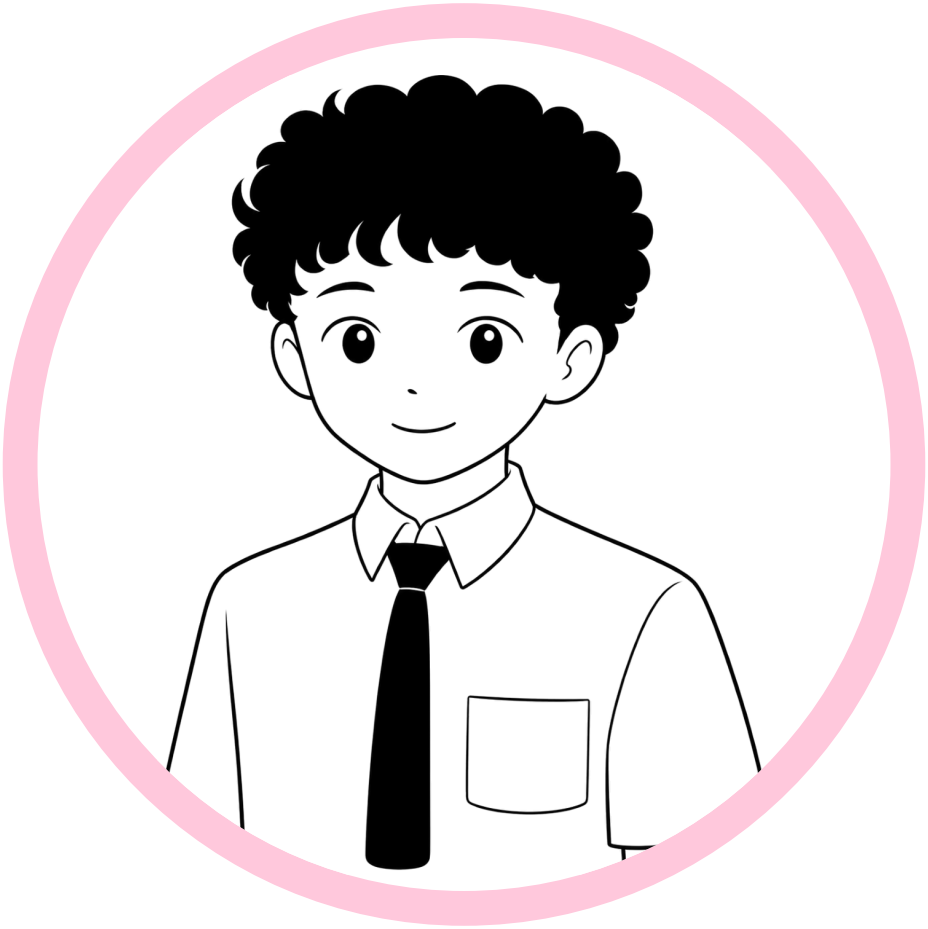
PEARSON EDEXCEL A-LEVEL PSYCHOLOGY · 9PS0

PSYCHOLOGY



MARK SCHEME

TOPIC 2: COGNITIVE PSYCHOLOGY

SCORE	PERCENTAGE
/109	%

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Mark Scheme

Q1.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • Reductionism involves breaking aspects of human behaviour into individual parts. • The multi-store model explains memory a simplistic processing system of three stores. • Many models of memory in cognitive psychology consider how the brain operates in a similar manner to a computer. • Cognitive psychology also used case studies of brain damaged patients which gather detailed information. **AO3** • Research into cognitive psychology often uses simplified tasks, like word lists, which reduce memory to a system of information processing. • Multi-store model assumes attention and rehearsal is required for memory which is reductionist as it ignores how people recall experiences they have not rehearsed. • Bartlett's (1932) reconstructive memory relies on schemas which come from whole life experience therefore is holistic so not all cognitive psychology can be considered reductionist. • The case of HM demonstrated the ability to learn procedural skills without rehearsal, showing that reducing memory to a set of stores is insufficient to explain how all memory works so cognitive psychology should be more holistic. **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.**		
Level 0	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)

Q2.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • Research using case studies of brain-damaged patients can give qualitative data that describes memory functioning in detail. • Brain damage is atypical and unique to the individual studied and there are rarely brain damage cases that are the same. • Case studies can combine multiple research methods, such as observations, PET scanning and experimental methods. • Case studies can follow the development of an individual with brain damage over a long period of time. **AO3** • Qualitative data can increase the validity of findings from case studies making them effective for investigating the memory of individuals. • An idiographic approach to personal experiences of brain damage decreases the effectiveness of the case study method for establishing universal psychological laws of memory functioning. • Triangulation of methodology in a case study can increase the scientific credibility of the findings about memory making the findings more effective in supporting theories and explanations. • Using longitudinal methods, the individual can be reassessed several times so the data about their memory can effectively show developmental differences in degenerative disorders such as Alzheimer's. **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)

Q3.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **Schmolck et al. (2002)** **AO1** • The sample included 8 male controls and 1 female, 5 male participants with brain damage. • All participants were given nine tests based on the same line drawings of 24 animals and 24 objects which could further be assigned to one of 8 categories; e.g. 6 birds. • For tests 8 and 9, the number of correct statements and incorrect statements were calculated, then they assigned a quality score (0–4) to each definition. • Schmolck et al. (2002) concluded that deficits in semantic knowledge is related to damage in anterolateral temporal cortex and not medial temporal lobe structures. **AO3** • Brain damaged patients are not representative of the wider population so findings about the role of brain regions in semantic knowledge may not be generalisable to all human memory. • The procedure was standardised with all participants seeing the same drawings which controls for variables increasing the reliability of the findings about semantic memory. • Quantitative data is an objective measure of memory performance which reduces subjectivity in the interpretation of the data about memory functioning. • They were unable to test semantic memory prior to brain damage so the conclusions do not consider individual differences in memory as there was no baseline measure before brain damage.	**(8)**

	Steyvers and Hemmer (2012) **AO1** • A random sample of 22 participants for the verbal cue condition and 25 participants for the visual cue condition was recruited from an experimental participant pool at the University of California. • A verbal cue condition with no image was used where participants had to list objects that came to mind that they expected to see in a given scene, such as a kitchen, or hotel room. • There was a separate group in the experimental condition who made perceptual judgements based on visual cues recalling what they could see. • They found that participants had strong prior expectations from schemas that are in line with occurrences of the objects in natural environments. **AO3** • The sample may only be representative of university students in a western society and may not be generalisable to the way prior expectation affects schema cross-culturally. • The verbal cue test for the prior expectations of participants gave Steyvers and Hemmer (2012) data to compare to the findings of the experimental condition increasing reliability. • Using an independent measures design means that the impact of individual differences may have affected the results about prior expectations, reducing the validity of the findings. • The study is supported by research from Bartlett (1932) who also found that prior expectation and schema affected the recall of information from the 'War of the Ghosts' story.	

	Sebastián and Hernández-Gil (2012) **AO1** • The sample was 570 volunteer, or volunteered, children aged between 5 and 17 years old from a range of schools, such as public and private, in Madrid. • Participants were divided into five different age groups and then each child was read the digits independently. • Each participant was read increasing sequences of digits to recall in the correct order with digit span recorded as the maximum digits recalled in the correct order without error. • Digit span in the Spanish population is significantly shorter than Anglo-Saxon culture, probably due to the word length effect associated with digits. **AO3** • The sample is only representative of Spanish speaking children in the Madrid region, so it cannot be generalised beyond this population to speakers of other languages. • The use of cross-sectional groups allowed them to track the development of digit span over time without the extended duration of conducting a longitudinal study. • Digit sequence recall is artificial and has limited task validity as children are unlikely to learn random sequences of numbers in their day-to-day experiences. • The study can be replicated to test verbal digit span across cultures to understand cross-cultural developmental and individual differences in phonological processing in working memory. **Look for other reasonable marking points.**	

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)

Q4.

Question Number	Answer	Mark
(a)	**AO2 (2 marks)** Up to two marks for a description of gathering a stratified sample in relation to the scenario For example: • Ken would determine the strata for the high school student population demographic across the city he has chosen (1) and then select student participants to meet each strata, such as the proportions of gender for each year group (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
(b)	**AO2 (2 marks)** Up to two marks for an explanation of an appropriate choice of test and reasoning. For example: • Ken would use a Wilcoxon signed ranks test (1) because he is looking for a difference between morning and afternoon memory processing speed (1). **Look for other reasonable marking points.**	**(2)**

Q5.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO2 (4 marks) For example: Key question: How reliable is eyewitness testimony? **AO1** • Unreliable eyewitness testimony can mean innocent individuals go to prison. • The Innocence Project (2015) identified that 72% of wrongful convictions were partly or wholly due to eyewitness misidentification showing it is a key issue for society. • Society will lose trust in the criminal justice system if innocent people are consistently being sent to jail so crimes may go unreported through fear of this continuing to happen. • Ronald Cotton was misidentified by Jennifer Thomson-Cannino and spent more than 10 years in prison for rape which could have been avoided with reliable eyewitness procedures. **AO2** • Reconstructive memory theory would propose that reconstructive errors are made by eyewitnesses due to them filling in the gaps of the recall with information from their schemas. • If an eyewitness does not pay attention to a crime and later rehearse the events their testimony may be inaccurate according to multi store model. • Misinformation could be given to witnesses in the form of leading questions and could mean they incorporate errors in their recall of a crime, leading to inaccurate testimony. • Peterson and Peterson (1959) showed rehearsal was important in retaining trigrams so if eyewitnesses rehearsed events repeatedly they may be able to give a more accurate version of events. **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.**		
Level 0	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)

Q6.

Question Number	Indicative content	Mark
	AO1 (6 marks), AO3 (6 marks) **AO1** • Nature relates to innate characteristics such as genes, hormones, and the brain. • Nurture relates to environmental factors such as drugs, disease, and diet. • Psychologists are interested in the nature-nurture debate to find the source of behavioural traits in individuals. • If we know if behaviour is caused by nature or nurture, we can establish suitable strategies for modifying behaviours. • Social psychology explains human behaviour through the influence of groups and personality. • Cognitive psychology attempts to explain how memory works using models such as the multi store model which emphasises nurture in the need for attention and rehearsal. **AO3** • The case of HM supports the existence of nature affecting the memory as he was unable to remember new factual information after surgery. • Clive Wearing (Blakemore, 1988) supports nurture to a certain extent because an illness prevented new memories being stored. • Blass (2012) found little difference between obedience cross-culturally which suggests that a nature explanation underpins obedience to a certain extent. • Milgram's variations show differences in obedience and conformity as a result of proximity and status which can, to an extent, be used to reduce situations result in blind obedience. • Social Impact Theory suggests the number of sources and targets can influence obedience in group situations, therefore the environment can play a significant role. • Peterson & Peterson (1959) showed the influence of rehearsal on short term memory which is a nurture factor that can be applied to some extent to improving student learning. **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 judgement/conclusion in their answer.		
	0	No rewardable material.
Level 1	1–3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A judgement/decision 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 judgement/decision being presented. Candidates will demonstrate a grasp of competing arguments but response may be imbalanced. (AO3)
Level 3	7–9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Displays a mostly developed and logical argument, containing mostly coherent chains of reasoning. Demonstrates an awareness of competing arguments, presenting a judgement/decision which may be imbalanced. (AO3)
Level 4	10–12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to a balanced judgement/decision. (AO3)

Q7.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • Respect requires researchers to keep participant details private and confidential. • Respect involves giving full informed consent to the participant before the research study. • Responsibility involves being protecting participants from harm. • Respect includes offering the participants the right to withdraw from the research at any time. **AO3** • Case studies in cognitive psychology regularly give participants a pseudonym to protect their identity, such as H.M., so this research is therefore ethical. • Sherif (1954/1961) had an individual interview the parents to explain the purpose and aim of the study and gain permission for the boys to participate in all camp activities and give their own permission so this shows informed consent was obtained. • Participants in Milgram's research showed visible signs of distress when they thought they were electrocuting the learner so by not protecting participants social psychology research may not be ethical. • Researchers working with H.M. could offer the right to withdraw but due to his impaired memory the extent to which this was followed is questionable, so this research may not be ethical. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Ccandidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.		
Level 0	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)

Q8.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO2 (4 marks) **AO1** • The multi-store model of memory (Atkinson and Shiffrin, 1968) divided memory into sensory store/sensory register, short-term memory and long-term memory. • Attention to information in the sensory store means it goes into short-term memory, or else it is lost. • Short-term memory has a capacity of 5 to 9 items (e.g. Miller, 1956) and duration of up to 30 seconds (probably shorter) (e.g. Posner, 1966), and it is thought to be acoustic in processing. • Memories in short-term memory can go into long-term memory if they are rehearsed, but if they are not rehearsed, they are lost (e.g. Hebb, 1961). • Interference tasks, such as that done by Peterson and Peterson (1959), show that one memory can prevent another memory being formed.	**(8)**

	AO2 • Rehearsal is often used in a formal teaching setting to learn. • Revising the rehearsal of information in the classroom to ensure long-term memory retention. • Application of interference theory, e.g. learning one list of words after having learned another list to explain why learning vocabulary is so difficult. • The distinction between short-term memory and long-term memory is useful in understanding how learning a language by rote learning can move information into long-term memory. The model has a vast amount of experimental research to support it as a useful memory model that holds reliability (e.g. Milner, 1966, using case studies of brain damaged patients to show evidence for the two separate stores). **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
Level 0	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)

Q9.

Question Number	Answer	Mark
	AO1 (4 marks) One mark for each point describing the multi-store model. For example: • Information primarily enters the system through a sensory experience and into the sensory register which is modality specific (1). Information is then passed to short term memory where it can be held for around 18-30 seconds before it decays (1). If this data is rehearsed to maintain the information it can be transferred to long term memory (1). Long-term memory is said to have a potentially infinite capacity and duration (1). **Look for other reasonable marking points.**	**(4)**

Q10.

Question Number	Indicative Content	Mark
	AO1 (6 marks), AO3 (6 marks) **AO1** • Nurture refers to the environment, interactions, and experiences that a person has over the duration of their lifetime. • Nature refers to the internal, innate aspects of a person that they are born with such as their physiological attributes. • Amnesia may occur following damage to brain regions because of an environmental influence. • Brain functioning can be influenced by nurture such as drug taking behaviour to achieve reward pathway excitation. • Nurture can include cultural experiences that change memory process through building individual schemas. • The environment can influence brain functioning, such as through exposure to toxins in the womb resulting in early developmental damage to the brain. **AO3** • Nurture is difficult to isolate when studying memory or brain functioning and so the influence of nurture on these components of human behaviour may never be completely measurable. • Raine et al. (1997) found differences in the brains of murderers (NGRI's) suggesting that violence is a result of brain functioning in the prefrontal cortex, so nurture may not have a strong influence. • The case of HM shows that human memory is a function of the brain but that an environmental process can change the operation of human memory, so nature and nurture are linked. • Olds and Milner (1954) found that stimulation of neural pathways resulted in the experience of pleasure, so while a neural response is an innate process it is the drug intake that triggers this, which would be nurture. • Bartlett's (1932) theory of reconstructive memory highlights how we use prior experiences and schemas that are part of individual personal history, so memory is highly influenced by nurture. • The influence of cannabis during pregnancy has been claimed by Chia-Shan Wu et al. (2011) to interfere in pre-natal brain maturation leading to deficits in higher-order cognitive functions, meaning nurture can influence both biological and cognitive psychology simultaneously. **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 judgement/conclusion in their answer.		
	0	No rewardable material.
Level 1	1–3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A judgement/decision 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 judgement/decision being presented. Candidates will demonstrate a grasp of competing arguments but response may be imbalanced. (AO3)
Level 3	7–9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Displays a mostly developed and logical argument, containing mostly coherent chains of reasoning. Demonstrates an awareness of competing arguments, presenting a judgement/decision which may be imbalanced. (AO3)
Level 4	10–12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to a balanced judgement/decision. (AO3)

Q11.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • The sensory register (SR) acts a buffer for sensory input from the five senses using modality specific encoding for this information. • The short-term store (STS) has a limited capacity of 5-9 items and limited duration of up to 30 seconds. • Atkinson and Shiffrin (1968) suggested that the STS encodes information acoustically. • The long-term store (LTS) stores unlimited information indefinitely using semantic encoding. **AO3** • The multi-store model of memory can be considered reductionist as it views human memory merely as a system of information processing that is over simplified into three distinct stores. • Peterson and Peterson (1959) found correct recall of the trigrams began to drop rapidly between 15-18 seconds, supporting the idea that, without rehearsal, decay occurs in STM within 30 seconds. • Baddeley and Hitch (1974) argue that the STM can actively process information using acoustic, visual and spatial information and so is not the basic system proposed in the MSM. • Bahrick et al. (1975) found that identification of names from a high school year book remained accurate for up to 48 years, supporting that the LTM can store information indefinitely. **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)

Q12.

Question Number	Answer	Mark
	AO2 (2 marks) Up to **two** marks for a description of one feature of the working memory model in relation to the scenario. For example: • Becca can read the name and location of each organ and use the phonological loop to hold the information in the phonological store (1) while using repetition in the articulatory rehearsal loop until the organ names and locations are transferred to long-term memory (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.** PE Brief: do not accept episodic buffer as this was not 1974 model	**(2)**

Q13.

Question Number	Answer	Mark
	AO1 (3 marks) Up to three marks for a description of working memory model (Baddeley and Hitch, 1974). For example: • The central executive is said to control the subsystems while also being involved in tasks such as problem solving and attention (1). The visuospatial sketchpad is a subsystem that processes visual input such as images or light, and spatial information such as direction (1) and the phonological loop processes auditory information using the articulatory control to subvocalise and the phonological store to temporarily hold sound (1). **Look for other reasonable marking points.**	**(3)**

Q14.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • Laboratory experiments in cognitive psychology are conducted under highly controlled conditions. • The experimental method manipulates an IV and measures the DV to find out about memory. • Laboratory experiments often used unnatural tasks to test participant recall and memory, such as word lists. • Laboratory experiments in cognitive psychology can be replicable as they have a standardised procedure. **AO3** • It could be difficult to generalise findings from studies such as Peterson and Peterson (1959) to real life memory situations from experiments because of low validity so they may not be fully useful. • Standardised procedures increase reliability so studies such as Baddeley (1966b) can be replicated, making them useful because results can be checked. • Steyvers and Hemmer (2012) used a naturalistic scenes for testing the effect of prior knowledge so experiments can be conducted with some ecological validity and be useful to cognitive psychology. • Bartlett (1932) used serial reproduction to test reconstructive memory so his research is difficult to replicate to retest the results, therefore experiments are more useful for providing empirical evidence about 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 assessment/conclusion in their answer.**		
Level 0	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)

Q15.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO3 (4 marks) **AO1** • Working memory assumes there are different systems rather than a unitary system for memory. • The visuo-spatial sketchpad deals with visual and spatial information. • In 2001 the episodic buffer was added to the model by Baddeley. • The phonological loop consists of the phonological store and the articulatory control loop that holds sound information. **AO3** • The KF case study supports the Working Memory Model. KF's impairment was mainly for verbal information while his memory for visual information was largely unaffected. • Smith and Jonides (1997) showed differences in brain activation with PET scans during visual and spatial tasks, which supports the visuo-spatial sketchpad not being one store. • By adding to the model later it could be suggested that the original model proposed in 1974 was incomplete and so it may still lack accuracy. • Robbins (1996) found that using chess players that it was the central executive not the phonological loop that played a role in remembering chess positions. **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)