OXFORD

INTERNATIONAL
AQA EXAMINATIONS

INTERNATIONAL A-LEVEL

PSYCHOLOGY

PS03

Unit 3 Advanced Topics and Research Methods 2

Mark scheme

June 2023

Version: 1.0 Final

236XPS03/MS

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 oxfordaqaexams.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.

Section A: Psychology of Sleep **Total for this section: 30 marks**

Question	Marking guidance	Total marks
01	**Briefly outline one characteristic of narcolepsy.** Award marks as follows: **2 marks** for a clear and accurate outline of one characteristic of narcolepsy. **1 mark** for a weak, muddled or very limited outline. **Possible content** • Sudden and unexpected loss of muscle tone while awake (cataplexy). • Extreme daytime sleepiness with reoccurring short periods of sleep. • Dreamlike experiences occurring while being awake (hypnagogic hallucinations). • Inability to move, often affecting the person when falling asleep or just before waking up (sleep paralysis, atonia). Credit other relevant material. **NOTE**: No credit for simply naming a characteristic.	**2** **AO1 = 2**

<table>
<tr><th>Question</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>02</td><td>
Briefly evaluate research into narcolepsy.

Possible evaluation
• Some studies into causes of narcolepsy were conducted on animals (eg dogs) questioning whether we can generalise those to humans.
• Research evidence in support of reliability and/or validity, eg Lin et al. (1999), Thannickal, Moore and Niehuis (2000).
• Research evidence is correlational and may not establish causation; problem of internal validity.
• Narcolepsy develops later in life (teenage years), questioning its origin.
• Possible links to research being reductionist or biased towards nature side of the debate.
• Nomothetic view suggesting the research is applicable to most people affected, which is helpful as can lead to treating lots of people at once.
• (Biological/hard) determinism as most research suggest biological causes implying that patients have limited control over the development of the disorder.
• Credit evaluation of methodology if explicitly linked to narcolepsy.

Credit other relevant evaluation.

<table>
<tr><th>Level</th><th>Description</th><th>Marks</th></tr>
<tr><td>2</td><td>Evaluation is accurate with some detail. The answer is clear with appropriate use of specialist terminology.</td><td>3–4</td></tr>
<tr><td>1</td><td>Evaluation is limited, vague or muddled. Specialist terminology is either absent or inappropriately used.</td><td>1–2</td></tr>
<tr><td>0</td><td>No creditable content.</td><td>0</td></tr>
</table>
</td><td>4

AO3 = 4</td></tr>
</table>

<table>
<tr><th>Question</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>03</td><td>
Two students are talking about animal behaviours.

“Animal sleeping habits are fascinating,” says Olga. “Bears sleep through the entire winter while other animals, like hamsters, sleep all day but are awake and active at night.”

“And I’ve always wondered why squirrels or cats may sleep up to 20 hours a day!” replies Anya.

Using your knowledge of at least one evolutionary explanation for the functions of sleep, explain the conversation between Olga and Anya.

Possible application
• Adaptation to the environment: animals have adapted to be awake and active when it is safe for them or when they have most food availability, eg some animals, like hamsters, became nocturnal.
• Predator-prey status: animals would stay motionless (asleep) for long periods so they do not become prey, they then feed when their natural predators are less active, eg squirrels may hide from birds of prey.
• Hibernation theory (conservation of energy): animals slow down their metabolic rate by sleeping for long periods when obtaining food resources is difficult, eg bears hibernating for winter.

Credit other relevant application.

Note: not all animal examples from the stem have to be included for full marks.

<table>
<tr><th>Level</th><th>Description</th><th>Marks</th></tr>
<tr><td>2</td><td>Application of at least one evolutionary explanation for the function of sleep is accurate with some detail. The answer is clear with appropriate use of specialist terminology.</td><td>3–4</td></tr>
<tr><td>1</td><td>Application of at least one evolutionary explanation for the function of sleep is limited, vague or muddled. Specialist terminology is either absent or inappropriately used.</td><td>1–2</td></tr>
<tr><td>0</td><td>No creditable content.</td><td>0</td></tr>
</table>
</td><td>4

AO2 = 4</td></tr>
</table>

<table>
<tr><th>Question</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>04</td><td>
Discuss the effects of endogenous pacemakers and exogenous zeitgebers on the sleep/wake cycle.

Possible content
• Endogenous pacemakers (EP) are internal mechanisms controlling the bodily rhythms.
• Description of a chosen EP that governs sleep/wake cycle, eg suprachiasmatic nucleus, pineal gland and the release of melatonin, although references to clock proteins PER and TIM are also possible.
• Exogenous zeitgebers (EZ) are external factors affecting the running of biological rhythms.
• Description of a chosen EZ in relation to the sleep/wake cycle, eg light, temperature, noise disruptions and social cues.
• The entrainment process where EPs are reset daily by EZs.
• Relevant research that demonstrates the role of EPs and EZs in sleep/wake cycle.

Possible discussion
• Research support, eg Darlington et al. (1998), Siffre (1975), Stephan & Zucker (1972), Morgan (1995), Vetter et al. (2011), Campbell & Murphy (1998), Mimosa plant references.
• Methodological issues: some studies were conducted on animals (generalisability), some are single case studies or small samples; the issue of separating extraneous variables which may affect validity.
• Biological determinism for EPs or environmental determinism for EZs – both limit the idea of free will making the concept pessimistic/negative.
• References to interactionist approach or nature-nurture.
• Good (internal) validity as both EPs and EZs are observable and measurable components that can be falsified, so they are scientific concepts.
• Real life applications: jet lag and shift work; high ecological validity.

Credit other relevant material.

<table>
<tr><th>Level</th><th>Description</th><th>Marks</th></tr>
<tr><td>4</td><td>Knowledge of effects of both endogenous pacemakers and exogenous zeitgebers on sleep/wake cycle is mostly accurate and generally well detailed. Discussion is mostly effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear and focused. Specialist terminology is mostly used effectively.</td><td>16–20</td></tr>
<tr><td>3</td><td>Knowledge of effects of both endogenous pacemakers and exogenous zeitgebers on sleep/wake cycle is evident but there are occasional inaccuracies/omissions. There is some effective discussion. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is mostly used appropriately.</td><td>11–15</td></tr>
</table>
</td><td>20

AO1 = 8
AO3 = 12</td></tr>
</table>

		2	Limited knowledge of the effects of endogenous pacemakers and/or exogenous zeitgebers on sleep/wake cycle is present. Any discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is occasionally used appropriately.	**6–10**
		1	Knowledge of the effects of endogenous pacemakers and/or exogenous zeitgebers is very limited. Discussion is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.	**1–5**
		0	No creditable content.	**0**

Section B: Schizophrenia **Total for this section: 30 marks**

Question	Marking guidance	Total marks
05	**What is meant by co-morbidity?** **Award marks as follows:** **2 marks** for a clear and accurate definition of co-morbidity **1 mark** for a weak, muddled or very limited definition. **Possible content** Co-morbidity is when secondary disorders/symptoms co-exist with the primary disorder making diagnosis more difficult.	**2** **AO1 = 2**

Question	Marking guidance	Total marks
06	**Aisha and her twin brother Zachary are aged 18. They both show symptoms of schizophrenia, such as hallucinations and delusions. Zachary also shows signs of avolition and speech poverty. Aisha decides to talk to her friends about her symptoms but Zachary refuses to talk to his friends.** **Referring to gender bias, explain why Zachary is more likely to be diagnosed with schizophrenia than Aisha.** **Award marks as follows:** **3 marks** for a clear and detailed application with appropriate use of specialist terminology. **2 marks** for an application that may lack detail and be unclear in places. **1 mark** for a limited/vague/muddled application. **Possible application** • The usual age of onset is earlier (3-5 years) in men than in women, which means Aisha may be considered too young to develop schizophrenia and remain undiagnosed; possible links to reliability of diagnosis. • Women are more likely to seek social support/help, eg Aisha deciding to talk to her friends who may comfort her, reducing the likelihood of diagnosis; whereas men are more likely to be referred to involuntary treatment, hence more likely to be diagnosed quicker. • Men tend to show more severe negative symptoms than women; having more symptoms on display, Zachary appears to match the possible diagnosis profile better than Aisha due to the presence of negative symptoms (avolition and speech positive) alongside positive symptoms. Credit other relevant application.	**3** **AO2 = 3**

Question	Marking guidance	Total marks
07	**Which one of the following statements best describes the symptom of avolition?** **Answer key: B –** When someone does not want to join in everyday activities.	**1** **AO1 = 1**

<table>
<tr><th>Question</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>08</td><td>
Mateo has delusions. He believes that the woman who walks past his house every day is going to hurt him. He also hears voices that tell him he is a bad person. Mateo sometimes finds it difficult to go to work. He stays inside the house most of the time. Rosa, his therapist, is going to use cognitive therapy to treat Mateo.

Using your knowledge of cognitive therapy, explain how Rosa might treat Mateo.

Possible application
• Rosa could use CBT or REBT to reduce Mateo's symptoms of schizophrenia by applying the principles of the ABC model, eg analysing the event of the woman walking past the house (A), challenging the belief that the woman will hurt Mateo (B), eliminating paranoid thoughts (C).
• Specific techniques and how they could work for Mateo, eg thought catching diary (Mateo writing down his daily reflections); disputation (Mateo understanding the woman passing his house goes to the shop); distracting techniques (Mateo listening to music); emotion intensity scale (Mateo recording his daily emotions); behaviour activation (Rosa instructing Mateo to go to work twice a week); homework tasks (Mateo asked to collect some information).

Credit other relevant application.

<table>
<tr><th>Level</th><th>Description</th><th>Marks</th></tr>
<tr><td>3</td><td>The application of how cognitive therapy could be used is detailed and appropriate. The answer is clear with appropriate use of specialist terminology.</td><td>5–6</td></tr>
<tr><td>2</td><td>The application of how cognitive therapy could be used is relevant but detail is lacking. Specialist terminology is used mostly appropriately. The answer lacks clarity in places.</td><td>3–4</td></tr>
<tr><td>1</td><td>The application of how cognitive therapy could be applied is very limited. Specialist terminology is either absent or inappropriately used. The answer is vague/muddled.</td><td>1–2</td></tr>
<tr><td>0</td><td>No creditable content.</td><td>0</td></tr>
</table>
</td><td>6

AO2 = 6</td></tr>
</table>

Question	Marking guidance	Total marks
09	**Explain how anti-psychotic drugs treat schizophrenia.** **Award marks as follows:** **3 marks** for a clear and detailed explanation with appropriate use of specialist terminology. **2 marks** for an explanation that may lack detail and be unclear in places. **1 mark** for a limited/vague/muddled explanation. **Possible content** • Typical anti-psychotic drugs relieve the positive symptoms of schizophrenia, such as hallucinations (by blocking dopamine receptors decreasing the overall activity of dopamine). • Atypical anti-psychotic drugs can reduce both positive symptoms and negative symptoms (by affecting both serotonin and dopamine levels). Credit other relevant content. **NOTE**: Credit description of how a named drug could work, eg Clozapine, Chlorpromazine.	**3** **AO1 = 3**

Question	Marking guidance	Total marks
10	**Explain one limitation of using anti-psychotic drugs to treat schizophrenia.** **Award marks as follows:** **3 marks** for a clear and detailed limitation with appropriate use of specialist terminology. **2 marks** for a limitation that may lack detail and be unclear in places. **1 mark** for a limited/vague/muddled answer. **Possible limitations** • High drop-out rate because drugs can cause side effects, eg nausea, weight gain, etc. • Specific issues caused by named drugs, eg agranulocytosis when using Clozapine. • Typical anti-psychotic drugs have little or no effect on negative symptoms. • Drugs do not cure schizophrenia but only reduce the symptoms – issue of validity. • Drugs must be taken regularly even when symptoms are not being experienced at the time. • Problem of drug dependency and drug adherence, especially in patients with delusions of persecution. • Ethical issues of using drugs to control people. • Problems of being reductionist/determinism/nature-focused. Credit other relevant limitations. **NOTE:** credit comparison of drug treatment to alternative forms of therapy.	**3** **AO3 = 3**

Question	Marking guidance	Total marks
11	**Describe and evaluate cognitive explanations for schizophrenia.** **Possible content** • Schizophrenia is a result of dysfunctional information processing where people with schizophrenia do not process information correctly. • People with schizophrenia have different perceptions and ways of interpreting mental experiences, eg hearing voices is perceived as someone trying to talk to them instead of a more realistic perception of hearing own voice as part of the inner dialogue. • Perception deficits when interpreting facial expressions leading to misperception of intent. • Memory deficits, eg poor perceptual processing leads to poor encoding of material into working memory. • Reasoning deficits, eg the jumping to conclusion hypothesis, extreme attribution bias, lack of theory of mind. • Language deficits in language output and/or language comprehension. **Possible evaluation** • Knowledge of dysfunctional thought processing in schizophrenia can form the basis of effective treatment, eg CBT. • Cognitive theories point to the importance of attributional and reasoning biases, which may contribute to the maintenance of delusions in schizophrenia. • Cognitive explanations can account for both positive and negative symptoms making this a holistic explanation. • Cognitive explanations are compatible with underlying biological cause; another link to holism. • Use of evidence to support or refute the cognitive explanation, eg Sterling (2006), O'Carroll (2000), Bowie and Harvey (2006), Betall et al (1991), Shin et al. (2008). • Much of the evidence is correlational, so we cannot be sure if cognitive deficits cause schizophrenia or if having schizophrenia causes cognitive deficits. • Some research has found that dysfunctional thinking occurs before the onset of schizophrenia suggesting that dysfunctional thinking cannot be an effect of having schizophrenia (O'Carroll, 2000). • Cognitive theories cannot explain what led to the cognitive dysfunction and thus cannot explain the cause of schizophrenia; problem of internal validity. • Possible commentary about the theories being reductionist as they reduce a complex disorder to a set of simple deficits. Credit other relevant material. **NOTE:** direct comparison to biological theories can be credited as far as it clearly links to the strengths/weaknesses of cognitive explanations.	**12** **AO1 = 6** **AO3 = 6**

Level	Description	Marks
4	Knowledge of cognitive explanations for schizophrenia is mostly accurate and generally well detailed. Evaluation is mostly effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear and focused. Specialist terminology is mostly used effectively.	**10–12**
3	Knowledge of cognitive explanations for schizophrenia is evident but there are occasional inaccuracies/omissions. There is some effective evaluation. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is mostly used appropriately.	**7–9**
2	Limited knowledge of cognitive explanations for schizophrenia is present. Any evaluation is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is occasionally used appropriately.	**4–6**
1	Knowledge of cognitive explanations for schizophrenia is very limited. Evaluation is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.	**1–3**
0	No creditable content.	**0**

Section C: Research Methods 2 **Total for this section: 30 marks**

As part of a school project, college students decided to test if there was a difference in how quickly people can read text printed on yellow paper or green paper. They used a repeated measures design with a group of 20 psychology students. All 20 were asked to read two similar texts, and the conditions were counterbalanced as follows:

- **10 participants read Text 1 printed on yellow paper; they rested for 30 minutes, then read Text 2 printed on green paper.**
- **The other 10 participants read Text 1 on green paper; they rested for 30 minutes, then read Text 2 printed on yellow paper.**

The students collected their data using a stopwatch. They then compared the speed of reading of each participant for both the yellow paper and the green paper texts.

Question	Marking guidance	Total marks
12	**The students used a repeated measures design. Explain one advantage of using a repeated measures design in this study.** **Award marks as follows:** **2 marks** for a clear explanation of an advantage for using a repeated measures design in this study. **1 mark** for a muddled or vague explanation. **Possible advantages** • Using repeated measures avoids individual differences as the reading abilities stay constant in each condition. As the students were measured on their reading speed (cognitive skills), all quick or slow readers would be measured against their own performance. • Fewer students are required in repeated measures design than in independent measures. The researchers gathered 20 psychology students. Having two independent groups of 10 to compare could lead to unreliable results. Having 20 students taking part in each of the conditions is a better option. Credit other relevant advantages.	**2** **AO2 = 2**

Question	Marking guidance	Total marks
13	**The students collected the data using an interval level of measurement.** **Explain what is meant by an interval level of measurement in this study.** **Award marks as follows:** **2 marks** for a clear explanation of what an interval level of measurement is in relation to the study. **1 mark** for a muddled or vague explanation. **Possible content** • Interval level of measurement means the students collected continuous numerical data which have equal spaces between the values, eg time measured in seconds. • Interval level of measurement means the data is objectively measured, often with a precise measurement tool, eg a stopwatch in the scenario. Credit other relevant material.	**2** **AO2 = 2**

Question	Marking guidance	Total marks
14 14.1	**The students used a related t-test to check if the results were significant.** **Apart from the interval level of measurement, outline two other reasons why the related t-test was appropriate for this study.** Award **1 mark for each** correctly identified reason. **Possible content** • The related t-test is the test of difference (the aim of this study was to see the difference between two coloured backgrounds). • The related t-test is used with a repeated measures design (as the same student participants took part in both conditions). **NOTE:** credit references to a related-t test being a parametric test.	**2** **AO2 = 2**

<table>
<tr><th>Question</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>14.2</td><td>
The students calculated the t score for the related t-test, t = 2.899

Table 1 Critical values for the related t-test
<table>
<tr><td></td><td colspan="4">Levels of significance for a two-tailed test</td></tr>
<tr><td></td><td>0.1</td><td>0.05</td><td>0.02</td><td>0.01</td></tr>
<tr><td>df</td><td>/</td><td>/</td><td>/</td><td>/</td></tr>
<tr><td>18</td><td>1.734</td><td>2.101</td><td>2.552</td><td>2.878</td></tr>
<tr><td>19</td><td>1.729</td><td>2.093</td><td>2.539</td><td>2.861</td></tr>
<tr><td>20</td><td>1.725</td><td>2.086</td><td>2.528</td><td>2.845</td></tr>
<tr><td>21</td><td>1.721</td><td>2.080</td><td>2.518</td><td>2.831</td></tr>
</table>
The calculated value must be equal to or greater than the critical value in the table for the significance to be shown.

Degrees of freedom (df) for the related t-test can be calculated by using the formula df = N - 1

Using the information in Table 1, explain whether the results of the study are significant or not. Justify your answer.

Award marks as follows:
1 mark for stating that the calculated value is significant OR for a statement that the null hypothesis can be rejected/alternative hypothesis can be accepted.

A further 2 marks as follows:
2 marks for a clear explanation of why the result is significant.
1 mark for a muddled or vague explanation

Possible content:
• Identifying an appropriate critical value from the table where df = 19, eg 2.093 at p=0.05 significance reading.
• Stating that the calculated t-value (2.899) is greater than the chosen critical value, eg 2.093.
</td><td>3

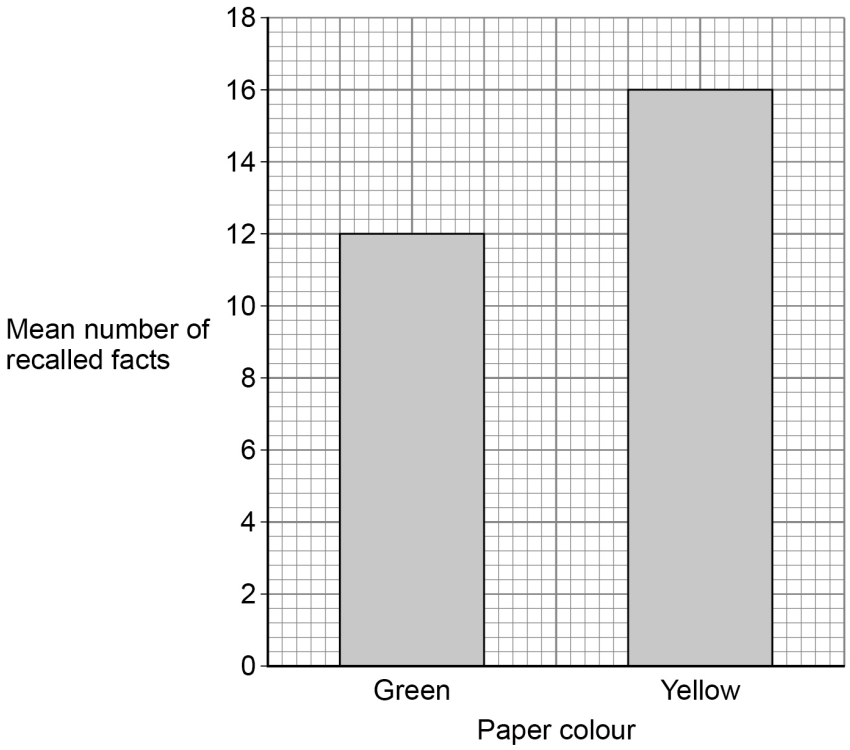
AO2 = 3</td></tr>
</table>

Question	Marking guidance	Total marks
15 15.1	**The students were worried that they might have made a Type I error in their study.** **What is a Type I error?** **Award marks as follows:** **2 marks** for a clear explanation of a Type I error. **1 mark** for a muddled or vague explanation. **Possible content** • It is when the researchers reject the null hypothesis or when the alternative hypothesis is wrongly accepted (it is a false positive result). • It is a type of error that happens when the significance level chosen is too stringent/harsh or the margin of error is very small (eg p<0.05). Credit other material.	**2** **AO1 = 2**

Question	Marking guidance	Total marks
15.2	**Using the critical values from Table 1, explain why the students were unlikely to have made a Type I error.** **Award marks as follows:** **2 marks** for a clear answer explaining how Type I error was unlikely to happen **1 mark** for a muddled or vague explanation. **Possible content** • The calculated value of 2.899 exceeds every critical value at df = 19 in the table up to p=0.01 (2.861) which is the most stringent level of significance with the smallest margin of error. Accept alternative wording.	**2** **AO2 = 2**

Question	Marking guidance	Total marks
16	**After measuring the speed of reading, the students designed a 20-item memory test to investigate if the colour of the paper might also affect the ability to remember printed information.** **Below are the mean values of correctly recalled memory items from each of the texts.** **Table 2 Mean values for memory recall for green paper and yellow paper** **Using the graph paper below, draw an appropriate display of the data in Table 2. Label your display fully, including the title.** **1 mark for each of the following** • Appropriate title eg Average memory recall for green and yellow paper OR Mean number of correctly recalled items dependent on the colour of the paper. Accept similar wording. • Correctly labelled x-axis: yellow/green background (in any order; accept similar wording; colours have to be identified). • Correctly labelled y-axis: mean number of items/average memory recall. • A distinct bar chart (separated bars). • Correct values (height) on the bars. **NOTE:** Accept x- and y-axes used interchangeably.	**5** **AO2 = 5**

Green paper (out of 20 items)	Yellow paper (out of 20 items)
12	16



Question	Marking guidance	Total marks
17	**The students decided to ask the participants their opinions after they had taken part in the memory test. They did this by using a questionnaire.** **Outline one advantage of using a questionnaire rather than an interview.** **Award marks as follows:** **2 marks** for a clear advantage of using questionnaires rather than interviews. **1 mark** for a muddled or vague advantage. **Possible advantages** • Questionnaires enable collection of greater quantities of responses at the same time whereas interviews would have to be conducted individually so are likely to take longer. • Interviews poses greater risk of investigator effect as the person interviewing can influence the responses; but questionnaires completed independently eliminates this. Credit other relevant advantages.	**2** **AO2 = 2**

Question	Marking guidance	Total marks
18	**Write a closed question that could be used to collect participants' opinions about the difficulty of the memory test.** Award **1 mark** for correctly worded closed question with clear options. **Possible content** • Did you find the memory test difficult? (circle) Yes/No. • On a scale of 1–10, how difficult was the memory test? 1 – very easy, 10 – very difficult. • How difficult did you find the memory test? (circle one answer) easy, neither too easy nor difficult, difficult. Credit other relevant material.	**1** **AO2 = 1**

<table>
<tr><th>Question</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>19</td><td>
Many psychologists use case studies as a research method.

Outline and evaluate the use of case studies in helping psychologists to understand human behaviour.

Possible content
Case studies provide a detailed investigation of a single individual/distinct group/event, allowing an in-depth approach to studying phenomena (idiographic approach).
• Involve analysing real-life data which was not enforced by variable manipulation.
• Often happen over a long period of time (longitudinal).
• Involves a variety of methods, eg interviews, observations, brain scans, experiments, reports from others.

NOTE: Credit use of example(s) of case studies to illustrate their features.

Possible evaluation
• High ecological validity as case studies rely on actual events that have happened.
• (Internal) validity issues as extraneous variables may be present.
• Often involve a single person in specific circumstances, so have low (population) validity/limited generalisability.
• Allows the collection of breadth of data eg qualitative and quantitative data.
• Allow researchers to study things that would otherwise be unethical to study via experimental methods.
• There may be ethical issues of privacy or human rights.
• The researcher may get emotionally involved, leading to biased data.
• Can be beneficial for the individuals themselves as they may have access to specialist support that otherwise would not be available to them if they were not a part of the research.

Credit other relevant material.

Note: Credit evaluation of methods used as part of the case study investigation when these are applied/linked back to the case study evaluation.

<table>
<tr><th>Level</th><th>Description</th><th>Marks</th></tr>
<tr><td>3</td><td>Knowledge of the case studies as a method of investigation is detailed and appropriate. Evaluation is mostly effective. The answer is clear with appropriate use of specialist terminology.</td><td>7–9</td></tr>
<tr><td>2</td><td>Knowledge of the case studies as a method of investigation is relevant but detail is lacking. Evaluation is evident but lacks effectiveness in places. The answer lacks clarity in places. Specialist terminology is mostly used appropriately.</td><td>4–6</td></tr>
</table>
</td><td>9

AO1 = 4
AO3 = 5</td></tr>
</table>

		1	Knowledge of the case studies as a method of investigation is very limited. Evaluation is limited, poorly focused or absent. The answer is vague/muddled. Specialist terminology is either missing or inappropriately used.	**1–3**	
		0	No creditable content.	**0**	