



GCSE PSYCHOLOGY 8182/2

Paper 2 Social Context and Behaviour

Mark scheme

June 2025

Version: 1.0 Final



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.

No student should be disadvantaged on the basis of their gender identity and/or how they refer to the gender identity of others in their exam responses.

A consistent use of 'they/them' as a singular and pronouns beyond 'she/her' or 'he/him' will be credited in exam responses in line with existing mark scheme criteria.

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

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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.

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**Social influence**

01	Both dispositional and social factors affect conformity. Which of the following is the best definition of ‘dispositional factors’? Shade one box. [1 mark]
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Marks for this question: AO1 – 1 mark**B** (Personal characteristics which may affect a person’s behaviour or choices)

02.1	Write a suitable null hypothesis for the described study of conformity. [2 marks]
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Marks for this question: AO2 – 2 marks**2 marks:** there must be two conditions of the IV and a clear DV which makes the statement operational.**1 mark:** the hypothesis lacks clarity.**Examples**

- There will be no difference in the answers given by participants when in a group of 3, or in a group of 8 (2 marks).
- When a participant is giving their answers in a group with 7 strangers, they will give the same answers as a participant giving their answers in a group with 2 strangers (2 marks).
- The number of wrong answers the participants give when they are in the group of 8 people will be the same as when they are the group of 3 people (2 marks).
- Participants will answer in the same way if giving answers in a group of 8 (1 mark).
- There will be no difference in the level of conformity between the group sizes of 3 and 8 (1 mark).
- There will be no difference in the answers given by participants when they are with 2 strangers (1 mark)
- There will be no difference in the number of participants who conform (0 marks)

Credit other relevant content.

NOTE: Do not accept answers that are only alternative hypotheses, aims, questions, correlational statements or statements of the results (eg answered/was/did/used).

02.2	Give one conclusion the psychologist could draw from the described study of conformity. Use the results to explain your answer. [3 marks]
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Marks for this question: AO2 – 2 marks and AO3 – 1 mark

AO3

1 mark for identifying an appropriate conclusion that the psychologist could draw from the described study of conformity.

Example

- A conclusion that the psychologist could draw is that the size of the group makes a difference to how likely someone is to conform.

NOTE: Conclusions must make some form of reference to group size in order to be credited.

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

PLUS

AO2

Up to **2 marks** for an explanation of the conclusion using the results.

2 marks: a clear and accurate explanation.

1 mark: a limited or muddled explanation.

Possible content

- The participants in the group of 3 only conformed 34% of the time. This is less than half the rate of the group of 8, which was 83%.
- This shows a clear difference between the conformity rates for groups of different sizes.

Credit other relevant content.

NOTE: If there is **NO** sense of a conclusion anywhere in the answer, then it is not possible to credit an explanation of one.

NOTE: To be considered clear and accurate, a clear reference to the results of both groups must be made. This could be the use of the percentages or 'the direction' of the data – ie the group of 3 gave fewer wrong answers than the group of 8.

NOTE: The command term 'explain' requires answers to 'set out purposes or reasons'. Answers that do not explicitly do this can only be considered to be limited or muddled.

02.3	Briefly evaluate Asch's study of conformity. [3 marks]
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Marks for this question: AO3 – 3 marks

Up to **3 marks** for an evaluation of Asch's study of conformity.

3 marks: a clear and detailed evaluation.

2 marks: a limited evaluation.

1 mark: a very limited/muddled evaluation.

Possible content

- The task of judging lengths of lines in a room with a group of strangers is not an everyday task. This may have resulted in the participants behaving in ways that they would not usually do. Therefore, Asch's study has low ecological validity.
- The task of judging lengths of lines is fairly trivial/not very important, and the cost of saying an incorrect answer is very low. People might be less likely to conform when the consequences are more important.
- Asch's study was a laboratory study and easily replicated and this has allowed other researchers to test the reliability of his findings.
- The participants were all male students from the United States of America. This means that the findings are only generalisable to a small section of the population.
- The participants did not know the others in the group were not authentic participants so they were being deceived. This goes against the ethical consideration of respect.
- Asch's study was carried out in America where the culture is individualistic. Higher levels of conformity have been found in countries with a collectivist culture. This means that the findings from Asch's study cannot be generalised to all cultures.
- Asch's study was carried out in 1950s. This was a time in the political history of America where there were high levels of conformity. An exact replication of Asch carried out in 1980 suggested that the Asch effect was a 'child of its time' because only one participant conformed.

Credit other relevant content.

NOTE: Answers that are generic and could therefore also be an evaluation of the described study rather than Asch, can only be credited as 'limited'. Answers that are clearly **only** relevant to the described study and not to Asch, are not creditworthy at all.

NOTE: Accept answers that are relevant to any of Asch's conformity studies.

03	What is meant by ‘social loafing’? Refer to both Anna’s and Mari’s comments in your answer. [4 marks]
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Marks for this question: AO1 – 2 marks and AO2 – 2 marks

Up to **2 marks** for a definition of social loafing.

2 marks: a clear and accurate definition.

1 mark: a limited or muddled definition.

Possible content

- Making less effort when working with others than when working alone.

NOTE: To be considered clear and accurate, answers should make reference to the concept ‘making **less** effort with others’ **and** ‘than when alone’.

PLUS

AO2

Up to **2 marks** for a relevant reference to both Anna and to Mari’s comments

2 marks: a clear and accurate reference to **both** comments.

1 mark: a limited/muddled reference to **both** comments **OR** a clear and accurate reference to **one** comment.

Examples

- Anna is showing a tendency towards social loafing when she sounds like she is pleased to do less work/she can let others do more of the work.
- Mari’s statement suggests that she is aware she is affected by social loafing when working in groups and that’s why she prefers to work on her own.

Credit other relevant content.

04.1	Identify one factor affecting bystander intervention that Piliavin could have been studying in this variation of his study. Briefly explain your answer. [2 marks]
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Marks for this question: AO2 – 2 marks

Up to 2 marks for identifying **one** appropriate factor that Piliavin could have been studying **and** for explaining this answer.

2 marks: an accurate factor **and** a clear and accurate explanation.

1 mark: a limited or muddled answer **OR** an accurate factor.

Possible content

Appropriate factor

- cost (of helping)
- similarity (to victim)

Accept other creditworthy answers such as prejudice, appearance, risk, fear

Explanation

Examples

- The large facial scar may make some people feel scared of helping and this increases any cost they may perceive as present.
- The large facial scar may make people feel more/less similar to the person needing help.

Credit other relevant content.

NOTE: The factor may be embedded in the explanation or separate, both are equally acceptable.

NOTE: If there is **NO** sense of a factor anywhere in the answer, then it is not possible to credit an explanation of one.

NOTE: If more than one factor has been identified, award marks to the **one** that is clearest and most appropriate.

04.2	Briefly explain two strengths of field experiments. Refer to Piliavin's subway study in your answer. [4 marks]
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Marks for this question: AO2 – 2 marks and AO3 – 2 marks

Level	Marks	Description
2 Clear	3–4	AO2: Clear and accurate application of knowledge and understanding of Piliavin's subway study. AO3: Analysis and evaluation of field experiments is effective and addresses two strengths. 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	AO2: Limited or muddled application of knowledge and understanding of Piliavin's subway study. AO3: Analysis and evaluation of field experiments is of limited effectiveness or muddled and may not address two strengths. 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

- Field experiments take place in real-life settings. This makes the results more natural and applicable to everyday situations. In Piliavin's study, the experiment was conducted during an everyday subway journey, so the participants were unaware they were part of a study. This made their behaviour more authentic, and the results are more likely to reflect how people would act in real emergencies.
- Field experiments often have high external validity, meaning the findings can be generalised to the real world. Since Piliavin's study was conducted in a public place with real passengers, the findings are more relevant to everyday situations.
- Participants in a field experiment may not know they are taking part in a study because they are conducted in an everyday environment/natural setting. This means the participants on the subway carriage are unlikely to have changed their behaviour and would have acted naturally.
- Field experiments often use tasks that people may have to do in real life. In Piliavin's study they had to decide whether or not to offer their help, which is something that people may need to do in real life.

Credit other relevant content.

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

NOTE: If more than two strengths are explained, award marks to the two with the most relevant content.

NOTE: Reference to 'Piliavin' or 'subway study' is not enough by themselves for 'relevant content' because it is part of the question stem.

05	How can Milgram's Agency theory be used to explain Participant A's behaviour? Refer to the article in your answer. [6 marks]
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Marks for this question: AO1 – 2 marks, AO2 – 2 marks and AO3 – 2 marks

Level	Marks	Description
3 Detailed	5–6	AO1: Relevant knowledge and understanding of Milgram's Agency theory is accurate with detail. AO2: Clear and accurate application of knowledge and understanding of Milgram's Agency theory as referred to in the article. AO3: Analysis of how Milgram's Agency theory can be used to explain Participant A's behaviour 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 Milgram's Agency theory is present but there are occasional inaccuracies/omissions. AO2: Reasonable application of knowledge and understanding of Milgram's Agency theory as referred to in the article. AO3: There may be some effective analysis of how Milgram's Agency theory can be used to explain Participant A's behaviour. 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	AO1: Knowledge and understanding of Milgram's Agency theory is present but limited. AO2: Limited or muddled application of knowledge and understanding of Milgram's Agency theory as referred to in the article. AO3: Analysis of how Milgram's Agency theory can be used to explain Participant A's behaviour is of limited effectiveness or muddled 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**AO1**

- We are more likely to obey orders when we are in an agentic state/when we believe we are acting on behalf of an authority figure.
- Because we believe the authority figure will take on responsibility for our actions, we no longer feel responsible.
- When someone we believe to be a figure of authority gives us an order, we go from an autonomous state to an agentic state (an agentic shift).

AO2 and AO3

- Participant A has obeyed orders given by a person wearing a uniform. Milgram's Agency theory would view Participant A as having undergone an agentic shift. This is because they say they 'just did what they were told' and 'didn't think'. Participant A probably saw the person giving the instructions as an authority figure.
- Participant A obeyed the orders even though doing so was dangerous. They appear to have left the person in the uniform with the responsibility of deciding if the instructions they were told to follow were appropriate. This is a sign of being in an agentic state.

Credit other relevant content.

NOTE: AO2 marks should be awarded for references to the article and AO3 marks should be awarded for explanations of participant A's behaviour.

NOTE: All AOs may be embedded together **or** separate, **both** are equally acceptable.

Section B**Language, thought and communication**

06.1	Which of the following best identifies the type of graph shown in Figure 1 ? Shade one box. [1 mark]
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Marks for this question: AO1 – 1 mark**A** (Bar chart)

06.2	Calculate the range for the number of metres the participants prefer to stand away from a stranger. Show your workings. [2 marks]
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Marks for this question: AO2 – 2 marks**2 marks** for either of the following correct answers.

7

8

OR**1 mark** for correct workings but incorrect/no answer.

8–1

8-1 + 1

07.1	Psychologists have found evidence that non-verbal behaviour is innate by carrying out research with neonates and the sensory deprived. Explain what is meant by ‘neonates’ and ‘the sensory deprived’. [4 marks]
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Marks for this question: AO1 – 4 marks

Up to **2 marks** for an explanation of what is meant by ‘neonates’.

2 marks: a clear and accurate explanation.

1 mark: a limited or muddled explanation.

Possible content

- Neonates are newborn babies less than a month old.

NOTE: To be considered clear and accurate, reference to ‘baby’/‘babies’ **AND** new-born/ less than a month old/up to a month of age must be made.

Credit other similar wording.

PLUS

Up to **2 marks** for an explanation of what is meant by ‘the sensory deprived’.

2 marks: a clear and accurate explanation.

1 mark: a limited or muddled explanation **OR** just a relevant example.

Possible content

- Animals or humans who receive limited or no information from one or more sensory organs.
- Reducing or removing the sensory stimuli from one or more of the senses.

Credit other relevant content.

NOTE: Where the words ‘sensory’ **or** ‘deprived’ are used as part of the answer and are **not** explained, this will reduce the clarity of the answer.

07.2	Explain why a case study can be seen as a suitable method for researching the non-verbal behaviour of the sensory deprived. [2 marks]
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Marks for this question: AO3 – 2 marks

Up to **2 marks** for an explanation of why a case study can be seen as a suitable method for researching the non-verbal behaviour of the sensory deprived.

2 marks: a clear and accurate explanation.

1 mark: a limited or muddled explanation.

Possible content

- A case study would be a suitable method because they are carried out on individuals or unique/rare groups. The sensory deprived are a unique/rare group.
- A case study is suitable because it allows researchers to closely observe individuals over time. This would allow researchers to collect data regarding any changes in the ability to communicate non-verbally.

Accept other creditworthy answers such as relevant comparisons with other research methods.

08	Outline Darwin's evolutionary theory of non-verbal communication.	[4 marks]
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Marks for this question: AO1 – 4 marks

Level	Marks	Description
2 Clear	3–4	Clear and accurate knowledge and understanding of Darwin's evolutionary theory of non-verbal communication with some detail. 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 and understanding of Darwin's evolutionary theory of non-verbal communication is 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

- Some of Darwin's key ideas are natural selection and survival of the fittest. He said that organisms that make the best changes in order to fit their situation and environment, are the ones most likely to survive and reproduce.
- Darwin put forward the idea that non-verbal communication has evolved as a way of expressing emotions.
- Darwin wrote about the principle of serviceable associated habits. A serviceable behaviour has a purpose.
- An example of a serviceable behaviour would be when people expose their teeth when they have an angry facial expression. Originally, humans may have used biting as a form of self-defence. So just like many animals, they may have exposed their teeth as a way of saying 'back off'.
- Darwin also suggested that some non-verbal communication is caused by our nervous system. Examples include dilated pupils and an open mouth when we are frightened.

Credit other relevant content.

NOTE: If answers do not address non-verbal communication but simply outline relevant elements of Darwin's evolutionary theory (e.g. natural selection and survival of the fittest) (MAX 1 mark).

09	Imagine that you have been asked to conduct a study to investigate the use of postural echo in a conversation. Use your knowledge of psychology to describe how you would do this. In your answer: • give a description of the procedure you would use • name the type of data you would collect. [3 marks]
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Marks for this question: AO2 – 3 marks

Up to **2 marks** for description of a suitable procedure.

2 marks: a clear and accurate description of a procedure.

1 mark: a limited or muddled description of a procedure.

NOTE: To be considered appropriate the procedure must clearly be investigating **postural echo in a conversation**

PLUS

1 mark for any of the following (MAX 1):

- quantitative
- primary.

Accept other creditworthy answers such as numerical, ordinal data, grouped discrete data, discrete data.

NOTE: The command term 'name' requires answers to 'identify using a recognised technical term'.

NOTE: If there is an obvious contradiction between the description and the type of data named, the data mark **cannot** be awarded.

NOTE: There are ways in which quantitative data can include data with words, such as when questions only have a very limited number of answers and the intention is that these answers are going to be counted. (Such as asking 'Did you find the person more friendly?' The likely answers are yes/no and this data will be compiled by counting).

10	Describe and evaluate Yuki's study of emoticons.	[9 marks]
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Marks for this question: AO1 – 4 marks and AO3 – 5 marks

Level	Marks	Description
3 Detailed	7–9	AO1: Relevant knowledge and understanding of Yuki's study of emoticons is accurate with detail. AO3: Analysis and evaluation of Yuki's study of emoticons 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	4–6	AO1: Relevant knowledge and understanding of Yuki's study of emoticons is present but there are occasional inaccuracies/omissions. AO3: There may be some effective analysis and evaluation of Yuki's study of emoticons. 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	1–3	AO1: Knowledge and understanding of Yuki's study of emoticons is present but limited. AO3: Analysis and evaluation of Yuki's study of emoticons 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

AO1

- Yuki's participants were students from America and Japan. He showed them emoticons with six different combinations of happy/neutral/sad eyes and mouths. Participants were asked to give a rating between 1 and 9 for how happy they thought each face was.
- The Japanese students gave the highest ratings to the faces with happy eyes and lowest ratings to the faces with sad eyes. The American students gave the highest ratings to the faces with the happy mouths and the lowest ratings to the faces with sad mouths.
- The results show that Japanese and American people give more importance to different parts of the face when interpreting another person's emotions. The Japanese focus more on the eyes while Americans focus more on the mouth.
- Yuki concluded that this is because of differences in socialisation in the two cultures.

AO3

- Study provided evidence that the way we respond to non-verbal behaviour is learned.
- Yuki used computer generated faces to test participants not real faces and it could therefore be said that the study lacks ecological validity.
- Demand characteristics may have affected the results because the participants were aware they were taking part in a piece of research. This means that they may not have given true responses.
- The samples in both conditions were all students and therefore not able to be representative of people who differ from this in various ways (e.g. age, education level).
- The emoticons only had eyes and mouths that were expressing two forms of emotions (happy and sad). But people express many more emotions in everyday life. This means that Yuki's results do not provide an understanding of cultural differences in the interpretation of all emotions and the findings cannot be generalised to all emotions.
- The rating scale may be too simplistic for accurately measuring something as complex as human emotions.

Credit other relevant content.

Section C**Brain and neuropsychology**

11.1	Which is the correct ratio for the number of different areas of damage identified using CT scans compared to the number of different areas of damage identified using PET scans? Shade one box. [1 mark]
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Marks for this question: AO2 – 1 mark

C (2:3)

11.2	The PET scans showed 50% more areas of damage than the CT scans did. Write 50% as a fraction. [1 mark]
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Marks for this question: AO2 – 1 mark $\frac{1}{2}$

Accept other correct unsimplified fractions such as - 50/100 or 5/10

NOTE: If the candidate has written more than one answer, **only** mark the **first one** UNLESS one of them is clearly indicated as the intended answer.

11.3	Calculate the mean number of areas of damage that were identified per participant when CT scans were used. Show your workings. [2 marks]
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Marks for this question: AO2 – 2 marks**2 marks** for the correct answer.

2

OR**1 mark** for correct workings but incorrect/no answer.

80/40

NOTE: Accept equivalent workings such as 40/20 or 20/10.

NOTE: If no answer has been given on the answer line, credit may be given for correct answers written in the workings box.

11.4	Name the experimental design being used in the described study of scanning techniques. [1 mark]
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Marks for this question: AO2 – 1 mark

Repeated measures.

Accept creditworthy alternatives such as within groups, or within-subjects design.

NOTE: If the candidate has written more than one answer, **only** mark the **first one**.

11.5	Discuss why the researchers may have found the results they did. Use your knowledge of CT scans and PET scans. [3 marks]
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Marks for this question: AO3 – 3 marks

Up to **3 marks** for a discussion of the potential reasons behind the results.

3 marks: a clear and detailed discussion that includes knowledge of CT **and** PET scans.

2 marks: a limited discussion.

1 mark: a very limited/muddled discussion.

Possible content

- Although CT scans are useful for showing damaged areas of the brain, they are limited because they only show structural information. CT scans do not give information about activity in the brain.
- PET scans actually show the brain in action. This can be useful for finding a blockage or an area of the brain that is not functioning as it should be.
- Therefore, the reason the researchers found more areas of damage with PET scans is because they provide more detailed information than CT scans do.

Credit other relevant content.

NOTE: If answers **only** give accurate and **relevant** knowledge of scans, BUT address **both** CT **and** PET scans, this can be seen as making an implied comparison. This can be credited as a very limited discussion.

12.1	The following diagram of a sensory neuron is not complete. Complete the diagram by drawing the missing part(s) within the circle. Identify the parts labelled A and B and write your answers in the spaces provided. [4 marks]
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Marks for this question: AO2 – 4 marks

Up to **2 marks** for completing the diagram by adding branches of dendrites with synaptic knobs.

2 marks: a clear and accurate diagram.

1 mark: a limited or muddled diagram.

PLUS

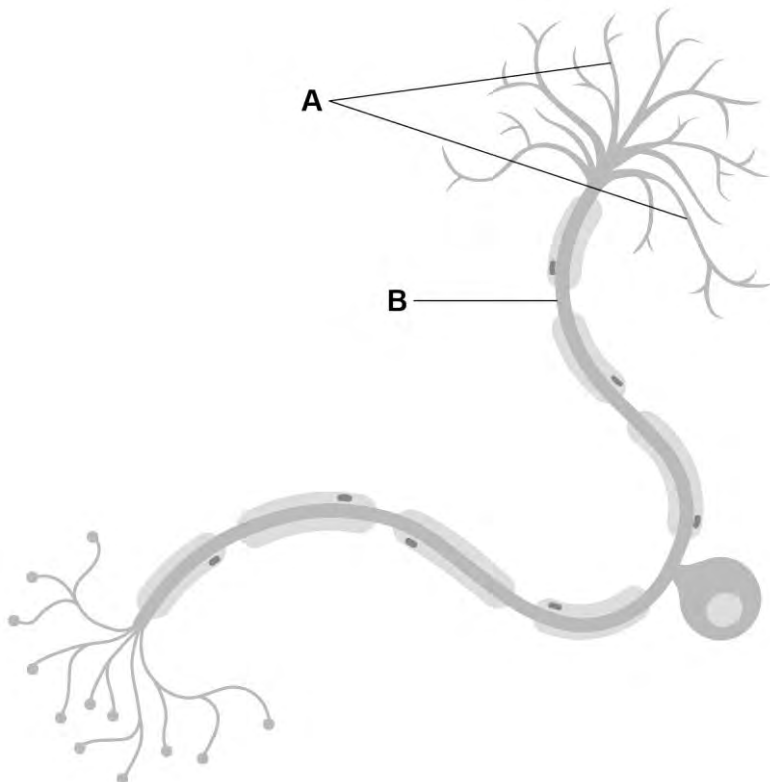
1 mark for accurately identifying **A** as a dendrite

PLUS

1 mark for accurately identifying **B** as an axon

Also accept 'node of Ranvier', 'myelin-sheath gaps' or 'gap in the myelin sheath'

Do not accept **just** myelin-sheath



12.2	Briefly explain the function of a sensory neuron.	[1 mark]
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Marks for this question: AO1 – 1 mark

1 mark for a **brief** explanation of the function of a sensory neuron.

Possible content

- Sensory neurons receive information from the sensory receptors/sense organs/peripheral nervous system (PNS) and pass it on to the central nervous system (CNS)/brain and spinal cord/relay neuron.
- Sensory neurons change external/physical/chemical stimuli from the environment into internal stimuli.

Credit other relevant content.

NOTE: Do not credit 'receptor' on its own because there are other types of receptors not involved with the function of a sensory neuron.

13	The brain contains four lobes. Briefly describe each of these structures and their basic function. [6 marks]
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Marks for this question: AO1 – 6 marks

Level	Marks	Description
3 Detailed	5–6	Relevant knowledge and understanding of the structures and basic functions of all four lobes is accurate with detail. 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	Relevant knowledge and understanding of the structures and/or basic functions of lobes is present but there are occasional inaccuracies/omissions. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, coherence, focus and logical structure.
1 Basic	1–2	Knowledge and understanding of the structures and/or basic functions of lobe(s) is present but limited. Relevant terminology may not be used at all or may be muddled.
0	0	No relevant content.

Possible content

- The frontal lobe is at the front of the brain and controls thinking, memory, planning, problem solving, cognitive and social behaviours, and movement such as facial expressions. It also includes the motor area and Broca's language area.
- The parietal lobe is separated from the frontal lobe by the central sulcus. It includes the somatosensory area. This lobe is responsible for mixing information from other areas to form the basis of complex behaviours, including all behaviour involving the senses. It is also responsible for language and helps us to form words and thoughts.
- The temporal lobe is below the frontal and parietal lobes and helps us to understand and process what we hear. It is responsible for the comprehension and production of spoken language. It is also involved in how we learn and organise information, and responsible for emotions and emotional memory. It includes the auditory area and Wernicke's language area.
- The occipital lobe is at the back of the brain and is where all visual information is processed such as colour, shape and distance.

Credit other relevant content.

14	Hebb's theory of learning and neuronal growth suggests that repeating the same task allows us to develop stronger cell assemblies. You have been asked to conduct an experiment to investigate Hebb's theory. You need to do this without the use of brain-scanning techniques. In your answer, outline the following information: • a description of the task you will use • an appropriate hypothesis for your experiment • the sampling method you will use and a description of how you will carry this out. [6 marks]
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Marks for this question: AO2 – 6 marks

Up to **2 marks** for a description of a suitable **experiment**.

2 marks: a clear and accurate description with at least two conditions.

1 mark: a limited or muddled description.

NOTE: To be considered clear and accurate, the description must be of a task that has a high likelihood of causing learning and neuronal growth. Experiments that involve repeating a simple task over a short period of time and/or where the task/information is unlikely to be new/novel to the participants, do not have a high enough likelihood of doing so.

NOTE: Experiments **do not** need to be based around the repeating of a task in order to be creditworthy.

PLUS

Up to **2 marks** for an appropriate hypothesis that fits the described experiment.

2 marks: there must be at least two conditions of the IV and a clear DV which makes the statement operational.

1 mark: the hypothesis lacks clarity.

NOTE: Do not accept aims, questions, correlational statements or statements of the results (eg was/did/used).

PLUS

1 mark for a sampling method.

PLUS

1 mark for an appropriate description of carrying out the **identified** sampling method.

Examples

- Putting up a poster asking for volunteers.
- Asking people you know to help you out by taking part.
- Putting names of students into a random generator.

NOTE: As it is only a 1-mark answer, the description is not expected to be detailed.

NOTE: The sampling method can be creditworthy even if the experiment and/or hypothesis are not.

Section D**Psychological problems**

15.1	Which two of the following are not symptoms of unipolar depression according to the International Classification of Diseases (ICD)? Shade two boxes. [2 marks]
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Marks for this question: AO1 – 2 marks**C** (Hair loss)

and

D (Increase in self-confidence)

15.2	Complete the following sentence. When the ICD is being used to diagnose unipolar depression, both the _____ of symptoms and the severity of symptoms need to be considered. [1 mark]
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Marks for this question: AO1 – 1 mark**Possible content**

- **Number**

Accept alternative words with the same meaning, such as amount, quantity, total.

NOTE: The ICD 10 refers to the **number** and severity of the symptoms when determining if a depressive episode is considered mild, moderate or severe.

- **Duration, consistency**

Accept alternative words with the same meanings, such as length, persistence, frequency.

NOTE: The ICD 11 refers to two specific symptoms (depressed mood and diminished interest in activities) as occurring for most of the day and nearly every day for at least two weeks when determining if a depressive episode is being experienced. It also refers to the symptoms being continuously present for at least 2 years in order for a diagnosis of a persistent Depressive Episode to be made.

16	Give three examples of the social effects of significant mental health problems. [3 marks]
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Marks for this question: AO2 – 3 marks

1 mark for each correct example (MAX 3):

- the need for more social care/social housing/health care/benefit payments
- increased crime rates
- implications for the economy
- increased cost of health care/social care/policing/the justice system.

Credit other relevant content.

NOTE: Answers that are primarily an effect on individuals rather than society are not creditworthy.

NOTE: If the candidate has written more than three effects, award marks to the **three** that are clearest and most effective.

17.1	Briefly outline Kaij's twin study of alcohol abuse. [3 marks]
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Marks for this question: AO1 – 3 marks

Up to **3 marks** for an outline of Kaij's twin study of alcohol abuse.

3 marks: a clear and detailed outline.

2 marks: a limited outline.

1 mark: a very limited/muddled outline.

Possible content

- Kaij investigated the effect of hereditary factors on addiction to alcohol.
- Kaij used data from a temperance board to find his participants. They were Swedish, male and twins.
- He interviewed the twins and family members to find out about the twins' alcohol use. Kaij used these results to categorise the twins based on their level of alcohol use.
- Kaij found that the concordance rate for twins in the same category for their levels of alcohol use by the identical twins was 54% but that it was only 28% for fraternal twins.
- He also found that 61% of MZ twins were both registered with the temperance board but only 39% of the DZ twins were.
- Kaij concluded that these findings suggest that there are genetic or hereditary factors involved in alcohol addiction.

Credit other relevant content.

17.2	Kaij used questionnaires in his twin study of alcohol abuse. Explain one strength and one weakness of using questionnaires in psychological research. [4 marks]
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Marks for this question: AO3 – 4 marks

Up to **2 marks** for an explanation of **one** strength of using questionnaires.

2 marks: a clear and accurate explanation.

1 mark: a limited or muddled explanation.

Possible content

- Questionnaires allow a lot of information to be collected relatively quickly and easily and few materials are needed.
- When questionnaires use closed questions, the answers can be analysed and compared relatively easily.
- Participants know they are answering a questionnaire, and this helps to ensure the study is ethical.
- Questionnaires can be used with a very large number of participants. Having a large sample size increases the ability to generalise the findings.

PLUS

Up to **2 marks** for an explanation of **one** weakness of using questionnaires.

2 marks: a clear and accurate explanation.

1 mark: a limited or muddled explanation.

Possible content

- When questionnaires **only** use closed questions, participants have a limited range of answers. They may not be able to give the answer they really want to give.
- One weakness of using questionnaires is that participants may not always answer honestly or may misunderstand the questions. This can lead to inaccurate or unreliable data, which affects the validity of the study's results.
- There is no way of checking if participants are lying. This can decrease the validity of the findings.
- Some questions may be misleading or leading. This decreases the validity of the findings.
- Participants may be influenced by the social desirability effect/bias and give the answer they think they should, or that makes them 'look good'.

Accept other creditworthy answers such as relevant comparisons with other research methods.

NOTE: If the candidate has written about more than one strength/weakness, award marks to the **one** that is clearest and most effective.

18	Briefly evaluate the use of aversion therapy as an intervention for addiction. [3 marks]
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Marks for this question: AO3 – 3 marks

Up to **3 marks** for an evaluation of the use of aversion therapy as an intervention for addiction.

3 marks: a clear and detailed evaluation.

2 marks: a limited evaluation.

1 mark: a very limited/muddled evaluation.

Possible content

- Studies have shown that aversion therapy has short-term success in treating addictions.
- The benefits of aversion therapy may only be effective in the short-term, so it may not be a long-term solution and other support may be needed.
- As it is an unpleasant treatment this means that there is often a high drop-out rate, so the treatment is often not effective.
- The unpleasant nature of the treatment raises ethical concerns, so it is important that the process is fully explained to the client and informed consent is gained.
- This intervention is reductionist because it only focuses on the behaviour. It does not consider or address the underlying causes of addiction.

Credit other relevant content.

19	Describe the role of neurotransmitters in synaptic transmission. Discuss whether or not neurotransmitters can be considered to be involved in causing depression. [9 marks]
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Marks for this question: AO1 – 4 marks and AO3 – 5 marks

Level	Marks	Description
3 Detailed	7–9	AO1: Relevant knowledge and understanding of the synaptic transmission of neurotransmitters is accurate with detail. AO3: Analysis and evaluation of whether or not neurotransmitters can be considered to be involved in causing depression 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	4–6	AO1: Relevant knowledge and understanding of the synaptic transmission of neurotransmitters is present but there are occasional inaccuracies/omissions. AO3: There may be some effective analysis and evaluation of whether or not neurotransmitters can be considered to be involved in causing depression. 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	1–3	AO1: Knowledge and understanding of the synaptic transmission of neurotransmitters is present but limited. AO3: Analysis and evaluation of whether or not neurotransmitters can be considered to be involved in causing depression 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**AO1**

- Synaptic transmission is how neurons communicate.
- It is when signals are sent from one neuron to another by neurotransmitters crossing the synaptic gap so they can bind with receptors on the next neuron.
- The neurotransmitter is released from swellings at the end of each dendrite, called synaptic knobs. These contain vesicles/pockets of chemical, and when an electrical impulse reaches them, the vesicles open and spill their chemicals into the synapse.
- The chemicals are then picked up at receptor sites on the next neuron, which are sensitive to that particular chemical.

AO3

- Research using brain scans has found that levels of a serotonin receptor were lower in depressed people than in non-depressed people.
- Autopsies of people who have experienced many depressive episodes have found that they have fewer neurons that release norepinephrine.
- Some research has found that lower levels of serotonin may cause a decrease in norepinephrine levels.
- It is very difficult to measure the levels of chemicals in the brain.
- It is also difficult to know if the level of chemicals being low is a cause or an effect of depression.
- The brain is very complex and it is difficult to be completely certain what each chemical does and how a lower or higher level actually affects someone.
- SSRIs are used to treat depression and these affect the synaptic transmission of serotonin. People with depression do find this treatment can help and this may also offer support for the idea that neurotransmitters cause depression.
- There are also psychological explanations for depression and there is evidence that supports their existence. Therefore, it is not very likely that it is only neurotransmitters that cause depression.
- Accept other creditworthy answers such as discussing alternative causes for depression.