

GCE

Psychology

H167/01: Research methods

AS Level

Mark Scheme for June 2025

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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.

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

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, email or via the RM Assessor messaging system.
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 the annotation 'SEEN' to confirm that the work has been seen and mark any responses using the annotations in section 11.

7. There is a NR (**No Response**) option. Award NR (No Response):

- if there is nothing written at all in the answer space
- OR if there is a comment which does not in any way relate to the question (e.g., 'can't do', 'don't know')
- OR if there is a mark (e.g., a dash, a question mark) which is not an attempt at the question.

Note: Award 0 marks – for an attempt that earns no credit (including copying out the question).

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.**

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:

To determine the level – start at the highest level and work down until you reach the level that matches the answer

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
	Context
	Level 1 (RF is basic)
	Level 2 (RF is limited)
	Level 3 (RF is reasonable)
	Level 4 (RF is good)
	Evaluation
	Repetition
	Missing information
	Not answering question
	Benefit of doubt given
	Irrelevant
	Seen (to show content on a page has been noted, but not credited)
	Highlighter tool

12. Subject Specific Marking Instructions

Section A: Multiple choice

Question	Answer	Mark	Guidance
1	B	1	matched participants design
2	C	1	Rate how much you like football on a scale 0 ('not at all') to 5 ('very much so')
3	A	1	mean
4	A	1	-0.9
5	D	1	4
6	D	1	9
7	C	1	when the researcher is not part of the group being observed
8	C	1	recording specific behaviours every time they occur during an uninterrupted period of time
9	D	1	a way of recording raw data in an observation
10	A	1	data in each condition should be from the same participants
11	B	1	independent measures design laboratory experiment and self-report
12	A	1	individual differences in memory ability in general between participants in the different conditions
13	C	1	1/10 second
14	A	1	-0.05
15	D	1	sample

Section B: Research design and response

Explain how you would use the observation method to investigate the behaviour of pupils in a classroom during a lesson. Justify your decisions as part of your explanation. You must refer to:

- the behavioural categories in your coding scheme (5 behaviours you will look out for)
- the use of time or event sampling
- details of how one ethical consideration would be addressed

You should use your own experience of practical activities to inform your response. [12]

Question			Answer			Marks	Guidance
16						Max 12	

Level of response	Details of required features (RFs) included	Justification of decisions made	Reference to own practical work
Good 10-12 marks	All 3 required features addressed. 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 <i>some</i> 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) 10 marks if just one RF linked, 11 marks if two and 12 if all three. If there is no explicit clear link between own practical work and <i>any</i> of the 3 required features cap the mark at 9 .
Reasonable 7-9 marks	All 3 required features addressed. Reasonably accurate and detailed knowledge and understanding of each feature. At least two applications of required features in context.	Some appropriate justification of decision related to all three required features (7 marks if only two required features justified). There was a line of reasoning evident with some structure.	Maximum 7 marks if no justification in context OR if only two required features justified. If one RF addressed in detail, justified in context and linked to own practical work award 4 marks, if two award 8 marks. Overall mark Look at RF first: L4 Good – all 3 described clearly, in detail and in context. L3 Reasonable – all 3 reasonably clear and somewhat detailed with min two in context. L2 Limited – min 2 limited (L2) with at least one in context. L1 Basic – 1 basic (L1)
Limited 4-6 marks	Two of the required features addressed. Limited application of required features. OR all required features referred to but in a limited way.	Attempt to justify decision(s) but weak. Evidence of some structure, but weak.	THEN look at justifications: L4 Good – all justified with at least 2 reasonable (L3) and at least two of the justifications are in context (does not have to be the reasonable ones) L3 Reasonable – all justified with at least 1 reasonable (L3) and at least one of the justifications in context. L2 Limited – at least 1 limited (no need for context). L1 Basic – no justification or basic justification
	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	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	Behavioural categories in your coding scheme (5 behaviours you will look out for)	• Good – Identified 5 behavioural categories that are clearly operationalised. • Reasonable – Identified 5 behavioural categories, some of them are operationalised. • Limited – Identified less than 5 behavioural categories OR none of the behavioural categories are operationalised. • Basic – Attempted to identify some behavioural categories OR defined behavioural category
2	The use of time or event sampling.	• Good – Identified the sampling behaviour used and clearly explained how this has been carried out in their study (time sampling should include reference to specific time intervals or time sampling technique; event sampling should include reference to specified time period and tallying all behaviours in the checklist). • Reasonable – Identified the sampling behaviour used, possibly defined AND reasonable attempt to explain how this has been carried out in their study. • Limited – Identified and defined either time or event sampling OR unclear attempt to explain how this has been carried out in their study. • Basic – Identified either time or event sampling, confused sampling behaviour (e.g. identified time but described event) OR attempts both.
3	Details of how one ethical consideration would be addressed.	• Good – Clear and somewhat detailed description of how one ethical consideration would be addressed (e.g. ask parents for informed consent – how? Phone call home, letter?) • Reasonable – Reasonable outline of how one ethical consideration would be addressed. • Limited – Limited/brief outline of how one ethical consideration would be addressed. NB. References to informed consent given by pupils only cannot be credited above limited level. • Basic – Identified one ethical consideration/muddled description. If more than one ethical consideration, credit the first one.
	Annotations	Context = pupils, school, (school) children, classroom 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.

Outline how you could use self-selected sampling to obtain a class of pupils from a school to use as participants for this study. [2]

Question			Answer	Marks	Guidance
17			<u>Possible suggestions include:</u> - Asking the head teacher at a school to announce at an assembly in the school that volunteers are required to take part in a study about class behaviour. - Asking the headteacher to send a letter home to parents announcing the study and asking for volunteers. - Use of a poster providing details of the study displayed in the school reception or library or website. - Any other creditworthy suggestion.	Max 2	Context = pupils, school, (school) children classroom, etc.
			Clear, detailed outline in context.	2	
			Clear, detailed outline but not in context.	OR attempted outline in context. 1	
			The candidate has not provided any creditworthy information.	0	

Outline one strength and one weakness of the use of the observation method in this study. [6]				
Question		Answer		Guidance
18		<u>Strengths include:</u> - Higher ecological validity. - Higher overall validity due to reduced demand characteristics <i>if</i> unnoticed they are being observed. - More ethical as researcher does not manipulate variables <u>Weaknesses include:</u> - Possible problems interpreting behaviour. - Restrictions of coding scheme used. - Ethical issues. - Possible demand characteristics if noticed they are being observed. - Observations do not explain 'why' we have seen a particular behaviour - Any other relevant strength or weakness of the use of the observation method.		Max 6 [3+3] Context = pupils, school, (school) children classroom, etc. NB: If more than one strength (or weakness) is provided, only first response is marked.
		Clear, detailed strength/weakness outlined in context.		3
		Clear, detailed strength/weakness but not in context.	OR attempted strength/weakness in context.	2
		Brief outline whether in context or not.		1
		The candidate has not provided any creditworthy information.		0

Outline two ways that inter-rater reliability could be increased if there were two researchers responsible for recording the behaviour in this study. [6]			
Question		Answer	Marks
19		<u>Possible answers include:</u> • Training the observers/establishing that each observer knows exactly what each behavioural category in the coding scheme refers to and records it in same way. • Reducing overall numbers of behaviours to look out for, as more likely to be consistent between each other if looking out for less behaviours. • Conducting a pilot study testing out the use / interpretation of the behaviours in the coding scheme. • Any other creditworthy suggestion.	Max 6 [3+3]
		3 marks for each way to increase inter-rater reliability outlined	
		Clear, detailed outline in context.	3
		Clear, detailed outline but not in context. OR attempted outline in context.	2
		Brief outline whether in context or not.	1
		The candidate has not provided any creditworthy information.	0

Context = pupils, school, (school) children classroom, etc.

NB. Inter-rater reliability is not the extent to which if the study was repeated the same findings would be obtained. It is concerned with the ability of two or more observers to look out for and record the same behaviours in the same way. Therefore, no credit for suggestions linked to replication.

Nothing creditworthy for references to the influence of situational variables, such as the time of day etc.

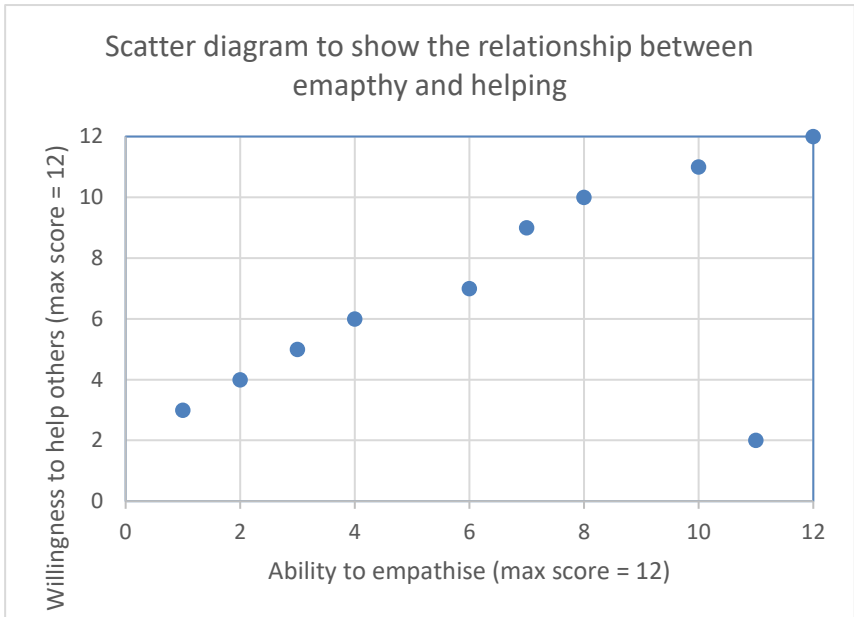
Outline two ways that you could reduce possible demand characteristics in your design of this study. [6]

Question			Answer	Marks	Guidance
20			<u>Possible answers include:</u> • Conducting the observation covertly to prevent participants from being aware they are being studied. • Ensuring the lesson observed is a 'normal' / regular one with the usual class teacher so it is less obvious their behaviour is being observed for research purposes. • Concealing the aim of the study from the students, perhaps by telling them that it is the teacher's behaviour that is being observed. • Any other creditworthy suggestion.	Max 6 [3+3]	Context = pupils, school, (school) children classroom, etc.
			3 marks for each way outlined		
			Clear, detailed outline in context.	3	
			Clear, detailed outline but not in context. OR attempted outline in context.	2	
			Brief outline whether in context or not.	1	
			The candidate has not provided any creditworthy information.	0	

Outline what information you would include in a debrief with participants at the end of the study. [3]						
Question			Answer	Marks	Guidance	
21			<u>Possible answers include:</u> - Informing pupils about the aim of the research (to establish what behaviours pupils display in a classroom with a view to improving teaching and learning). - Making participants aware they can have access to their data, and they can choose to withhold it if desired. - Informing participants that they can be told about conclusions reached from the study when the data has been analysed. - Any other creditworthy suggestion.	Max 3	Context = pupils, school, (school) children classroom, etc.	
			Clear, detailed outline in context.	3		
			Clear, detailed outline but not in context.	OR attempted outline in context. 2		
			Attempt, and / or brief outline whether in context or not.			1
			The candidate has not provided any creditworthy information.			0

Section C: Data analysis and interpretation

Draw a fully labelled scatter diagram displaying the data from this study. [4]

Question		Answer	Marks	Guidance
22	(a)	 Scatter diagram to show the relationship between empathy and helping	Max 4 [1+1+1+1]	Labels on axes must be clear. For example, just putting 'empathy', or 'help' is unclear (but remember this can be clarified by a title if provided).
		1 mark is awarded for correctly plotting the data	1	
		1 mark is awarded for clear labelling of the x axis	1	
		1 mark is awarded for clear labelling of the y axis	1	
		1 mark is awarded for operationalised title	1	

Outline two conclusions that can be made from the data displayed in this scatter diagram. [6]

Question		Answer	Marks	Guidance
22	(b)	<u>Possible conclusions include:</u> - There is a positive relationship between empathy and helping, which may suggest that the more an individual can empathise with another person the more likely they are to help. This could be because they feel their distress/pain. - High empathy scores are not always related to high helping scores, suggesting that an ability to empathise is not always related to the tendency to help. - There may be individual characteristics of a person that influence this; there is a lot of variation in people's ability to empathise, suggesting this is a very personal thing unique to each individual. - Accept any other appropriate conclusions here.	Max 6 [3+3]	Context = empathy, helping, etc. Clear (explicit) <i>interpretation</i> of findings (i.e. plausible explanation for findings) is required for top band. Cap findings at 1 mark for each if only findings are present. Do not credit any reference to cause and effect or mentioning 'difference' between the variables.
		3 marks for each conclusion		
		Clear, detailed conclusion in context	3	
		Clear, detailed conclusion but not in context	OR attempted conclusion in context 2	
		Brief and/or unclear attempted conclusion, whether in context or not	OR simply stating a finding 1	
		The candidate has not provided any creditworthy information	0	

Outline one strength and one weakness of the use of the self-report method to gather data in this study. [6]						
Question			Answer		Marks	Guidance
23			<u>Strengths include:</u> • Easy and quick to obtain data about empathy and helping behaviour. • High reliability as same questions can be used (standardised) for each participant. • High construct validity as we can access subjective experiences, feelings, attitudes and beliefs. <u>Weaknesses include:</u> • Prone to possible social desirability bias (e.g. people saying they would help, when in reality they may not) • Hypothetical scenarios used (low ecological validity). • Possible problems understanding the questions / scenarios used. • Any other relevant strength or weakness of the use of the self-report method.		Max 6 [3+3]	Context = empathy, helping, etc. NB: If more than one strength (or weakness) is provided, only first response is marked.
			For each strength/weakness			
			Clear outline in context		3	
			Attempted outline in context	OR Clear outline, but not in context	2	
			Brief and/or weak outline (whether in context or not)		1	
			The candidate has not provided any creditworthy information		0	

Explain why the Spearman's Rho would be the appropriate non-parametric inferential statistical test to use to analyse the data from this study. [3]						
Question			Answer	Marks	Guidance	
24			Reasons: ▪ Test of correlation/relationship (and the study investigated the relationship between empathy and helping). ▪ Ordinal data collected - scores out of 12 on each test (empathy and helping).	Max 3	Context = empathy, helping, etc.	
			Two appropriate reasons provided, with at least one in context.			3
			Two appropriate reasons provided but neither in context.	OR one appropriate reason provided in context.		2
			One appropriate reason provided but not in context.			1
			The candidate has not provided any creditworthy information.			0

Use the formula for Spearman's Rho provided to calculate the value of r_s .

The value of $\sum d^2 = 72$.

Show your workings.

Write your answer to 2 significant figures. [3]

Question			Answer	Marks	Guidance
25			Answer: 0.564 Workings ... $r_s = 1 - \frac{6 (\sum d^2)}{n (n^2 - 1)}$ $= 1 - \frac{6 \times 72}{10 \times 99} \quad \text{OR} \quad = 1 - \frac{432}{990}$ $= 1 - 0.436 = 0.564$ $= 0.56 \text{ to 2 SF.}$	Max 3	
			Correct answer given to 2 SF (0.56) with some workings shown.	3	
			Correct answer but not given to 2 SF, or incorrectly rounded (0.57), with some workings shown.	2	
			Correct answer (between 0.56-0.57) but no workings shown. OR some correct workings, but incorrect answer.	1	
			The candidate has not provided any creditworthy information	0	

Explain what it would mean if a type 2 error was made following the analysis of the data in this study. [3]					
Question			Answer	Marks	Guidance
26			A type 2 error is a 'false negative' and means that the null hypothesis has been incorrectly accepted (i.e. the null is actually false / not true). In the context of this study, it would mean that it has been claimed that there is not a significant correlation between empathy and helping behaviour (when really, there is).	Max 3	Context = empathy, helping, etc. Do not credit any reference to cause and effect or mentioning 'difference' between the variables.
			Clear, detailed explanation in context	3	
			Clear, detailed explanation but not in context	OR attempted explanation in context 2	
			Brief and/or unclear explanation, whether in context or not.	1	
			The candidate has not provided any creditworthy information	0	

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