

**GCSE**

**Psychology**

Unit **B543**: Research in Psychology

General Certificate of Secondary Education

**Mark Scheme for June 2014**

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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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## Annotations

Annotation	Meaning
	Blank Page – this annotation <b>must</b> be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.
	Correct response
	Incorrect response
	Unclear
	Banded down
	Benefit of doubt
	No benefit of doubt
	Expansion of a point
	Irrelevant
	Effective evaluation
	Knowledge and understanding

## MARK SCHEME

Question		Answer	Marks	Guidance
1		'to investigate whether using coloured paper can improve student performance'. [1]	1	Allow similar response. The response must be an aim not a hypothesis and cannot be in the past tense i.e. 'he investigated'.
2		1 mark for recognising that this hypothesis predicts a difference. 1 mark for the accurate identification of <b>both</b> variables.  For example 'students who take a maths test printed on green paper will score higher [1] than students who take a maths test printed on white paper' [1] or 'there will be a difference [1] in the student's scores when they take a maths test printed on the green and white paper' [1] or 'there will be a difference [1] in student performance depending on which colour paper is used'. [1]	2	A response that is an aim/question/correlation/relationship is capped at 1 mark.  NB: hypotheses can be phrased in either the present or future tense, but not the past tense.  Allow school performance/marks/scores as DV and reference to different coloured paper as IV.
3	(a)	1 mark for opportunity sampling.	1	Do not allow definitions of an opportunity sample as this is quoted in the source.
	(b)	1 mark for the identification of a generic problem pertaining to the use of opportunity sampling.  1 mark for elaborated responses demonstrating how or why it's a specific problem with opportunity sampling.  For example 'opportunity samples can be biased [1] as the researcher can choose whoever they want to be in their research'. [1]	2	No explicit reference to the source is required.  Responses that identify a generic disadvantage with no specific reference to opportunity sampling. [1] For example 'The sample may not be representative so the results cannot be generalised. [1]

Question		Answer	Marks	Guidance
4		<p>1 mark for recognising that a sample is <b>drawn from</b> a wider group (target population). 1 mark for illustrating that the results are <b>applied</b> to this wider population.</p> <p>For example 'The target population is the group of people from whom the sample is drawn [1] so the target population is all the people the psychologist wants to generalise his findings to. [1] 'The target population is the group of people the results are aimed at [1] and the sample is taken from this group.' [1]</p>	2	Allow examples that illustrate that a sample is drawn from a target population.
5	(a)	1 mark for repeated measures.	1	If both boxes are ticked 0 marks.
	(b)	<p>1 mark for identifying an appropriate disadvantage of using a repeated measures design. 1 mark for a contextualised explanation of the identified disadvantage.</p> <p>For example 'A disadvantage of repeated measures is practice effects. [1] As they do the same maths test twice, they may be better at it the second time round (because they've already done it once)'. [1] 'A disadvantage of repeated measures is demand characteristics.' [1] After doing the first test, participants may guess the aim and change their behaviour.' [1]</p>	2	<p>When explaining the disadvantage, candidates should make reference to aspects of the source. By the nature of this question, contextualisation should appear automatically for the second mark. E.g. same participants in each condition.</p> <p>Allow reference to tiredness / boredom / demand characteristics as a disadvantage of repeated measures designs.</p>
6		<p>1 mark for identifying the independent variable as 'printed on green or white paper'. 1 mark for identifying the dependent variable as 'scores on the maths test'.</p>	2	If 2 lines are drawn from either variable to more than one box, 0 marks can be awarded for that variable.

Question	Answer	Marks	Guidance
7	<p>1 mark for identifying a feature of laboratory/field experiments. 1 mark for identifying a comparable feature of field/laboratory experiments.</p> <p>For example 'Laboratory experiments are carried out in artificial environments [1] and field experiments are carried out in a participant's real (natural) environment'. [1]</p>	2	<p>If a candidate provides one feature and the opposite feature, 1 mark rather than 2 should be awarded e.g. 'a laboratory experiment is carried out in an artificial environment whereas a field experiment is not carried out in an artificial environment'. [1]</p> <p>A comparison between the <u>same</u> feature must be apparent to obtain full marks.</p> <p>If the candidate identifies a difference without referring to the types of experiment, award 1 mark rather than 2. For example 'one difference is that one is carried out in real life and one is carried out in an artificial environment'. [1]</p>
8	<p>1 mark for a vague response indicating that using the same maths test was a control / method of standardisation. 2 marks for an elaborated response indicating how or why it acted as a control / method of standardisation (in relation to the IV).</p> <p>For example: 'Using different maths tests would have been an extraneous variable' [1] so we wouldn't know if it was the maths test affecting the scores or the coloured paper'. [1]</p>	2	<p>No specific reference to control is needed. Answers which make implicit reference can be credited.</p> <p>Allow 'fair' or 'standardised' to show control.</p> <p>The elaboration must make reference to how using the same test would allow the researcher to see the effect of the independent variable (coloured paper).</p>
9	1 mark for quantitative (data).	1	If both boxes are ticked 0 marks.
10	<p>1 mark for a vague response indicating that there is a difference in the two sets of scores. 1 mark for an elaborated response clearly indicating the findings.</p> <p>For example 'the mean score on the maths test was higher when it was printed on green paper, [1] so using coloured paper did improve student performance'. [1] 'the mean score</p>	2	<p>The answer must go beyond stating the results to achieve 2 marks.</p> <p>Any elaboration either by results or a conclusion can be credited.</p> <p>Do not credit differences that imply independent groups.</p>

Question	Answer	Marks	Guidance
	on the maths test was higher (43 approximately) when it was printed on green paper than white (30 approximately).' [2]		

Question		Answer	Marks	Guidance
11		<p>1 mark for each correctly identified ethical issue.</p> <p>Consent – the students should agree to take part in the experiment.</p> <p>Confidentiality – the psychologist should protect students' identities when recording the scores on the maths test.</p> <p>Deception – the psychologist should not lie to the students and should tell them the nature of the experiment.</p>	3	
12		<p>1 mark for a vague answer or a partially correct response. 1 mark for an accurate explanation of what an extraneous variable is.</p> <p>For example 'An extraneous variable is a variable that is not the independent variable [1] that could affect the results of the investigation if it is not controlled.' [1] 'An extraneous variable is a variable that you are not testing [1] that can affect the results.' [1]</p>	2	<p>The question asks candidates to explain, so mere examples of extraneous variables are not creditworthy.</p> <p>Responses that suggest extraneous variables '<b>cannot</b> be controlled' are not credit worthy.</p>
13	(a)	<p>1 mark for recognising this hypothesis predicts no difference. 1 mark for including both variables in a clear statement.</p> <p>For example: 'There will be no difference [1] in the levels of addiction between males and females'. [1] or 'There will be no gender differences [1] in addiction to computer games'. [1]</p>	2	<p>A response that is an aim/question/correlation/relationship is capped at 1 mark.</p> <p>For 2 marks the hypothesis must be a <u>null</u> hypothesis.</p> <p>Allow gender difference as IV. Allow addiction as DV.</p> <p>NB: hypotheses can be phrased in either the present or future tense, but <u>not</u> the past tense.</p> <p>If both no difference and a correlation/relationship are given, marks are capped at [1].</p>

Question			Answer	Marks	Guidance
13	(b)	i	<p>1 mark for giving a question that could be used in this questionnaire (the question can be open or closed).</p> <p>For example, 'how many hours do you spend a day playing computer games?' [1]</p>	1	<p>Closed questions do not need to include a set of responses to gain credit.</p> <p>The question should focus on gender or computer (video) games.</p>
13	(b)	ii	<p>1 mark for briefly explaining why the type of question was chosen.</p> <p>1 mark for an elaborated explanation of why this type of question was chosen.</p> <p>For example 'I would get quantitative data [1] which means I can put the data into a graph / calculate the mean (time spent playing computers)'. [1] 'I would get numerical data [1] and so I can compare the data more easily' [1] 'I would get qualitative data [1] so I get in-depth information about their thoughts on computer games.' [1]</p>	2	<p>Refer back to 13(b)i.</p> <p>Reference to type of question only = 0 marks. For example, 'I would use a closed question' as the focus of the question is on <u>why</u>.</p>
	(c)		<p>1 mark for an attempt to describe how the investigation would be done. For example, 'I would write a questionnaire with 10 questions asking people about playing computer games and I would give it to 10 males and 10 females from my school.'</p> <p>2 marks for describing a reasonable feasible procedure For example, 'I would write a questionnaire with 10 questions asking people about how much time they spent playing computer games and I would give it to 10 males and 10 females from my school. I would use a rating scale with different timings like 0-2 hours, 2-4 hours 4-6 hours a week.'</p> <p>3 marks for describing, in some detail within the time constraints, a feasible procedure. For example, 'I would write a questionnaire with 10 questions asking people about how much time they spent playing computer games and I would give it to 10 males and 10 females from my school. I</p>	3	<p><b>NB: Refer back to 13(b) i &amp; ii and to 13(f) before marking this question to check for repetition.</b></p> <p>The question is on <b>how</b> not why so justifications are not creditworthy.</p> <p>No marks can be awarded for descriptions of question types or examples given in the previous question. <b>Although if a closed question is given in 13(b) i and no set of responses (i.e. rating scale) is given, this can be credited in this question.</b></p> <p>No marks can be awarded for descriptions of how data would be presented as this is credited in question 13 (f).</p> <p>Credit any feasible features of the design not already asked for in other questions. For example:</p>

Question		Answer	Marks	Guidance
		would use a rating scale with different timings like 0-2 hours, 2-4 hours 4-6 hours a week. I would gain their informed consent first and assure them that I wouldn't use their names for confidentiality'.		<ul style="list-style-type: none"> <li>• Sample/target population</li> <li>• Sampling technique</li> <li>• Examples of questions not previously credited</li> <li>• Administration of the questionnaire</li> <li>• Piloting the questionnaire</li> <li>• Details of ethical guidelines followed</li> <li>• Details of controls</li> <li>• How data would be collected and/or analysed.</li> </ul> <p>If the answer reads like a list (e.g. simple identification of features) marks are capped at 2.</p> <p>If there is no mention of males / females / gender marks are capped at 2 (but reference to gender would not get credit alone).</p>
13	(d)	<p>Social desirability is when participants give answers that they think the researchers want to hear/make themselves appear in a positive light, rather than give their true answers.</p> <p>1 mark for a vague response which states that social desirability is where participants may lie in questionnaires.</p> <p>1 mark for an accurate description of social desirability which includes reference to participants giving answers they think the researchers want to hear/they believe society expects of them.</p> <p>1 mark for placing the answer in context of the investigation in the source.</p> <p>(For example, 'social desirability is when participants do not give true answers [1], it may be a problem in questionnaires as the participant may guess the aim of the investigation and so try to fit their answer in line with what the researcher is investigating [1], so participants may tell the researcher that they spent less time playing computer games than they</p>	3	If there is no reference to the source (un-contextualised), marks are capped at 2.

Question		Answer	Marks	Guidance
		really do.' [1] 'Social desirability is where the participants answering the questionnaire do not give their honest answer [1], they give the answer they think makes them look good [1], so in this study they may say that they don't play computer games very often'. [1]		
	(e)	1 mark for the identification of a generic strength of using a questionnaire. 1 mark for explaining <b>why</b> it is a strength in <b>their</b> investigation.  For example, 'One strength of using questionnaires is they are standardised [1], so everyone is asked the same questions on computer games.' [1] 'Questionnaires are normally quick and easy to administer [1] because lots of people are able to complete the questionnaire at the same time.' [1]	2	Generic strengths of questionnaires, not contextualised can be awarded 1 mark e.g. 'questionnaires are often answered more honestly than interviews.' [1]  <b>NB: refer back to 13(b)i, 13(b)ii, 13(c)</b> and do not double credit for repetition.  For example, if 'quantitative data' has been credited in 13(b)ii, it cannot be re-credited in 13(e).  The strength identified must not contradict the candidate's previous responses. For example, if the candidate has used closed questions in 13(b)i and 13(c) and then puts their strength as gathering qualitative data, this is not creditworthy.
13	(f)	1 mark for identifying a means of presenting the data. 1 mark for illustrating how it could work for this investigation. (For example, 'I would put the data in to a bar chart. [1] That way I would be able to see if males spend more time playing computer games than females.' [1]	2	For full marks reference to an analysis / comparison of gender difference is required. Allow implicit references, for example 'I would draw a bar graph [1] with one bar for males and one for females.' [1]  Focus is on the presentation of data, not how they would analyse it.  The method of presentation must not contradict data. For example, a pie chart using mean scores is not creditworthy, but a pie chart using percentages is.

Question			Answer	Marks	Guidance
					Presenting data in a scattergraph is not creditworthy.

**OCR (Oxford Cambridge and RSA Examinations)**  
1 Hills Road  
Cambridge  
CB1 2EU

**OCR Customer Contact Centre**

**Education and Learning**

Telephone: 01223 553998

Facsimile: 01223 552627

Email: [general.qualifications@ocr.org.uk](mailto:general.qualifications@ocr.org.uk)

[www.ocr.org.uk](http://www.ocr.org.uk)

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