, Dilallo (1988) found children who spend more time in day care were less cooperative and helpful in their relations with other children. Length of time in day care may be a factor as Campbell (2000) found children who were in care for a long time each day were less socially competent than children who spent shorter days in care.

Candidates may refer to older studies. This is acceptable as long as they relate to day care (not institutionalisation) and relate to peer relations. Candidates who refer to aggression would need to make a link with peer relations.

Candidates are likely to refer to findings of studies but description of procedure is also credit worthy.

AO1
Knowledge and understanding of research into the effects of day care on peer relations.
<p>4 marks Accurate and reasonably detailed</p> <p>Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of relevant research.</p> <p>There is appropriate selection of material to address the question.</p>
<p>3 marks Less detailed but generally accurate</p> <p>Less detailed but generally accurate answer that demonstrates relevant knowledge and understanding of relevant research.</p> <p>There is some evidence of selection of material to address the question.</p>
<p>2 marks Basic</p> <p>Basic answer that demonstrates some relevant knowledge and understanding of research, but lacks detail and may be muddled.</p> <p>There is little evidence of selection of material to address the question.</p>
<p>1 mark Very brief/flawed</p> <p>Very brief or flawed answer demonstrating very little knowledge of research.</p> <p>Selection and presentation of information is largely inappropriate.</p>
<p>0 marks</p> <p>No creditworthy material.</p>

Question 9**AO1 = 4 marks****Outline of theory**

Learning theory suggests attachment develops through classical and operant conditioning.

According to classical conditioning food (UCS) produces pleasure (UCR). The mother is associated with the pleasure and becomes a conditioned stimulus. According to operant conditioning food satisfies the infant's hunger and makes it feel comfortable again (drive reduction). Food is therefore a primary reinforcer. The mother is associated with food and becomes a secondary reinforcer. The infant becomes attached to the mother because she is a source of reward.

Candidates may refer to classical conditioning, operant conditioning or both. SLT may be creditworthy if focussed on attachment.

The explanation must be directly linked to attachment. Unrelated descriptions of classical or operant conditioning are not creditworthy.

AO2 = 4 marks**Evaluation of the theory**

Evaluation of learning theory could include reference to research studies such as Schaffer and Emerson who found that less than half of infants had a primary attachment to the person who usually fed them. Responsiveness seemed to be the key to attachment. Harlow's research suggesting the importance of contact comfort rather than food could also be made relevant. Alternative explanations, such as Bowlby's evolutionary theory, could gain credit as long as they are used as evaluation and not simply described. Commentary on implications could be creditworthy.

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

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