

Cambridge International AS & A Level

PSYCHOLOGY**9990/21**

Paper 2 Research Methods

October/November 2025**MARK SCHEME**Maximum Mark: 60

Published

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	Generic mark
    	Used to show Level 1, 2, 3, 4, or 5 in the 10-mark planning Q
	Not answering question

Annotation	Meaning
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	Something is missing
   	Used for each point of description of a required feature in the 10-mark planning Q

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1	A researcher is conducting an observation to investigate the study habits of students. The observation uses a fixed list of behavioural categories.	
1(a)	Explain whether this observation is structured or unstructured. 1 mark for explanation of why it is structured • Structured <u>because</u> there is a fixed list of behavioural categories; • Structured <u>because</u> only set observations will be recorded;	1
1(b)(i)	Suggest <u>two</u> behavioural categories that the researcher could use to observe the study habits of students. Suggestion must be an <u>observable/measurable</u> category of student study habits = 1 [x2] • time spent working; • frequency of using books; • note taking; • Use of flashcards • Studying alone • Study with others • Studying whilst listening to music • Studying whilst doodling.	2

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Question	Answer	Marks
1(b)(ii)	For <u>one</u> of the behavioural categories, you suggested in part (b)(i): Suggest <u>one</u> methodological problem with using this category to observe the study habits of students. Suggestion = 1 Link = 1 One problem with ‘number of books used’: • The category may be underestimated/miscategorised; (suggestion) • As a book could be on their phones/iPad (link) One problem with ‘note taking/doodling’: • Difficult to operationalise; (suggestion) • When does one ‘note’ end and the next one start/as it’s difficult to state what is meant by a note/doodle/picture; (link) One problem with studying whilst listening to music • The category may be underestimated/miscategorised; (suggestion) • as they may be listening to music on their headphones which the researcher will not hear/the researcher may assume they are listening to music if they are wearing headphones (and they are not) (link) One problem with studying with others/alone. • The category may be underestimated/overestimated (suggestion) • As they may be talking about things with others that are not to do with studying/ they may seem to be studying alone but they are actually studying together using electronics (link).	2

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Question	Answer	Marks
2	In the study by Saavedra and Silverman (button phobia), imagery exposure was investigated. During this, the boy reported a ‘severity rating’ for distress at three different ‘time frames.’	
2(a)	State what was meant by the time frames 1, 2 and 3. Two out of three correct time frames = 1 All three correct time frames = 2 Just one correct = 0 • Time frame 1: before (imagery exposure/therapy) session; • Time frame 2: midway through (imagery exposure/therapy) session; • Time frame 3: after the (imagery exposure/therapy) session;	2
2(b)	Outline the change in severity rating from time frame 1 to time frame 3 when the boy had to imagine hundreds of buttons falling on his body. Outline of change = 1 the boy’s (distress) rating decreased over time/from timeframes 1-3	1

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Question	Answer	Marks
3	The study by Hölzel et al. (mindfulness and brain scans) used participants who wanted to reduce their stress and were able to have an MRI scan. There were several other inclusion criteria (reasons for being included in the sample).	
3(a)	Outline <u>two</u> other inclusion criteria. Inclusion criterion = 1 (x2) • not taking any medications; • Physically and psychological healthy • no meditation classes in the past six months; • no more than 4 classes in the past 5 years, or 10 classes in lifetime; • 25-55 years old; • commitment to attend all classes; • commitment to do homework; • No contraindications for MRi scanning such as metal implants/claustrophobia. • All right-handed	2

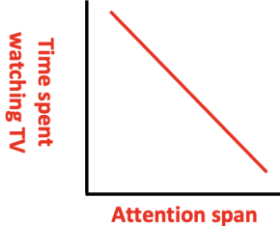
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Question	Answer	Marks
3(b)	For each of the inclusion criteria outlined in part (a): Suggest why each inclusion criterion was important in this study, other than to ensure that the experimental and control groups were similar. <i>Reason for criterion = 1 (x2)</i> <i>not taking any medications:</i> • symptoms could reduce even without mindfulness; • <i>no meditation classes in the past six months:</i> • Classes could obscure brain changes due to study's intervention/IV / MBSR; ensure that the changes were due to the current MBSR and not the previous ones <i>no more than 4 classes in the 5 years/ 10 in life:</i> • Could obscure brain changes due to study's intervention / MBSR; • <i>25-55 years old:</i> people • younger/older adults could have brain differences/impairments.; • <i>commitment to attend classes/do homework:</i> • otherwise, difficult to tell if MBSR was cause; <i>No contraindications for MRI scanning</i> • As metal implants may cause harm to the participants <i>Right handedness</i> • To ensure that the differences were not due to differences in brain lateralisation.	2

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Question	Answer	Marks
4	The study by Baron-Cohen et al. (eyes test) used an independent measures design.	
4(a)	Explain <u>one</u> strength of using an independent measures design. Strength = 1 Detail/link = 1 Less chance of demand characteristics (than RM); (strength) • Because the Ps only see one level of the IV; (detail) Can be used to study fixed/pre-existing groups; (strength) • As participants could not be both AS and control; (detail) Eliminates the chance of order effects (strength) • Because the Ps only see one level of the IV; (detail)	2
4(b)	Explain <u>one</u> weakness of using an independent measures design. Weakness = 1 Detail/link = 1 Hard to control the effect of individual differences; (weakness) • Which would be a confounding variable which affects the DV (other than the IV); (detail) • e.g. the AS/HFA group might have had less experience with people than the controls; (link) You will need a bigger sample for IM than RM (weakness) • which may be more difficult especially if it's a hard-to-find sample (detail) • this may lead to rising costs for the researcher which may lead to a smaller sample (and lower generalisability) (detail)	2

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Question	Answer	Marks
5	Sketch a graph on the axes in Fig. 5.1 to show a negative correlation between ‘time spent watching television’ and ‘attention span’. You <u>must</u> label the axes. Axis labels (both, either way round) = 1 Negative correlation (line/points) = 1 	2

Question	Answer	Marks
6	Describe measures of central tendency, using any example(s). 1 mark for each definition/point of detail, up to a maximum of 2 for each term/concept. 1 mark for each example, max 2 for each term/concept (up to a maximum of 4). Examples can include examples from any studies (core studies, other studies, candidate's own studies). Max 4 if no examples or if only about one term/concept. Only 1 example needed to access 6 marks. Measures of central tendency: - Way to find typical / average of data set / single number to describe the data; (description) - e.g. mean / median / mode; (description) <i>description of how to calculate mode = 1 (max)</i> <i>description of how to calculate median = 1 (max)</i> <i>description of how to calculate mean = 1 (max)</i> Examples Andrade mean of monitoring/number names recalled; (core study) Bandura mean aggression scores; (core study) Baron-Cohen mean eyes test/AQ/IQ/age; (core study) Dement & Kleitman mean nightly awakenings/sleep time; (core study) Fagen mean offers by elephants on each behavioural task/ mean percent correct (pass rate) for all elephants for all tasks; median passing scores given for behaviours in sequences (core study) Hassett mean total time and mean frequency with plush and wheeled toys for males and females / mean dominance rank; Hölzel means from MBSR: homework time/body scan practice/yoga/ sitting meditation; Milgram mean percent students saying Ps would reach 450V / mean and mode for interview of How painful?/ Perry means of IRI/empathy score/percent distances in CID and choosing rooms for OT and placebo groups; Piliavin mean number of people per car / people in critical area / number of comments (for white v Black, Cane v Drunk, before v after 70 sec)/ mean and median latencies); Pozzulo mean correct identifications (for human v cartoon, adult v child);	6

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Question	Answer	Marks
7	Professor March is interested in interpersonal distance. He has met Dennis, who needs a large interpersonal distance. Dennis has agreed to Professor March conducting a case study about him using a questionnaire.	
7(a)	Suggest why Dennis may prefer Professor March to use a questionnaire rather than a face-to-face interview. Suggestion = 1 • Professor March would need to be too close; • Dennis does not need to be in the same room as Professor March; • Because Dennis may get distressed/nervous about Professor March being too close for a face-to-face interview.	1
7(b)	Suggest <u>two</u> examples of questions that Professor March could use to collect data about the need Dennis has for a large interpersonal distance. Description = 1 x2 e.g. Describe what people you cannot tolerate close to you; e.g. Describe why you cannot tolerate people close to you; e.g. How do you feel when someone gets close to you? e.g. Rate how you felt when we met 0 (okay) to 5 (bad); e.g. Use a (paper-based) CIDS; mark on lines for comfortable interpersonal distance;	2

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Question	Answer	Marks
7(u)	Suggest <u>one</u> problem that Professor March could have when using a questionnaire to study Dennis. Identification of problem = 1 (i.e. linked) Detail = 2 (generic or linked) • Prof March may need to hand him the questionnaire; (problem) • Which could make him uncomfortable /nervous; e.g. (detail) • and affect his responses on to the questions; (detail) • reducing validity; (detail) • Dennis won't like being given paper for the CIDs; (problem) • Because it could make them uncomfortable /nervous; (detail) • This could affect his responses on the task; (detail) • reducing validity; (detail) • It may be more may make it more likely that Dennis will give socially desirable answers; (problem) • especially given the topic area is sensitive as it is about not wanting to get close (detail) • and the researcher does not see the body language so won't know they are lying (unlike face-to-face interview) (detail)	3

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Question	Answer	Marks
8	Dr East is observing children playing. She is a participant observer. The children have met Dr East before and believe she is a playground assistant who watches them when their teachers have lunch.	
8(a)	Suggest <u>one</u> strength of using participant observation in this study. Suggestion of strength = 1 Link (to play) = 1 ‘Can get close to /interact with the children (strength) • So is more likely to understand their play/games; (link) She will be aware of the children’s mood; (strength) • She will know whether they are enjoying playing/games; (link) She can approach the children; (strength) • So can see what they are playing with; (link) She can easily talk to the children; (strength) • So can ask the children what they are playing; (link)	2

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Question	Answer	Marks
8(b)	Suggest <u>one</u> advantage of Dr East using a non-participant observation compared to a participant observation. Suggestion of advantage of non-participant = 1 Linked (to play) detail/justification = 1 The children will be unaware she is there; (advantage) • So, their play/games will be more natural; (link) There is distance between the researcher and the children/the researcher does not get involved in the situation (advantage) • So, their play/games will be more natural (link) She could use a video to record the children's behaviour; (advantage) • Which she can use to accurately analyse the children's play (link) She could use a second observer; (advantage) • Which means comparisons can be made to ensure they have the same results about children's play (link)	2
8(c)	Explain <u>one</u> ethical problem caused by the children believing that Dr East is a playground assistant. Explanation of problem = 1 Detail = 1 • They are being misled / lied to (because they are told she is a playground assistant); (problem/detail) • Deception; (problem/detail) • So cannot give consent; (detail)	2

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Question	Answer	Marks
9	Dr Okami is using animals in an experiment to study the effects of noise on learning. In this study, the animals will learn to run through narrow tunnels and will meet other animals. Each animal will <u>either</u> run through the tunnels with noise <u>or</u> run through the tunnels without noise.	
9(a)	Explain whether the experimental design of Dr Okami's study is repeated measures or independent measures. Explanation of why independent measures = 1 (generic or specific) (Independent measures) because each animal only does one level of the IV/ either with or without noise (not both); (explanation)	1
9(b)	The independent variable is 'with noise or without noise' and the dependent variable is 'learn to run through the tunnels'. Define what is meant by the terms 'independent variable' and 'dependent variable'. Independent variable Dependent variable Generic definition of IV = 1 Generic definition of DV = 1 Marks are for definitions, not examples Independent variable is manipulated by the researcher to create two (or more) different conditions/levels; Dependent variable is measured to see effect of IV;	2
9(c)	Dr Okami needs to follow ethical guidelines in relation to animals.	
9(c)(i)	Dr Okami will use reinforcement to help the animals to learn to run through the narrow tunnels. Suggest <u>one</u> way that the animals could be reinforced. Your answer <u>must</u> be ethical. Way to reinforce = 1 - Deprivation then a reward; - Food; - Water; - Treat	1

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Question	Answer	Marks
9(c)(ii)	Dr Okami needs to follow the guideline of ‘species’. Explain <u>two</u> ways that Dr Okami’s choice of animal will be affected by following this guideline. Explanation = 1 (x2) link to stem = 1 (x2) Choose a small animal/do not choose a large animal; (explanation re. guideline) - as tunnels are narrow / animals need to pass; (link to stem) Choose a social species/animal; (explanation re. guideline) - as the animals will meet/might be aggressive; (link to stem)	4
9(c)(iii)	Dr Okami needs to follow the guideline of ‘minimising harm’. Suggest why this guideline is relevant to Dr Okami’s study. Suggestion = 1 Second suggestion or detail = 1 - Noise could be distressing / cause pain; - Other social animals could be distressing / cause pain;	2

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Question	Answer	Marks
10	Dr Aster is interviewing people about their exciting experiences. He is interested in people's feelings about different types of exciting experience.	
10(a)	Describe how Dr Aster could conduct a study using an interview to investigate people's feelings about different types of exciting experience. Do <u>not</u> describe sample/sampling technique or ethical issues/guidelines in your answer. To mark Q10(a), create four 'imaginary columns' down one margin, using one column for each of the four required features. Tick each feature (tick-a, tick-b, tick-c, tick-d) when it appears, then underline the letter [✓]_a) for detail. Use L1, L2, L3, L4, L5 at the end of the response to indicate the level. Use the table below to mark candidate responses to this question. The four required features for this interview are: (a) format: (description of structured/unstructured/semi-structured) (b) question format (open / closed questions, fillers/quantitative/qualitative) (c) examples of questions (at least two) (d) question scoring / interpretation (e.g. use of numerical scoring / measures of central tendency / analysis of qualitative data)	10

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Question	Answer		Marks
10(a)	Level	The response:	
	Level 5 9-10 marks	- has all the required features, all with <u>detail</u>, with mostly appropriate terminology. AND <i>clearly applies</i> knowledge of methodology involved in planning an investigation.	
	Level 4 7–8 marks	- has all the required features, but only some of these with <u>detail</u>, with some appropriate terminology. AND <i>applies</i> knowledge of methodology involved in planning an investigation.	
	Level 3 5–6 marks	- has some of the required features with <u>detail</u> / all of the required features with no detail, and some appropriate terminology. AND <i>applies a basic</i> knowledge of methodology involved in planning an investigation.	
	Level 2 3–4 marks	- has at least two of the required features, with little appropriate terminology. AND <i>attempts</i> to use knowledge of methodology involved in planning an investigation.	
	Level 1 1–2 marks	- has one of the required features and uses little appropriate terminology. AND - makes a <i>limited attempt</i> to use knowledge of methodology involved in planning an investigation, e.g. may not use the method required by the question.	
	0 marks	No creditable response.	
	Other appropriate responses should also be credited.		

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Question	Answer	Marks
10(b)	For <u>one</u> part of the procedure, you described in (a):	
10(b)(i)	Describe <u>one</u> practical/methodological strength of this part of the procedure. Do <u>not</u> refer to sampling or ethics in your answer. Identification of practical strength of one part of the procedure= 1 explanation (generic or linked) = 1 Part of procedure may relate to: • operationalisation / a specific question content • question content / a specific question content • question format / a specific question format • controls / a specific control Accept other practical influences on validity or reliability	2
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Annotation	Meaning
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	Something is missing
   	Used for each point of description of a required feature in the 10-mark planning Q

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Question	Answer	Marks
1(a)	Outline what is meant the term ‘fatigue effect’. Outline = 1 • Poor performance due to repetition; • <u>Worse scores/performance declines</u> due to boredom;	1
1(b)	Suggest one fatigue effect that could have occurred in the study by Hölzel et al. (mindfulness and brain scans). Linked suggestion = 1 • Bored with mindfulness exercises (and stopped / not try as hard); • Stopped doing the homework (before end of study);	1

Question	Answer	Marks
2	Data can be qualitative or quantitative.	
2(a)	Outline what is meant by ‘qualitative data’. Outline = 1 • Data that is descriptive / in depth / detailed / gives insight;	1

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Question	Answer	Marks
2(b)	Describe the qualitative data that was collected from <u>one</u> of the following studies: • Milgram (obedience) • Piliavin et al. (subway Samaritans). Identification of qualitative data from Milgram/Piliavin = 1 Detail/second ID = 1 (example of comments, how data used) Milgram: • What people said about feelings when shocked; (ID) • How people reacted (verbally) when they shocked the learner (ID) • What people said after about (not) regretting having participated; (ID) • For example, “I do not think this is humane” (detail/example) Piliavin: • Comments people made about the victims; (identification) • Saying they were scared of the drunk/that they were not strong enough to help; (detail)	2

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Question	Answer	Marks
3	In the study by Fagen et al. (elephant learning) behaviours such as ‘trunk here’, ‘trunk up’ and ‘bucket’ were recorded using a structured observation. Explain <u>one</u> strength of using a structured observation in this study. Strength = 1 (generic or linked) Detail = 1 (generic or linked) The response <u>must be linked</u> at least once (either in the strength or detail) to earn full credit (2 marks) Improved reliability (inter or intra-observer); (generic strength) - As observations such as the two trunk positions can be compared to ensure that both agreed (linked detail) Observers would not get distracted by the elephant’s other behaviour/only focus on the elephant behaviours that are relevant to the study; (linked strength) - Making the observations more valid; (generic detail)	2

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Question	Answer	Marks
4	In the study by Pozzulo et al. (line-ups):	
4(a)	There was a sample of children and a sample of adults. In both samples there were some males and some females. Suggest why it was important that <u>both</u> males and females were present in <u>both</u> samples. Suggestion for why both genders = 1 Detail / suggestion for why both groups = 1 Suggestions • Males and females might differ in their recall/ response to social factors / knowledge of cartoons; (suggestion for both genders) • It could hide the effect of age / difference between adults and children (if there were more/less males/females in one group); (why both groups) • It will mean that you are able to generalise to males and females” Detail • This would be a confounding factor / would affect the DV; (detail) • As males and females may react differently to the situation (and therefore you need to have both to ensure that is measured/can apply the results to both) (detail)	2
4(b)	The standard deviation for the age of the adults was larger than the standard deviation for the age of the children.	
4(b)(i)	Describe what is meant by a ‘standard deviation’. Basic outline = 1 Detail = 1 <u>No link to the study needed for full marks.</u> • A measure of spread / variation / dispersion = 1 • (calculated as) the (average) difference from the mean = 1 • A measure a spread/variation (looking at difference) from the mean = 2	2

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Question	Answer	Marks
4(b)(ii)	Explain <u>one</u> reason why the standard deviation for the age of the adults was larger than the standard deviation for the age of the children. Simple explanation = 1 Detailed explanation = 2 There <u>must be a link</u> for full marks • The spread of age in the adults was greater than the spread in children; (explanation) • Because the children had to be young, so aged <u>4–7</u>, whereas there are decades of adulthood; (justification)	2

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Question	Answer	Marks
5	Describe semi-structured interviews and unstructured interviews, using any example(s). 1 mark for each definition/point of detail, up to a maximum of 2 for each term/concept. 1 mark for each example, max 2 for each term/concept. Examples can include examples from any studies (core studies, other studies, candidate's own studies). Max 4 if no examples or if only about one term/concept. Only 1 example needed to access 6 marks. interviews generally: • self-report / a way to ask the participant questions directly; • face-to-face/ telephone/ real time; • can include open and closed questions (can be credited only once in response); • Milgram used interviews to debrief his participants after the main study had finished. • Pozzulo et al. used interviews with the children. semi-structured: • interviews follow some set/fixed questions; • the interviewer can add some questions in response to the participant's responses; • can include open and closed questions (can be credited only once in the response); Examples • e.g. Dement and Kleitman used a semi-structured interview when asking participants a fixed question about whether they dreamed or not = 1 (brief example) • Dement & Kleitman asked all Ps whether they had had a dream and if they did, they would follow up and ask them more questions about each dream = 2 (detailed example) • Saavedra and Silverman used interviews with both the boy and his mother = 1 (brief example) • Saavedra and Silverman used interviews with both the boy and his mother to ensure that the boy met the criteria for a diagnosis with a specific phobia = 2 (detailed example) unstructured: • interview does not have set questions; • questions follow on from participant's answers; • so, the interviewer can pursue lines of interest/thought; • can include open and closed questions (can be credited only once in the response); • Saavedra and Silverman asked the boy and mother about stressful life events that may have triggered the onset of the phobia.	6

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Question	Answer	Marks
6	Dr Raj is conducting a case study to investigate an elderly man, who he refers to as ‘Mr J’, who has an exceptional memory.	
6(a)	Dr Raj is considering the ethics of his study.	
6(a)(i)	Explain <u>one</u> ethical reason Dr Raj refers to his participant as Mr J. Reason: confidentiality = 1 [definitive] Linked explanation of reason = 1 confidentiality; (guideline) - Because Mr J/the elderly man should not be identifiable; (link) - His memories might make him recognisable; (link)	2
6(a)(ii)	Mr J can recall most of his life events, including negative ones. Explain the ethical guideline Dr Raj should follow when studying Mr J because he can remember negative life events. Reason: Protection from (psychological) harm = 1 Linked explanation/detail of reason = 1 Protection from (psychological) harm; (guideline) - Because negative events are distressing; (linked detail) - Mr J may become upset by his negative memories; (linked detail) Right to withdraw (guideline) - Because if he feels uncomfortable talking about negative events he can choose to leave (linked detail) Privacy (guideline) - Because negative life events may be very personal and he may not want to disclose them (linked detail)	2

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Question	Answer	Marks
6(b)	Dr Raj wants to triangulate his data. Explain what is meant by triangulation, using Dr Raj's study as an example. Explanation (generic/linked) = 1 Detail/link = 1 To get 2 marks there must be a link to the study. Using more than one technique to collect data (can be both between or within methods); (explanation) • To check Dr Raj gets the same findings about memory; (link) • Dr Raj could use interviews and a questionnaire; (link) • Dr Raj could use a questionnaire and then use open questions to gain qualitative data and also ranked-scale questions to gain qualitative data	2
6(c)	Explain <u>two</u> weaknesses of case studies. Explanation = 1 [×2] Detail (may be linked or generic) = 1 [×2] <i>One participant so low generalisability of findings; (weakness)</i> • Especially as they tend to focus on rare instances; (generic detail) • As case studies tend to be of one person/group (who have unique characteristics) (generic detail) • Not even all exceptional people will be the same as Mr J; (linked detail) <i>Researcher gets to know participant well/forms an attachment with the participant (weakness)</i> • This may lead to the researcher writing down responses that make the participant 'look good'/ignoring any wrong answers the participants give (generic detail) <i>After working with them intensely, participants will get to know the researcher well/like the researcher leading to high social desirability; (weakness)</i> • The P tries to 'look good' as the researcher's opinion will matter to them; (linked detail) <i>As the study is in depth the participant may get to know a lot about study; (weakness)</i> • This may lead to demand characteristics such as Mr J trying really hard to remember; (linked detail) Ethical issues are also creditworthy i.e. distress/confidentiality/ right to withdraw	4

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Question	Answer	Marks
7	Lorna has noticed that children often talk to their toys. She thinks this may be related to the children's vocabulary size (how many words they know). Lorna is planning a correlational study to investigate whether there is a relationship between how often a child talks to their toys and the child's vocabulary size.	
7(a)	Suggest <u>one</u> way that Lorna could measure a child's vocabulary size. Way to measure vocabulary size = 1 • Observe/ count different words used; • Observe /how many/frequency different words used (in 1 hour); • Count number of different words used in school exercise book; • Listen to them talking, count how many different words used;	1
7(b)	Lorna must ask the children and their parents/guardians for consent to participate in her study.	
7(b)(i)	Explain why it is important to ask <u>both</u> the children and their parents/guardians for consent in this study. Explanation = 1 (understand study AND agree) Link to both children and parents (likely to be partly implicit) = 1 <i>Consent allows participants to (have enough information to) understand the study and agree to it; (explanation)</i> • (Parents must agree as) children cannot give valid consent; (link) • As children can't fully understand / too young (so need parents too); (link)	2

Question	Answer	Marks
7(b)(ii)	Suggest <u>one</u> suitable way that Lorna could ask for consent from the children. Suggestion of a child friendly generic request/question asking for consent = 1 Suggestion of a child friendly way of asking for consent linked to the study = 2 - Asking them if they agree to join/take part in a study using simple language (generic suggestion) = 1 - Asking them if they agree to join/take part in a study (generic suggestion) and then show them a child friendly video about what they will be doing with the toys/words (linked detail) = 2 - Will you come and talk to me for a while then play with the toys?' (linked suggestion) = 2 Would you like to come and play a game word game with me and my toys? (linked suggestion) = 2 - Lorna could show them a child friendly video with children playing happily with toys and then ask them if they agree to do the same = 2	2
7(c)	Lorna finds a positive correlation. She concludes that vocabulary size in children is increased by talking to toys more often. Explain why this conclusion is <u>not</u> correct. Generic/linked Explanation = 1 Generic/linked detail = 1 (response must be linked at least once for full 2 marks) <i>She cannot say it is a causal relationship; (generic explanation)</i> - Therefore, she could only conclude that vocabulary size and number of toys are related; (linked detail) <i>A third factor could affect both vocabulary and talking play; (linked explanation /detail)</i> - e.g. parenting could affect both vocabulary and talking play; (linked detail)	2

Question	Answer	Marks
8	Dr Chand is going to measure how much adults want to participate in social activities, such as team sports or attending a festival.	

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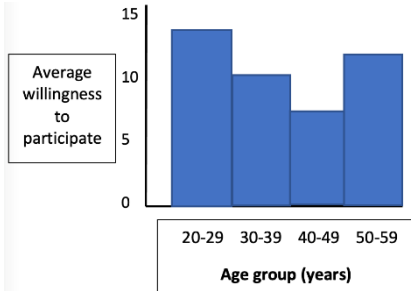
Question	Answer	Marks
8(a)	Dr Chand wants to collect <u>quantitative</u> data about how much adults want to participate in social activities. He can use the methods of questionnaires or interviews. Suggest <u>two</u> ways that Dr Chand could collect this data using one or both of these methods. 1. ... 2. ... Suggestion = 1 [×2] Answer does not have to produce a score out of 15 to earn credit, the ‘total’ in the Q could be a composite score. • A (closed) question ‘How likely are you join in social activities, on a scale (of 0 (I wouldn’t) to 15 (I definitely would))’; • An (open) question ‘Describe how much you like or dislike joining in with social activities’ and score the answer (on a scale of 1–15);	2
8(b)	For <u>one</u> of the ways of collecting data you suggested in part (a):	

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Question	Answer	Marks
8(b)(i)	‘Explain <u>one</u> way this method of collecting data is valid. Strength = 1 Detail = 1 <i>Questionnaire:</i> <i>Can be done online/through the post (strength);</i> • Therefore, if they are embarrassed about not joining in, they may be more honest (detail); • unlike interviews which may be face to face and subject to social desirability bias (leading to less honest answers) (comparative detail) <i>Interview:</i> <i>Can explain the nature of the question if the participant does not understand (strength);</i> • whereas a questionnaire can only help with general printed instructions (leading to answers not related to the aim) (comparative detail) • means that the response given will be directly related to the question asked/the information the researcher wants to find out (detail). <i>Closed Q:</i> <i>Quantitative data is achieved so easy to analyse/is more objective; (strength)</i> • Can just produce a score that can be averaged/comparisons can be made between different groups i.e. ages (detail) • meaning it is not subject to researcher bias or interpretation (lowering validity); (detail) <i>Open Q:</i> <i>Allows opportunity to give individual/detailed responses; (strength)</i> • So, people with different reasons/feelings can express themselves more allowing a greater insight into their feelings; (detail)	2

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Question	Answer	Marks
8(b)(ii)	Explain <u>one</u> way this method of collecting data is not valid. <i>Weakness = 1</i> <i>Detail = 1</i> <i>Questionnaire:</i> <i>Ps may not understand the questions being asked (weakness);</i> - Whereas an interviewer would be able to explain (comparative detail) - meaning that the responses given may not be directly related to the question asked (general detail); <i>Interview:</i> <i>If the interview is face to face the Ps might lie/may give socially desirable answers (weakness);</i> - e.g. as they may want to appear more sociable as they feel this is more socially acceptable; <i>Closed Q:</i> <i>Limits responses (to a number/to fixed choices); (weakness)</i> - Ps may want to say ‘in situation X I would be willing’; (detail) - Meaning that the questionnaire answers may not have the choice that is more relevant to the desired answer for the participant (detail) <i>Open Q:</i> <i>The scoring of a response is subject to the interpretation by researcher; (weakness)</i> - Comments may imply willingness and therefore they may give it a higher score, but that is not what the participant meant; (detail)	2

Question	Answer	Marks															
8(c)	When Dr Chand conducts his study, he gives each adult a score out of 15 for how much they want to participate in social activities. He divides the adults into four different age groups and finds an average willingness to participate score for each group. These averages are shown in Table 8.1. <table border="1"><thead><tr><th></th><th colspan="4">Age groups (years)</th></tr><tr><th></th><th>20–29</th><th>30–39</th><th>40–49</th><th>50–59</th></tr></thead><tbody><tr><th>Average willingness to participate score</th><td>14</td><td>10</td><td>7</td><td>12</td></tr></tbody></table> Plot a suitable graph of Dr Chand’s data. You <u>must</u> label the axes. Can achieve marks for any of the following but <u>max 3 if the bars are not touching even if heights are correct.</u>  x-axis label: ‘Age group (in years)’; = 1 x-axis units: 20–29 etc; = 1 y-axis label: willingness to participate; = 1 y-axis units: numbers up to at least 14; = 1 bar heights correct and touching		Age groups (years)					20–29	30–39	40–49	50–59	Average willingness to participate score	14	10	7	12	4
	Age groups (years)																
	20–29	30–39	40–49	50–59													
Average willingness to participate score	14	10	7	12													

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Question	Answer	Marks
9	Dr Gul is investigating whether people focus their attention more on brightly coloured advertisements than on less brightly coloured advertisements. He is planning to conduct a field experiment on a train.	
9(a)	Describe how Dr Gul could conduct a field experiment to investigate the effect of colour brightness on how much train passengers focus their attention on advertisements. Do <u>not</u> describe sample/sampling technique or ethical issues/ guidelines in your answer. To mark Q10(a), create four 'imaginary columns' down one margin, using one column for each of the four required features. Tick each feature (tick-a, tick-b, tick-c, tick-d) when it appears, then underline the letter a () for detail. Use L1, L2, L3, L4, L5 at the end of the response to indicate the level. Use the table below to mark candidate responses to this question. The four required features for this field experiment are: (a) <u>independent variable</u>: (ads bright v dull coloured) (b) <u>dependent variable</u>: (attention: operationalisation) (c) <u>controls/standardisation</u>: (advert size/content on the advert/time of day/route of the train. At least two) (d) <u>experimental design</u>: (probably independent measures/ knowledge of what this means)	10

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Question	Answer		Marks
9(a)	Level	The response:	
	Level 5 9–10 marks	- has all the required features, all with <u>detail</u>, with mostly appropriate terminology. AND <i>clearly applies</i> knowledge of methodology involved in planning this investigation.	
	Level 4 7–8 marks	- has all the required features, but only some of these with <u>detail</u>, with some appropriate terminology. AND <i>applies</i> knowledge of methodology involved in planning this investigation.	
	Level 3 5–6 marks	- has some of the required features with <u>detail</u> / all of the required features with no detail, and some appropriate terminology. AND <i>applies a basic</i> knowledge of methodology involved in planning this investigation.	
	Level 2 3–4 marks	- has at least two of the required features, with little appropriate terminology. AND <i>attempts</i> to use knowledge of methodology involved in planning this investigation.	
	Level 1 1–2 marks	- has one of the required features and uses little appropriate terminology. AND - makes a <i>limited attempt</i> to use knowledge of methodology involved in planning this investigation, e.g. may not use the method required by the question.	
	0 marks	No creditable response.	
	Other appropriate responses should also be credited.		

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Question	Answer	Marks
9(b)	Explain <u>two</u> strengths of the study you described in part (a). Do <u>not</u> refer to sampling or ethics in your answer. Identification of strength = 1 (x2) explanation (generic or linked) = 1 (x2) Part of procedure may relate to: • operationalisation • situational / participant variables factors • controls • design / counterbalancing Accept other practical influences on validity	4

Cambridge International AS & A Level

PSYCHOLOGY**9990/23**

Paper 2 Research Methods

October/November 2025**MARK SCHEME**Maximum Mark: 60

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **23** printed pages.

PUBLISHED**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

PUBLISHED**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

PUBLISHED**Social Science-Specific Marking Principles
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require n reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

2 Presentation of mark scheme:

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

PUBLISHED**3 Calculation questions:**

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

4 Annotation:

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	Correct point
	Incorrect point
BOD	Benefit of doubt
REP	Repetition (of stem or within response)
	Unclear point
GM	Generic mark
L1 L2 L3 L4 L5	Used to show Level 1, 2, 3, 4, or 5 in the 10-mark planning Q
NAQ	Not answering question

Annotation	Meaning
	Acknowledge blank pages
	Something is missing
   	Used for each point of description of a required feature in the 10-mark planning Q

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Question	Answer	Marks
1(a)	Define what is meant by ‘counterbalancing’. Outline = 1 - Counterbalancing is) having two groups of Ps who do tasks / conditions / levels of the IV in opposite orders; (definition) - When one group do condition A then condition B the other do condition B then condition A (ABBA)	1
1(b)	Outline <u>one</u> reason why counterbalancing is important in experiments. Reason for importance = 1 To reduce order effects; (importance)	1

Question	Answer	Marks
2	State whether the hypothesis ‘attention will be better when eating than when not eating’ is a: directional hypothesis non-directional hypothesis null hypothesis. Correct choice = 1 [definitive] - directional hypothesis	1

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Question	Answer	Marks
3	In the study by Fagen et al. (elephant learning), there were several stages to the training process.	
3(a)	Explain why there was no fixed length of time for the elephants' training. Basic explanation = 1 (can be generic) Detail = 1 (Response must contain a link for 2 marks) <i>Individual differences; (generic explanation)</i> • one had to be retrained because she preferred saline (to water); (linked detail) • All elephants will have different learning rates / different needs (linked detail) • the trainers knew the elephants, so learning time was tailored towards their elephant; (detail)	2
3(b)	Some behavioural tasks were more difficult than others for the elephants to learn. This difference in difficulty was called 'relative difficulty' in the study. Explain how Fagen et al. measured relative difficulty. Basic explanation = 1 (can be generic) Detail = 1 (Response must contain a link for 2 marks) <i>Total number of offers/cues which had to be given (to pass a behavioural test); (basic explanation)</i> • The average of the totals for all the elephants was used; (detail) • 'Average number of offers/cues' = only 1 mark	2

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Question	Answer	Marks
4	Hölzel et al. (mindfulness and brain scans) measured changes in mindfulness using the 39-item five facet mindfulness questionnaire (FFMQ).	
4(a)	Explain <u>one</u> strength of measuring the change in mindfulness in this way. Strength = 1 (generic or specific) Linked detail = 1 • High (internal) reliability; (generic strength) • Produced objective/quantitative data (generic strength) • Five subscales are consistent with each other; (specific strength) • Meaning that a P with high score on one scale would have a high score on the others; ORA (specific detail) • Meaning that the scores before and after the study can be easily compared/analysed to see whether scores had risen (specific detail)	2
4(b)	Explain <u>one</u> weakness of measuring the change in mindfulness in this way. Weakness = 1 (generic or specific) Linked detail = 1 (generic or specific) Weakness (It's a questionnaire) so people might lie / give socially desirable answers; (generic weakness) Fatigue effect; (generic weakness) 39 questions items is a lot, Ps might get bored; (specific weakness) Practice effect; (generic weakness) Detail • So, their answers to the questions may not reflect their level of mindfulness lowering validity; • So, they might not answer the questions at the end of the questionnaire/ towards the end of the study; • People might give the same answers about mindfulness even when they are more / less mindful;	2

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Question	Answer	Marks
5	In the study by Piliavin et al. (subway Samaritans), there were two types of victim who collapsed on the train.	
5(a)	Describe three ways that the two types of victim differed. Identification of difference = 1 [x3] Difference can be implicit. • One was 'drunk' whereas one was 'ill' • One carried a (black) cane whereas one carried a bottle (in a brown bag) • One smelled of liquor/alcohol whereas one appeared sober.	3
5(b)	Explain why it was important that there were also similarities between the two types of victim. Explanation = 1 Detail = 2 (can be 1 or 2 further suggestions) Needs at least one link to the study for all three marks. <i>Standardisation / control / to limit confounding variables; (explanation)</i> • so, differences were only due to the IV; (generic explanation /detail) • so, the victims looked like ordinary passengers; (linked detail) • to ensure other trials (e.g. model) were consistent; (linked detail)	3

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Question	Answer	Marks
6	Describe open questions and closed questions, using any example(s). 1 mark for each definition/point of detail, up to a maximum of 2 for each term/concept. 1 mark for each example, max 2 for each term/concept. Examples can include examples from any studies (core studies, other studies, candidate's own studies). Max 4 if no examples or if only about one term/concept. Only 1 example needed to access 6 marks. Open questions: - allow participants to choose own response; (1 for definition) - produce more detailed/ in depth / descriptive / qualitative data; (1 for detail) - open questions are interpreted researchers / are subjective; (1 for detail) Examples - answers to 'Describe/Explain ...' (1 for example) Dement & Kleitman 'where participants were instructed to describe the content of the dream.' (1 for example) Closed questions: - only allows P to choose from a limited number of options; (1 for definition) - closed questions produce quantitative/ numerical data; (1 for detail) - closed questions tend to be more objective /less subjective; (1 for detail) Examples - answers to 'How many times on a scale of 1–10 ...' (1 for example) - Eyes test choices in Baron-Cohen; (1 for example)	6

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Question	Answer	Marks
7	Pedro is conducting a study about children’s interest in different types of objects. He has objects for children to explore, including picture books and toy bricks. Pedro is recording which objects children choose and for how long they interact with those objects.	
7(a)(i)	Pedro wants to add more objects and is considering plush (soft) toys, wheeled toys, noisy toys and balls. Explain why <u>two</u> of these objects could interest children. Your two answers must be different. Explanation of interest to children = 1 Soft/animal toys: • They could cuddle them / they are comforting/feel soft and warm. ; Noisy toys: • More stimulating than noiseless toys; Wheeled toys: • More stimulating because move; (allow only once) Balls: • More stimulating because move; (allow only once) • They could play social games / games with others;	2

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Question	Answer	Marks
7(a)(ii)	Suggest <u>one</u> reason why <u>one</u> of the objects named in part (a)(i) may <u>not</u> interest the children. Explanation of lack of interest to children= 1 Link = 1 <i>Soft/animal toys:</i> • The soft toy reminds them of bedtime (link); • So they would not find them stimulating <i>Noisy toys:</i> • They might be scared of the noise (link) • So they will not go near them; <i>Balls:</i> • Some children may be introverted; • Which means that they do not want to play with the balls; (link) <i>Wheeled toys:</i> • The girls may see cars/trucks as 'boys' toys (link) • And therefore, not be interested in playing them.	2
7(b)	Suggest how Pedro could tell the children that they have the right to withdraw from his study in a way that they will understand. Suggestion of generic offer of withdrawal = 1 (e.g. a statement) Suggestion of children friendly way of offering withdrawal linked to the study = 2 • Telling them they can leave the study (generic suggestion) = 1 • Telling the children that they don't have to stay in the room and play with the toys (linked suggestion) = 2 • Saying that 'You can stop playing with the toys and go home if you want to' = 2 • Saying 'You don't have to stay and play with the toys if you don't want to' = 2	2

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Question	Answer	Marks														
7(c)	Pedro tests two children using a choice of picture books, toy bricks and one other object. He collects data about how long each child interacts with the objects. Draw a table that Pedro could use to collect this data. You <u>must</u> label the rows and columns of your table. Row heading 'Object'/'toy' (type) = 1 Row categories of 'object' minimum picture books, toy bricks, 'other object' (abstractly or named) = 1 Column heading 'Duration of interaction (with object)' = 1 Column categories of Participants = 1 There are several acceptable table layouts, row/column layout can be reversed. <table border="1"> <tr> <th rowspan="2">Object (e.g.)</th><th colspan="2">Duration of interaction</th></tr> <tr> <th>Participant 1</th><th>Participant 2</th></tr> <tr> <td>Picture books</td><td></td><td></td></tr> <tr> <td>Toy bricks</td><td></td><td></td></tr> <tr> <td><i>Any other object</i></td><td></td><td></td></tr> </table>	Object (e.g.)	Duration of interaction		Participant 1	Participant 2	Picture books			Toy bricks			<i>Any other object</i>			3
Object (e.g.)	Duration of interaction															
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Question	Answer	Marks
8	Dr Bakar is investigating the effect of boredom on people's estimation of time. Her participants were separated into two groups, and did different activities: Group A watched an exciting film (non-boring activity) Group B moved small boxes from one pile to another (boring activity). Both activities lasted 30 minutes. Each participant was asked to estimate how long the activity had lasted.	
8(a)	Outline the dependent variable in Dr Bakar's study. Outline of dependent variable = 1 Operationalisation = 1 - Estimation of time; (DV) = 1 (Estimation of) how long the activity lasted; (operationalisation) = 2	2
8(b)	Dr Bakar is concerned about possible differences between individuals in Group A and Group B that could affect the validity of her study.	
8(b)(i)	Suggest why <u>two</u> possible differences between individuals in Group A and Group B could lower validity. Suggestion of difference in participant variables = 1 [×2] Why = 1 [×2] - Watch more films / more interested in films; (suggestion) - Likely to get involved (so time passes faster); (justification) - Do box moving type job / shelf stacker; (suggestion) - Even more bored so time moves extra slowly; (justification) - Better at timing; (suggestion) - Better timing when bored / in box condition; (justification) - It may be that one person really likes moving boxes/stacking shelves more than another (suggestion) - So they really get involved in the task (so time passes more quickly)	4

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Question	Answer	Marks
8(b)(ii)	For <u>one</u> of the differences you suggested in part (b)(i): Suggest how Dr Bakar could change her study to improve validity. <i>Suggested change = 1</i> <i>Detail (e.g. how to achieve / how it helps) = 1</i> <i>Watch more film/enjoys moving boxes:</i> • Use a questionnaire to match Ps; (suggestion) • Then used matched pairs, one in each condition; (how it helps) <i>Shelf stacker:</i> • Randomly allocate people to conditions; (suggestion) • so not all shelf stackers in one group; (detail) <i>Better at timing:</i> • Do a timing test first (and allocate accordingly); (suggestion) • So differences due to IV/activity not timing ability; (detail)	2
8(c)	Dr Bakar includes a control group in her study.	
8(c)(i)	Suggest a suitable control group for Dr Bakar's study. <i>Suggestion of control group = 1</i> • No activity; • A boring film; • Moving exciting things about;	1

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Question	Answer	Marks
8(c)(ii)	Explain why the control group you suggested in part (c)(i) is suitable. Explanation of control group = 1 <i>No activity:</i> • Time estimation might be the same as for boring; • This will give a baseline to compare to the exciting/boring groups. <i>A boring film:</i> • Any difference might be due to vision/movement not boredom; • Because that would remove the confounding variable of film preference. <i>Moving exciting things about:</i> • Any difference might be due to excitement (not vision or movement);	1

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Question	Answer	Marks								
9	Daniel is investigating the effect of childhood experiences on adult food preferences. He asked adult participants to taste one food item. He counted the number of participants who liked this food item who had: • a positive childhood experience of that food item • a negative childhood experience of that food item • no childhood experience of that food item.									
9(a)	Total numbers of participants who liked the food item <table><thead><tr><th>Childhood experience of the food item</th><th>Total numbers of participants who liked the food item</th></tr></thead><tbody><tr><td>Positive</td><td>10</td></tr><tr><td>Negative</td><td>3</td></tr><tr><td>No</td><td>7</td></tr></tbody></table> A graph of Daniel's results is shown in Fig. 9.1.	Childhood experience of the food item	Total numbers of participants who liked the food item	Positive	10	Negative	3	No	7	
Childhood experience of the food item	Total numbers of participants who liked the food item									
Positive	10									
Negative	3									
No	7									
9(a)(i)	Name the type of graph in Figure 9.1. Name = 1 Bar chart / Bar graph [definitive]	1								
9(a)(ii)	Suggest <u>one</u> conclusion from Daniel's results. Conclusion = 1 • Early food experiences affect later liking; • Positive early experiences with a food increases later liking; • Negative early experiences with a food decreases later liking; • No early experience with the food produces greater liking than negative early experiences;	1								

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Question	Answer	Marks
9(b)	Suggest <u>one</u> problem with validity that Daniel may have because he is only using adults in his study, other than generalisability. Problem = 1 (can be generic) Detail of effect on validity = 1 <i>Adults may not remember early experiences; (problem)</i> • So may not miss out positive/negative experiences; (detail) • So (may lie and) create experiences they did not have; (detail) Low generalisability / low representativeness = 0 [NAQ]	2

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Question	Answer	Marks
10	Liam is a young man who is unusually good at focussing his attention on many types of stimuli, such as sights or sounds.	
10(a)	Describe how a researcher could conduct a case study to investigate Liam’s unusual ability to focus his attention. Do <u>not</u> describe ethical issues / guidelines in your answer. To mark Q10(a), create four ‘imaginary columns’ down one margin, using one column for each of the four required features. Tick each feature (tick-a, tick-b, tick-c, tick-d) when it appears, then underline the letter () for detail. Use L1, L2, L3, L4, L5 at the end of the response to indicate the level. Use the table below to mark candidate responses to this question. The four required features for this <u>case study</u> are: (a) <u>details about the participant / unit</u> (exceptional attention, male, age, how found, other info e.g. from parents, teachers/coworkers) (b) <u>content of information collected</u>: (e.g. depth/detail: e.g. attention span (time), associated with different stimuli, effect of boredom etc.) (c) <u>two or more techniques for data collection</u> (observation, interview him, interview parents/teachers/coworkers – at least two) (d) <u>analysis / interpretation / triangulation</u>: (description of how data used: qualitative and/or quantitative) Other appropriate responses should also be credited.	10

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Question	Answer		Marks
10(a)	Level	The response:	
	Level 5 9–10 marks	- has all the required features, all with <u>detail</u>, with mostly appropriate terminology. AND <i>clearly applies</i> knowledge of methodology involved in planning an investigation.	
	Level 4 7–8 marks	- has all the required features, but only some of these with <u>detail</u>, with some appropriate terminology. AND <i>applies</i> knowledge of methodology involved in planning an investigation.	
	Level 3 5–6 marks	- has some of the required features with <u>detail</u> / all of the required features with no detail, and some appropriate terminology. AND <i>applies a basic</i> knowledge of methodology involved in planning an investigation.	
	Level 2 3–4 marks	- has at least two of the required features, with little appropriate terminology. AND <i>attempts</i> to use knowledge of methodology involved in planning an investigation.	
	Level 1 1–2 marks	- has one of the required features and uses little appropriate terminology. AND - makes a <i>limited attempt</i> to use knowledge of methodology involved in planning an investigation, e.g. may not use the method required by the question.	
	0 marks	No creditable response.	
	Other appropriate responses should also be credited.		

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Question	Answer	Marks
10(b)	Explain how <u>two</u> features of the procedure you described in part (a) help to make the study valid. Do <u>not</u> refer to ethics in your answer. Identification of = 1 × 2 explanation (generic or linked) = 1 × 2 Part of procedure may relate to: • operationalisation • data collection techniques • triangulation Accept other practical influences on validity	4