GCSE
PSYCHOLOGY
8182/1

Paper 1 Cognition and Behaviour

Mark scheme

June 2022

Version: 1.0 Final Mark Scheme

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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 Examiner.

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, i.e. 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.

Possible 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 possible 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 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.

Section A

Memory

01	Which **two** of the following statements about the reconstructive theory of memory are correct? Shade **two** boxes. **[2 marks]**

Marks for this question: AO1 – 2 marks

Answers

C (Memory involves effort after meaning)
E (The way we store and recall information is an active process)

02	Briefly evaluate the reconstructive theory of memory. **[2 marks]**

Marks for this question: AO3 – 2 marks

Up to **2 marks** for evaluation of the reconstructive theory of memory.

2 marks: a clear and detailed evaluation.
1 mark: a limited or muddled evaluation.

Possible content:

AO3

- There is research evidence to support the idea that people add effort after meaning when recalling events. For example, in Bartlett's 'War of the Ghosts' study, participants changed parts of the story when they retold it, showing that memories are reconstructed.
- Not all memories are reconstructed. Research evidence shows that important personal events, such as our first day at school, are often accurately remembered.
- The theory can be applied to everyday situations. It helps us understand why two different people, such as eyewitnesses, can give very different versions of the same events. Both have reconstructed the events in different ways.
- The theory is based on evidence that has higher ecological validity than memory research in which participants have to learn word lists. This is because retelling a story is a more familiar use of memory in everyday life than learning word lists.
- The theory is still very popular despite being developed in the early 1900s.

Credit other relevant evaluation.

NOTE: No credit for evaluation of the 'War of the Ghosts' study alone, without reference to how it impacts on the theory.

03.1	Use the article to identify **two** examples of procedural memory, **two** examples of semantic memory and **two** examples of episodic memory. Write your answers in the correct boxes. **[6 marks]**

Marks for this question: AO2 – 6 marks

1 mark for each correct response for procedural memory (MAX 2)
1 mark for each correct response for semantic memory (MAX 2)
1 mark for each correct response for episodic memory (MAX 2)

	Procedural memory	**Semantic Memory**	**Episodic memory**
Example 1	How to play the piano	London is the capital of England	What he ate (the day before)
Example 2	How to ride a bike	The Eiffel Tower is in Paris	What he was wearing (the day before)

Credit other appropriate wording.

03.2	Psychologists sometimes study unique individuals like TJ using a case study. Briefly evaluate the use of case studies in psychological research. **[3 marks]**

Marks for this question: AO3 – 3 marks

Up to **3 marks** for evaluation of the use of case studies in psychological research.

3 marks: a clear and detailed evaluation.
2 marks: a limited evaluation.
1 mark: a very limited/muddled evaluation.

Possible content:

AO3
- The information provided by a case study is very detailed.
- The information gathered from a case study cannot be applied to a wider population because it is very specific to the participants involved.
- There are various ethical issues to consider when carrying out a case study. For example, because the participants are so unique, it may be possible to identify them from any reports of the results. This may prevent data about participants remaining confidential.
- Case studies are a good way of studying unusual behaviours/phenomena that cannot be studied using other methods. In doing so, they often help our understanding of what is 'normal'.
- Case studies record behaviour over time. This allows changes in behaviour to be seen.

Accept other relevant content.

04	You have been asked to investigate the effect of interference on the accuracy of memory. Describe how you would design an experiment to do this. You need to include: • what participants would be asked to do • a suitable hypothesis for your experiment • the results that you expect to find. **[6 marks]**

Marks for this question: AO2 – 4 marks and AO3 – 2 marks

AO2
Up to **2 marks** for describing a method that would investigate the effect of interference on the accuracy of memory.

2 marks: a clear and accurate description where participants do a similar thing with similar material.
1 mark: a limited or muddled description.

PLUS

Up to **2 marks** for a suitable hypothesis for the experiment that has been described.

2 marks: there must be both conditions of the independent variable and a clear dependent variable which makes the statement operational.
1 mark: the hypothesis lacks some clarity.

PLUS

AO3
Up to **2 marks** for the results you expect to find.

2 marks: a clear and accurate description of the expected results with both conditions of the independent variable.
1 mark: a limited or muddled description of the expected results.

NOTE: The 'description' **and** the 'results' marks can only be awarded if the described experiment investigates the effect of interference on the accuracy of memory.

NOTE: Distraction is a distinct process (preventing encoding) and not the same as interference (a failure to retrieve). An experiment that focuses on distraction is therefore not likely to be creditworthy.

NOTE: If a student only describes a known study rather than basing their design on a known study (max 1 mark).

05	Murdock investigated the effects of serial position on recall. Describe **and** evaluate this study. **[6 marks]**

Marks for this question: AO1 – 3 marks and AO3 – 3 marks

Level	Marks	Description
3 Detailed	**5–6**	AO1: Relevant knowledge and understanding of Murdock's serial position curve study is accurate with detail. AO3: Analysis and evaluation of Murdock's serial position curve study is effective. Any conclusions drawn are sound and fully expressed. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, and is clear, coherent and focused.
2 Clear	**3–4**	AO1: Relevant knowledge and understanding of Murdock's serial position curve study is present but there are occasional inaccuracies/omissions. AO3: There may be some effective analysis and evaluation of Murdock's serial position curve study. There may be an attempt to draw conclusions. 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	**1–2**	AO1: Knowledge and understanding of Murdock's serial position curve study is present but limited. AO3: Analysis and evaluation of Murdock's serial position curve study 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.
0	**0**	No relevant content.

Possible content:

AO1

- To investigate whether there are separate short-term and long-term memory stores or to see if the likelihood of recalling a word depends on its position in the list.
- Participants heard lists of words. The word lists had between 10 and 40 words on them. The participants were asked to recall as many as possible.
- Participants recalled more words from the start of the list (primacy effect) and the end of the list (recency effect) than those in the middle of the list.
- These results have been taken to show that the words at the end of the list were recalled best as they were still in the short-term memory. The ones at the start of the list were recalled well because they had been transferred to the long-term memory. The words in the middle of the list were not remembered well and this suggests that they were not in either the short- or long-term store.
- These results indicate the likelihood of recalling a word depends on its position in a list.

AO3

- This provides evidence for the existence of short- and long-term memory stores.
- This is a laboratory-based study, so participants were using their memory under highly controlled conditions. This allowed the researcher to eliminate many extraneous variables so they can be sure the position of a word in a list affected the likelihood of it being recalled.
- Participants were asked to listen to word lists. This was an artificial task because people do not normally have to do this. This means the results may lack validity because they may not predict how serial position affects memory recall in everyday memory.
- The effects of serial position were tested in a laboratory setting in this study. This may have increased the artificiality of the performance of the participants. This means it is difficult to generalise research findings to predict the effects of serial position in a more normal setting.
- A limited sample of participants was used in this study. They were all psychology students and so may have been of a similar age. This means it is difficult to generalise the findings to predict the effects of serial position to people of different ages or who have not studied psychology.

Accept other relevant content.

NOTE: Reference to **'**serial position' is not enough for 'relevant content' because it is part of the question stem.

Section B

Perception

06	Gilchrist and Nesberg investigated the effect of motivation on perception. Which **two** of the following statements about their study are correct? Shade **two** boxes. **[2 marks]**

Marks for this question: AO1 – 2 marks

Answers

B (The independent variable was whether participants were deprived of food or not)
C (The participants were shown slides of four different meals)

07	Which **one** of the following is a description of occlusion? Shade **one** box. **[1 mark]**

Marks for this question: AO1 – 1 mark

Answer

C (Where an object covers part of another object in the visual field, it appears to be closer)

08.1	The range of estimated lengths for the spider for participants in Group B was 43 mm. Use the information in **Table 1** to calculate the range of estimates for participants in Group A. Show your workings. **[2 marks]**

Marks for this question: AO2 – 2 marks

2 marks for correct range.
102 or 103

1 mark for correct workings ONLY.
161–59

08.2	The mean estimated length of the spider in Group A was 93 mm. Use the information in **Table 1** to calculate the mean estimated length of the spider in Group B. State your answer using **two** significant figures **and** show your workings. **[3 marks]**

Marks for this question: AO2 – 3 marks

3 marks for correct mean to two significant figures.
81

2 marks for the correct mean but not rounded to two significant figures.
80.6

1 mark for correct workings ONLY.
806/10

NOTE: Credit may be given for correct answers written in the workings box – not just on the answer line.

09	Outline **one** binocular depth cue that affects how people judge distance. Refer to Ava's experience in your answer. **[4 marks]**

Marks for this question: AO1 – 2 marks and AO2 – 2 marks

Level	Marks	Description
2 Clear	**3–4**	AO1: Clear and accurate knowledge of **one** binocular depth cue with some detail. AO2: Clear and accurate application of knowledge and understanding of **one** binocular depth cue to Ava's experience. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, and is clear, coherent and focused.
1 Basic	**1–2**	AO1: Limited or muddled knowledge of **one** binocular depth cue. AO2: Limited or muddled application of knowledge and understanding of **one** binocular depth cue to Ava's experience. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
0	**0**	No relevant content.

Possible content:

AO1
- Convergence is a depth perception that uses the extent to which eye muscles have to work, in order to focus on images/objects. The closer an image/object is, the more the eye muscles have to work.
- Retinal disparity is the difference between the sensory information received through each eye as they view the world from a different angle. The more disparity, the further away an image/object is.

AO2
- Ava cannot use convergence/retinal disparity when one eye is covered so she is struggling with depth perception.
- This means Ava finds it difficult to judge how far away things are when she is moving around her house. This is why she is clumsy and bumps into furniture when she wears the eye patch.

Accept other relevant content.

NOTE: If the candidate has written about more than one binocular depth cue, award marks to the one that is clearest and most effective.

NOTE: The AO1 may be embedded in the AO2 or separate; both are equally acceptable.

NOTE: Monocular depth cues are not creditworthy.

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

Marks for this question: AO1 – 4 marks

Level	Marks	Description
2 Clear	**3–4**	Clear and accurate knowledge of Gregory's constructivist theory of perception. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning, and is clear, coherent and focused.
1 Basic	**1–2**	Limited or muddled knowledge of Gregory's constructivist theory of perception. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
0	**0**	No relevant content.

Possible content:

AO1
- Perception is an active process because it involves drawing inferences.
- Perception is constructed using both sensations and stored knowledge.
- We learn how to perceive (nurture) because we interpret sensory information using what we already know (a top-down theory of perception).
- Stored knowledge and expectations come from past experiences.
- Perception becomes more sophisticated as we get older.
- We use visual cues to help us perceive distance and depth.
- Mistakes in perception, such as being tricked by visual illusions, are the result of misinterpreting visual cues.

Accept other relevant content.

11	Bruner and Minturn investigated the effect of expectation on perception. Describe this study. Evaluate the research method used in this study. **[9 marks]**

Marks for this question: AO1 – 4 marks and AO3 – 5 marks

Level	Marks	Description
3 Detailed	**7–9**	AO1: Relevant knowledge and understanding of Bruner and Minturn's study is accurate with detail. AO3: Analysis and evaluation of laboratory-based studies is effective. Research conclusions drawn are sound and fully expressed. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning and is clear, coherent and focused.
2 Clear	**4–6**	AO1: Relevant knowledge and understanding of Bruner and Minturn's study is present but there are occasional inaccuracies/omissions. AO3: There may be some effective analysis and evaluation of laboratory-based studies. There may be an attempt to draw conclusions. 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 Bruner and Minturn's study is present but limited. AO3: Analysis and evaluation of the laboratory-based studies 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.
0	**0**	No relevant content.

Possible content:

AO1

- 24 participants took part in an experiment on recognising numbers and letters using an independent groups design.
- Half of the participants were shown a series of letters with an ambiguous figure in the middle. The other half were shown a series of numbers with the same ambiguous figure in the middle.
- The ambiguous figure was a broken 'B' that could be seen as either the letter B or the number 13.
- Most of the participants who had been shown numbers drew a '13'. Most of the participants who were shown letters drew a 'B'.
- The researchers concluded that the participants' expectations had directly affected how they interpreted the ambiguous figure.
- This shows that expectation affects perception.

AO3

- This is a laboratory-based study, so people were perceiving figures under highly controlled conditions.
- This is useful for the researcher who has eliminated many extraneous variables so can be sure the IV has affected the DV if the results show an effect.
- Procedures are standardised so the study can be replicated.
- Laboratory-based studies are often carried out in artificial settings. This means there is a lack of ecological validity.
- Laboratory-based study often use artificial tasks (such as interpreting ambiguous images). Because people do not normally have to do these, this can reduce the validity of the results.
- High control can decrease the validity of the results because it increases the artificiality of the performance of the participants. This means it is difficult to generalise research findings to predict behaviour in a more normal setting.

Credit other relevant content.

NOTE: Where a description is not given, or is not creditworthy, AO3 marks for accurate evaluation of laboratory-based studies can still be awarded.

NOTE: Reference to the effect of expectation on perception is not enough for 'relevant content' because it is part of the question stem.

NOTE: Evaluation of Bruner and Minturn's study with no link to the research method used (MAX 1 AO3 mark).

Section C

Development

12	Which **one** of the following is an example of a visualiser learning style? Shade **one** box. **[1 mark]**

Marks for this question: AO2 – 1 mark

Answer

A (Drawing a diagram)

13	What is meant by 'praise' in the context of learning? **[2 marks]**

Marks for this question: AO1 – 2 marks

Up to **2 marks** for a definition of praise in the context of learning.
2 marks: a clear and accurate definition.
1 mark: a limited or muddled definition.

Possible content:

- Expressing approval for the effort put into a piece of work.
- Expressing admiration for the standard of a piece of work.

Accept other relevant definitions.

NOTE: A definition should be considered as limited unless there is direct reference to praise in the context of learning.

NOTE: An example may be used to add clarity to a definition (eg by providing a learning context) but is not by itself creditworthy.

NOTE: Where the words 'praise', 'praising' or 'praised' are used as part of the answer and are not defined/explained, this will reduce the clarity of the answer.

14	50 teachers were asked whether they were more likely to praise student effort or student performance. 37 of these teachers said they were more likely to praise student effort. Calculate the fraction of teachers who were more likely to praise student performance. **[1 mark]**

Marks for this question: AO2 – 1 mark

13/50

15	Explain the role of nature **and** nurture on the brain development of a baby before it is born. Refer to Doctor Kumar's **and** Doctor Andersson's comments in your answer. **[6 marks]**

Marks for this question: AO1 – 4 marks and AO2 – 2 marks

Level	Marks	Description
3 Detailed	**5–6**	AO1: Relevant knowledge and understanding of the role of nature **and** nurture on early brain development is accurate with detail. AO2: Clear and accurate application of knowledge and understanding of the role of nature **and** nurture on early brain development to Doctor Kumar's **and** Doctor Andersson's comments. Relevant terminology is used consistently throughout. The answer demonstrates a high level of substantiated reasoning and is clear, coherent and focused.
2 Clear	**3–4**	AO1: Relevant knowledge and understanding of the role of nature **and** nurture on early brain development is present but there are occasional inaccuracies/omissions **OR** level 3 knowledge of **either** nature or nurture. AO2: Reasonable application of knowledge and understanding of the role of nature **and/or** nurture on early brain development to Doctor Kumar's **and/or** Doctor Andersson's comments. 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	**1–2**	AO1: Knowledge and understanding of the role of nature **and/or** nurture on early brain development is present but limited. AO2: Limited application of knowledge and understanding of the role of nature **and/or** nurture on early brain development to Doctor Kumar's **and/or** Doctor Andersson's comments. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
0	**0**	No relevant content.

Possible content:

AO1

- Nature refers to the argument that characteristics and behaviours are genetically influenced.
- This suggests that how a baby's brain develops before it is born is influenced by the genes inherited from its parents.
- Nurture refers to the argument that characteristics and behaviours are influenced by upbringing, environment and experiences.
- Nurture suggests that how a baby's brain develops before it is born is influenced by the mother's environment, lifestyle and experiences during pregnancy.
- Most brain development before birth is due to nature but nurture also plays a role.
- Both nature and nurture can affect early brain development (interaction between nature and nurture).

AO2

- Doctor Kumar is talking about nature when highlighting the influence of a mother's genes on early brain development.
- Both Doctor Kumar and Doctor Andersson state that nature plays a key role in early brain development because they agree that a mother's genes are important in early brain development.
- Doctor Andersson is talking about nurture when highlighting the importance of the mother's diet during pregnancy.
- Doctor Andersson is talking about nurture when saying that a mother's lifestyle and experiences will influence brain development.

Accept other relevant content.

16	Describe **and** evaluate the 'policeman doll study' carried out by Hughes. **[6 marks]**

Marks for this question: AO1 – 3 marks and AO3 – 3 marks

Level	Marks	Description
3 Detailed	**5–6**	AO1: Relevant knowledge and understanding of Hughes' 'policeman doll study' is accurate with detail. AO3: Analysis and evaluation of Hughes' 'policeman doll study' is effective. Any 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	**3–4**	AO1: Relevant knowledge and understanding of Hughes' 'policeman doll study' is present but there are occasional inaccuracies/omissions. AO3: There may be some effective analysis and evaluation of Hughes' 'policeman doll study'. There may be an attempt to draw conclusions. 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	**1–2**	AO1: Knowledge and understanding of Hughes' 'policeman doll study' is present but limited. AO3: Analysis and evaluation of Hughes' 'policeman doll study' 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.
0	**0**	No relevant content.

Possible content:

AO1

- Thirty children aged from 3.5 to 5 years old took part in the laboratory study.
- Hughes tested egocentrism using a model of two intersecting walls, a boy doll and two policeman dolls.
- To introduce the task, a policeman doll was placed on the model. Each child was asked to hide the boy doll from the policeman doll.
- A child was told if they made a mistake. Then they were allowed to try the task again.
- In the actual experiment, a second policeman doll was placed on the model and the child was asked to hide the boy doll so that neither of the policeman dolls could see him.
- Ninety percent of the children were able to hide the boy doll from the policeman dolls.
- In following trials, where more than two walls were used, the younger children were only correct 60 percent of the time.
- Hughes concluded that most children between 3.5 and 5 years old can see things from another person's point of view so are not egocentric in their thinking.

AO3

- One strength of the study was that asking children to hide a doll made the task engaging and meaningful because hiding games were likely to be familiar to them. It can be argued that this meant children were better able to show their cognitive ability than in Piaget's original research.
- A limited sample of children was used as all of the participants came from Edinburgh. This means it may be problematic to generalise these findings to explain when children from other cultures can see things from another person's point of view.
- One limitation of the study was the possibility that hidden cues from the researcher, such as looking at the place where the doll might be positioned, may have influenced the children's behaviour.
- Other research studies support the findings that some children under seven years old can see things from another person's point of view.
- One strength of this study is that it challenged Piaget's conclusion that children show egocentric thinking until the age of about seven years old. It suggested that some children can see the world from different viewpoints at a significantly younger age than was previously thought.

Accept other relevant content.

NOTE: Reference to policeman dolls is not enough for 'relevant content' because it is part of the question stem.

17	Describe **and** evaluate Dweck's mindset theory of learning. In your answer, refer to the mindset encouraged by **both** restaurant businesses in this information. **[9 marks]**

Marks for this question: AO1 – 3 marks, AO2 – 3 marks, AO3 – 3 marks

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 both restaurant businesses. AO3: Analysis and evaluation of Dweck's mindset theory of learning is effective. Any 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: Reasonable application of knowledge and understanding of Dweck's mindset theory of learning to either/both restaurant businesses. AO3: There may be some effective analysis and evaluation of Dweck's mindset theory of learning. There may be an attempt to draw conclusions. 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: Limited application of knowledge and understanding of Dweck's mindset theory of learning to either/both restaurant businesses. 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.
0	**0**	No relevant content.

Possible content:

AO1
- People with a fixed mindset believe that success is due to innate factors like genes. This means there is nothing you can do to change your ability or talent.
- People with a fixed mindset view failure as a lack of talent.
- People with a growth mindset believe that ability and success is due to hard work and perseverance.
- People with a growth mindset view failure as an opportunity to grow.
- Mindset is affected by the form of praise (i.e. person praise or process praise) a student is given.

AO2
- Employees in Zuppa are more likely to have a fixed mindset. People are recruited according to their talents and this business values results over hard work.
- Employees in Zuppa dislike challenges because if they fail on a task it will be seen as due to a lack of talent.
- Employees in Bravas are more likely to have a growth mindset. People are recruited according to their work ethic and this business values hard work over natural talent.
- Employees at Bravas enjoy challenges because they know they can learn from experiences, even if they fail.

AO3
- One strength of mindset theory is that people can change their mindset and this can be used to improve performance in different contexts such as at school, in sports or in the workplace.
- There is evidence to support the idea that a growth mindset can improve performance.
- Dweck's research showed that teaching children to develop a growth mindset in schools increased their motivation and grades.

Accept other relevant content.

NOTE: The AO2 may be separate or embedded elsewhere; both are equally acceptable.

Section D

Research Methods

18	Which **one** of the following is a feature of an interview? Shade **one** box. **[1 mark]**

Marks for this question: AO1 – 1 mark

Answer

B (Directly asking people questions)

19	Which **one** of the following is most likely to achieve a representative sample? Shade **one** box. **[1 mark]**

Marks for this question: AO1 – 1 mark

Answer

C (Stratified)

20	Name the descriptive statistic that is calculated by ordering the values in a set of data then selecting the middle value. **[1 mark]**

Marks for this question: AO1 – 1 mark

Median

21	Define what is meant by 'secondary data'. **[2 marks]**

Marks for this question: AO1 – 2 marks

Up to **2 marks** for a definition of secondary data.

2 marks: a clear and accurate definition.
1 mark: a limited or muddled definition.

Possible content:

- It is second-hand information / not gathered personally by researcher.
- It was gathered / published before the current research took place.
- It comes from sources/ places such as public records or studies by other researchers.

Credit other relevant content.

NOTE: An example may be used for clarification but is not required for an answer to be considered clear.

NOTE: Where the word 'secondary' is used as part of the answer and is **not** defined/explained, (e.g. 'Data is collected from a secondary source'), this will reduce the clarity of the answer.

22.1	Identify the dependent variable **and** both conditions of the independent variable in this experiment. Write your answers in the correct spaces provided. **[3 marks]**

Marks for this question: AO2 – 3 marks

1 mark for identifying the dependent variable.

Example:

- Whether the participant cleaned their desk. (1 mark)
- The number of participants who cleaned their desk. (1 mark)

PLUS

Up to **2 marks** for identifying the independent variable.

2 marks: a clear and accurate outline with **both** conditions of the independent variable.
1 mark: a limited or muddled outline.

Example:

- Whether the smell of cleaning product was present in a room or not. (2 marks)
- The smell of a room. (1 mark)

22.2	The results of this experiment are shown in **Figure 1**. Use this information to complete the table below. **[2 marks]**

Marks for this question: AO2 – 2 marks

1 mark for **each correct value** (MAX 2 marks):

	Smell group	**No smell group**
Number of participants who cleaned their desk	18	**10**
Number of participants who did not clean their desk	12	**20**

22.3	33.3% of participants cleaned their desk in the no smell group. Calculate the percentage of participants who cleaned their desk in the smell group. Use the information from **Question 22.2**. Show your workings. **[2 marks]**

Marks for this question: AO2 – 2 marks

2 marks for the correct percentage.
60

1 mark for correct workings ONLY
18/30 × 100

22.4	State whether the environmental cue of smell did or did not influence participant behaviour in this experiment. Use the data in **Figure 1** to explain your answer. **[3 marks]**

Marks for this question: AO2 – 2 marks and AO3 – 1 mark

AO2 and AO3

Up to **3 marks** for stating that smell **did influence** behaviour **and** using Figure 1 to explain this.

3 marks: a clear and accurate explanation explicitly using accurate data taken from Figure 1 **PLUS** correctly stating that smell **did influence** behaviour.

2 marks: a limited or muddled explanation **PLUS** correctly stating that smell **did influence** participant behaviour **OR only** a clear and detailed explanation explicitly using accurate data taken from Figure 1.

1 mark: a limited or muddled explanation **OR only** correctly stating that smell **did influence** participant behaviour.

0 marks: incorrectly stating that the smell **did not** influence participant behaviour.

Possible content:

- The smell **did influence** behaviour. There were the same number of participants in each group/condition and a higher number of participants in the smell group/condition (18) cleaned their desk compared to the no smell group/condition (10).
- The smell **did influence** behaviour. A higher proportion of participants cleaned their desk in the smell group/condition (60%) compared to the no smell group/condition (33.3%).

Credit other relevant content.

22.5	Name the experimental design used by the psychologist in this study. Explain your answer. **[2 marks]**

Marks for this question: AO2 – 2 marks

1 mark for correctly naming **independent groups/measures** as the experimental design used

PLUS

1 mark for explanation

Possible content:

- Separate groups of participants were used in each condition.
- One group of participants completed the smell group/condition, and a different group of participants completed the no smell group/condition.
- Each participant only took part in one of the conditions.
- Each participant completed either the experimental or the control group/condition.

Accept other relevant content

NOTE: Where **no** experimental design is named, an explanation for independent groups/measures can still be creditworthy.

22.6	Explain **one** weakness of using the experimental design you named in **Question 22.5**. **[2 marks]**

Marks for this question: AO3 – 2 marks

Up to **2 marks** for explaining **one** relevant weakness.

2 marks: a clear and accurate explanation.
1 mark: a limited or muddled explanation.

Possible content:

- With an independent groups design, participant variables (such as how much they like cleaning or how much they care about cleanliness), may influence the results for each group. This means it can be problematic to compare the results of the experimental group to the control group.
- More participants are needed (than with the repeated measures design), as you need a different group of participants for each condition.

NOTE: If an INCORRECT experimental design has been named in **Question 22.5**, credit can be awarded for explaining one relevant weakness of the experimental design named.

Example:

- **Repeated measures:** order effects may occur because participants complete both conditions/tasks in an experiment. For example, practice may improve performance in the second condition/task.
- **Matched pairs:** it is time consuming and difficult for researchers to collect the data required to match participants.

Accept other relevant weaknesses.

23	Evaluate the use of correlations in psychological research. **[6 marks]**

Marks for this question: AO3 – 6 marks

Level	Marks	Description
3 Detailed	**5–6**	Analysis and evaluation of the use of correlations in psychological research is effective. Any 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	**3–4**	There may be some effective analysis and evaluation of the use of correlations in psychological research. There may be an attempt to draw conclusions. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
1 Basic	**1–2**	Analysis and evaluation of the use of correlations in psychological research is of limited effectiveness or may be absent. Any attempts to draw conclusions are not always successful or present. Relevant terminology may not be used at all or may be muddled.
0	**0**	No relevant content.

Possible content:

- Correlations can be used to investigate relationships without the researcher manipulating variables. This means that correlations can be used when other research methods are not suitable due to ethical or practical reasons – for example, to investigate whether social media use is linked to mental health problems.
- Correlations can provide a useful starting point for research because they allow a researcher to see whether two co-variables are connected. If a pattern is established between variables, a researcher can then use an experiment to further investigate this relationship.
- Correlations cannot be used to establish cause and effect relationships between two co-variables. For example, we might find a positive correlation between playing violent computer games and aggressive behaviour. However, we cannot show that one causes the other as there may be a third variable that could explain this relationship.
- Correlations can be used to identify and investigate non-linear (curvilinear) relationships between two variables, for example, stress level and task performance.
- Large amounts of information are required for correlational research to be useful. This is because establishing relationships from small samples may not be reliable.
- Collecting a large enough data set for correlations to be considered reliable can be time consuming and expensive for researchers.

Credit other relevant evaluation.

NOTE: Full credit can be awarded without reference to examples, but answers can receive credit for using examples to illustrate evaluations.