GCE

Psychology

H567/01: Research methods

Advanced GCE

Mark Scheme for Autumn 2021

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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.

ANNOTATIONS

Annotation	Meaning
	Unclear
AE	Attempts evaluation
BOD	Benefit of doubt
CONT	Context
	Cross
EVAL	Evaluation
—	Extendable horizontal line
~~	Extendable horizontal wavy line
IRRL	Significant amount of material which doesn't answer the question
NAQ	Not answered question
RES	Good use of resources
	Tick
	Development of point
^	Omission mark

Section A: Multiple choice

Ques	Answer
1	B
2	D
3(a)	A
3(b)	B
4	B
5	D
6	C
7	A
8	A
9	C
10	A
11	B
12	D
13	A
14	C
15	D
16	D
17	B
18	B
19	B

Section B: Research design and response

Question			Answer	Marks	Guidance
20			The self-report method involves obtaining data from participants through responses to questions. **2 mark answer:** Clear outline of one feature of self-report method Possible answers: • Uses questions to obtain responses from participants • Likert and semantic rating scales can be used to get opinions from participants **1 mark answer:** Identification of one feature Possible answers: • Uses questions • Involves scales **0 marks:** No creditworthy response	**2**	Three ways to outline feature of self-report (award 2 marks): 1 general comment on question **and** response, e.g. uses questions to obtain responses from participants 2 outline of two features of questionnaires or interviews e.g. open/ closed questions, types of scales: semantic/ Likert, structure/unstructured interviews, 3 two methods of data collection outlined e.g. questionnaires and interviews
21	(a)		Detailed response of sample clearly contextualised Possible answers: Age, Gender, Number, Target Population. **2 mark answer:** Clear details provided in context Possible answer: 20 participants aged 16-19 with a range of happiness levels **1 mark answer:** Clear details provided but not in context	**2**	-Context = happy, happiness, comedy, emotion etc Wide range of ages, gender, ethnicity, etc. award 1 mark.

			OR attempt to provide details in context Possible answer: The participants in this study on happiness should be varied in age and ethnicity. **0 marks:** No creditworthy response		
21	**(b)**		Clear outline of how sample would be recruited using the self-selected sampling technique. i.e. what researcher would do to recruit the participants, how the researcher would select participants from those who have volunteered, in context **3 mark answer:** Clear outline in context **2 mark answer:** Clear outline but not in context OR Attempted outline in context **1 mark answer:** Brief and/or weak attempt to outline how self-selected sampling could be used (whether in context or not) **0 marks:** No creditworthy response	**3**	Context = happy, happiness, comedy, emotion etc Self-selected sampling can use posters, adverts, social media, mailshot, etc.
21	**(c)**		Weakness identified, elaborated/explained, contextualised Answers could include: bias (e.g. only happy people respond); problems obtaining a representative sample as researcher limited in choice by type of people who respond, etc. **3 mark answer:** Clear outline in context **2 mark answer:** Clear outline but not in context	**Max 3**	Context = happy, happiness, comedy, emotion etc Not generalisable/representative without any link to self-selected sampling technique award 1 mark whether in context or not. Demand characteristics is not creditworthy.

			OR Attempted outline in context **1 mark answer:** Brief and/or weak attempt to outline of weakness of the use of self-selected sampling (whether in context or not) **0 marks:** No creditworthy response		

Question	Answer	Marks	Guidance
22		Max = 15	-Context = happy, happiness, comedy, emotion etc

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, e.g. specific mention of question/scales used or extraneous variables controlled -If there is no explicit clear link between own practical work and *any* of the 4 required features caps the mark at 11 maximum. RF1- Good – two closed questions with response categories. Reasonable – not identifying the RF as a closed question. Limited – one closed question with response categories. Basic – one or two questions that could be answered as closed questions. RF2 Good – two open questions and identified as open questions. Reasonable – not identifying the open question. Limited – one open question. Basic – unclear open question(s). RF3 Good – the questions correctly identified as Likert and semantic differential. One Likert scale statement (with fully labelled scale showing strength of agreement/disagreement) and one semantic differential scale question (clearly labelled/how to complete). Reasonable – one of the questions is unclear/labelling is unclear. Limited – Both of the questions are unclear/labelling is unclear. Basic – Rating scales are given (which are neither Likert nor semantic differential). RF4 – Good – the self-report can be reliably administered e.g. 1. whether it is an interview/questionnaire 2. if the participant does the questionnaire at home or in front of the researcher 3. how the participant submits the questionnaire/how the interview is recorded.
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	-**Attempt** to justify decision(s) but weak -Evidence of some structure, but weak	
	OR three or all four required features referred to but in a limited way		
	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	-**None**, or if present very weak	
	OR more than one of the required features referred to but in a very brief and/or basic way		

Question			Answer	Marks	Guidance
23			Likely answers could include: dishonesty (lowering validity); demand characteristics (lowering validity); comprehension of questions asked (affecting reliability and / or validity) etc For each weakness: **2 mark answer:** Clear outline of weakness in context **1 mark answer:** Clear outline of weakness but not in context OR attempted outline of weakness in context **0 marks:** No creditworthy response	**Max 2+2**	-Context = happy, happiness, comedy, emotion etc Identification of weakness in context award 1 mark Identification of weakness not in context award 0 marks A weakness that is specific to a type of question (e.g. rating scale) that is not a weakness for all self-reports is not creditworthy.
24	(a)		Clear focus on technique, i.e. identification of sampling technique, description of how this technique is used to select the participants, contextualised. Description of the features of the sample is not creditworthy on its own. **3 mark answer:** Clear outline in context **2 mark answer:** Clear outline but not in context OR Attempted outline in context **1 mark answer:** Brief and/or weak attempted outline (whether in context or not) **0 marks:** No creditworthy response	**3**	-Context = theme for candidates own selected practical activity OR specific location/target population of participants.

Question			Answer	Marks	Guidance
24	(b)		Identification and elaboration of strength plus context Clear focus on technique not on features of sample **3 mark answer:** Clear outline of strength in context **2 mark answer:** Clear outline of strength but not in context OR Attempted outline of strength in context **1 mark answer:** Brief and/or weak attempt to outline strength (whether in context or not) **0 marks:** No creditworthy response	**3**	-Context = theme for candidates own selected practical activity or specific location/target population of participants.

Section C: Data analysis and interpretation

Question			Answer	Marks	Guidance
25	**(a)**		Total 14,21,32,28,20,8,26,12,22,18,20,21 =242 /12 Mean = 20.16666 So to 3 SFs = 20.2 **1 mark** for correct working **1 mark** for correct mean **1 mark** for correctly stating to 3 significant figures **0 marks:** No creditworthy response	**3**	
25	**(b)**		Order: 10, 10, 12, 12, 16, 18, 19, 21, 23, 24, 24, 24 Median = 18.5 Range = 24-10 = 14 OR 24-10 = 14+1 = 15 **1 mark** for ordering data correctly **1 mark** for identifying median correctly **1 mark** for calculating range correctly **0 marks:** No creditworthy response	**3**	

Question			Answer	Marks	Guidance
26			Answer = 25% less food consumed when eyes on fridge compared to when no eyes on fridge Workings ... 8 items less when eyes on fridge (32-24) 8 as a percentage of 32 = 8/32 x 100 = 25% **3 mark answer:** Percentage correctly stated with full workings shown **2 mark answer:** Percentage correctly stated with some workings shown OR Percentage only shown (no workings) **1 mark answer:** Partial workings shown e.g. 8/32 or 32-24 **0 mark answer:** No credit worthy response	**3**	

Question			Answer	Marks	Guidance
27	(a)		There was more variation in the consumption of snacks when eyes were not on the fridge compared to when they were. This informs us that having eyes on the fridge has a fairly consistent effect on the amount of food consumed across the different participants. Without eyes on the fridge there is more variation, which informs us that some people may be better than others at restricting taking food from the fridge. **3 mark answer:** Clear explanation in context **2 mark answer:** Clear explanation, but not in context OR Attempted explanation in context **1 mark answer:** Brief and/or weak explanation (whether in context or not) **0 mark answer:** No credit worthy response	**3**	Context = food, snacks, eat(ing), fridge etc

Question			Answer	Marks	Guidance
27	(b)		The standard deviation is the square root of the variance. The advantage of this is that the answer is a figure that is much more typical of the actual difference (actual data collected) in the amount of snacking taking place with or without eyes on the fridge. The variance is a much bigger (untypical) figure as it is the sum of the differences in each individual's snacking compared to the mean which is then squared (squaring makes the answer a much bigger figure). **3 mark answer:** Clear outline in context **2 mark answer:** Clear outline, but not in context OR Attempted outline in context **1 mark answer:** Brief and/or weak outline (whether in context or not) **0 mark answer:** No credit worthy response	**3**	Context = food, snacks, eat(ing), fridge etc Responses that refer to the standard deviation as more valid/accurate than the variance are not creditworthy.

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>28</td><td></td><td></td><td>Answer T = 5

Workings
<table>
<tr><td rowspan="2">p</td><td colspan="6">Number of times snacks taken from fridge during one week</td></tr>
<tr><td>(a)
Without eyes on fridge door</td><td>(b)
With eyes on fridge door</td><td>Diff
(a – b)</td><td>Ranks of diffs</td><td>Sum of ranks of neg’ diffs</td><td>Sum of ranks of pos’ diffs</td></tr>
<tr><td>a</td><td>14</td><td>10</td><td>4</td><td>7</td><td></td><td>7</td></tr>
<tr><td>b</td><td>21</td><td>18</td><td>3</td><td>5</td><td></td><td>5</td></tr>
<tr><td>c</td><td>32</td><td>24</td><td>8</td><td>10</td><td></td><td>10</td></tr>
<tr><td>d</td><td>28</td><td>24</td><td>4</td><td>7</td><td></td><td>7</td></tr>
<tr><td>e</td><td>20</td><td>16</td><td>4</td><td>7</td><td></td><td>7</td></tr>
<tr><td>f</td><td>8</td><td>10</td><td>-2</td><td>3.5</td><td>3.5</td><td></td></tr>
<tr><td>g</td><td>26</td><td>24</td><td>2</td><td>3.5</td><td></td><td>3.5</td></tr>
<tr><td>h</td><td>12</td><td>12</td><td>0</td><td>-</td><td></td><td></td></tr>
<tr><td>i</td><td>22</td><td>23</td><td>-1</td><td>1.5</td><td>1.5</td><td></td></tr>
<tr><td>j</td><td>18</td><td>12</td><td>6</td><td>9</td><td></td><td>9</td></tr>
<tr><td>k</td><td>20</td><td>19</td><td>1</td><td>1.5</td><td></td><td>1.5</td></tr>
<tr><td>l</td><td>21</td><td>21</td><td>0</td><td>–</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Σr= 5</td><td>Σr= 50</td></tr>
</table>

1 mark for finding difference a-b
1 mark for ranking differences
1 mark for sum of negative ranks
1 mark for sum of positive ranks
1 mark for correct identification of T</td><td>5</td><td>Allow Diff to be b-a</td></tr>
</table>

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
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29	**(a)**		Table critical value = 8 **2 mark answer:** Critical value correctly stated **1 mark answer:** Correct sample size used (10) but wrong critical value quoted **0 mark answer:** No creditworthy response	**2**	
29	**(b)**		T = 5 , n = 10, p<0.05 **OR** In words ... e.g. the null hypothesis (i.e. that there is no difference in amount of food consumed with eyes on fridge compared to without) is rejected as the calculated value is less than the critical value. There is a significant finding/the hypothesis is accepted (eyes on fridge *does* make a difference to amount of food consumed). **2 mark answer:** Correctly written significance statement (calculated value, sample size and probability level) OR written in words rather than a formal statement	**Max 2**	Context = food, snacks, eat(ing), fridge etc OR the correct numerical data (e.g. T=5). 1 mark for correctly saying null rejected, hypothesis accepted.
			1 mark answer: just stating p<0.05 **OR** weak and/or brief written response **0 mark answer:** No creditworthy response		

Question			Answer	Marks	Guidance
29	(c)		**Answers could include:** • Population/scores normally distributed (68% of our data should be less than ±1 standard deviation around the mean) • At least interval/ratio (continuous) data • No extreme scores **1 mark per criteria:** Appropriate criteria identified **0 marks:** No creditworthy response	**2**	
30			Answer could include: low generalisability as participants could be all quite well known to each other (contacts of contacts), so all similar (e.g. all big or small snackers etc); high generalisability as sample could have been diverse as snowball sampling potentially allows access to individuals not known to the researcher, so may have a variety of different snacking habits etc **3 mark answer:** Clear outline of way sampling technique could have affected generalisability of the data in context. **2 mark answer:** Clear outline of way sampling technique could have affected generalisability of the data, but not in context OR Attempted outline of way sampling technique could have affected generalisability of the data in context **1 mark answer:**	**3**	Context = food, snacks, eat(ing), fridge etc

			Brief and/or weak to outline way sampling technique could have affected generalisability of the data (whether in context or not) **0 mark answer:** No credit worthy response		

Question			Answer	Marks	Guidance
31	(a)		Answer could include: ability to analyse data about snacking more easily; can compare across conditions and individual participants easily etc **3 mark answer:** Clear outline of advantage in context **2 mark answer:** Clear outline of advantage, but not in context OR Attempted outline of advantage in context **1 mark answer:** Brief and/or weak to outline advantage (whether in context or not) **0 mark answer:** No credit worthy response	**3**	Context = food, snacks, eat(ing), fridge etc
31	(b)		Answer could include: no reasons for why snacks consumed obtained **3 mark answer:** Clear outline of disadvantage in context **2 mark answer:** Clear outline of disadvantage, but not in context OR Attempted outline of disadvantage in context	**3**	Context = food, snacks, eat(ing), fridge etc

			1 mark answer: Brief and/or weak to outline disadvantage (whether in context or not) **0 mark answer:** No credit worthy response		

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