



**General Certificate of Education (A-level)
June 2012**

Psychology A

PSYA1

(Specification 2180)

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

Final

Mark Scheme

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Section A Cognitive Psychology and Research Methods

Question 1

AO2 = 4 Marks Explanation of differences

Candidates are likely to identify capacity, duration and encoding as ways in which STM and LTM differ. Processes are acceptable eg putting information into the stores or keeping information in the stores. Any legitimate difference(s) in multi-store model should be credited.

For each difference:-

1 mark for identifying the difference eg STM holds less than LTM or LTM lasts longer than STM.

2nd mark for accurate elaboration eg the capacity of STM is limited to 7 +/- 2 items whereas the capacity of LTM is unlimited or the duration of STM is up to 30 seconds whereas the duration of LTM is a lifetime.

0 marks for simply naming eg capacity, duration, encoding of STM or LTM but no difference.

Question 2 a

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 which was added in 2000.

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.

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. 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 the model. There is some evidence of selection of material to address the question.
2 marks Basic Basic answer that demonstrates some relevant knowledge of the model, 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 of the model. Selection of material is largely inappropriate.
0 marks No creditworthy material.

Question 2 b

AO2 = 4 marks Outline of strength and limitation

Likely strengths include research support such as dual task studies and physiological evidence from brain scans. Candidates may offer a comparison with the MSM and suggest WMM gives a better account of STM. Strengths may include practical applications of the model eg the phonological loop plays a key role in the development of reading, and working memory capacity might be used as a measure of suitability for certain jobs.

Likely limitations include the fact that little is known about how the central executive works or evidence from brain studies suggesting the central executive is not unitary. The model doesn't account for musical memory because participants can listen to instrumental music without impairing performance on other acoustic tasks.

Simply stating that the model does not explain LTM is not credit-worthy as a limitation. However, stating that the link between WM and LTM is not fully explained is legitimate. Credit any acceptable strength and limitation.

For each strength and limitation, 1 mark for identification. A further mark for accurate elaboration.

For example (strength), there is evidence from dual task studies to support the model (1 mark). It is easier to do two tasks at the same time if they use different processing systems (verbal and visual) than if they use the same slave system (2 marks).

For example (limitation), the central executive is too simple/vague (1 mark). The central executive is an important/vital part of the model but it's exact role is unclear (2 marks).

Question 3 a

AO3 = 2 marks Correct identification of aim

One aim of the investigation is to see if the age of participants affects their ability to identify a person.

(Credit relevant alternatives)

1 mark for a very brief or muddled aim eg to investigate whether participants can identify a man in a photograph or to investigate EWT or to investigate memory.

For 2 marks the aim must be more detailed eg to investigate the effect on EWT or to investigate EWT in a natural setting.

Question 3 b

AO3 = 2 marks Knowledge of research methods

Participants are less likely to show demand characteristics because in the first part of the experiment they are unaware they are taking part and so are likely to respond more genuinely. 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 to eyewitness testimony in court cases.

1 mark for a very brief or muddled answer eg high ecological validity.

2 marks for accurate elaboration.

Question 3 c

AO3 = 4 marks Knowledge of research methods

Opportunity sample 1 mark. Volunteer or random = 0 marks.

One limitation is the lack of a target population. This means that the sample is not representative of any population so there are problems in generalising the findings.

However, selecting participants for availability is an appropriate way to select a sample when no names are available. Comparison with alternative sampling methods is credit-worthy.

1 mark for identifying a limitation or advantage eg biased sampling.

Further marks for accurate elaboration or identification of further limitations/advantages.

Candidates may refer to one or more limitations, advantages or both.

Candidates who identify the sample incorrectly can still gain marks for correct evaluation of opportunity sampling.

Question 3 d

AO3 = 4 marks Knowledge of research methods

Extraneous variables are anything other than the independent variable that could affect the dependent variable. In this study they could include situational variables such as how the researcher asked for directions or time of day, and participant variables such as gender or eye-sight.

1 mark for identification of any possible extraneous variable in this study.

Eg One possible extraneous variable is the length of time the researcher spends with each participant.

3 marks for accurate explanation of how this variable could have affected this study.

This might have affected the results of this study because old people are more likely to have time to stop and chat than younger participants. They therefore spend longer giving directions and would therefore find it easier to identify the researcher.

1 mark for very brief or slightly muddled explanation.

Further marks for accurate elaboration.

Question 3 e

AO1 = 4 marks Knowledge of what research has shown

There is a wide range of research that could be selected. Candidates might describe in some detail what one research study has shown, or describe more research studies in less detail. Some of the research is contradictory, so unsubstantiated statements such as “children’s memories are worse than adults” are unlikely to receive credit.

Candidates may refer to older and younger adults, eg Anastasi & Rhodes (2006) used participants aged 18 – 78 years. They found young and middle aged participants were more accurate at recognising photographs than older participants. Yarmey (1984) and Cohen and Faulkner (1988) found older people made more recall errors than younger people. However, Yarmey (1993) found no differences in the ability of older participants to recall physical characteristics of a young woman.

Reference to children as witnesses would also be relevant eg Warren et al (2005) found older children were more likely to be influenced by leading questions than adults.

Descriptions of procedures or evaluation of research are not credit-worthy.

4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of what research has shown about age of witness and eyewitness testimony. 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 and understanding of what research has shown about age of witness and eyewitness testimony. There is some evidence of selection of material to address the question.
2 marks Basic Basic answer that demonstrates some relevant knowledge and understanding of what research has shown about age of witness and eyewitness testimony 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 of what research has shown about age of witness and eyewitness testimony. Selection of material is largely inappropriate.
0 marks no creditworthy material

Question 3 f

AO1 = 4 marks Knowledge of one relevant study

Candidates must select a study which clearly relates to both anxiety and eyewitness testimony. For full marks there must be some reference to what was done and what was found.

In Loftus's (1979) weapon focus experiment more participants correctly identified a person holding a pen (49%) than a person holding a knife covered in blood. 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 accident. Peters (1988) found participants who visited a healthcare centre were better able to recognise a researcher than a nurse who gave an injection. However, in a real life study Yuille and Cutshall (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.

4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of one study into the effect of anxiety on eyewitness testimony. 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 and understanding of one study into the effect of anxiety on eyewitness testimony. There is some evidence of selection of material to address the question.
2 marks Basic Basic answer that demonstrates some relevant knowledge and understanding of one study into the effect of anxiety on eyewitness testimony, 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 of one study into the effect of anxiety on eyewitness testimony. Selection of material is largely inappropriate.
0 marks no creditworthy material.

Question 4

AO2 = 4 marks

Application of knowledge to a novel situation

Candidates' answers should focus on how strategies could be used to help revision for a psychology exam. They 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 or acrostics; deep processing etc.

Context and state dependent recall could be credited as long as the candidate makes their answer relevant to revising psychological research.

The question refers to psychology revision, so strategies which could lead to memory improvement in short term memory, such as chunking, should not be credited.

Simply naming "mnemonic" should not be credited.

<p>4 marks Effective</p>
<p>The selection and application of psychological knowledge to memory improvement for psychology revision is appropriate and effective.</p>
<p>3 marks Reasonable</p>
<p>The selection and application of psychological knowledge to memory improvement for psychology revision is mostly appropriate.</p>
<p>2 marks Basic</p>
<p>The selection and application of psychological knowledge to memory improvement for psychology revision is basic.</p>
<p>1 marks Rudimentary</p>
<p>The selection and application of psychological knowledge to memory improvement for psychology revision is rudimentary.</p>
<p>0 Marks</p>
<p>No creditworthy material or description of memory improvement strategy is not related to psychology revision.</p>

Section B Developmental Psychology and Research Methods

Question 5

AO1 = 6 marks Description of Bowlby's theory of attachment

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.

For top band, answers do not need to address all these points.

Answers which focus on MDH can be credited if the material is relevant to Bowlby's theory of attachment eg critical period.

AO1
Knowledge and understanding
6 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of Bowlby's explanation of attachment. There is appropriate selection of material to address the question.
5 - 4 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant knowledge and understanding of Bowlby's explanation of attachment. 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 of the Bowlby's explanation of attachment but lacks detail and may be muddled. There is little evidence of selection of material to address the question.
1 mark Very brief/flawed or inappropriate Very brief or flawed answer demonstrating very little knowledge of Bowlby's explanation of attachment. Selection of material is largely inappropriate.
0 marks No creditworthy material.

Question 6 a

AO2 = 4 marks Differences between attachment types

Candidates are likely to refer to episodes in the strange situation where there is a difference between the behaviour of insecure-avoidant and insecure-resistant infants, eg Separation behaviour – insecure avoidant (Megan) seem unconcerned when mother leaves, whereas insecure resistant (Rosie) 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.

Candidates who select other episodes eg behaviour when mother is present or behaviour towards the stranger would need to make a clear difference between the infants' behaviour. Candidates may explain one difference in detail, or more than one in less detail.

AO2

Application of knowledge and understanding

4 marks Accurate and reasonably detailed

Accurate and reasonably detailed answer that demonstrates sound knowledge and understanding of how Megan's behaviour would differ from Rosie's behaviour in the strange situation.

3 marks Less detailed but generally accurate

Generally accurate but less detailed answer that demonstrates relevant knowledge and understanding of how Megan's behaviour would differ from Rosie's behaviour in the strange situation.

2 marks Basic

Basic answer that demonstrates some relevant knowledge and understanding of how Megan's behaviour would differ from Rosie's behaviour in the strange situation.

1 mark Very brief and or flawed

Very brief or flawed answer that demonstrates very little knowledge of how Megan's behaviour would differ from Rosie's behaviour in the strange situation.

0 marks

No creditworthy material.

Question 6 b

AO2 = 2 marks Limitation of the strange situation

Candidates may refer to ethical issues because being left in an unfamiliar environment and being approached by a stranger may have been stressful for the infant.

Children who have been in day care may appear to be insecurely avoidant because they are used to being separated from their mother.

The strange situation was developed in America and may have limitations in studying attachment types in different cultures.

Credit any relevant limitation.

1 mark for a very brief or muddled answer eg it's stressful for the infant.

2 marks as above.

Question 7 a

AO3 = 3 marks Knowledge of research methods

Advantages of using a questionnaire in this study could include that data from the hundred adults could be collected relatively quickly because the researcher would not need to be present when the questionnaires were completed; participants might be more willing to answer honestly because they would feel more anonymous; there might be a reduction in investigator effects because the researcher's reactions would not be visible. The advantage must be one that could be applied to this study.

1 mark for a slightly muddled or very brief outline of an advantage. Further marks for accurate elaboration.

Question 7 b

AO3 = 2 marks Knowledge of research methods

Qualitative is non-numerical and uses words to give a full description of what people think or feel.

1 mark for a very brief or slightly muddled answer eg qualitative data uses words.

2nd mark for accurate elaboration eg by comparison or by using an example.

Question 7 c

AO3 = 2 marks Writing a suitable question

One mark for a question which would produce qualitative data but is not appropriate eg "How are you feeling?"

Two marks for an appropriate question eg "Tell me what it was like in the institution"
(Full marks can be awarded if it is not in the form of a question).

0 marks for a question that would not produce qualitative data.

Question 7 d

AO3 = 1 + 1 + 3 marks Ethical issues and dealing with an ethical issue

There are no ethical issues named in the specification, so any potentially relevant issues should be credited.

Likely ethical issues include informed consent, right to withdraw, protection from harm, confidentiality, respect or the need for debriefing in this particular case.

Other issues such as deception (deliberate or by omission) can be credited as they could apply in this research.

One mark each for identification of a relevant ethical issue.

One mark for a brief mention of how the issue could be dealt with. Two further marks for elaboration appropriate to this research.

There is a depth/breadth trade-off. Candidates may explain one way of dealing with the issue in some depth, or mention several ways (of dealing with one issue) more briefly.

Ethical issue one eg, right to withdraw (1 mark); ethical issue two eg confidentiality (1 mark);

Don't identify the participants (1 mark). Don't use photographs or names in published research. Names of people and/or places should be changed (2 further marks).

Question 8

AO1 = 6 marks Description of research into the effects of day care

The effects of day care on aggression and peer relations are included in the specification, so it is likely that candidates will select research which relate to these.

Generally the effect of day care on peer relationships is 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, it also concluded that high levels of group care before the age of three (and particularly before the age of two) were associated with higher levels of aggression. 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.

Shea (1981) observed children (average age 4 years 3 months) who attended pre-school for 2, 3 or 5 days a week. He found that over a 10 week period aggressive behaviour decreased in all three groups. In the US, the NICHD study has followed the progress of more than 1000 children since 1991. It was found that the more time children spent in day care from birth to four and a half years, the more adults rated them as aggressive.

Research in to the effects of day care on other aspects of children's social development (eg attachment) is creditworthy.

Candidates may refer to older studies. This is acceptable as long as they relate to day care (not institutionalisation) and relate to children's social development.

AO1
Knowledge and understanding
6 marks Accurate and reasonably detailed Accurate and reasonably detailed description 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 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 but lacks detail and may be muddled. There is little evidence of selection of material to address the question.
1 mark Very brief/flawed Very brief or flawed description that demonstrates very little knowledge or understanding. Selection and of information is largely or wholly inappropriate.
0 marks No creditworthy material presented.

AO2 = 6 marks Evaluation of research into the effects of day care

Candidates may include evaluation of specific studies. Eg the research study by Campbell et al (2000) was carried out in Sweden where day care is very well funded. The findings may not apply to day care in other countries where the day care is less well funded. More general evaluation of research in this area would also be relevant. The child's experience will depend on the type of day care they attend, eg nursery or child minder. The age at which children start day care and the time they spend there each week are also important, as is the quality of care they receive. Negative views surrounding day care often relate to very young children who spend long periods each day in day care. Practical applications of research would also be relevant. Good quality day care should include low adult to child ratio, well-trained staff and a stable attachment figure.

AO2 Application of knowledge and understanding
6 marks Effective evaluation Effective use of material to address the question and provide informed evaluation. 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.
5-4 marks Reasonable evaluation Material is not always used effectively but produces a reasonable evaluation. 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.
3-2 marks Basic evaluation The use of material provides only a basic evaluation. 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.
1 mark Rudimentary evaluation The use of material provides only a rudimentary evaluation. 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.
0 marks No creditworthy material presented.

Assessment Objectives

QUESTION	AO1 MARK	AO2 MARK	AO3 MARK
1		4	
2a	4		
2b		4	
3a			2
3b			2
3c			4
3d			4
3e	4		
3f	4		
4		4	
Cognitive Totals	12	12	12
5	6		
6a		4	
6b		2	
7a			3
7b			2
7c			2
7d			5
8	6	6	
Developmental and Research Totals	12	12	12
Totals	24	24	24

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