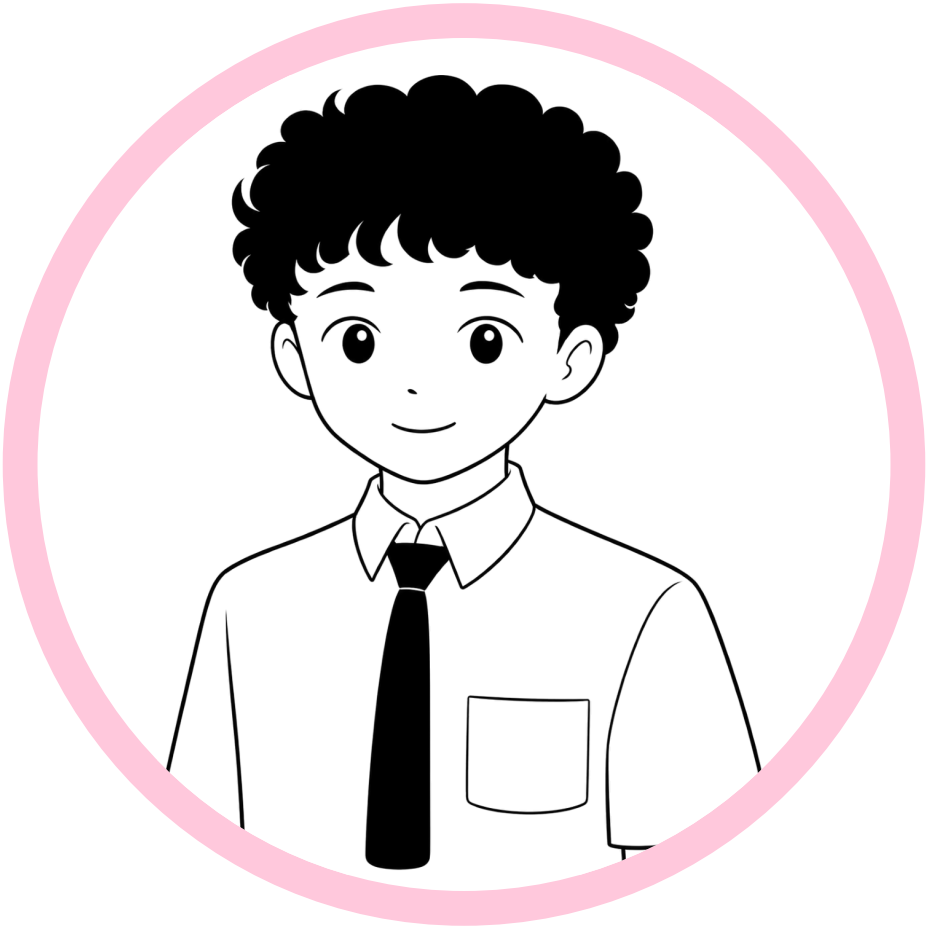
PEARSON EDEXCEL IAL PSYCHOLOGY · YPS01

PSYCHOLOGY



MARK SCHEME

COGNITIVE PSYCHOLOGY

SCORE	PERCENTAGE
/242	%

STEMUP

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Mark Scheme

Q1.

Question Number	Answer	Mark
(a)	**AO1 (2 marks)** Credit **one** mark for each accurate statement. For example: • The episodic buffer is used to link information across the other slave systems within the STM (Visuo-spatial sketchpad, phonological loop) (1). • The episodic buffer can store multi-modal information in visual, spatial, and verbal form (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO1 (2 marks), AO3 (2 marks)** Credit **one** mark for identification of each weakness (AO1) Credit **one** mark for justification/exemplification of each weakness (AO3) For example: • The working memory model claims the central executive is one of the most important features responsible for delegation of all tasks but does not fully explore how this system works (1). This limits the plausibility of the theory as it does not clearly provide an explanation of how it actually supervises and coordinates the slave sub-systems (1). • The working-memory model is only a theory of short-term memory and does not provide information on the process of long-term memory storage or retrieval (1). Tulving (1972) proposed that the LTM is divided into different memory stores such as the semantic and episodic memory which the working-memory model does not fully consider (1) **Look for other reasonable marking points.**	**(4)**

Q2.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example; • Jaya may have experienced an overload in the capacity of the phonological store when trying to process the auditory input from both the customer and managers voices (1) and she may have struggled to use articulatory rehearsal to maintain details of the food order which resulted in a loss of information (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks), AO3 (2 marks)** Credit **one** mark for accurate identification of a strength and a weakness in relation to the scenario (AO2) Credit **one** mark for justification/exemplification of the strength and the weakness (AO3) For example; Strength • There is credible evidence that suggests acoustic information storage in working memory is limited, explaining why Jaya struggled to process and store the whole food order that she was given verbally (1). Baddeley et al. (1975) found participants could remember more words of one syllable word compared to five syllable words, so Jaya may have struggled to store the simultaneous auditory input from the manager and customer (1). Weakness • Working memory model may not provide a complete explanation of why Jaya could not remember some of the food order as it does not explain the role of the LTM (1), as it is likely that the restaurant menu is stored in Jaya's LTM requiring limited STM processing to remember a food order linked to existing LTM, so working memory may not fully account for why Jaya forgot some of the food order (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(4)**

Q3.

Question Number	Answer	Mark
(a)	**AO1 (2 marks)** Credit up to **two** marks for an accurate description. For example; • A schema is a mental structure based on prior knowledge that a person has about a particular situation or object (1). Schemas are used as a blueprint for processing new information by drawing on their existing experience and understanding (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO1 (1 mark), AO3 (1 mark)** Credit **one** mark for accurate identification of a strength (AO1) Credit **one** mark for justification/exemplification of the strength (AO3) For example; • One strength of reconstructive memory is that there is credible empirical evidence to support Bartlett's concept that memory is flawed as it is reconstructed when we recall information (1) such as Loftus and Palmer (1974) who found that the use of different verbs would affect how participants recalled a car accident despite them having watched the same video of the accident (1). **Look for other reasonable marking points.**	**(2)**

Q4.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example; • Bobby may have an existing schema of features he associates with car thieves from his own knowledge or past experiences of theft (1) so when recalling the thieves Bobby filled in gaps in his memory using his schema of criminality to recall that the thieves were males in dark clothing (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks), AO3 (2 marks)** Credit **one** mark for accurate identification of a reason in relation to the scenario (AO2) Credit **one** mark for justification/exemplification of each reason (AO3) For example; • Chris may have assimilated information from the security guard and other witnesses that he talked to about the theft and his memory of the event has been altered from the post-event schema he has developed (1). Loftus and Pickrell (1995) found that in 25% of participants, memories could be created from false information given about an event showing how the other witnesses may have changed Chris's own memory of the car theft (1). • Confabulation may have influenced Chris's recall of events as it could make more sense to Chris that a physically smaller sized person would be a female rather than a male (1). Bartlett (1932) would suggest that this occurs when individuals alter or change a memory in order for it to fit with their own schema, so Chris would have recalled the smaller thief as female (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(4)**

Q5.

Question Number	Answer	Mark
(a)	**AO1 (2 marks)** Credit up to **two** marks for an accurate description. For example: • The sensory store receives modality specific information from the environment using all the senses (1). There is temporary storage of information for just a fraction of a second before passing to the short term memory (STM) if attention is paid (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO1 (1 mark) AO3 (1 mark)** Credit **one** mark for an accurate identification of one strength (AO1). Credit **one** mark for justification/exemplification of the strength (AO3). For example: • Glanzer and Cunitz (1966) found that participants recalled more words from the beginning and end of a list of words in the serial position effect experiment (1), providing supporting evidence for the existence of a separate short-term memory store and a long-term memory store as suggested in the multi-store model of memory (1). **Look for other reasonable marking points.**	**(2)**

Q6.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example: • The teacher believes that the class will revise more efficiently in silence as the phonological loop has limited capacity (1). Listening to music at the same time as revising will overload the phonological loop, making revision less effective (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks), AO3 (2 marks)** Credit **one** mark for identification of a strength and a weakness in relation to the scenario (AO2). Credit **one** mark for justification/exemplification of the strength and the weakness (AO3). For example: Strength • Experimental evidence shows there is limited capacity for acoustic information in the phonological loop which supports the teacher's insistence that the class revise in silence (1), Baddeley's (1975) word length experiment showed that participants struggled to remember multi syllabic words compared with shorter words, so Andrei would struggle to listen to music as well (1). Weakness • The long-term memory (LTM) may play a part in revision as some concepts may already be in Andrei's LTM which can be retrieved when he is revising (1), so this model may not realistically support the teacher's view of revising in silence as the LTM is not fully explained in working memory model (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(4)**

Q7.

Question Number	Answer	Mark
(a)	**AO1 (2 marks)** Credit up to **two** marks for an accurate description. For example; • The visuo-spatial sketchpad is a slave system of working memory that is controlled by the central executive (1) which processes visual and spatial information such as light, colour, shape and tracking movement of objects (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO1 (1 mark), AO3 (1 mark)** Credit **one** mark for accurate identification of a weakness (AO1) Credit **one** mark for justification/exemplification of the weakness (AO3) For example; • Baddeley and Hitch's (1974) working memory model is not a complete explanation of human memory as it only explains the short-term memory and ignores other memory components (1) therefore concepts like the phonological loop are limited in how useful they may be when applied to explaining memory processes such as long-term memory or sensory input (1). **Look for other reasonable marking points.**	**(2)**

Q8.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example; • Korie's visual-spatial memory was at capacity from processing the visual input from the television programme (1) which interfered with his spatial processing of the cupboard door location and position, so he walked into the cupboard door (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks), AO3 (2 marks)** Credit **one** mark for accurate identification of each weakness in relation to the scenario (AO2) Credit **one** mark for justification/exemplification of each weakness (AO3) For example; • Evidence that visual and spatial tasks do not interfere with each other in the VSS weakens the idea that the television would limit Korie's ability to notice the open cupboard door (1). Klauer and Zhao (2004) found that visual memory tasks were more disrupted by visual interference and spatial tasks more disrupted by spatial interference, so Korie should have noticed the cupboard door (1). • The idea of visual and spatial processing being within one sub-system may be an oversimplistic reason for why Korie did not notice the cupboard door (1). Lieberman (1980) suggests that blind people have excellent spatial awareness, although they have never had any visual information, so the VSS should be two separate stores, so Korie should have noticed the cupboard door (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(4)**

Q9.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example: • Eliza may encourage Darius to read out loud the names of roads and buildings from the map to articulate their names using articulatory storage (1) and then subvocalise each city landmark by repeating the names ten times to rehearse them in his articulatory loop (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example: • Eliza may ask Darius to trace his finger along the roads in the city so he can use his spatial processing to learn the locations of the main features of the map (1) and then draw this himself using different colours for each landmark, so he creates his own visual image of the map of the city (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(2)**

Q10.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the cognitive practical investigation. For example: • We made sure that those who took part were all over 16 years old as under they BPS guidelines they could consent to their own participation in the test of recall (1) and then informed consent was gained from all the students by giving them a full description of the memory recall task for them to read before they agreed to the experiment (1). **Look for other reasonable marking points.** **Answers must relate to the cognitive practical of a laboratory experiment using a repeated measures design to gather quantitative data.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the cognitive practical investigation. For example: • We used a Wilcoxon signed ranks test because we used a repeated measures design where the students took part in both conditions of the IV (1) and we wanted to see if there was a significant difference between the results for the interference and no interference conditions (1). **Look for other reasonable marking points.** **Answers must relate to the cognitive practical of a laboratory experiment using a repeated measures design to gather quantitative data.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
(c)	**AO2 (2 marks), AO3 (2 marks)** Credit up to **two** marks for identification of improvement in relation to the cognitive practical investigation. (AO2) Credit up to **two** marks for justification/exemplification of each improvement (AO3) For example: • We could have used an independent measures design with different participants taking part in the interference or no interference conditions (1) which would prevent any demand characteristics from participants guessing the aim of the experiment skewing the results about recall (1). • We could use a stratified sample of participants to ensure we had a more representative sample of ages and genders being tested for STM recall (1) this improves the generalisability of our findings about STM recall to a wider target population (1). **Look for other reasonable marking points.** **Answers must relate to the cognitive practical of a laboratory experiment using a repeated measures design to gather quantitative data.** **Generic answers score 0 marks.**	**(4)**

Q11.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • A case study can involve in-depth research into the effects of brain damage on a single participant's memory process and functioning. • Case studies can investigate patients where the brain damage that has occurred could not be intentionally caused for the purpose of a study. • Case studies can triangulate a number of research methods, such as observations, PET scanning and experimental methods. • Research using case studies of brain-damaged patients can generate qualitative data that describes the memory functioning in detail. **AO3** • The uniqueness of cases such as Clive Wearing or H.M., means the results may not be generalisable as the damage to their brains may not be useful to represent how memory would be affected in others. • Case studies may be a more ethical way to investigate the effects of things like the removal of H.M.'s hippocampus on memory processes, so are useful to study novel circumstances. • Triangulation improves the consistency of the data gathered within a case study, so can lead to greater reliability in findings about memory providing useful information for the understanding of memory. • The qualitative nature of the data can make it difficult to retest and check for accuracy of the results, therefore any conclusions about memory functions may not useful if accuracy cannot be confirmed. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.**		
	0	No rewardable material.
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. leading to an assessment being presented which considers a range of factors Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Q12.

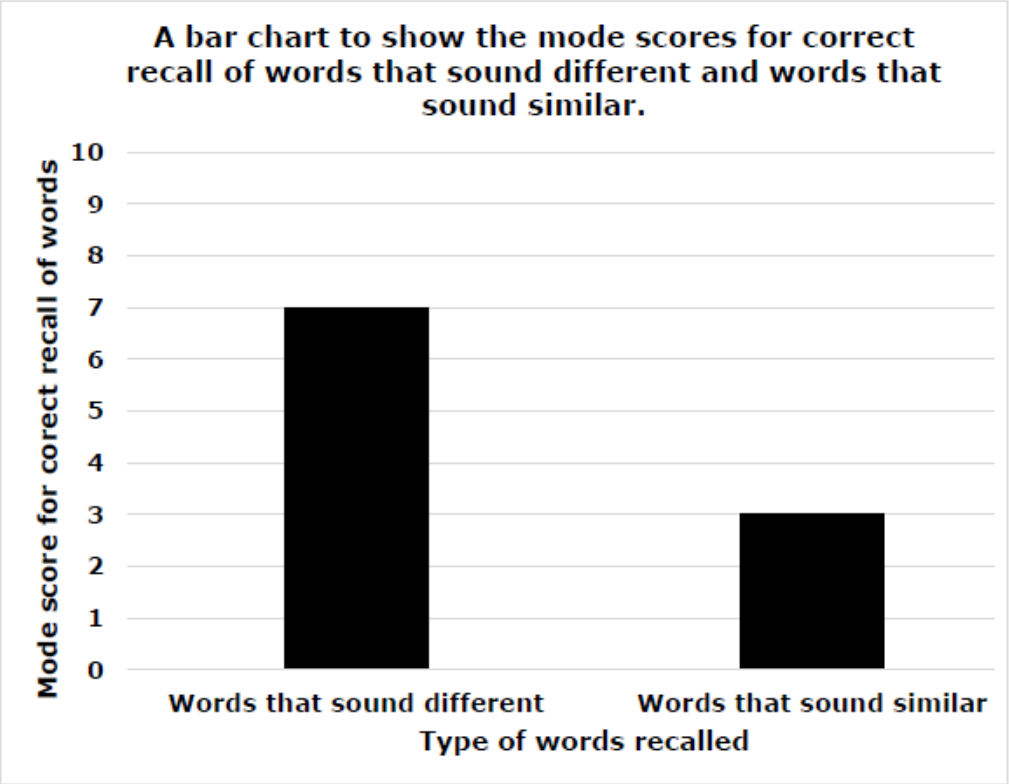
Question Number	Indicative content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • Henry Molaison (HM) underwent surgery to remove his hippocampus to relieve the severity of his epilepsy. • HM experienced severe memory loss and could not create any new declarative long-term memories after the loss of his hippocampus. • HM was able to learn new motor skills as shown by the mirror star drawing task where he improved over several attempts. • HM was studied for over 40 years and during that time participated in many experiments and observations. **AO3** • HM was an individual who had unique problems so a case study may not be representative of memory functions in all, so the findings may not be generalisable. • HM could not create new long-term memories, so his case is useful as it supports the MSM concept of separate STM and LTM stores. • HM is useful as it supports the concept of different long-term stores suggested by Tulving as he could still use his procedural memory. • The researchers in HM case study worked with him over a long period of time and built up a relationship with him, so there is a possibility of researcher bias reducing its usefulness. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.		
	0	No rewardable material.
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Q13.

Question Number	Answer	Mark
(a)	**AO2 (1 mark)** Credit **one** mark for correct answer. • 6.75 (1). **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
(b)	**AO2 (1 mark)** Credit **one** mark for correct answer. • 3 (1). **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
(c)	**AO2 (3 marks)** Credit **one** mark for appropriate **title.** Credit **one** mark for appropriate **labelling of axes.** Credit **one** mark for correct **plots.**  **Look for other reasonable marking points.**	(3)

Question Number	Answer	Mark
(d)	**AO2 (3 marks)** Credit up to **three** marks for an accurate description in relation to the scenario. For example: • Mateus could find several websites that have users from a range of backgrounds, such as educational, professional or retirement social media sites (1). He would place an advert on the social media sites to ask for people to come forward to take part in his memory study (1) and the potential participants would contact Mateus to offer to join his memory study which would give him a range of people in his sample (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	(3)

Q14.

Question Number	Answer	Mark
(a)	**AO2 (1 mark)** Credit **one** mark for correct answer. • 7.5 (1). **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
(b)	**AO2 (1 mark)** Credit **one** mark for correct answer. • 2.5 (1). **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
(c)	**AO2 (4 marks)** Credit **one** mark for correct completion of **difference** Credit **one** mark for correct completion of **ranked difference** Credit **one** mark for a correct calculation of **sum of both ranks** Credit **one** mark for a correct answer for **T=1**	

Participant	Condition A Number of trigrams recalled correctly with immediate recall	Condition B Number of trigrams recalled correctly with an interference task of 20 seconds	Difference	Ranked Difference
A	9	4	**5**	**3.5**
B	9	2	**7**	**7.5**
C	8	3	**5**	**3.5**
D	9	2	**7**	**7.5**
E	7	1	**6**	**5.5**
F	3	4	**-1**	**1**
G	7	3	**4**	**2**
H	8	2	**6**	**5.5**

Sum of positive ranks=35
Sum of negative ranks=1

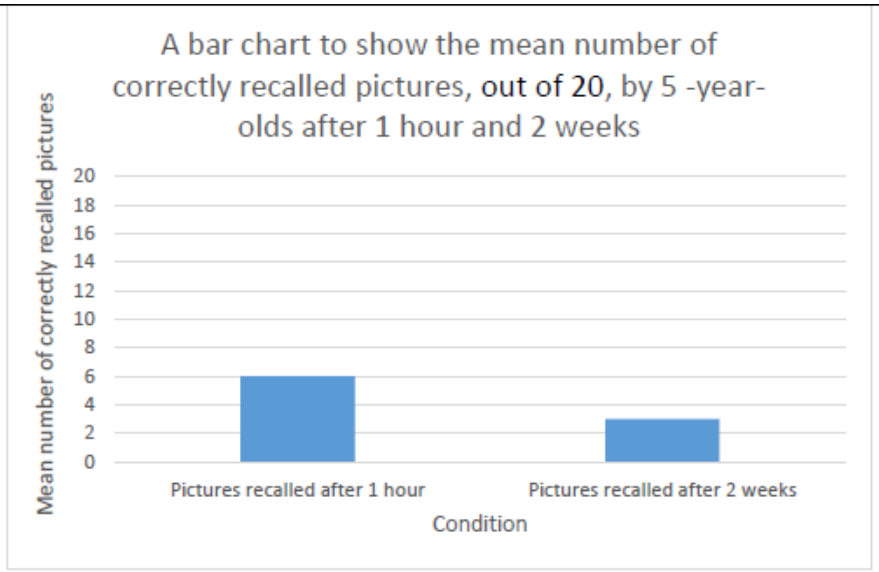
Look for other reasonable marking points. **(4)**

Question Number	Answer	Mark
(d)	**AO2 (2 marks)** Credit **one** mark for each accurate reason. For example: • Kim used a repeated measures design, with participants taking part in both conditions of interference and no interference (1). • Kim was looking for a difference in trigrams recalled correctly in the two conditions of the IV (1). **Look for other reasonable marking points.**	**(2)**

Q15.

Question Number	Answer	Mark
(a)	**AO2 (1 mark)** Credit **one** mark for a correct answer. For example: • 55% (1). **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
(b)	**AO2 (1 mark)** Credit **one** mark for correct answer For example: • 3:2 (1). **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
(c)	**AO2 (3 marks)** Credit **one** mark for an appropriate **title** Credit **one** mark for appropriate labelling of **axes** Credit **one** mark for appropriate **plots**. For example:	**(3)**
	 **Look for other reasonable marking points.**	

Question Number	Answer	Mark
(d)	**AO2 (3 marks)** Credit up to **three** marks for an accurate description in relation to the scenario. For example: • Katy could contact several local pre-school groups and ask for permission to carry out her investigation on the children (1). She could ask them for a list of the 3-year-olds attending nursery which she could put into a computer database (1). She could use a random number generator to select the first 10 children for her memory investigation (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(3)**

Q16.

Question Number	Answer	Mark
(a)	**AO2 (1 mark)** Credit **one** mark for a correct answer. For example: • 26 (1) **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
(b)	**AO2 (1 mark)** Credit **one** mark for a correct answer. For example: • 16 (1) **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
(c)	**AO2 (4 marks)** Credit **one** mark for correct completion of **difference** Credit **one** mark for correct completion of **ranked difference** Credit **one** mark for a correct calculation of **sum of both ranks** Credit **one** mark for a correct answer for **T=3** For example:	**(4)**

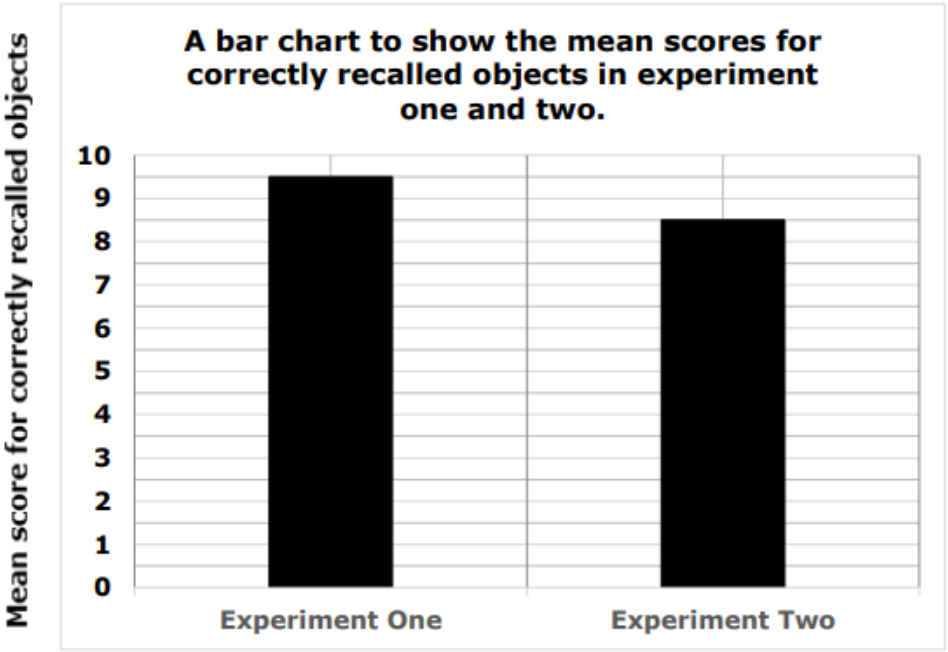
Participant	Condition A Number of details that were recalled correctly	Condition B Number of details that were recalled correctly	Difference	Ranked Difference
A	26	20	6	3.5
B	14	15	-1	1.5
C	28	21	7	5
D	19	9	10	6
E	21	21	0	-
F	26	13	13	7
G	20	14	6	3.5
H	24	25	-1	1.5

Sum of positive ranks=25
Sum of negative ranks=3

Look for other reasonable marking points.

Q17.

Question Number	Answer	Mark
(a)	**AO2 (3 marks)** Credit **one** mark for correct calculation of **sum of differences² = 17.5** Credit **one** mark for correct calculation of **dividing the sum of the differences² by (n-1) = 3.5** Credit **one** mark for correct answer for **standard deviation** to **two decimal places =1.87** **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
(b)	**AO2 (3 marks)** Credit **one** mark for appropriate **title**. Credit **one** mark for appropriate **labelling of axes**. Credit **one** mark for correct **plots**. For example:  **Experiment 1 or 2.** **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
(c)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example: • Lev should have made sure he had informed consent from the two sets of participants before they took part in the short-term memory capacity test (1) by explaining to the twelve participants that they would be shown images of objects and their accuracy of recall would be measured so they understood what they were consenting to (1). **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(2)**

Q18.

Question Number	Answer	Mark
(ai)	**AO2 (4 marks)** Credit **one** mark for correct completion of **difference** Credit **one** mark for correct completion of **ranked difference** Credit **one** mark for a correct calculation of **sum of both ranks** Credit **one** mark for a correct answer for **T= 4** For example:	**(4)**

Participant	Condition A	Condition B	Difference	Ranked Difference
A	2	5	-3	6
B	3	5	-2	4
C	4	3	1	2
D	6	7	-1	2
E	4	4	0	
F	5	8	-3	6
G	2	5	-3	6
H	3	2	1	2

Sum of positive ranks = **4**
Sum of negative ranks = **24**

Look for other reasonable marking points.

Question Number	Answer	Mark
(aii)	**AO3 (1 mark)** Credit **one** mark for an accurate determination of significance. For example: • The calculated value of 4 was higher than the critical value of 3 for a one-tailed test at $p \leq 0.05$ where N=7 so the results are not significant (1) **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks), AO3 (2 marks)** Credit up to **two** marks for identification of improvement in relation to the scenario. (AO2) Credit up to **two** marks for justification/exemplification of each improvement (AO3) For example: • Leonardo could have used two different sets of 12 digit number sequences using one in each condition instead of using the same numbers (1) which would prevent the order effect of the participants from rehearsing the numbers presented making the results about recall more valid (1). • Leonardo could use more than 8 participants to reduce the impact of anomalies on his results about chunking in memory recall (1) this prevents his data being skewed by individual differences in participants, making his results about improvements in recall more reliable (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(4)**

Q19.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description in relation to the scenario. For example: • Bashir could use a task such as giving participants a verbal request of nine items he needs them to buy from the shop (1) and ask participants to walk to the shop to buy the items while counting the number of steps they take to get there (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks), AO3 (2 marks)** Credit up to **two** marks for identification of each weakness in relation to the cognitive practical investigation (AO2). Credit up to **two** marks for justification/exemplification of each weakness (AO3) For example: • Bashir would be unable to control for extraneous variables in the environment that can cause distraction during a memory task and interfere with short-term memory (1) which would result in his findings about STM being affected by confounding factors rather than his IV so his results would be unreliable (1). • Bashir may not be able to replicate the procedure exactly for each participant due to the nature of the natural context of his memory experiment (1), resulting in it being difficult for others to replicate his test of short-term memory duration to check his findings for consistency (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(4)**

Q20.

Question Number	Answer	Mark
(a)	**AO2 (3 marks)** Credit up to **three** marks for an accurate description in relation to the scenario. For example: • Melanie would first split her 18 participants into two different groups with 9 participants in each separate group (1). One group would take part in the first condition of the IV such as having no exposure to visual interference as a baseline measure of recall (1) and the second group would take part in the second condition of the IV, such as being given visual distractions when trying to learn the words (1). **Look for other reasonable marking points.** **Generic answers score 0 marks.**	**(3)**

Question Number	Answer	Mark
(b)	**AO1 (1 mark), AO3 (1 mark)** Credit **one** mark for identification of a weakness (AO1) Credit **one** mark for justification/exemplification of the weakness (AO3) For example: • A laboratory experiment takes place in a context that is artificial to the participants and does not reflect real-life situations and experiences (1), therefore there is low ecological validity as the findings from experiments may not be applicable to human behaviour in the real world (1). **Look for other reasonable marking points.**	**(2)**

Q21.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description of a difference. For example: • Quantitative data is numerical data but qualitative data is descriptive written data (1) such as answers to open-ended questions that contain more detail than quantitative data that is often statistical results or calculations (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks)** Credit up to **two** marks for an accurate description of a difference. For example: • Primary data is gathered first-hand by the researcher and secondary data is information already published (1) which is then used by a researcher as part of their own investigation instead of conducting research such as experiments to find original data (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(c)	**AO2 (2 marks)** Credit **one** mark for an accurate statement. Credit **one** mark for an appropriate example For example: • Ordinal data can be placed in order of value even when the difference between values may not have the same meaning (1) for example when people are placed as 1st, 2nd 3rd in a race even when the time gap between those positions may be different (1). **Look for other reasonable marking points.**	**(2)**

Q22.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO2 (4 marks) **AO1** • Information is initially detected by the sense organs, such as sight or sound, and enters the sensory store in a modality specific form for a very brief time. • The short-term memory store is said to have a limited capacity of 5-9 items for information storage and a limited duration of 15-30 seconds. • Rehearsal takes place in short-term memory to transfer information into the long-term memory store. • Information is said to be encoded in the long-term memory store in mainly a semantic format. **AO2** • Smaragda would need to pay attention to sensory input of the content of the instruction manual and icons in order for the information to transfer to her STM to be processed. • Smaragda can chunk information from the instruction manual to hold more in her short-term memory about how to operate the computer system. • Information from the instruction manual will only be held for a short period of time, so Smaragda will need to make sure she is not interfering with this memory by using the computer at the same time. • She will need to give the information from the manual meaning to encode in semantic storage, so she could use the computer system and practice the steps, so she is able to make connections between the computer, icons and instructions. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures. (AO2)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Q23.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO2 (4 marks) **AO1** • The sensory register receives information from the environment using all five senses and process this in a modality specific format. • Information is transferred from the sensory register to the short-term memory store when it has been given attention. • The short-term store has a capacity of 5-9 items and can last for up to 30 seconds before information is lost. • The long-term store encodes information semantically for an unlimited time once transferred from the short-term store using rehearsal. **AO2** • As the music was very loud and lots of people were shouting, the sensory register may not have been able to process all of the information leaving gaps in what could be transferred to the short-term store. • Isla may not have paid attention to the song playing when the man was knocked over as she was distracted, so the song is not transferred to her short-term memory store. • Kiwi did not remember the light show due to overload of information at that time when the band members jumped into the audience, so her STM capacity was taken up with locating the band when she ran to them. • Isla and Kiwi sang along to some songs which they both remembered as they were using a process of rehearsal of the lyrics to transfer the information about the song to their long-term memory store. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures. (AO2)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Q24.

Question Number	Indicative content	Mark
	AO1 (6 marks), AO3 (6 marks) **AO1** • The aim of the study was to investigate the effect of previous knowledge on the recall of the War of the Ghosts story. • Bartlett recruited 20 participants from Cambridge University who were given a story adapted from Native American folk tale. • In the repeated reproduction condition each participant read the story to themselves at normal reading rate twice and reproduced it usually after 15 minutes. • In the serial reproduction condition the participant read the story through at their normal reading rate twice and told the story to another person 15 minutes later. • Participants changed some aspects of the story to make sense of the story, for example 'canoes' were changed to 'boats' or 'something black' was changed to 'escaping breath'. • The story became much shorter and more coherent whilst the supernatural element was no longer prominent after several reproductions.	**(12)**
	AO3 • The experiment was carried out in 1932 and the findings might not be as relevant today where people are exposed to more culturally diverse material. • The sample was limited with just 20 participants from Cambridge so it may not have accounted for different cultures and age groups. • As the story was unknown to the participants it should be an accurate measurement of the effect of schema on memory increasing the validity of the study. • There are missing details of exactly how the study was conducted and the distance between	

	reproductions was inconsistent making it difficult to replicate accurately. • Bartlett's (1932) study provides important support for schema theory and shows that memory is actively reconstructed in terms of past experiences and cultural expectations. • Bartlett's (1932) study has a useful application in EWT, as it explains why people can interpret information differently and why witnesses will give different accounts of the same event. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4-6 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7-9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning, leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	10-12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q25.

Question Number	Indicative Content	Mark
	AO1 (6 marks), AO3 (6 marks) **AO1** • Memory is not like a video recorder as memories are reconstructions of events and usually contain errors. • Reconstructive errors of people's recent experiences can be influenced by past experiences of an event/object/person that was similar. • Schemas are packets of knowledge about a person/object that could be personally experienced or acquired from other sources. • Memories may be subject to confabulation where information is removed or changed to fit with an existing schema. • People hold stereotypes that can also affect the accuracy of a memory as they fill in blanks with preconceived ideas they have. • The process of assimilation is when people adapt and change an existing schema with new information to fit with what they have newly learned. **AO3** • Reconstructive memory simply describes how we encode memory traces at the time of an event so it may only partially explain inaccuracies in memory as there could be other factors involved at the recall stage. • Inaccuracies can be explained through schema, with Brewer and Treyens (1981) finding that an 'office schema' affected the accuracy of participant recall who added objects usually found in an office that were not present. • Godden and Baddeley (1975) found that divers were able to recall better underwater when this was the context in which they had learned the information, so context may explain inaccuracy more than schema. • The War of the Ghosts study (1932) found that participants filled in gaps in recall with their own schema for example, boats became a substitute for canoes, which can explain why recall was inaccurate. • Allport & Postman (1947) found participants inaccurately recalled from an image that a black man was holding a razor despite this being held by the white man in the image, reflecting preconceived ideas at that time. • It is difficult to measure whether the reconstruction of memories takes place at the point of learning or the point of recall, therefore concepts such as assimilation may not be plausible explanations of how memory adapts. **Look for other reasonable marking points.**	**(12)**

Level	Mark	Descriptor
AO1 (6 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4-6 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7-9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	10-12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q26.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO2 (4 marks), AO3 (4 marks) **AO1** • Reconstructive memory suggests that we actively try and make sense of new information based on what we already know. • Information may be remembered in a distorted way since memories are reconstructions based on an individual's past experiences and expectations. • Schemas are mental pockets of knowledge that we develop over time and then use to interpret new experiences. • Schemas hold past experiences and expectations that we use to fill in gaps of an event, person, or object as we do not take in all information at the time. **AO2** • The uncle talks about the brothers having a fight which may have provided new information about their childhood that influenced the way in which the two brothers then recalled the event themselves. • Arthur recalled having hurt his arm during the fight, which could have been because the uncle had led Arthur into recalling information in a distorted way by using the word 'fight'. • Arthur may have a schema for children fighting and what may take place during a child's fight from his past experiences, so he described being pushed over by Benny as this is part of his schema. • Benny may remember the incident as falling onto Arthur by accident if he has a belief that he is a non-aggressive person so his expectation of his own actions would be that it was an accident, changing his memory to this.	
	AO3 • Loftus and Palmer (1974) found that changing a word in a question, such as smash, bump, collide, led participants into making higher speed estimates of a car accident, therefore a leading word can distort memory. • Yuille and Cutshall (1986) found that recall of a real-life event was accurate even after a period of time and that misleading questions had no effect on recall accuracy, so differences in recall may not be related to reconstructions. • A schema cannot be empirically observed or tested so is a hypothetical explanation that may lack sufficient scientific credibility to explain differences in recall for the same event. • Bartlett (1932) found that participants in 'War of the Ghosts' changed the story content, such as canoes to boats, using prior knowledge showing how prior knowledge can change memories. **Look for other reasonable marking points.**	**(12)**

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4-6 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7-9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments, but evaluation may be imbalanced. (AO3)
Level 4	10-12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques, or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q27.

Question Number	Indicative Content	Mark
	AO1 (6 marks), AO3 (6 marks) **AO1** • The multi-store model of memory can be described as an information processing model where information is input, processed then output. • Information is initially detected by the sense organs, such as sight or sound, and enters the sensory store in a modality specific form for a very brief time. • Information that is attended to in the sensory store is then transferred to the short-term memory store where acoustic encoding is used. • The short-term memory store is said to have a limited capacity of 5-9 items for information storage and a limited duration of 15-30 seconds. • Rehearsal takes place in short-term memory to transfer information into the long-term memory store. • Information is said to be encoded in the long-term memory store in mainly a semantic format.	**(12)**

	AO3 • Baddeley and Hitch (1974) suggest that short term memory comprises of multiple slave systems, so the multi-store model may be an over simplistic explanation of information processing in memory. • The multi-store model explains all stages of memory processes from sensory input through to long-term storage making it a more complete explanation of how the stages of human memory work. • In the case of KF, Shallice and Warrington (1974) found that material in the STM was analysed for meaning, and not simply for sound as the multi-store model claimed, so STM may be more complex than Atkinson and Shiffrin (1968) suggested. • Peterson and Peterson (1959) found that decay occurs in the STM store over a period of 18-30 seconds if rehearsal is prevented, supporting the rehearsal process of transfer to LTM. • Supporting evidence for separate memory stores and transference comes from the case study of HM whose STM was unaffected by his brain damage, but he could not create new semantic long-term memories. • There is evidence from the case of HM that new long term procedural memories could be created, such as mirror drawing, which is not explained by the multi-store model, making it an incomplete explanation of memory. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4-6 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7-9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments, but evaluation may be imbalanced. (AO3)
Level 4	10-12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q28.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • The multi-store model of memory can be described as an information processing model where information is input, processed then output. • The short-term memory store is said to have a limited capacity for information storage and a limited duration. • Short-term memory is said to encode information acoustically, and through rehearsal this is transferred to the long-term memory. • Declarative memory in the long-term memory store is said to be encoded in mainly a semantic format. **AO3** • The multi-store model fully explains all stages of memory process from sensory input through to long-term storage making it a comprehensive explanation of how the stages of human memory work. • Miller (1956) supports the claim that the capacity of the short-term memory store is limited to 7 +/-2 items after which displacement of information begins to occur. • From the case of KF who had verbal deficits in STM it was found that material in the STM can be encoded visually, and not just acoustically as proposed by the multi-store model. • Evidence from HM showed that new long term procedural memories could be created, such as mirror drawing, which is not explained by the multi-store model, making it an incomplete explanation of memory. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	3-4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	5-6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments, but evaluation may be imbalanced. (AO3)
Level 4	7-8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q29.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • A laboratory experiment is conducted in an artificial setting for the participants where the setting is highly controlled. • A field experiment is conducted in a more natural context that is familiar to the participants. • The control of extraneous variables in a laboratory experiment means the IV is more likely to be the only variable affecting the DV. • Experimental methods can be designed in ways that allocate participants to the same or different conditions of the IV, such as independent measures or repeated measures. **AO3** • Bartlett (1932) controlled the learning of the War of the Ghosts story, but recall was in different locations over a period of time which may be a more valid test of recall than in an artificial setting. • It can be difficult to replicate memory tasks undertaken in a field experiment which reduces the reliability of the findings about how memory works as they cannot be retested. • The artificiality is beneficial for testing memory as it can eliminate possible extraneous variables, such as noise which could prevent STM rehearsal in experiments such as Baddeley (1966b). • The use of different designs, like independent measures, can eliminate issues such as practice effect so the data gathered in a memory task is a valid measure of memory recall. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.**		
	0	No rewardable material.
Level 1	1-2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	3-4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	5-6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments, but evaluation may be imbalanced. (AO3)
Level 4	7-8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q30.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • A repeated measures design is when participants in a study take part in all the conditions of the independent variable. • An independent groups design is when participants in a study only take part in one of the conditions of the independent variable. • When matched pairs is used, the participant sample are matched on specific features, such as age, gender or cognitive ability. • The type of memory task, such as repeated trigram tests, can influence the likelihood of order effects and demand characteristics. **AO3** • Taking part in all conditions of the IV can lead to participants guessing the aim of the study and changing their behaviour which reduces the internal validity of findings about memory. • Individual differences, such as processing speed, can become a confounding variable in an independent groups design which reduces the comparability of data gathered in each condition of the IV. • Matching the participants on their cognitive ability, such as their age in a digit span test, can help ensure that the results in each condition are less influenced by participant variables. • Careful consideration of a research design can reduce the likelihood of a memory task causing fatigue or giving away the aim, improving the reliability that the IV is causing the effect on the DV. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.**		
	0	No rewardable material.
Level 1	1-2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	3-4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	5-6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments, but evaluation may be imbalanced. (AO3)
Level 4	7-8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q31.

Question Number	Indicative Content	Mark
	AO1 (6 marks), AO3 (6 marks)	**(12)**
	Darling et al. (2007) **AO1** • The sample consisted of 44 females and 28 males from a non-student volunteer participation panel at the University of Aberdeen. • Darling et al. (2007) randomly allocated their 72 participants into one of six possible combinations of memory and interference task. • Each participant took part in three sets of 24 trials for the combination group to which they had been allocated for the experiment. • Darling' s study only measured one category of visual information from a black screen with white squares and a P positioned on it. • Each trial was controlled and standardised, so all participants experienced the same presentation of the location and font of the 'P' in the visual display. • The findings imply that appearance information is accessed differently from location information and so 'visuo-spatial' memory might reflect separate components of the cognitive system.	
	AO3 • The volunteer sample may not represent a range of individuals as not everyone would have time to volunteer in research studies so the findings may not reflect the memory skills of a wider population. • Random allocation is an objective way of allocating participants to their memory tasks therefore avoiding any experimenter bias increasing reliability. • By undertaking 24 trials in each condition there is internal reliability as the task was tested and re-tested within the study, increasing the reliability of the findings about memory. • By only measuring one type of visual memory the study can be considered reductionist as it oversimplifies human visual processing to judgements on a letter and font. • Controlling the trials give the findings about visuo-spatial processing internal validity as Darling et al. (2007) can be more certain that the task was the only impact on memory accuracy. • Visual and spatial memory in humans deals with lots of visual stimuli therefore the finding may not be valid to everyday visual or spatial processing. **Look for other reasonable marking points.**	

Sacchi et al. (2007)

AO1

- Sacchi' s task involved using doctored photographs of two famous events, the Tiananmen Square protest in Beijing and the peaceful protest near the Coliseum, in Rome.
- The sample consisted of 187 undergraduates, of which 31 were male and 156 were female with an age range of 19 to 39 years.
- Participants viewed one of four possible combinations of the photographs for the Beijing event and the Rome event which were counterbalanced and randomised when presented.
- The photographs and three sets of multiple-choice questions were presented in a printed questionnaire that participants completed in classroom settings.
- Participants who viewed doctored photographs rated the event significantly more violent than those who saw the original photograph, suggesting memories of events can be inaccurate when misleading information is given.
- During a debriefing, the participants were shown both versions of each photograph, and the purpose of the study was explained.

AO3

- The photographs were of real events that happened in society therefore increasing task validity as people are often presented with visual images of events in the media.
- The sample is unrepresentative of males so findings about memory reconstruction lack population validity and not be generalisable to the memory of males.
- Random allocation is an objective way of allocating the photograph combinations to participants therefore avoiding experimenter bias and increasing reliability.
- The ratings of the photographs may have been biased as self-report questionnaires are prone to social desirability so participants may give socially appropriate attitude scores reducing internal validity.
- There is a lack of external validity to the findings about memory as people have access to multiple sources of information about events that have happened, so multiple sources of information are more likely to be used than just one photograph.
- The debriefing process gives the study good ethical considerations under the BPS Code of Ethics and Conduct (2009) as Sacchi et al. (2007) demonstrated responsibility towards their participants.

Look for other reasonable marking points.

Level	Mark	Descriptor
AO1 (6 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4-6 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7-9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	10-12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q32.

Question Number	Answer	Mark
(a)	**AO1 (1 mark), AO3 (1 mark)** Credit **one** mark for accurate identification of a strength (AO1) Credit **one** mark for justification/exemplification of the strength (AO3) For example; • Peterson and Peterson (1959) found that over 90% of trigrams were forgotten from STM after 18 seconds when rehearsal was prevented (1), which supports the suggestion in the multi-store model of memory that rehearsal is required for memory transference from STM to LTM, giving credibility to the theory (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
(b)	**AO1 (1 mark), AO3 (1 mark)** Credit **one** mark for accurate identification of a weakness (AO1) Credit **one** mark for justification/exemplification of the weakness (AO3) For example; • The multi-store model could be considered reductionist as it oversimplifies human memory to three very basic stores and simplistic encoding processes (1), therefore it fails to fully account for any other types of human memory such as spatial processing in short-term memory or procedural memory for movement (1). **Look for other reasonable marking points.**	**(2)**

Q33.

Question Number	Answer	Mark
	AO1 (2 marks), AO3 (2 marks) Credit **one** mark for identification of each strength/weakness (AO1) Credit **one** mark for justification/exemplification of the strength/ weakness (AO3) For example: Strength • Peterson and Peterson (1959) provide supporting evidence that more than 90% of trigrams were forgotten from STS when rehearsal was prevented by using an interference task (1) adding credibility to the role of rehearsal to transfer information from STS to LTS as suggested in the multi-store model of memory (1). Weakness • The multi-store model it is a reductionist explanation of memory as it oversimplifies human memory to three very basic stores with simple processes and functions (1), therefore it ignores other types of human memory such as procedural memory for muscle movement gained from physical practice (1). **Look for other reasonable marking points.**	**(4)**