

**Psychology**

General Certificate of Secondary Education **B543**

Research in Psychology

**Mark Scheme for June 2010**

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## Section A – PLANNING, DOING AND ANALYSING RESEARCH

## The Source

Question Number	Expected Answer	Marks	Rationale
1	<p><b>Give the aim of the study in the source.</b></p> <p>1 mark for 'to investigate whether there are <b>gender</b> differences in the levels of aggression shown by primary school children' or similar response</p>	<b>[Max mark 1]</b>	
2	<p><b>State an alternate hypothesis for this study.</b></p> <p>1 mark for identifying that this hypothesis predicts a difference            1 mark for the accurate identification of <i>both</i> variables            (eg 'There will be a difference [1] in the number of verbal and physically aggressive acts shown by males and females' [1] or 'Boys will show more verbal and physical aggression [1] than girls' [1])</p> <p>Must be a statement, not a question or an aim.</p>	<b>[Max mark 2]</b>	<p>Allow 'levels of aggression' as a measure of the DV</p> <p>Comparison between genders is needed for full marks</p>
3 (a)	<p><b>The psychologist used an opportunity sample.</b></p> <p><b>Describe <u>one</u> weakness of using an opportunity sample for this study.</b></p> <p>1 mark for a weakness of the opportunity sampling method            1 mark for illustrating the weakness in context of this investigation            (eg 'A weakness of the opportunity sampling method is that it is biased [1], the teacher could have chosen the 6 boys who she knew were more aggressive and 6 girls who she knew weren't' [1]. Or, 'one weakness is that such a small sample of children will not be representative [1] so you cannot generalise to all children [1]) or similar response.</p>	<b>[Max mark 2]</b>	

## Section A – PLANNING, DOING AND ANALYSING RESEARCH

## The Source

Question Number	Expected Answer	Marks	Rationale
3 (b)	<p><b>State <u>one</u> other sampling method the psychologist could have used other than opportunity sampling.</b></p> <p>Random or self selected sampling (volunteer) are the most likely alternative possibilities</p>	[Max mark 1]	Allow: quota, systematic and stratified sampling
4	<p><b>Using the data in the source, give the mean number of physically aggressive acts that were shown by the boys.</b></p> <p>1 mark for '25'</p>	[Max mark 1]	
5	<p><b>State one finding of the study in the source.</b></p> <p>1 mark for <b>one</b> of the following:</p> <p>Boys were found to be more verbally and physically aggressive than girls Boys were much more physically aggressive than girls Girls and boys use similar amounts of verbal aggression, Males were more aggressive than females, or similar responses</p>	[Max mark 1]	<p>Comparison between males and females <b>or</b> between physical and verbal aggression.</p> <p>Do not allow a repeat of the number of aggressive acts</p>
6	<p><b>The psychologist used quantitative data rather than qualitative data. State what quantitative data is.</b></p> <p>1 mark for recognising that quantitative data is numerical. Opposites can still be awarded credit, for example 'data that is not descriptive, or does not use words'</p>	[Max mark 1]	Allow 'digits'

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Question Number	Expected Answer	Marks	Rationale
7	<p>The researcher used an observation. One other method he could have used is an interview.</p> <p><b>Outline one weakness of the interview method.</b></p> <p>1 mark for a brief, unexplored answer such as ‘the interviewer may be biased’ or ‘it is hard to analyse the results’ 2 marks for a detailed response (eg ‘answers may be biased [1] by the way the interviewer asks questions [1], or ‘participants may give the answers they think the interviewer wants to hear[1] and so they will be untruthful’ [1], or ‘participants may give answers they think are socially acceptable [1] rather than truthful because they want to appear in a positive light to the interviewer’ [1], ‘results may be hard to analyse [1] because they will be words from what has been said rather than numbers which can be put into a graph’. [1])</p>	<p><b>[Max mark 2]</b></p>	
8	<p><b>The study raises a number of ethical issues. Look at the diagram below. Draw a line to match each ethical issue to its correct definition.</b></p> <p>1 mark for each of the following:</p> <p>Informed consent = Participants should agree to taking part in a study  Withdrawal = Participants know that they can leave the study at any time  Confidentiality = Participants have the right to expect that information they provide will not be given to others</p>	<p><b>[Max mark 3]</b></p>	

## Section A – PLANNING, DOING AND ANALYSING RESEARCH

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Question Number	Expected Answer	Marks	Rationale
9	<p><b>The psychologist carried out a covert observation. Explain the difference between a covert and overt observation.</b></p> <p>1 mark for identifying a feature of a covert observation.            1 mark for identifying a feature of an overt observation.            1 mark for identifying a separate distinction between the two types of observations.</p> <p>(eg 'In covert observations, the participants do not know they are being watched [1], whereas in overt observations they do [1]. If participants know they are being watched, they may behave differently'. [1])</p>	<b>[Max mark 3]</b>	
10	<p><b>The psychologist used a non-participant observation. Describe one strength of a non-participant observation.</b></p> <p>Non-participant observation is where the researcher sets up but does not take part in the observational study. They observe participants at a distance. Strengths include the observer being less likely to be influenced by the group so research data could be seen as being more objective, and the researcher can use more aids for recording information as the researcher is not hiding his or her role.</p> <p>1 mark for the identification of a strength that pertains to non-participant observations            1 mark for elaboration/answers that describe the strength; saying why it is a strength</p> <p>(eg 'one strength of non-participant observations is that the researcher can record the behaviour as it happens [1] because they are not actually part of the observation, they are just watching from a distance' [1], or 'one strength of non-participant observations is that the researcher can be more objective [1] because he isn't actually taking part in the research himself, he is just observing other people's behaviour' [1])</p>	<b>[Max mark 2]</b>	<p>Allow responses from a participant's point of view with regard to the presence of another, in a participant observation, potentially leading to changes in the participant's behaviour.</p> <p>Do not credit environmental / context changes (i.e. ecological validity).</p>

## Section A – PLANNING, DOING AND ANALYSING RESEARCH

## The Source

Question Number	Expected Answer	Marks	Rationale
11 (a)	<p><b>Outline what is meant by the term inter-rater reliability.</b></p> <p>This is where more than one observer is analysing and measuring the behaviour being studied, and where they are all interpreting the behaviour in the same way.</p> <p>1 mark for answers that show an understanding of reliability <b>unrelated</b> to observations (for example, ‘inter-rater reliability means it is consistent or the same each time’).</p> <p>2 marks for an answer which explains reliability in context of observational research (eg ‘inter-rater reliability is where all observers are watching for the same thing and recording it in the same way’).</p>	<b>[Max mark 2]</b>	For full marks the response must relate to observations / watching behaviour.
11 (b)	<p><b>Explain how inter-rater reliability could have been achieved in this study.</b></p> <p>1 mark for recognising that training observers in recording the behaviour is the most appropriate way of achieving inter-rater reliability.</p> <p>1 mark for a response that describes how inter-rater reliability could be achieved in context of this investigation.</p> <p>(for example ‘observers could be trained before the experiment on what they are looking for’ [1] so they all record the same behaviour in the playground [1], or, ‘the children could be video recorded playing in the playground [1] and the observers could analyse and interpret the results from watching this, or they could use it to check their observations’. [1])</p>	<b>[Max mark 2]</b>	The focus is on <i>how</i> inter-rater reliability could be achieved, do not credit definitions of inter-rater reliability here.

## Section A – PLANNING, DOING AND ANALYSING RESEARCH

## The Source

Question Number	Expected Answer	Marks	Rationale
12	<p><b>Explain what is meant by <i>gender bias</i> in research.</b></p> <p>1 mark for vague answers or for responses which do not encompass the whole concept (eg 'this is where men are seen as better than women' or 'this is where women are seen as inferior and less important than men').</p> <p>2 marks for an accurate definition which encompasses the entire concept (i.e. gives a balanced view of how men and women's behaviour is seen). (eg 'Gender bias is where differences between men and women are exaggerated [1]. Generally male behaviour is seen as the norm and female behaviour as inferior or abnormal when it is just different'. [1])</p> <p>NB: No marks for answers that repeat the question (eg 'gender bias is when psychologists are biased towards one gender').</p>	<p><b>[Max mark 2]</b></p>	<p>Allow responses that refer to favouring one gender, but for 2 marks, the answer needs to encompass the entire concept. Do allow examples which illustrate the entire concept.</p>
<b>Section A Total</b>		<b>[25]</b>	



## Section B – Planning and Investigation

Question Number	Expected Answer	Marks	Rationale
13 (a)	<p><b>State a null hypothesis for your investigation.</b></p> <p>1 mark for recognising this hypothesis predicts no difference.            1 mark for correctly identifying the variables (eg 'there will be no difference [1] in the task performance of people completing the task with background noise or in silence' [2]).</p> <p>NB: For full marks, a null hypothesis must be given.            Responses must be a statement not a question or an aim.</p>	<b>[Max mark 2]</b>	Accept 'performance' as a measure of the DV
13 (b)	<p><b>Identify who you would use as your participants and give one reason why you would choose them.</b></p> <p>1 mark for identifying a group of participants.            1 mark for explaining why that particular group of participants was chosen.</p> <p>(eg 'I would use a class of students at my school as my participants [1] as I could do the experiment on all of them at once [1] or 'I would use friends and family as my participants [1] as it would be quick and easy'. [1])</p>	<b>[Max mark 2]</b>	<p>Justification can be related to either the way the sample is drawn (i.e. quick and easy) or to the IV (noise and silence).</p> <p>A specific group must be identified, however, credit can be awarded for the justification if it fits the sample identified even if the sample is too vague for credit. For example stating men and women as the participants = 0 marks, choosing men and women to avoid differences in gender = 1 mark.</p>

## Section B – Planning and Investigation

Question Number	Expected Answer	Marks	Rationale
13 (c)	<p><b>Briefly outline how you would carry out an experiment to investigate whether noise affects task performance.</b></p> <p>1 mark for identification of the how the independent variable would be manipulated. (eg 'I would get people to complete a task in silence and then with noise in the background like music playing'.)</p> <p>2 marks for describing a reasonable feasible procedure. (eg 'I would get my participants to complete a word search in silence and then with music playing. I would time how long it took them to finish the word search. I would then compare them to see if the music group were slower'.)</p> <p>3 marks for describing, in some detail within the time constraints, a feasible procedure. (eg 'I would get a group of participants and divide them into two groups. I would ask group one to complete a word search in their own time whilst they sat in a room in silence. I would then ask group two to complete the same word search in their own, but this time I would play loud music to them whilst they did it. I would then compare the two groups to see who completed the task the quickest'.)</p>	<b>[Max mark 3]</b>	<p>The focus should be on <i>how</i>, not <i>why</i>. No credit for description of sample as asked for previously.</p>

## Section B – Planning and Investigation

Question Number	Expected Answer	Marks	Rationale
13 (d)	<p><b>Explain one control you would use in this investigation.</b></p> <p>1 mark for identifying a feature of the experiment or environment that could potentially distort the results (an extraneous variable). Up to 2 additional marks for a description/explanation of how the variable would be controlled in this investigation.</p> <p>(eg 'the time of day could affect performance [1], some people will perform better in the morning than in the afternoon[1], so I would make sure all my participants completed the task at the same time of day'[1] or 'the type of task could affect how well people do on it [1], some people are better at doing word searches anyway [1] so I would make sure all my participants took part in both the silent and music condition [1] to avoid these individual differences affecting the results' or 'gender differences may occur [1] as girls may better at completing my task than boys [1] so I would make sure I had a similar number of boys and girls in both of my groups'. [1])</p> <p>NB: If just a definition of a control in research is given, a max of 1 mark can be awarded.</p>	<p><b>[Max mark 3]</b></p>	
13 (e)	<p><b>Describe one ethical issue you would have to consider when investigating the effects of noise.</b></p> <p>1 mark for identifying a relevant ethical issue to the study of noise. 2 marks for explaining why the ethical issue is relevant to investigating stress.</p> <p>(eg 'one ethical issue is protection [1], loud noise may hurt some people's ears or give them hearing problems' [1], or 'protection [1], some people may feel stupid if they cannot do the task you have set'. [1])</p>	<p><b>[Max mark 2]</b></p>	<p>Allow definitions of ethical issues.</p>

## Section B – Planning and Investigation

Question Number	Expected Answer	Marks	Rationale
13 (f)	<p><b>Describe one weakness of using an experiment in this investigation</b></p> <p>1 mark for the identification of a limitation of the experimental method.            1 mark for explaining why it is a limitation.            1 mark for describing the limitation in context of this investigation.</p> <p>(eg 'one limitation of using an experiment is you might get demand characteristics [1] because participants may pick up on cues and guess what is being tested [1] in this investigation they may work out that the effect of noise is being measured, especially if they take part in both conditions' [1] or 'one limitation of the experiment is it lacks ecological validity [1] this means the task participants do can be very artificial [1] just because people have more trouble completing a task when music is playing does not mean they will have trouble in real life'. [1])</p>	<b>[Max mark 3]</b>	
	<b>Section B Total</b>	<b>[15]</b>	
	<b>Paper Total</b>	<b>[40]</b>	

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