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General Certificate of Education

Psychology 1181

Specification A

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

Mark Scheme

January examination - 2009 series

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SECTION A - COGNITIVE PSYCHOLOGY AND RESEARCH METHODS

Total for this question: 12 marks

1 (a) In the table below, write which **one** of the concepts listed above (**A**, **B**, **C**, or **D**), matches each definition. *(2 marks)*

AO1 = 2 marks Correct completion of the table

One mark for each correct answer.

Definition	Concept
The length of time the memory store holds information	A - Duration
Transforming incoming information into a form that can be stored in memory	C - Encoding

1 (b) Outline the main features of the multi-store model of memory. *(6 marks)*

AO1 = 6 marks Outline of the model

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

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

Candidates may include a diagram. If this is accurately labeled and sufficiently detailed, this can potentially receive the full 6 marks.

6 marks Accurate and reasonably detailed Accurate and reasonably detailed outline of the multi-store model of memory that demonstrates sound knowledge and understanding of both structure and processes.
5 - 4 marks Less detailed but generally accurate Less detailed but generally accurate outline of the multi-store model of memory that demonstrates knowledge and understanding of structure and/or processes.
3 - 2 marks Basic Basic outline of the multi-store model of memory that correctly identifies the main structures and/or processes, but further detail may be muddled.
1 mark Very brief/flawed Very brief or flawed outline of the multi-store model demonstrating very little knowledge.
0 marks – No creditworthy information.

1 (c) The multi-store model of memory has been criticised in many ways. The following observation illustrates a possible criticism.

Some students read through their revision notes lots of times before an examination, but still find it difficult to remember the information. However, the same students can remember the information in a celebrity magazine, even though they read it only once.

Explain why this observation can be used as a criticism of the multi-store model of memory. *(4 marks)*

AO2 = 4 marks Explanation of the criticism

Candidates are most likely to focus on rehearsal. Answers could refer to the fact that mere rehearsal is too simple a process to account for the transfer of information from STM to LTM. Candidates might also point out that the type of information is important in whether it is recalled or not. For example, 1 mark for identifying rehearsal as a transfer mechanism and up to 3 further marks for explaining that even though students rehearse the information it doesn't transfer from STM to LTM as predicted by the model. However, information in the magazine is only presented once, but it does transfer to LTM, despite lack of rehearsal.

Alternative explanations related to the MSM would be acceptable. Explanations which don't relate to the MSM (eg shallow processing) or explanations related to a single individual (eg brain damage) would not.

Candidates who state a relevant criticism of the MSM, but who make no explicit reference to any part of the observation, should be restricted to a maximum of 2 marks.

Total for this question: 4 marks

2 Outline how **one** research study investigated the accuracy of eyewitness testimony. (EWT) *(4 marks)*

AO1 = 4 marks Outline of relevant study.

Answers can refer to any research study relating to eyewitness testimony. This may be by naming a relevant study, or by identifying the study in some other way. Likely research would include a number of studies by Loftus including those into the role of leading questions, and Yuille & Cutshall (1986) who investigated evidence from an actual crime. Studies into factors affecting the accuracy of EWT including anxiety (eg weapon focus) or age of witnesses would also be relevant. Flin et al (1992) used a staged event and compared deterioration of children's and adults' memories over time, while Karpel et al (2001) showed a video of a robbery and compared information given by young adults (17 – 25) with that given by older adults (65 – 85). Allport and Postman's (1947) study using a picture of two men arguing is relevant to EWT. However, Bartlett's research using a story or simple drawings is not.
One mark for a basic outline of the method, eg In Loftus and Palmer's study, participants were asked questions about a film. Three further marks for accurate details, eg participants were tested in a laboratory situation. They were asked how fast a car was travelling when an accident occurred. Some questions included the words "smashed into". Others included collided with, bumped into, hit or contacted.
Whilst the question does not ask for findings, conclusions, or criticisms, candidates may receive credit for procedural detail included in such material.

Total for this question: 9 marks

3 A psychologist showed participants 100 different cards, one at a time.

Each card had two unrelated words printed on it e.g. DOG, HAT.

Participants in one group were instructed to form a mental image to link the words.
Participants in the other group were instructed to simply memorise the words.
After all the word pairs had been presented, each participant was shown a card with the first word of each pair printed on it. Participants were asked to recall the second word.

The following results were found

Number of words correctly recalled

	Mental Image Group	**Memorising Group**
Mean Score	80	45

(a) What is the independent variable (IV) in this study? *(2 marks)*

AO3 = 2 marks **Correct statement of IV in this study**

The independent variable is the type of memory strategy or whether the participants were instructed to form a mental image to link the words, or to memorise the words.
One mark for the "memory technique" or "instructions to participants or memory strategy."
Two marks where the IV is operationalised as above.

(b) What is the dependent variable (DV) in this study? *(2 marks)*

AO3 = 2 marks **Correct statement of DV in this study.**

The dependent variable is number of words correctly recalled.
One mark for "recall" or a slightly muddled statement.
Two marks where the DV is operationalised as above.

(c) What experimental design was used in this study? *(1 mark)*

AO3 = 1 mark **Correct identification of experimental design**

One mark for correct identification of an independent groups design.
Accept independent design/between-participant design.

(d) Explain **one** strength of this experimental design in the context of this study. *(2 marks)*

AO3 = 2 marks **Explanation of strength**

One mark for stating a strength. eg the same word list can be used for both conditions.
A further mark for explaining why this is a strength. eg the words for each group will be equally easy to learn. Credit any acceptable strength.

(e) Explain how a psychologist could find out whether these results are reliable. *(2 marks)*

AO3 = 2 marks Correct explanation

One mark for identifying a suitable way of checking reliability, eg do it again. A further mark for elaboration, eg carry out the experiment again and look for a similarity in both sets of results.

Total for this question: 4 marks

4 A student teacher finds it very difficult to remember pupils' names. She decides to look in a psychology book to find some useful strategies for improving her memory.

Outline **one** strategy the teacher could use, and explain why this might improve her memory for pupils' names. *(4 marks)*

AO2 = 4 marks Explanation of suitable strategy

The explanation will depend on the strategy identified. Candidates may suggest using imagery, in which case one strategy would be associating a name with a visual image. Research into improving memory has shown that under certain circumstances people retain pictures better than words. An alternative strategy would deep processing of the information.

Any potentially **relevant** strategy should be credited. One mark for naming or giving a very brief outline of the strategy, eg deep processing helps memory. 3 further marks for elaboration and explanation. For example, "Don't just listen to the sound of the name, but think about it's meaning". Semantic processing creates a stronger and longer lasting memory than shallow processing.

Total for this question: 7 marks

5 (a) Traditionally, police have questioned eyewitnesses using a standard interview procedure. This involves a period of free recall about an event, followed by specific questions. However, an increasing number of police forces are now using the cognitive interview technique.

Explain how a cognitive interview differs from a standard interview. *(4 marks)*

AO2 = 4 marks Explanation of the difference

Differences could include effectiveness of cognitive interviews and implications such as cost of training required, time it takes, etc.

The main techniques used in a cognitive interview include context reinstatement (CR), reporting everything (RE), recall from a changed perspective (CP) recall in reverse order.
Candidates who show some understanding of a cognitive interview, e.g. by naming/outlining one or more of the techniques above, but make no attempt to explain a difference should be awarded a maximum of 2 marks. Further marks for elaboration, eg a standard interview might just ask witnesses to recall an event, but a cognitive interview could ask them to recall the context in which the event occurred. This could include environmental details (such as the weather) and emotional factors (such as how they felt at the time).

5	(b)	Psychologists have carried out research into the use of cognitive interviews. One possible ethical issue which might arise during this research is protection of participants from harm. Explain how psychologists could deal with this ethical issue. *(3 marks)*

AO3 = 3 marks Explanation of relevant ways of dealing with this ethical issue

Simply identifying or naming one or more potentially relevant ways of dealing with the ethical issue – maximum 1 mark. For example, confidentiality, anonymity, debrief. Further marks for explaining how psychologists could deal with this ethical issue.

For example:

Right to withdraw. (1 mark)
Participants should be reminded of their right to withdraw from the research. (2 marks)
If participants are showing signs of distress, the psychologist should remind the participants of their right to withdraw. (3 marks)

SECTION B – DEVELOPMENTAL PSYCHOLOGY AND RESEARCH METHODS

Total for this question: 6 marks

6 (a) Ainsworth and Bell placed infants in an unfamiliar room to assess the quality of their attachment to their mother. Observations during this 'Strange Situation' related to:-

Exploration – how much the infant explored the unfamiliar room;
Separation behaviour – how the infant reacted when the mother left;
Stranger anxiety – the response of the infant to a stranger;
Reunion behaviour – how the infant reacted when the mother returned.

Select **two** of these categories and explain how the behaviour of securely attached infants and insecurely attached infants wo*u*ld be different in the 'Strange Situation'.
(2 marks+ 2 marks)

AO2 = 2 + 2 marks. Outline of two differences in infants behaviour.

Exploration - securely attached infants explored the unfamiliar environment, but returned to the mother at regular intervals. Avoidant insecure infants did not orientate towards the mother when exploring the room.

Separation behaviour – securely attached infants were subdued when mother left. Insecure avoidant seemed unconcerned, but insecure resistant showed intense distress.

Stranger anxiety - when a stranger appears a securely attached infant will move closer to the mother and be wary of a stranger. They clearly prefer their mother to a stranger. Insecurely attached avoidant infants are unconcerned about a stranger being there and show little preference for the mother over a stranger. They often avoid both.

Reunion behaviour - securely attached infants greet the mother positively when she returns and make physical contact with her. Insecure resistant infants may cling to their mother, but show ambivalent behaviour towards her. Insecure avoidant children show little reaction when the mother comes back.

In each case, one mark for a very brief outline of a difference in behaviour, eg securely attached infants show more pleasure when their mother returns than insecurely attached infants. one further mark for elaboration of the difference as above. Candidates must refer to a difference between secure and insecure attachment. They need not distinguish between different types of insecure attachment.

6	(b)	Briefly explain why some children show characteristics of secure attachment and some characteristics of insecure attachment. *(2 marks)*

AO2 = 2 marks **Brief explanation of why children show different types of attachment.**

Answers may refer to caregiver sensitivity. The association between mothers' behaviour and infants' attachment type suggests the mothers' behaviour may be important. Ainsworth suggested secure attachments were the result of mothers being sensitive to the child's needs while insecure attachment was associated with insensitive mothering.
Alternatively candidates may refer to the temperament hypothesis which suggests some infants form secure attachments because they are innately more friendly than other infants. Cultural differences, or experience of day care would also be relevant.

An alternative way of interpreting the question is acceptable. Candidates may refer to disorganised attachments or explanations in terms of problems with categorisation.

Credit any relevant explanation.
One mark for identifying either caregiver sensitivity or innate temperament. Second mark for some elaboration, eg children show different types of attachment because of their mothers behaviour towards them (1 mark). Secure attachment is associated with sensitive mothers and insecure attachment with insensitive mothering. (2 marks)

Total for this question: 6 marks

7	(a)	One situation in which disruption of attachment can occur is when a mother of a young child is admitted into hospital. A researcher decided to study the behaviour of a two-year old boy who experienced this disruption of attachment. She decided to use naturalistic observation of the boy both before his mother was admitted into hospital and after she returned. Each period of observation lasted for one hour. Suggest **two** suitable behavioural categories the researcher could use to record the boy's behaviour. *(2 marks)*

AO3 = 2 marks **Naming suitable behavioural categories**

Behaviour must be operationalised. Suitable behavioural categories could include crying, clinging to mother, smiling, playing independently etc.
One mark for each suitable behavioural category.

7	(b)	How might the researcher record the boy's behaviour? *(2 marks)*

AO3 = 2 marks

Candidates may refer to time sampling, CCTV and later analysis or ticking a box when the behaviour is shown. Unstructured observation could also be relevant.

One mark for a brief explanation. This could include demonstrating some understanding of the use of behavioural categories, eg draw a table and tick boxes. A further mark for elaboration, eg drawing the table and/or indicating when the boxes would be ticked.

7	(c)	Explain why the psychologist might want to carry out a pilot study before the main observation. *(2 marks)*

AO3 = 2 marks

One reason for the psychologist carrying out a pilot study would be to check cameras were positioned appropriately. Another would be to check the suitability of the behavioural categories. Alternative relevant reasons should be credited.
One mark for a brief reason eg to check equipment. A further mark for elaboration as above.

Total for this question: 6 marks

8	Outline what research has shown about the effects of day care on children's aggressive behaviour. *(6 marks)*

AO1 = 6 marks

Day care refers to care of children by carers other than their parents. Institutional care should not be credited. There are a wide range of research findings that candidates could refer to. 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 National Institute of Child Health and Human Development (NICHD) study has followed the progress of more than 1000 children since 1991. It found the more time children spend in day care centres from birth to four and a half years, the more adults rated them as aggressive when between 2 and 6 years, both at school and at home. However, for the majority of children the levels of aggression were well within the normal range.

In Britain, the Effective Provision of Pre-school Education (EPPE) project focused mainly on the impact of pre-school education of a group of 3000 three and four year olds. It 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 aggressive behaviour at age three.

6 marks Accurate and reasonably detailed Accurate and reasonably detailed outline of relevant findings that demonstrates sound knowledge and understanding.
5 - 4 marks Less detailed but generally accurate Less detailed but generally accurate outline of the relevant findings that demonstrates knowledge and understanding.
3 - 2 marks Basic Basic outline of relevant findings that correctly identifies some knowledge but further detail may be muddled.
1 mark Very brief/flawed Very brief or flawed outline of relevant findings demonstrating very little knowledge.
0 marks – No creditworthy information.

Total for this question = 6 marks

9 (a) A psychologist analysed the results of 'Strange Situation' studies from different countries. Some of the results are shown below.

Country (and number of studies)	**% of each type of attachment.**		
	Secure	**Insecure-Avoidant**	**Insecure-Resistant**
Country One (2)	64	7	29
Country Two (18)	65	21	14
Country Three (4)	67	26	7

Outline what the table above shows about cultural variations in attachment.

(3 marks)

AO3 = 3 marks Outline of what table shows

Candidates may point out that the % of secure attachment in all three countries is very similar, but that insecure attachments vary. Country one has the lowest % of insecure-avoidant but the highest of insecure resistant. Country three has the lowest % of insecure-resistant but the highest of insecure-avoidant.

One mark for a brief outline of one point. Two further marks for accurate elaboration of one point in detail or more than one point more briefly.

9 (b) Explain **one** criticism of investigating cultural variations in attachment using the 'Strange Situation.'

(3 marks)

AO3 = 3 marks **Explanation of one criticism**

Candidates may refer to limitations of the strange situation as a way of identifying attachment type. Alternatively they may focus on the differences in number of studies in each country. They could also criticise the use of meta analysis.

One mark for a brief outline of a relevant criticism. Two further marks for elaboration.

For example, the findings for country two come from 18 different studies. We can't be sure that all of the studies were carried out in the same way. (second mark). It is possible that the 'Strange Situation' or ways of categorising types of attachment were different in the different studies. (third mark)

If candidates give more than one criticism, the best should be credited.

Total for this question: 12 marks

10 Psychologists have put forward different explanations of attachment, such as learning theory and Bowlby's theory.

Outline and evaluate **one or more** explanations of attachment. *(12 marks)*

AO1 = 6 marks **Outline of one or more explanations of attachment.**
AO2 = 6 marks **Evaluation of the explanations**

It is likely that candidates will refer to learning theory and/or Bowlby's evolutionary perspective as these are named in the specification. However, other explanations such as Freud's theory or social learning theory are equally acceptable.

Explanations must be explicitly linked to attachment. General descriptions of classical or operant conditioning are not creditworthy unless they are explicitly linked to attachment. Learning theory of attachment suggests attachment develops through classical and operant conditioning processes. According to classical conditioning food (UCS) produces pleasure (UCR). The mother becomes 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.

Bowby's theory of attachment suggests attachment is important for survival. 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 is emphasised. The child's relationship with a PCG provides an internal working model which influences later relationships.

Evaluation of learning theory could include reference to research studies such as Shaffer and Emerson who found that less than half of infants had a primary attachment to the person who usually fed them. Responsiveness appeared to be the key to attachment. Harlow's research suggesting the importance of contact comfort rather than food could also be made relevant.

Evaluation of Bowlby's explanation could relate to criticism of the critical period and monotropy. Candidates might refer to imprinting and the problems of generalising from birds to humans. However, positive references to the importance of Bowlby's work would be equally relevant.

Genuine comparison/contrast between different explanations could also be credited as evaluation.

AO1 Knowledge and understanding	AO2 Application of 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. Presentation of information is clear and coherent.	**6 marks Effective evaluation** 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.
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. Information is presented in an appropriate form.	**5-4 marks Reasonable evaluation** 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.
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. Information is not presented in an appropriate form.	**3-2 marks Basic evaluation** 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.
1 mark Very brief/flawed Very brief or flawed description that demonstrates very little knowledge or understanding of research. Selection and presentation of information is largely inappropriate.	**1 mark Rudimentary evaluation** 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.
0 marks No creditworthy material presented.	**0 marks** No creditworthy material presented.

ASSESSMENT OBJECTIVES

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

6		2 + 2	
6b		2	
7a			2
7b			2
7c			2
8	6		
9a			3
9b			3
10	6	6	
Developmental and Research Totals	12	12	12
Totals	24	24	24