

AQA A-LEVEL PSYCHOLOGY • 7182

PSYCHOLOGY



EXAM QUESTION PACK

3.1.2 TYPES OF LONG-TERM MEMORY

SCORE

/36

PERCENTAGE

%

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Q1.

Two types of long-term memory are procedural memory and episodic memory.

Explain **two** differences between procedural memory and episodic memory.

(Total 4 marks)

Q2.

Annie can still skateboard even though she hasn't skated for many years.

Germaine can still recall what happened on his first day at university even though it was ages ago. Billy remembers the names of the tools he needs to repair the broken tap.

Identify **three** types of long-term memory and explain how **each** type is shown in **one** of the examples above.

(Total 6 marks)

Q3.

Complete the following statement about long-term memory. Shade **one** box only.

Information stored with reference to time and place refers to:

A Episodic memory

☐

B Procedural memory

☐

C Semantic memory

☐

(Total 1 mark)

Q4.

Complete the following statement about long-term memory. Shade **one** box only.

Information not available for conscious inspection refers to:

A Episodic memory

☐

- B** Procedural memory ☐
- C** Semantic memory ☐

(Total 1 mark)

Q5.

Psychologists conducted a case study of Patient X, an individual who developed severe amnesia following a car accident. Patient X has difficulty storing new long-term memories, though his short-term memory and his memory for events that happened before the accident are unaffected.

- (a) Evaluate the use of case studies, like that of Patient X, in psychological research.

(5)

- (b) Briefly explain how the experiences of Patient X could be interpreted as supporting the multi-store model of memory.

(2)

- (c)

The same psychologists conducted an experiment with Patient X where he was given the task of tracking a rotating disc every day for a week. It was found that Patient X's performance on the task improved with practice, though he had no recollection of ever having done the task, and could not remember the names of the

psychologists who conducted the experiment.

With reference to the experiment involving Patient X, outline **two** types of long-term memory.

(4)

- (b) Discuss **two** differences between the types of long-term memory you have outlined in your answer to **part (c)**.

(4)

(Total 15 marks)

Q6.

Psychologists have identified differences between episodic memory, procedural memory and semantic memory.

Define **two** of these types of memory. Briefly explain **one** difference between the two types of memory that you have defined.

(Total 3 marks)

Q7.

Give **one** example of a semantic memory and **one** example of an episodic memory. Briefly explain **one** difference between these types of long-term memory.

(Total 3 marks)

Q8.

Distinguish between *procedural* memory and *semantic* memory.

(Total 3 marks)

Mark schemes

Q1.

[AO3 = 4]

Level	Marks	Description
2	3 – 4	Explanation of two differences is clear and coherent. Some detail/expansion may be lacking for 3 marks.
1	1 – 2	Explanation of one or more differences is present but is briefly stated/outlined only. Alternatively, there is one clearly explained difference at the top of the band. For 1 mark one difference may be stated but not applied to both types of memory.
	0	No relevant content.

Possible differences:

- procedural memories are memories of motor skills/actions/muscle memories; episodic memories are memories of life events
- procedural memories are unavailable for conscious inspection/difficult to explain verbally (non-declarative); episodic memories can be expressed verbally (declarative)
- procedural memories may be more resistant to forgetting/amnesia
- each type of memory may reside in a different area of the brain
- credit examples/evidence, eg HM, used to explain a difference.

Credit other relevant differences.

Q2.

[AO2 = 6]

1 mark: for each correct application in recognising (naming/identifying) each type of long-term memory by matching to the person in the stem.

Plus

1 mark each for knowledge of a feature of the type of memory explained in the context of the behaviour in the stem.

- Annie's case/remembering how to skateboard is an example of procedural memory (1) because she is remembering an action or muscle-based memory (1).
- Germaine's case/remembering what happened is an example of episodic memory (or autobiographical memory) (1) because he recalls the events that took place at a specific point in time (1).
- Billy's case/remembering the names of tools is an example of semantic memory (1) because he remembers factual/meaningful information (1).

Q3.

[AO1 = 1]

A

Q4.

[AO1 = 1]

B

Q5.

(a) [AO3 = 5]

Level	Marks	Description
3	4 – 5	Evaluation of the use of case studies in psychological research is clear and accurate. There is at least one strength and one limitation, though a number of points may be presented in less detail. The answer is clear and organised. Specialist terminology is used effectively.
2	2 – 3	Evaluation of the use of case studies is limited. The answer may contain strengths or limitations, or both are presented but are lacking in detail. The answer may lack accuracy and organisation. There is some appropriate use of specialist terminology.
1	1	One evaluative point is stated but not developed, or there may be more than one but there is substantial inaccuracy. Specialist terminology is absent or inappropriately used.
	0	No relevant content.

Likely content:

- Depth/detail of data collected – qualitative
- Validity/meaningfulness of data, insight gained
- A single anomalous case may lead to revision of a theory
- Researcher bias/subjective interpretation
- Unscientific/unreliable, cannot be replicated
- Problems of generalisation

Accept other valid points.

Application to the case of 'Patient X' may be present but is not essential for full marks.

(b) [AO2 = 2]

1 mark for the link to the MSM: this suggests that STM and LTM are separate stores/functionally different (supporting the model).

Plus

1 mark for the idea that whilst Patient X's STM is functioning normally, he is unable to retain new info in LTM/the link between STM and LTM appears to have been cut.

(c) **[AO2 = 4]**

2 marks for an outline of two types of LTM from the following (1 for each type):

- Episodic – memory for events/autobiographical memory
- Semantic – memory for facts/general knowledge/the rules of language
- Procedural – memory for motor skills/actions/'muscle memory'

Plus

2 marks for linking the two types to the information in the stem (1 for each type):

- Episodic – he had no recollection of ever doing the task
- Semantic – he could not remember the names of the psychologists
- Procedural – his performance improved on the rotating disc task over consecutive days

(d) **[AO3 = 4]**

Level	Marks	Description
2	3 – 4	Discussion of two differences is clear and mostly accurate. For full marks, there must be reference to both types of memory within each difference discussed. The answer is generally coherent with effective use of specialist terminology.
1	1 – 2	Discussion of two differences are both incomplete/partly accurate. For 1 mark there may be one difference briefly stated. Specialist terminology is not always used appropriately.
	0	No relevant content.

Content:

Possible differences (depends on the types of LTM chosen):

- Semantic/episodic – 'knowing that'/declarative memory; available for conscious inspection – procedural – 'knowing how'/non-declarative memory; often unavailable for conscious inspection
- Semantic – may not recall when we learned/encoded these memories – episodic – stored with reference to time and place
- Credit differences based on the durability/resistance to forgetting of different types of memory

- The fact that evidence suggests that these types of memory reside in different areas of the brain
- Credit use of evidence as part of the discussion of the differences.

Credit other valid differences.

Do not credit differences that merely restate the definitions of both types of memory.

Q6.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

[AO1 = 2, AO2 = 1]

AO1

AO1 Award up to two marks for a definition of any two of the following:

- semantic – memory for facts / general knowledge;
- episodic – memory for (life) events / experiences;
- procedural – memory for (motor) skills / actions / knowing how to do things.

No credit for stand-alone examples.

AO2

Award one mark for a valid difference / distinction between the types of long- term memory chosen.

Possible answers: semantic / episodic – ‘knowing that’ / declarative memory; available for conscious inspection – procedural – ‘knowing how’ / non-declarative memory; often unavailable for conscious inspection.

Semantic – may not recall when we learned / encoded these memories
– episodic – stored with reference to time and place.

Credit distinctions based on the durability / resistance to forgetting of different types of memory; the fact that evidence suggests that these types of memory reside in different areas of the brain.

Credit other valid distinction points.

Note that the explanation of the difference must make reference to **both** types of memory.

Q7.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

[AO1 = 2, AO2 = 1]

AO1

One mark each for:

An example of semantic memory – knowing that Paris is the capital of France or a hawk is a bird of prey.

An example of episodic memory – remembering a conversation we had yesterday or our 10th birthday party. Example must be personalised to get credit.

AO2

One mark for a distinction point. Likely points: semantic memories are general knowledge about the world, but episodic memories are memories of our personal experiences. Or, we may not recall when and where we learned / encoded our semantic memories but we do recall this for our episodic memories. Evidence suggests they are located in different areas of the brain.

Q8.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

[AO1 = 2, AO2 = 1]

AO1

1 mark each for a descriptive point about procedural and semantic memory.

Procedural memory is a motor / action-based memory or a memory of how to do something.

Semantic memory is memory for facts / information about the world / knowledge memory / the meaning of words.

No credit for answers based on semantic processing.

Do not credit examples alone.

AO2

1 mark for a distinction point. Likely points: procedural is non-declarative / not easy to express in words and semantic is declarative / knowing how vs knowing that; procedural is more resistant to forgetting; semantic is conscious and procedural less conscious; stored in different parts of the brain.

Allow full credit for one distinction point that is fully elaborated or for more than one point with less detail about each.

Allow full credit for three valid distinction points.

Examiner reports

Q1.

Although most answers provided accurate descriptions of procedural and episodic memory these were sometimes not structured around 'differences', but simply presented as two separate descriptions. To earn full credit, two clear differences had to be explicit, for example types of material, availability to conscious inspection, vulnerability to amnesia, location within the brain etc. Some students provided more than two differences, costing themselves time that could have been spent on other questions.

Q2.

Most students recognised this as a question about episodic, semantic and procedural memory and most could successfully identify the three types in the cases presented. Unfortunately, not all students could adequately explain how the cases presented in the stem illustrated the three types of memory. This was evident in answers that attempted to explain using the same terms, eg 'Annie's is a procedural memory because she is remembering a procedure'. It is worth noting that describing procedural memory as a 'how to' memory is somewhat ambiguous, since remembering 'how to bake a cake' could mean recalling the action of stirring the mixture (procedural memory) but is more likely to mean remembering the list of ingredients and sequence of steps involved (semantic memory). Procedural memory is much more effectively explained as an action or skillsbased memory. A small number of students chose a completely alternative interpretation of the question to that intended and tried to link the three types of memory to just one of the cases in the stem. In such cases, students were credited for legitimate, plausible applications, eg 'Billy shows semantic memory because he is remembering factual information about tools and their use, he is using episodic memory because he remembers which tools he used last time he fixed a tap, and he is showing procedural memory recalling the muscle action required to use the tools'. Although it was rarely used, the term 'declarative memory' was accepted in place of either semantic or episodic memory, but not for both.

Q6.

This was generally well answered with the majority scoring at least two of the three marks available. Some students gave examples rather than definitions of their chosen types of long term memory which did not gain credit, unless they were supported by some description. The differences given were often a repetition of the attempted definitions. Most students earned their third mark through some explanation of the declarative / non-declarative distinction, provided they had chosen two appropriate types in the first place.

Q7.

Many students did not give an unambiguous example of episodic memory. Many examples veered a little too close to semantic memory of 'facts', such as, 'remembering the date of my mum's birthday' or 'knowing that I had cornflakes for breakfast'. Examples of global or national events such as 9 / 11 or the Queen's Jubilee, needed to be personalised; for example, 'my memory for how I felt when I heard the news of 9 / 11' to become creditworthy. Examples of semantic memory presented fewer problems for students although there was occasionally confusion with procedural memory. Most students did not make their distinction point explicit, but having defined both types of memory in their answer – even though this was not required by the question – credit was awarded for an implicit distinction. Those students who did produce an explicit distinction point often correctly explained that information related to 'time and place' is necessary for

the formation of an episodic memory, whilst this is not the case for semantic.

Q8.

Two marks was the norm here. Typical definitions referred to 'memory for motor skills' for procedural and 'memory for facts / general knowledge' for semantic. There was confusion between 'semantic memory' and 'semantic processing' in a small number of answers. The third 'distinction' mark proved rather elusive and many students did not attempt it, perhaps assuming they had already distinguished between the two types of memory by defining them. Indeed, some students, who included terms such as 'declarative' and 'non-declarative' as part of their definitions, gained the third mark almost 'accidentally' as a result. Others were more explicit and produced detailed distinction points that were often based upon the amount of conscious processing required for each type of memory.