GCE

Psychology

H567/01: Research methods

A Level

Mark Scheme for June 2024

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

MARKING INSTRUCTIONS

PREPARATION FOR MARKING

RM ASSESSOR

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: *RM Assessor Assessor Online Training*; *OCR Essential Guide to Marking*.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3. Log-in to RM Assessor and mark the **required number** of practice responses ("scripts") and the **number of required** standardisation responses.

YOU MUST MARK 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the RM Assessor 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the RM Assessor messaging system, or by email.

5. **Crossed Out Responses**

Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

Rubric Error Responses – Optional Questions

Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM assessor, which will select the highest mark from those awarded. *(The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)*

Multiple Choice Question Responses

When a multiple choice question has only a single, correct response and a candidate provides two responses (even if one of these responses is correct), then no mark should be awarded (as it is not possible to determine which was the first response selected by the candidate).

When a question requires candidates to select more than one option/multiple options, then local marking arrangements need to ensure consistency of approach.

Contradictory Responses

When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only **one mark per response**)

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

Short Answer Questions (requiring a more developed response, worth **two or more marks**)

If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Longer Answer Questions (requiring a developed response)

Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there, then add a tick to confirm that the work has been seen.

7. Award No Response (NR) if:
   - there is nothing written in the answer space

   Award Zero '0' if:
   - anything is written in the answer space and is not worthy of credit (this includes text and symbols).

   Team Leaders must confirm the correct use of the NR button with their markers before live marking commences and should check this when reviewing scripts.

8. The RM Assessor **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**
   If you have any questions or comments for your team leader, use the phone, the RM Assessor messaging system, or e-mail.

9. *Assistant Examiners will send a brief report on the performance of candidates to their Team Leader (Supervisor) via email by the end of the marking period. The report should contain notes on particular strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.*

10. For answers marked by levels of response: Not applicable in F501
    a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
    b. **To determine the mark within the level**, consider the following:

Descriptor	**Award mark**
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

11. Annotations

Annotation	Meaning
	Correct
	Incorrect
	Unclear
CONT	Context
L1	Level 1 (RF is basic)
L2	Level 2 (RF is limited)
L3	Level 3 (RF is reasonable)
L4	Level 4 (RF is good)
EVAL	Evaluation
REP	Repetition
^	Missing information
NAQ	Not answering question
BOD	Benefit of doubt given
IRRL	Irrelevant
SEEN	Seen (to show content on a page has been noted, but not credited)
	Highlighter tool

Section A: Multiple choice

Ques	Answer	Guidance
1	**A**	inter-rater
2	**D**	quasi experiment
3	**C**	$p < 0.025$
4	**C**	Median
5	**D**	81
6	**B**	semi-structured interviews
7	**B**	it is based on the data collected
8	**D**	58
9	**C**	three
10	**D**	memory of words
11	**D**	an observation study which records whether customers say 'thank you' or not to the checkout assistant in a shop
12	**A**	name of the university the research was conducted at
13	**A**	-0.94
14	**A**	debrief
15	**A**	peer review
16	**A**	range
17	**B**	semantic differential
18a	**B**	15
18b	**A**	5
18c	**D**	task

Section B: Research design and response

Write a one-tailed alternative hypothesis for this study. [3]				
Question		**Answer**	**Marks**	**Guidance**
19		For example … Children will have better concentration (measured by spot the difference puzzle out of 20) when wearing slippers compared to wearing shoes.	**Max 3**	Context = concentration, slippers, shoes, learning, primary school children etc. Tail can be in either direction (predicting ***better*** concentration when wearing slippers, or predicting ***worse*** concentration when wearing slippers) Zero marks for two-tailed, null or correlational hypotheses. Can be written in future or present tense. Use of the word 'significant' is not necessary for full marks. For full marks both the variables must be operationalised. IV – both levels/conditions must be given (slippers vs shoes) DV – need to specify how concentration will be measured, e.g. spot the difference puzzle <u>score</u>/spot the difference score <u>out of 20</u>. 'Level of concentration' is **not** operationalised.
		Correctly cited one-tailed alternative hypothesis with both variables operationalised.	**3**	
		Correctly cited one-tailed alternative hypothesis with reference to both variables, but only one operationalised.	**2**	
		Correctly cited one-tailed alternative hypothesis with reference to both variables, but neither operationalised.	**1**	
		The candidate has not provided any creditworthy information.	**0**	

Explain how you would conduct a study using the laboratory experimental method to investigate if wearing slippers affects a child's ability to concentrate.

Justify your decisions as part of your explanation. You must refer to:

- how you would use random sampling to obtain 30 participants for the study

- the experimental design you would use in this study

- how you would operationalise the dependent variable to obtain quantitative data

- the control of one extraneous variable

You should use your own experience of practical activities to inform your response. [15]

Question	Answer		Marks	Guidance
20			**Max = 15**	
Level of response	**Details of required features (RFs) included**	**Justification of decisions made**		**Reference to own practical work**
Good 12-15 marks	**All 4** required features (RFs) addressed in context. **Accurate** and **detailed** knowledge and understanding of each feature in context. **Good** evidence of **application** of required features in context.	**Appropriate justification** of all decisions and *some* is contextualised. Well-developed line of reasoning that is clear and logically structured.		**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature, e.g. specific mention of aim or procedural features. For top band (good) 12 marks if just one RF linked, 13 marks if two, 14 marks if three and 15 if all four are linked. If there is no explicit clear link between own practical work and *any* of the 4 required features caps the mark at 11 maximum. **Maximum 11 marks (reasonable) if clearly done as a field experiment**. **If no justification in context award 8 marks.** Overall mark **Look at RF first:** L4 Good – all 4 good (L4) in context L3 Reasonable – min 3 reasonable (L3) in context L2 Limited – min 2 limited (L2) in context or 3- 4 limited (L2) with no context L1 Basic – 1 basic (L1) (no context needed). **THEN look at justifications:** L4 Good – at least 2 reasonable (L3) AND at least 2 of the justifications are in context (does not have to be the reasonable ones) L3 Reasonable – at least 2 limited (L2) AND at least 1 of the justifications is in context. L2 Limited – at least 1 limited (L1) (no need for context) L1 Basic – no justification or basic justification
Reasonable 8-11 marks	At least **3 required features in context**. **Reasonably accurate** and **detailed** knowledge and understanding of each feature.	**Some** appropriate **justification** of decision related to required features (if no justification in context award 8 marks). There was a line of reasoning evident with some structure.		
Limited 4-7 marks	At least **two** of the required features addressed in context. **Limited application** of required features. **OR** three or all four required features referred to but in a limited way.	**Attempt** to justify decision(s) but weak. Evidence of some structure, but weak.		
	If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks.			
Basic 1-3 marks	At least **one** of the required features addressed. **Weak application** of required features. **OR** more than one of the required features referred to but in a very brief and/or basic way.	**None**, or if present very weak.		

RF		Details of RF
1	Use of random sampling to obtain 30 participants	• **Good** – Clearly explained how this has been carried out in their study in terms of procedural details (e.g. register + the use of random number generator + how contacted after the selection/hat). • **Reasonable** – Shown reasonable attempt to explain how this has been carried out in their study (e.g. register + the use of the random number generator/hat). • **Limited** – possibly defined OR unclear attempt to explain how this has been carried out in their study. • **Basic** – Confuses sampling methods (i.e. alludes to some features of random sampling however also includes features of other methods)
2	Experimental design	• **Good** – Identified the experimental design and clearly explained how this has been implemented/carried out in their study (IMD should include reference as to how they were allocated to conditions; RMD should include reference to the order of conditions/counterbalancing; MPD should include reference to variables that participants were matched on). • **Reasonable** – Identified the experimental design, possibly defined AND reasonable attempt to explain how this has been carried out in their study. • **Limited** – Experimental design identified and defined OR unclear attempt to explain how this has been carried out in their study. • **Basic** – Just identifying the experimental design or confuses experimental designs (e.g. identified IMD but described RMD).
3	Operationalise the dependent variable to obtain quantitative data	• **Good** – Clear details on how dependent variable will be operationalised. Outline how data is quantified and how/when the concentration is measured (e.g. teacher or self-rating of concentration on a scale of 1-10 (1 being poor concentration and 10 being very good concentration), number of letter 'f' crossed out, score on the spot the difference puzzle, etc.) • **Reasonable** – Reasonable details on how dependent variable will be operationalised that does lead to quantitative data. • **Limited** – the way DV is operationalised is quantitative and addressed in a limited/unclear way, e.g. more than one measure indicated. • **Basic** – Vague indication of how DV would be measured (e.g. level of concentration).
4	Control of one extraneous variable	• **Good** – Clear and somewhat detailed description of how EV can be controlled. • **Reasonable** – Reasonable outline of how EV can be controlled. • **Limited** – Limited/brief outline of how EV can be controlled. NB. References to sample characteristics being controlled cannot be credited above limited level. • **Basic** – Identified how EV can be controlled/muddled description. If more than one control, credit the first one.
	Annotations	Context = concentration, slippers, shoes, learning, (primary school/young) children etc. Annotate: RF on the left with: **L4=Good; L3=Reasonable; L2= Limited; L1= Basic.** Context with **CONT**. Justification within the response on the right with a **TICK**. Do not annotate the level, note the level of justification to decide on the mark given within the band.

Suggest one open question you could use to obtain some additional information for this study. [3]					
Question			**Answer**	**Marks**	**Guidance**
21	**(a)**		Accept any appropriate open question (e.g. How did you feel when completing your work whilst wearing slippers?)	**Max 3**	Context = concentration, slippers, shoes, learning, primary school children etc. Context can be only credited within the question. Context can be from the Q20 (study design). Example 2 mark (attempt in context) = Ask the pupils to discuss comfortable footwear when learning. Example 1 mark (open question not in context) = How do you feel today? **NB: Only first response is marked.**
			Clear suggestion of an appropriate open question in context.	**3**	
			Attempt to suggest appropriate open question in context.	**2**	
			Attempt to suggest appropriate open question not in context.	**1**	
			The candidate has not provided any creditworthy information	**0**	

Outline one strength of the use of open questions in this study. [3]					
Question			**Answer**	**Marks**	**Guidance**
21	**(b)**		Likely answers: more detail acquired; allows elaboration on responses, could lead to useful applications in education due to greater understanding etc.	**Max 3**	Context = concentration, slippers, shoes, learning, primary school children etc. Context can be from the question that they ask in 21(a) unless their question has achieved 1 mark as open but not in context. No credit for just identifying that it is qualitative data (with no indication of why this is a strength or what the strength is). **NB: Only first response is marked.**
			Clear outline of strength in context.	**3**	
			Clear outline of strength but not in context. **OR** attempted outline of strength in context.	**2**	
			Identification of or attempt to outline strength (whether in context or not).	**1**	
			The candidate has not provided any creditworthy information.	**0**	

Outline one strength of conducting this study as a laboratory experiment.[3]					
Question			**Answer**	**Marks**	**Guidance**
22			Likely answers: high levels of control over extraneous variables, ability to establish cause and effect, more able to replicate than field experiments, standardisation allowing replication.	**Max 3**	Context = concentration, slippers, shoes, learning, primary school children etc. Do not accept comments related to the choice of experimental design as this is not the experimental method. **NB: Only first response is marked.**
			Clear outline of strength in context.	**3**	
			Clear outline of strength but not in context. **OR** attempted outline of strength in context.	**2**	
			Identification of or attempt to outline strength (whether in context or not).	**1**	
			The candidate has not provided any creditworthy information	**0**	

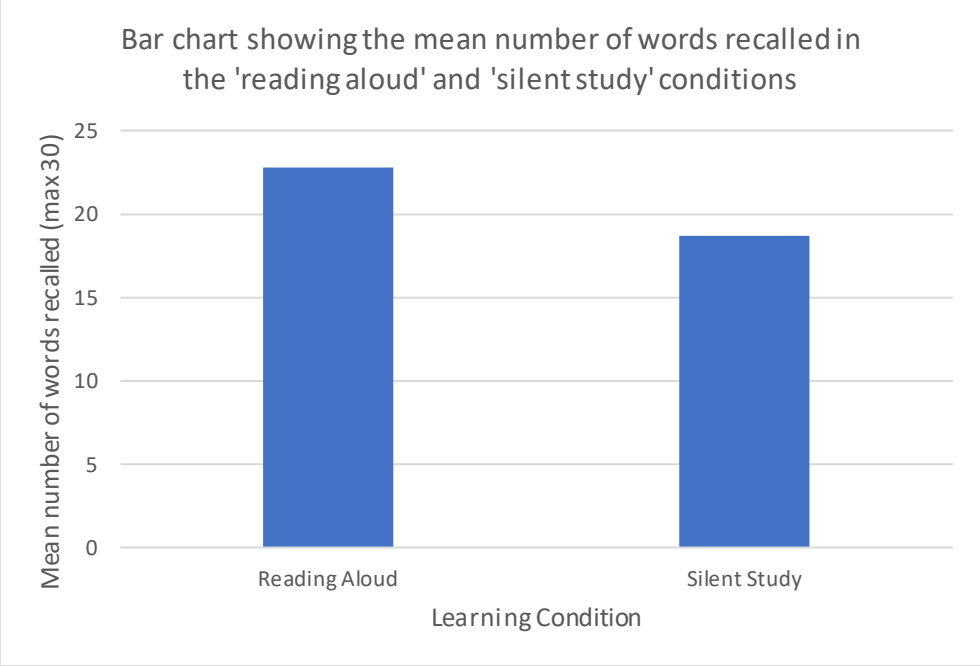
Outline one way you could uphold the ethical consideration of respect in this study. [2]					
Question			**Answer**	**Marks**	**Guidance**
23			Under BPS ethical considerations … respect = informed consent, right to withdraw and privacy/confidentiality. For example, one way to do this would be to inform primary school children at the beginning of the study on concentration that they can withdraw at any time.	**Max 2**	Context = concentration, slippers, shoes, learning, primary school children etc. Mere identification of the ethical guideline gains no credit. Informed consent is only creditworthy if linked to parental/headteachers consent. **NB: Only first response is marked.**
			One way to uphold ethical consideration of respect clearly presented in context.	**2**	
			Attempt to outline one way to uphold ethical consideration of respect (whether in context or not)	**1**	
			The candidate has not provided any creditworthy information	**0**	

<table>
<tr><td colspan="6">Explain two factors that could affect the external validity of this study. [6]</td></tr>
<tr><td colspan="3">Question</td><td>Answer</td><td>Marks</td><td>Guidance</td></tr>
<tr><td rowspan="6">24</td><td rowspan="6"></td><td rowspan="6"></td><td>Likely answers: size/diversity/representativeness of sample; ecological validity of task set to assess concentration, ecological validity of the setting, etc.</td><td>Max 6 [3+3]</td><td rowspan="6">Context = concentration, slippers, shoes, learning, primary school children etc.

NB. If candidates refer to types of external validity that are not listed on the specification these can be credited, e.g. temporal validity (teaching methods change over time)</td></tr>
<tr><td>3 marks for each factor outlined ...</td><td></td></tr>
<tr><td>Clear explanation of how external validity could be affected in context.</td><td>3</td></tr>
<tr><td>Clear explanation of how external validity could be affected, but not in context. OR attempted explanation of how external validity could be affected in context.</td><td>2</td></tr>
<tr><td>Identification of relevant factor/type of external validity or weak attempt to explain how external validity could be affected (whether in context or not).</td><td>1</td></tr>
<tr><td>The candidate has not provided any creditworthy information</td><td>0</td></tr>
</table>

Section C: Data analysis and interpretation

Outline one conclusion that can be made from the raw data presented in this table. [3]					
Question			**Answer**	**Marks**	**Guidance**
25			Conclusions could include: ▪ Reading aloud seems to facilitate memory, perhaps because the act of reading enables the words to be practiced more and processed at a deeper level ▪ There are some individual differences, so reading aloud does not improve memory for everyone, indicating cognitive processes work differently for different people. Accept any other appropriate conclusions here.	**3**	Context = reading aloud, silence, recall, memory, etc. A conclusion must be an interpretation/application of the findings / data (not simply a statement of the result(s) obtained). **Max 1 mark** for presentation of a finding (involving comparison of data) with no interpretation/explanation of it. Zero marks if just data is given. **NB: Only first response is marked.**
			Clear, detailed conclusion in context (or supported by data).	**3**	
			Clear, detailed conclusion but not in context. **OR** attempt in context.	**2**	
			Brief and/or weak attempt (whether in context or not)	**1**	
			The candidate has not provided any creditworthy information	**0**	

Draw a fully labelled bar chart showing the mean number of words recalled in each condition. Plot the means to two significant figures. [4]					
Question			**Answer**	**Marks**	**Guidance**
26				**Max 4 [1+1+1+1]**	Context = reading aloud, silence, recall, memory, etc. Mean values for each condition need to be calculated first. Mean for **reading aloud** condition = **23** to 2 sf. Mean for **silent** condition = **19** to 2 sf. Title must include both variables: (mean) number of words recalled and reading aloud/silent study conditions). Response must make it clear that this is the mean number of words (max 30) recalled in either title or y axis, if not max 3. Labels on axes must be clear. X axis – reading aloud/silent study Y axis – mean number of words recalled - and measurement must start at 0 (does not need to go up to 30 and can go beyond 30). If two bars are together (or if the bar touches y axis) do not award mark for correct presentation of data.
			1 mark is awarded for **correctly** calculating then **presenting** by value each bar representing the **mean** number of words recalled (to 2 significant figures) in the 'reading aloud' and 'silent' conditions	**1**	
			1 mark is awarded for **clear labelling of the x** axis	**1**	
			1 mark is awarded for **clear labelling of the y** axis including measurement (which must start at 0).	**1**	
			1 mark is awarded for a fully operationalised title.	**1**	

<table>
<tr><td colspan="5">Give one reason why the Mann Whitney U test is the appropriate inferential test to use to analyse the data from this study.</td></tr>
<tr><td colspan="3">Question</td><td>Answer</td><td>Marks</td><td>Guidance</td></tr>
<tr><td>27</td><td></td><td></td><td>Any one reason (in bold) in context from:

▪ It is a test for independent measures design, and this study had different participants in the reading aloud condition compared to the silent condition.

▪ It is a test that uses <u>at least</u> ordinal data and this study had ordinal data as it was scores out of 30 in a memory test.

▪ It is a test that assesses differences between conditions, and this study assessed differences in memory between the reading aloud and silent conditions.</td><td>Max 2</td><td>Context = reading aloud, silence, <u>recall of words</u>, memory, etc.

‘6 participants’ not enough for context.

NB: Only first response is marked.</td></tr>
<tr><td></td><td></td><td></td><td>One appropriate reason in context.</td><td>2</td><td></td></tr>
<tr><td></td><td></td><td></td><td>One appropriate reason but not in context. OR attempt to give one appropriate reason in context.</td><td>1</td><td></td></tr>
<tr><td></td><td></td><td></td><td>The candidate has not provided any creditworthy information.</td><td>0</td><td></td></tr>
</table>

Before using the formula for the Mann Whitney U test, the data obtained must be ranked. In the result two participants have the same score of 24. Explain how this is dealt with when ranking the data. [3]					
Question			**Answer**	**Marks**	**Guidance**
28			As the two scores of 24 were the same, so they receive the same rank of 9.5 as the ranks 9 and 10 have been shared, i.e. 9 + 10 / 2 = 9.5	**Max 3**	Context = reading aloud, silence, recall, memory, etc. NB. Specific scores could be credited as context.
			Clear explanation in context of how having the same scores is dealt with including references to the same rank and a way of finding the same rank.	**3**	
			Clear explanation of how having the same scores is dealt with including references to the same rank (or simply 9 and 10) and a way of finding the same rank (no context). **OR** Explanation of why two ranks are the same in context.	**2**	
			Attempt to explain why two ranks are the same (whether in context or not).	**1**	
			The candidate has not provided any creditworthy information	**0**	

Calculate the U value for the Mann Whitney U test for the data collected in this study. Show your workings. You may use the formula presented below. [5]

U = the smaller of U_1 and U_2

Where U_1 is …

$$U_1 = R_1 - \frac{n_1(n_1 + 1)}{2}$$

and U_2 is …

$$U_2 = R_2 - \frac{n_2(n_2 + 1)}{2}$$

Question			Answer	Marks	Guidance	
29	(a)		**1 mark for each of the following correct / evident in answer ...**	**Max 5 [1+1+1+1+1]**	**U_1:** = 46.5 – $\frac{6\ (6+1)}{2}$ = 46.5 – $\frac{6 \times 7}{2}$ = 46.5 – $\frac{42}{2}$ = 46.5 – 21 **= 25.5**	**U_2:** = 31.5 – $\frac{6\ (6+1)}{2}$ = 31.5 – $\frac{6 \times 7}{2}$ = 31.5 – $\frac{42}{2}$ = 31.5 – 21 **= 10.5**
			1 mark for sum of ranks for reading aloud condition calculated correctly (46.5)	**1**		
			1 mark for sum of ranks for silent study group calculated correctly (31.5).	**1**		
			1 mark for correct calculation of U_1 (25.5) value OR correct calculation of U_2 value (10.5).	**1**		
			1 mark for <u>all</u> workings of U_2 value shown.	**1**	**U_2 is the smaller of the two scores so U = 10.5 (candidates may indicate this by circling the correct U value)** **NB.** Accept alternative workings for U_1 and U_2 if the correct answer is calculated.	
			1 mark for choosing the final U value.	**1**		
			The candidate has not provided any creditworthy information.	**0**		

How is the critical value used to determine if the findings are statistically significant? [1]					
Question			**Answer**	**Marks**	**Guidance**
29	**(b)**		For one mark this must refer to comparison with calculated value. It is **compared to** the appropriate/correct **calculated/observed** value.	**1**	Accept answers related directly to the Mann-Whitney test.

Explain what p>0.05 would mean if it appeared as part of the significance statement when reporting the findings from this study. [3]					
Question			**Answer**	**Marks**	**Guidance**
30			Answer could refer to the following features: 1. Greater than 5% probability that the results are due to chance. 2. Null hypothesis is accepted AND/OR the alternative hypothesis is rejected. 3. The results are not significant/there is no significant difference. 4. Less than 95% confident that the results are significant. 5. Observed value was greater than the critical value, therefore results are not significant.	**Max 3**	Context = reading aloud, silence, recall, memory, etc. Example 3-mark answer: The results are **not significant**, so **the null hypothesis is accepted** (i.e. there is no difference in memory when words are read aloud compared to when studied in silence). Example 2-mark answer: There is **no significant difference** between how many words are recalled when words are read aloud or studied in silence. Example 1-mark answer: The **null hypothesis should be accepted.**
			2 correct features in context.	**3**	
			2 correct features, but not in context. **OR** 1 correct feature in context.	**2**	
			1 correct feature, not in context.	**1**	
			The candidate has not provided any creditworthy information	**0**	

Explain one strength of using quantitative data in this study. [3]					
Question			**Answer**	**Marks**	**Guidance**
31	**(a)**		**Strengths** could include: ▪ Easier data analysis and comparison across conditions (reading aloud vs silent) ▪ Easier to record data ▪ Easier to interpret. ▪ Objective ▪ Easier to check for consistency etc.	**Max 3**	Context = reading aloud, silence, recall, memory, etc. **NB: Only first response is marked.**
			Clear explanation of strength in context.	**3**	
			Clear explanation of strength but not in context. **OR** attempted explanation of strength in context.	**2**	
			Brief and/or weak attempt to explain strength (whether in context or not).	**1**	
			The candidate has not provided any creditworthy information	**0**	

Explain one weakness of using quantitative data in this study. [3]					
Question			**Answer**	**Marks**	**Guidance**
31	**(b)**		**Weaknesses** could include: ▪ Doesn't inform us about reasons why there is a difference or not in memory between reading aloud and studying words in silence, because it lacks detail. ▪ Construct validity issues (simplifying complex behaviours to a score) etc.	**Max 3**	Context = reading aloud, silence, recall, memory, etc. **NB: Only first response is marked.**
			Clear explanation of weakness in context.	**3**	
			Clear explanation of weakness but not in context. **OR** attempted explanation of weakness in context.	**2**	
			Brief and/or weak attempt to explain weakness (whether in context or not).	**1**	
			The candidate has not provided any creditworthy information	**0**	

This study used an independent measures design. Identify one strength and one weakness of this design. [2]					
Question			**Answer**	**Marks**	**Guidance**
32	**(a)**		**Strengths include:** ▪ No order effects. ▪ Can keep the learning material (words) the same in each condition. ▪ Less chance of demand characteristics **Weaknesses include:** ▪ Participant variables, i.e. individual differences in memory may have influenced the findings irrespective of learning condition. ▪ More participants needed for the study. Accept any other appropriate strengths or weaknesses. 1 mark for each identified strength and weakness	**Max 2 [1+1]**	Do not credit 'eradicates/eliminates/rules out demand characteristics' as a strength. **NB: Only first strength and first weakness are marked.**

Outline two ways that an independent measures design could affect the validity of this study. [4]

Question			Answer	Marks	Guidance
32	(b)		Answers could include: ▪ No order effects from having already studied words in previous condition, so increased validity. ▪ Individual differences in memory may have influenced the findings irrespective of learning condition (reading aloud vs silent), so decreased validity. ▪ Can keep the learning material (words) the same in each condition, so words in one condition are not easier or harder to remember than others, so increased internal validity. Accept any other appropriate strengths or weaknesses.	**4 [2+2]**	Context = reading aloud, silence, recall, memory, etc. Evaluation points are likely to be based on those in part (a) but other points can be used. However, do not credit a point that is just a repetition of a strength/weakness given in Q32a, unless it is specifically related to the effect on validity. Accept both positive and negative impacts on validity. Do not credit 'eradicates/eliminates/rules out demand characteristics'. Do not accept population validity. Do not credit issues that relate to reliability (e.g. therefore increases consistency).
			Identified strength/weakness explained in relation to impact on validity and in context.	**2**	
			Some understanding of impact on validity, not in context.	**1**	
			The candidate has not provided any creditworthy information.	**0**	

Which section of the write-up of a practical report would each of the following appear in, other than the abstract?

(a) Details of sample obtained. [1]

(b) Suggestions for possible future research. [1]

Question			Answer	Marks	Guidance
33				**Max 2 [1+1]**	Accept methodology.
	(a)		Method	**1**	
	(b)		Discussion	**1**	

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