AQA

GCSE
PSYCHOLOGY
8182/1

PAPER 1 COGNITION AND BEHAVIOUR

Mark scheme

SAMs

V1.0

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Examiners are required to assign each of the students' responses to the most appropriate level according to its overall quality, then allocate a single mark within the level. When deciding upon a mark in a level examiners should bear in mind the relative weightings of the assessment objectives (see page 28) and be careful not to over/under credit a particular skill. For example, in question 17.4 more weight should be given to AO3 than to AO2. This will be exemplified and reinforced as part of examiner training.

Section A

Memory

01.1 Which **one** of these is a description of retrieval? Shade **one** box only.

    A   Changing information so that it can be stored in memory
    B   Forgetting information
    C   Holding information in memory
    D   Recalling information

[1 mark]

Marks for this question: AO1 = 1

D

01.2 Which **one** of these is a description of episodic memory? Shade **one** box only.

    A   A memory of a personal experience
    B   A memory that lasts for a few seconds
    C   Remembering factual information
    D   Remembering how to do something

[1 mark]

Marks for this question: AO1 = 1

A

02 You have been asked to conduct an experiment to investigate the effects of serial position when learning a list of words. Describe how you would conduct this experiment.

You need to include:

- the experimental design you would choose, and why this would be suitable
- the task participants would be required to do and the data that you would collect
- the results you would expect to find from your experiment.

[6 marks]

Marks for this question: AO2 = 4 and AO3 = 2

Indicative content

AO2

Up to two marks for identification of a suitable experimental design that is justified.

Example – repeated measures so that there are no participant variables which would affect recall of the words (2 marks).

Up to two marks for a description of a memory task and the data to be collected.

Example – a list of 15 words and the score for the first 5 and the middle 5 and the last 5 is taken for each participant (2 marks).

AO3

Up to two marks for a description of the expected results such as the scores for the beginning and the end of the list would be on average higher than for the middle of the list (2 marks).

03.1 Identify **one** factor that has been shown to affect the accuracy of memory.

[1 mark]

Marks for this question: AO1 = 1

Interference, context, false memory.

Accept other relevant factors.

03.2 Use your knowledge of psychology to describe how the factor you have identified in **question 03.1** affects the accuracy of memory.

[3 marks]

Marks for this question: AO1 = 3

Up to **3 marks** for a description of how the chosen factor affects memory.

3 marks: a clear and accurate description
2 marks: a clear description, minor inaccuracy may be present
1 mark: a muddled attempt at a description

Interference – for example: new learning will cause people to recall previously learned information less accurately and original learning can also decrease the accuracy of recently learned information.

Context – for example: recall of information will be improved if it occurs in the same context that learning takes place. When the recall context is different from the learning context, recall will be less accurate.

False memory – for example: people either remember things that didn't happen often because these things have been implanted or remember them differently from the way they really were making the recall less accurate in both cases.

Accept other relevant information such as use of relevant research or examples to illustrate the effect of the chosen factor.

04	Briefly discuss **two** criticisms of research into factors that affect the accuracy of memory.	
		[4 marks]

Marks for this question: AO3 = 4

Level	Marks	Description
2 **Clear**	**3 – 4**	AO3: Relevant discussion of two criticisms of research into factors that affect the accuracy of memory is accurate with detail. Although minor detail and/or elaboration might be lacking, the material selected is sufficient.
1 **Basic**	**1 – 2**	AO3: Relevant discussion of criticism(s) of research into factors that affect the accuracy of memory is present, or one criticism is outlined well. There may be inaccuracies/omissions.
	0	No relevant content

Indicative content:

Much of the research (into interference and context for example) involves learning word lists or similar information under laboratory conditions. This is not what people usually have to do in everyday life. Therefore the results might lack ecological validity.

Research (into false memory for example) often involves deception, as participants are not aware that researchers are planting false memories, for example through asking leading questions. This raises ethical concerns.

Accept other relevant criticisms of research.

05	Discuss what Bartlett's theory and research into reconstructive memory **and** at least **one** theory of language and thought tell us about the possible relationship between language and thought. Refer to Tim's conversation with his mother as part of your answer.
	[9 marks]

Marks for this question: AO1 = 3, AO2 = 3 and AO3 = 3

Examiners must award a maximum of 5 marks if the response only refers to **EITHER** the work of Bartlett **OR** a theory(ies) of language and thought.

Level	Marks	Description
3 **Detailed**	**7 – 9**	AO1: Relevant knowledge and understanding of Bartlett's theory and research into reconstructive memory and of theory(ies) of language and thought is accurate with detail. AO2: Clear application of knowledge and understanding of Bartlett's theory and research and of theory(ies) of language and thought to Tim's comments. AO3: Analysis and discussion of Bartlett's work and the possible relationship to language and thought is effective. Conclusions drawn are sound and fully expressed. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, is clear, coherent and focused.
2 **Clear**	**4 – 6**	AO1: Relevant knowledge and understanding of Bartlett's theory and/or research into reconstructive memory and of theory(ies) of language and thought is present but there are occasional inaccuracies/omissions. AO2: There is reasonable application of knowledge and understanding of Bartlett's theory and/or research and of theory(ies) of language and thought to Tim's comments. AO3: There may be some effective analysis and discussion of Bartlett's work and a possible relationship with language and thought. There may be an attempt to draw conclusions. Up to 6 marks may be awarded if the answer only focuses on any two of AO1/AO2/ AO3 skills. Relevant terminology is usually used. The answer frequently demonstrates substantiated reasoning, and is clear, generally coherent and focused although structure may lack some logic.
1 **Basic**	**1 – 3**	AO1: Knowledge and understanding of Bartlett's work and/or of theory(ies) of language and thought is present but limited. There may only be description of a study. AO2: Application of knowledge and understanding of Bartlett's theory and/or research and/or of theory(ies) of language and thought to Tim's comments is limited. AO3: Analysis and discussion of Bartlett's work and possible relationship with language and thought is of limited effectiveness or may be absent. Any attempts to draw conclusions are not always successful or present.

		Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure. **OR** AO1: Award up to 3 marks for an answer that only describes relevant theory and/or research. AO2: Award up to 3 marks for an answer that focuses only on application skills. AO3: Award up to 3 marks for an answer that only attempts to analyse the possible relationship to language and thought and draws conclusions based on the work of Bartlett and theory(ies) of language and thought.
	0	No relevant content

Examiners are reminded that AO1, AO2 and AO3 are regarded as interdependent. When deciding on a mark in instances where there is an attempt at more than one assessment objective all attempts should be considered together using the best fit approach. In doing so, examiners should bear in mind the relative weightings of the assessment objectives.

When an answer only contains content related to one of the skills (AO1/AO2/AO3), then the levels descriptors for the award of marks for the skill attempted should be applied to the answer, up to the maximum mark available.

Indicative content:

AO1 Knowledge

- Bartlett proposed that human memory is not a literal reproduction of the past, but instead relies on constructive processes that are sometimes prone to error and distortion so we change our memories to fit in with what we already know even though we believe we are thinking accurately.
- Evidence of the War of the Ghost study, including detail of how the story was passed on and the changes that were noted in different groups.
- There are different theories about the relationship between language and thought – thinking affects language is the view of Piaget.
- Evidence for Piaget's view from developmental studies.
- The Sapir-Whorf hypothesis is that language determines the structure of thought processes.
- Evidence for Sapir-Whorf view from cross-cultural studies.

AO2 Application

- The unfamiliar language structures used in War of the Ghosts may have caused participants to recall the story inaccurately: this might be why Tim did state he found the task very difficult to do.
- The story was retold/recalled in a way that made sense using existing schemas. This might be why Tim suggested fishing rather than a battle as the event, or the boats rather than canoes.

AO3 Analysis and discussion

- Evidence from the Bartlett study might suggest that thinking depends on language.
- The results of the study suggest that only when people changes the words or actions in the story – ie changed the language, could they then think about what happened and recall anything coherent.
- The Sapir-Whorf hypothesis that the relationship between language and thought is one in which language determines thinking is supported by the Bartlett study results.
- There is virtually no evidence to support Piaget's view.
- The research of Bartlett and cross-cultural studies have tasks that are more socially relevant to the way we use memory in everyday life and makes any analysis of the relationship between language and thought based on this research more sound.
- However, some research has been criticised because it is difficult to accurately measure participants' responses; for example, the scoring method for Bartlett's War of the Ghosts study may not be reliable.
- The use of an unfamiliar style of story rather than the language used may have been the reason why language seemed to affect thinking.
- There are contradictory findings from different studies. For example, research has found that memories for distinctive events can be relatively resistant to change.
- Vygotsky's view that language and thought develop independently.

Section B

Perception

06.1 Sally touches a piece of material and can feel it is soft like cotton wool. Which process does this demonstrate? Shade **one** box only.

A Expectation
B Motivation
C Perceptual set
D Sensation

[1 mark]

Marks for this question: AO1 = 1

D

06.2 Which is the best explanation for the visual illusion known as Rubin's vase? Shade **one** box only.

A Ambiguity
B Convergence
C Misinterpreted depth cues
D Size constancy

[1 mark]

Marks for this question: AO1 = 1

A

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07 What is meant by 'perception'?

[2 marks]

Marks for this question: AO1 = 2

Indicative content:

Perception is the process of interpreting sensory information (1 mark) to give it meaning (1 mark).

08	Briefly outline **two** of the monocular depth cues shown in **Figure 1**. Explain how each cue you have identified helps us to perceive the distance of objects in this image.

[4 marks]

Marks for this question: AO1 = 2 and AO2 = 2

Level	Marks	Description
2 **Detailed**	**3 – 4**	AO1: Relevant knowledge and understanding of two monocular depth cues is accurate with detail. AO2: Application of knowledge and understanding of two monocular depth cues to the perception of distance in the image is appropriate and accurate. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, is clear, coherent and focused.
1 **Basic**	**1 – 2**	AO1: Relevant knowledge and understanding of monocular depth cues is present. **OR** Only one depth cue is outlined for 1 mark. Award a further mark if there is appropriate application of that depth cue **OR** There may **only** be description of depth cues for 2 marks max. AO2: Application of knowledge and understanding of monocular depth cue(s) to the perception of distance in the image is limited. There may be application of only one monocular depth cue. Relevant terminology is sometimes used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
	0	No relevant content.

Examiners are reminded that AO1 and AO2 are regarded as interdependent. When deciding on a mark in instances where there is an attempt at more than one assessment objective all attempts should be considered together using the best fit approach. In doing so, examiners should bear in mind the relative weightings of the assessment objectives.

When an answer only contains content related to one of the skills (AO1/AO2), then the levels descriptors for the award of marks for the skill attempted should be applied to the answer, up to the maximum mark available.

Indicative content:

AO1
- Height in plane is concerned with the position on the page of the objects
- Relative size is how large the same or similar objects appear to be
- Occlusion is concerned with whether objects overlap
- Linear perspective is the appearance of parallel lines converging.

Credit description of any other relevant monocular depth cues.

AO2
For example; height in plane – the Eiffel Tower is higher in our visual field than the people posing for a photograph, so we know that the Eiffel Tower is further away than the people posing for photograph.

09.1 Identify **one** binocular depth cue.

[1 mark]

Marks for this question: AO1 = 1

1 mark for a correct identification of binocular depth cue:

- retinal disparity
- convergence.

09.2 Explain how the binocular depth cue you have identified in **question 09.1** helps us to perceive how far away objects are.

[2 marks]

Marks for this question: AO1 = 2

Explanation for how the identified binocular depth cue helps us perceive distance:

- convergence – the eyes turn inwards more when an object is closer than when it is further away (1 mark). This information is passed from the muscles of the eyes to the brain to help us perceive how far away objects are (1 mark)
- retinal disparity – the images from each eye are slightly different and the brain blends/merges these together (to create a single image) (1 mark). This merging process helps the brain to work out how far away objects are or the more similar the two images the further away the object is (1 mark).

10	Describe Gregory's constructivist theory of perception.
	[4 marks]

Marks for this question: AO1 = 4

Level	Marks	Description
2 **Clear**	**3 – 4**	AO1: Relevant knowledge and understanding of Gregory's constructivist theory of perception is accurate with detail.
1 **Basic**	**1 – 2**	AO1: Knowledge and understanding of Gregory's constructivist theory of perception is present but limited. There may be inaccuracies/omissions.
	0	No relevant content

Indicative content:

AO1
- Perception is an active process and involves drawing inferences.
- Perception is constructed using both sensations and stored knowledge, influence of nurture.
- This means we interpret sensory information using what we already know.
- Stored knowledge and expectations come from past experiences which will be individual depending on the nurturing environment.
- Description of relevant illusions as used by Gregory to illustrate his constructivist theory of perception. For example the Müller-Lyer, Necker Cube.

Accept other relevant information.

11	Gregory's constructivist theory of perception has been criticised. Use your knowledge of psychology to evaluate Gregory's theory.	
		[5 marks]

Marks for this question: AO3 = 5

Level	Marks	Description
3 **Detailed**	**4 – 5**	AO3: Evaluation of Gregory's constructivist theory of perception is effective. Conclusions drawn are sound and fully expressed. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, is clear, coherent and focused.
2 **Clear**	**2 – 3**	AO3: There is some effective evaluation of Gregory's constructivist theory of perception. Any conclusions drawn may not be fully expressed. Relevant terminology is used. The answer frequently demonstrates substantiated reasoning, and is clear, generally coherent and focused although structure may lack some logic.
1 **Basic**	**1**	AO3: Evaluation of Gregory's constructivist theory of perception is of limited effectiveness. Relevant terminology is occasionally used. The answer lacks clarity, coherence, focus and logical structure.
	0	No relevant content.

Indicative content:

- Visual illusions show that perception is driven by expectation because people try to apply their stored knowledge of a 3D world to these 2D representations.
- Evidence from research shows that factors such as motivation, and emotion, affect perception so support the idea that perception is actively constructed.
- Cross cultural studies show that perception is influenced by experience.
- Direct theories of perception challenge this theory because they argue that the information received by the retina is detailed enough to be able to interpret the sensation without inference, nature drives perception.
- Gregory's theory does not fully explain the role of movement in perception.
- Gregory's theory may be more applicable to 2D images, illustrated by illusions, rather than real world perception.

Accept other relevant discussion points.

12.1 Use your knowledge of types of data to explain why the data collected in this study is an example of primary data.

[2 marks]

Marks for this question: AO2 = 1 and AO3 = 1

AO2
1 mark for application to this study

AO3
1 mark for analysis in which the connection is made between the data in this study and the procedure used by the researcher.

Indicative content:

The researcher collected the data by recording the responses to the ambiguous figure as they were given by the participants (1 mark AO2). When a researcher collects the data himself from participants this is called primary data (1 mark AO3).

12.2 Use your knowledge of factors affecting perception to draw a conclusion from the results shown in **Table 1**. Explain your answer.

[3 marks]

Marks for this question: AO2 = 1 and AO3 = 2

AO2
1 mark for application to this study

AO3
2 marks for analysis and conclusion drawn

AO2
- Participants were primed by being presented with either numbers or letters.

AO3
- As item shown was ambiguous and could have been the number 13 or the letter B they were affected by their expectation/past experience/prior exposure/set which caused the answers to be most likely to be numbers for Condition B and letters for Condition A.
- Showing expectation/past experience/prior exposure/set does affect perception.

Section C

Development

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13 Which of the following describes **one** feature that is usually present by the end of Piaget's sensorimotor stage of development. Shade **one** box only.

A the child thinks in an abstract way
B the child understands objects exist when they are out of sight
C the child understands things are the same even if they look different
D the child understands things from a different point of view

[1 mark]

Marks for this question: AO1 = 1

B

14.1 What is Mikey's likely age?

[1 mark]

Marks for this question: AO2 = 1

1 mark for an answer between 2 and 7 years.

14.2 How can Piaget's theory of cognitive development be used to explain Mikey's behaviour?

[6 marks]

Marks for this question: AO1 = 2, AO2 = 2 and AO3 = 2

Level	Marks	Description
2 **Good**	**4 – 6**	AO1: Relevant knowledge and understanding of Piaget's theory of cognitive development is accurate with detail. AO2: Application of knowledge and understanding of Piaget's theory to Mikey's behaviour shown in the conversation is appropriate. AO3: Analysis of Piaget's theory of cognitive development is effective. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning is clear, coherent and focused.
1 **Basic**	**1 – 3**	AO1: Knowledge and understanding of Piaget's theory of cognitive development is present but may be limited. Focus may be on description or there may be inaccuracies/omissions. **OR** There may **only** be knowledge of Piaget's theory for up to 2 marks max. AO2: Application of knowledge and understanding of Piaget's theory to Mikey's behaviour shown in the conversation may be attempted. **OR** There may **only** be application of knowledge and understanding of Piaget's theory to Mikey's behaviour as shown in the conversation for up to 2 marks max. AO3: Analysis of Piaget's theory of cognitive development is of limited effectiveness or may be absent. **OR** There may **only** be analysis of Piaget's theory of cognitive development for up to 2 marks max. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
	0	No relevant content.

Examiners are reminded that AO1, AO2 and AO3 are regarded as interdependent. When deciding on a mark in instances where there is an attempt at more than one assessment objective all attempts should be considered together using the best fit approach. In doing so, examiners should bear in mind the relative weightings of the assessment objectives.

When an answer only contains content related to one of the skills (AO1/AO2/AO3), then the levels descriptors for the award of marks for the skill attempted should be applied to the answer, up to the maximum mark available.

Indicative content:

AO1

- Piaget suggested children develop their intellect/understanding of their world in stages.
- In the preoperational stage a child cannot conserve/ does not understand that things are the same even if they look different.
- A child can conserve when they understand that different shaped glasses can still contain the same amount of liquid as each other even if one glass is filled higher than the other.

AO2

- Mikey has seen the same amount of orange juice being poured into each container but
- He believes that these containers now have different amounts of liquid in them
- Mikey is confused by the different shapes of the containers/he thinks 'higher' equals 'more' or vice versa

AO3

- Piaget would argue that behaviour like that of Mikey indicates a child has not developed conservation of volume – does not understand that amounts of liquid and be distorted by the shapes of containers
- This is behaviour typical of a child in the preoperational stage of development
- This means such children have not reached the correct maturation for that knowledge.

Credit use of relevant research.

14.3	Give **two** ways in which Piaget's theory of cognitive development could be applied to education **and** support **each** way you have given with an example that could be used in the classroom.
	[4 marks]

Marks for this question: AO1 = 2 and AO2 = 2

AO1
1 mark for **each** correct way identified.

AO2
1 mark for **each** example that could be used in the classroom.

Indicative content:

- Piaget suggested that children should be taught in a more **child-centred** (1 mark AO1) way in which the teacher should provide materials like bulbs and wires to make a circuit and allow the child to discover the answers to problems for themselves (1 mark AO2).
- Piaget suggested that teachers should take a **readiness approach 9** (1 mark AO1) by presenting opportunities for the child to learn only when it was at the right stage of intellectual/cognitive development like learning to conserve number before volume (1 mark AO2).

Accept other relevant answers.

14.4 Identify and explain **one** criticism of Piaget's theory of cognitive development.

[4 marks]

Marks for this question: AO1 = 1 and AO3 = 3

AO1
1 mark for an appropriate criticism of Piaget's theory.

AO3
Up to **3 marks** for an explanation of why the criticism is appropriate.

3 marks: a clear and accurate explanation
2 marks: a clear explanation, minor inaccuracy may be present
1 mark: a muddled attempt at an explanation

Indicative content:

- Piaget's theory has been criticised because it is based on **poor methods of data collection.** This is because he often used small and unrepresentative samples/his own children. He often did not record the behaviours seen or standardise his methods.
- Piaget's theory has been criticised because the **tasks he set were confusing** to children. He asked the same questions many times which might have encouraged children to change their answers and get the answers incorrect. (Credit use of studies to illustrate the answer).
- Piaget **set ages** for development of cognitive skills that other researchers have demonstrated **are incorrect**. Lots of researchers have shown that children acquire object permanence/conservation/decentring skills before Piaget thought was possible/that people acquire formal operations much later, if at all. (Credit use of studies to illustrate the answer).

Accept other relevant information.

15	Outline and evaluate Dweck's Mindset theory of learning. Refer to the conversation between Lizzie and Ben in your answer.
	[9 marks]

Marks for this question: AO1 = 3 and AO2 = 3 and AO3 = 3

Level	Marks	Description
3 **Detailed**	**7 – 9**	AO1: Relevant knowledge and understanding of Dweck's Mindset theory of learning is accurate with detail. AO2: Clear application of knowledge and understanding of Dweck's Mindset theory of learning to the conversation. AO3: Analysis and evaluation of Dweck's Mindset theory of learning is effective. Conclusions drawn are sound and fully expressed. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, is clear, coherent and focused.
2 **Clear**	**4 – 6**	AO1: Relevant knowledge and understanding of Dweck's Mindset theory of learning is present but there are occasional inaccuracies/omissions. AO2: There is reasonable application of knowledge and understanding of Dweck's Mindset theory of learning to the conversation. AO3: There may be some effective analysis and evaluation of Dweck's Mindset theory of learning. There may be an attempt to draw conclusions. Up to 6 marks may be awarded if the answer only focuses on any two of AO1/AO2/AO3 skills. Relevant terminology is usually used. The answer frequently demonstrates substantiated reasoning, and is clear, generally coherent and focused although structure may lack some logic.
1 **Basic**	**1 – 3**	AO1: Knowledge and understanding of Dweck's Mindset theory of learning is present but limited. AO2: Application of knowledge and understanding of Dweck's Mindset theory of learning to the conversation is limited. AO3: Analysis and evaluation of Dweck's Mindset theory of learning is of limited effectiveness or may be absent. Any attempts to draw conclusions are not always successful or present. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure. **OR** AO1: Award up to 3 marks for an answer that only describes Dweck's Mindset theory of learning. AO2: Award up to 3 marks for an answer that focuses only on application skills.

		AO3: Award up to 3 marks for an answer that only attempts to analyse and evaluate Dweck's Mindset theory of learning.
	0	No relevant content

Examiners are reminded that AO1, AO2 and AO3 are regarded as interdependent. When deciding on a mark in instances where there is an attempt at more than one assessment objective all attempts should be considered together using the best fit approach. In doing so, examiners should bear in mind the relative weightings of the assessment objectives.

When an answer only contains content related to one of the skills (AO1/AO2/AO3), then the levels descriptors for the award of marks for the skill attempted should be applied to the answer, up to the maximum mark available.

Indicative content:

AO1
- Mindset theory is a theory of motivation and explains how students can achieve success in their learning.
- Students are described as having generally one of two types of mindset.
- Fixed mindset students believe their ability is fixed, probably at birth, comes from talent, is genetic. This means that when faced with a challenge or difficulty in their learning tasks the student with this mindset will give up.
- Growth mindset students believe ability and success are due to learning and that learning takes time and effort and sometimes means you need to ask for help and be prepared to practice. This means that when faced with a challenge or difficulty in their learning tasks the student with this mindset will keep on trying which increases the likelihood of success.

AO2
- Lizzie seems to have a fixed mindset about her ability in maths, stating that she wasn't born with maths talent and that is why she cannot do maths.
- Ben has a growth mindset about his ability recognising that his talent in maths is the result of all the practice/effort he has put into learning maths.
- Lizzie seems to have a fixed mindset about her ability in maths whereas Ben's is not fixed/has a growth mindset about his ability.

AO3
- There is lots of evidence to support Dweck's theory of mindsets.
- Dweck has shown how the type of praise given by teachers can affect the mindsets of students. Person-oriented praise – 'you are good at this' leads students to attribute their success and, more importantly, failure to something beyond their control.
- Process-oriented praise – 'that was a good way to answer that question' teaches students to believe their success or failure was due to amount of effort.
- The theory and its associated research shows how students can change their belief system and improve academically.

Accept other relevant information.

Section D

Research Methods

16.1 What is an independent variable?

[1 mark]

Marks for this question: AO1 = 1

The (2 or more) conditions in an experiment that are compared/changed (in an experiment) (1 mark)

16.2 What is a dependent variable?

[1 mark]

Marks for this question: AO1 = 1

- The variable that is measured by the researcher (1 mark).
  OR
- The variable that changes because of the manipulation of the independent variable (1 mark).

16.3 Write a suitable hypothesis for this experiment.

[2 marks]

Marks for this question: AO2 = 2

For 2 marks there must be both conditions of the IV and a clear DV which makes the statement operational.

For 1 mark the hypothesis lacks clarity.

There is (will be) a difference in the number of errors made when recalling numbers presented in three groups of three compared to numbers presented in one group of nine (2 marks).

17.1   Describe how the psychologist could have used systematic sampling to select 10 participants.

[3 marks]

Marks for this question: AO2 = 3

3 marks: A clear description containing all of the following points.
2 marks: A reasonable description but lacking in detail; for example, not resulting in a sample of 10 participants.
1 mark: A very brief description; for example, 'pick every 10th name.'

Indicative content:

- Reference to obtaining a list of all the warehouse workers.
- A method of systematic selection, eg selecting every n^{th} name.
- Stop selecting when 10 names are generated.

17.2   The mean number of errors for Condition A is 5. Calculate the mean number of errors for Condition B. Show your workings.

[2 marks]

Marks for this question: AO2 = 2

11.1 (2 marks)

OR

10 + 12 + 9 + 8 + 12 + 14 + 12 + 11 + 12 + 11 = 111/10 (1 mark)

17.3   The range for Condition A is 6. Calculate the range for Condition B. Show your workings.

[2 marks]

Marks for this question: AO2 = 2

6 (2 marks)

OR

8, 9, 10, 11, 11, 12, 12, 12, 12, 14 14 – 8 (1 mark)

17.4	Using the means **and** the ranges, what conclusions could the psychologist draw from this experiment? Explain your answer.	**[6 marks]**

Marks for this question: AO2 = 2 and AO3 = 4

Level	Marks	Description
2 **Clear**	**4 – 6**	AO2: Clear application of knowledge and understanding of appropriate psychological procedures concerning the use of means and ranges. AO3: Clear analysis of the implications of the calculations made from the data and their contribution to drawing appropriate conclusions.
1 **Basic**	**1 – 3**	AO2: Application of knowledge and understanding of psychological procedures concerning means and/or ranges. AO3: Analysis of the implications of the calculations made from the data is limited. Any conclusions drawn are not fully supported. **OR** There is clear application and clear analysis but of only one calculation, either means or ranges at Level 2.
	0	No relevant content.

Examiners are reminded that AO2 and AO3 are regarded as interdependent. When deciding on a mark in instances where there is an attempt at more than one assessment objective all attempts should be considered together using the best fit approach. In doing so, examiners should bear in mind the relative weightings of the assessment objectives. More weight should therefore be given to AO3 than AO2.

When an answer only contains content related to one of the skills (AO2/AO3), then the levels descriptors for the award of marks for the skill attempted should be applied to the answer, up to the maximum mark available.

Indicative content:

AO2
- The mean is lower for Condition A (5 as opposed to 11.1).
- The ranges for both conditions are the same.

AO3
- The means suggest that people recall numbers written in small groups (chunks) more accurately/with few errors/mistakes than when these are presented as one long string of numbers.
- This might suggest chunked information improves accuracy of recall.
- Equal ranges suggest there is similarity in the range of performances of the participants in both condition A and in condition B.
- This could suggest the difference in performance is due to the change in the IV not variation in participant performances.

Accept other relevant conclusions.

18.1	Use the graph paper below to sketch a scatter diagram of the results shown in **Table 3.**
	Provide a suitable title and labels for your diagram.
	[4 marks]

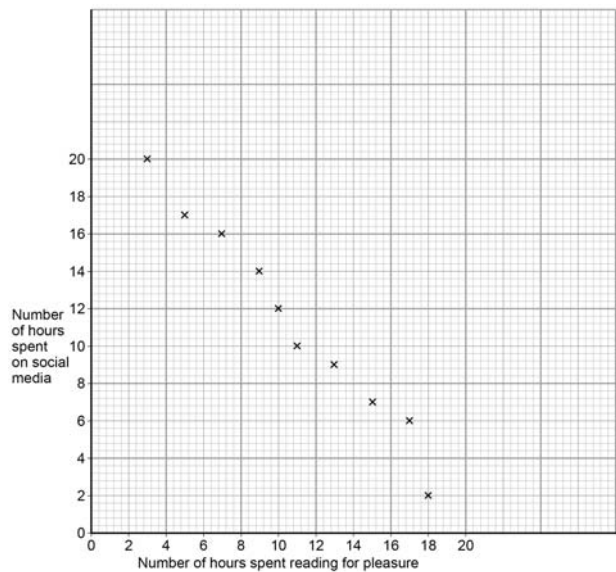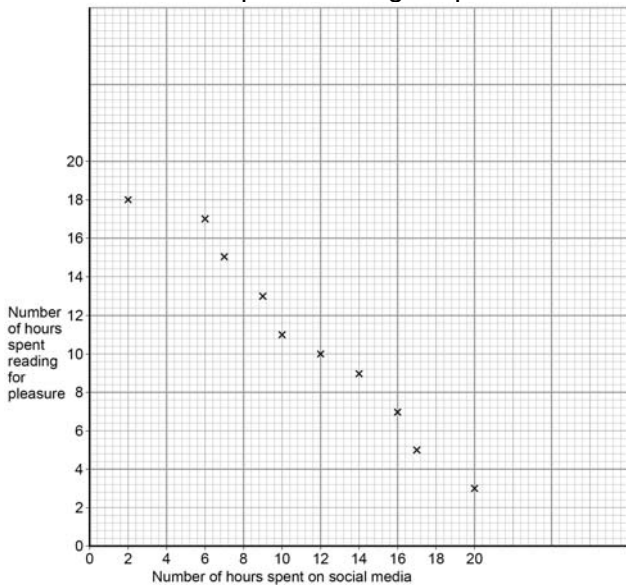**Marks for this question: AO2 = 4**

- Informative title (1 mark).
- Correct labelling of both axes (1 mark).
- Correct scaling of both axes (1 mark).
- Correct plotting of the results (1 mark).

NOTE: If the display is not a scatter diagram, award no marks.

A scatter diagram showing the relationship between the number of hours spent on social media and the number of hours spent reading for pleasure.

18.2 Identify the type of correlation the teacher found. Shade **one** box only.

A	Negative correlation
B	No correlation
C	Perfect correlation
D	Positive correlation

[1 mark]

Marks for this question: AO2 = 1

A

18.3 Outline what is meant by qualitative and quantitative methods in psychology **and** explain **one** difference between these methods.

[3 marks]

Marks for this question: AO1 = 2 and AO3 = 1

AO1
Up to 2 marks for knowledge of qualitative and quantitative data. This must make clear that any method can be qualitative or quantitative and the difference only occurs because the task has produced either numerical or non-numerical data.

AO3
1 mark for an explanation of the difference between qualitative and quantitative data.

Indicative content

AO1
Qualitative methods are any method which in a particular case produces non-numerical data usually descriptions (1 mark).
Quantitative methods are any method which in a particular case produces numerical data usually scores on a test (1 mark).

AO3
The difference is concerned with whether the data are in numerical form or not (1 mark).

Accept other differences, eg richness of data ie level of descriptive data.

Assessment Objective Grid

Memory	AO1	AO2	AO3	Total
01.1	1 (recall)			**1**
01.2	1 (recall)			**1**
02		4 (RM)	2 (RM)	**6**
03.1	1 (recall)			**1**
03.2	3			**3**
04			4 (RM)	**4**
05	3	3	3	**9**
Total	**9**	**7**	**9**	**25**

Perception				
06.1	1			**1**
06.2	1 (recall)			**1**
07	2 (recall)			**2**
08	2	2		**4**
09.1	1 (recall)			**1**
09.2	2			**2**
10	4			**4**
11			5	**5**
12.1		1 (RM/maths)	1 (RM/maths)	**2**
12.2		1	2 (RM/maths)	**3**
Total	**13**	**4**	**8**	**25**

Development				
13	1			**1**
14.1		1		**1**
14.2	2	2	2	**6**
14.3	2	2		**4**
14.4	1(RM)		3 (RM)	**4**
15	3	3	3 (2 RM)	**9**
Total	**9**	**8**	**8**	**25**

Research methods				
16.1	1 (RM/recall)			**1**
16.2	1 (RM/recall)			**1**
16.3		2 (RM)		**2**
17.1		3 (RM)		**3**
17.2		2 (RM/maths)		**2**
17.3		2 (RM/maths)		**2**
17.4		2 (RM/maths)	4 (RM)	**6**
18.1		4 (RM/maths)		**4**
18.2		1 (RM/maths)		**1**
18.3	2 (RM/maths)		1 (RM/maths)	**3**
Total	**4**	**16**	**5**	**25**

Paper Total	**35**	**35**	**30**	**100**

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