

Cambridge International AS & A Level

PSYCHOLOGY**9990/43**

Paper 4 Specialist Options: Application and Research Methods

May/June 2026**MARK SCHEME**Maximum Mark: 60

Published

This mark scheme contains the instructions and marking guidance that our examiners used to mark candidate responses for this component.

Before they start marking, examiners complete a standardisation process. They review a range of candidate responses and discuss the mark scheme in detail to agree which answers can and cannot be accepted. Examiners award marks where it is clear that candidate responses have met the requirements of the mark scheme. These requirements may vary between different components or different versions of the same component, depending on the exact requirements of the question and the candidate responses seen during the standardisation process.

Sometimes, our mark schemes may allow marks to be awarded to responses which contain elements that are factually incorrect or for content not covered by the syllabus. We do this in response to the demands of a specific question to support candidates and make sure that our assessments are fair. However, these allowances should not be used as a guide for teaching and learning.

We cannot discuss the mark scheme with schools, and we recommend that schools read the mark scheme together with the assessment material and the Principal Examiner Report for Teachers.

This document consists of **37** printed pages.

General marking principles

All examiners must apply these marking principles when marking candidate responses.

1	Examiners must award marks for each response in line with: - the specific content defined in the mark scheme - the specific skills defined in the mark scheme or in the level descriptions - the standard of response required as exemplified by the standardisation scripts.
2	Examiners must award whole marks (not half marks, or other fractions).
3	Examiners must award marks positively . This means that: - marks are not deducted for errors or omissions - marks are awarded for correct / valid answers as defined in the mark scheme and also for other valid answers which go beyond the scope of the syllabus and mark scheme referring to your team leader as appropriate - the quality of spelling, punctuation and grammar are judged only when the mark scheme indicates that these features are specifically assessed in the question. However, the meaning of all responses must be unambiguous.
4	Examiners must consistently apply the requirements of the mark scheme and any rules for what to do when candidates have not followed instructions correctly.
5	Examiners must use the full range of marks defined in the mark scheme, unless limited by the quality of the candidate responses seen.
6	Examiners must award marks according to the mark scheme and must not award marks with grade thresholds or grade descriptions in mind.

**Social Sciences-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).

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
	Answer unclear
NOM	Used in the 10-mark planning Q in Section B to indicate wrong method
E	Used in the 10-mark planning Q in Section B to indicate ethics included
NAQ	Not answering question
SEEN	
	Supportive point
B	Used in the 10-mark planning Q in Section B to indicate bullet point included
NE	Used in the 10-mark planning Q in Section B to indicate no ethics included

Generic levels of response marking grids**Table A: AO2 Application**

The table should be used to mark the 10 mark 'Plan a study' questions (9, 10, 11 and 12).

Level	Description	Marks
5	The response: • uses an appropriate method as required by the question. • describes a good range of appropriate method-specific features with accurate detail. • describes a good range of appropriate general methodological features with accurate detail. • shows very good understanding and the plan is coherent and is sufficient for replication. • clearly applies knowledge of psychological methodology and terminology involved in planning a study. • Uses and shows good understanding of ethical guidelines.	9–10
4	The response: • uses an appropriate method as required by the question. • describes a range of appropriate method-specific features in detail. • describes a range of appropriate general methodological features with some in detail. • shows good understanding and the plan is coherent. • applies knowledge of psychological methodology and terminology involved in planning a study. • uses ethical guidelines appropriately.	7–8
3	The response: • uses an appropriate method as required by the question. • describes a range of appropriate method-specific features although these may lack detail. • describes some general methodological features although these may lack detail. • shows limited understanding and the plan has some coherence. • applies some knowledge of psychological methodology and terminology involved in planning a study. • refers to ethical guidelines.	5–6
2	The response: • uses an appropriate method as required by the question. • identifies (lists) some appropriate method-specific features. • identifies (lists) a limited range of appropriate general methodological features. • shows little understanding and the plan would be difficult or impossible to replicate. • makes some attempt to apply knowledge of psychological methodology and terminology involved in planning a study. • ethical guidelines listed or absent.	3–4

Level	Description	Marks
1	The response: • may not use the method required by the question. • may not answer the question set. • identifies a few general and / or method-specific features and detail is limited. • shows very little understanding and the plan would be impossible to replicate. • makes a limited attempt to apply knowledge of psychological methodology and terminology involved in planning a study.	1–2
0	• No response worthy of credit. • The candidate describes the study listed on the syllabus. • The plan is unethical.	0

Question	Answer	Marks
1	From the key study by Oruč et al. (1997) on mood (affective) disorders:	
1(a)	Describe the procedure of this study. Syllabus: 1.2.2 Explanations of mood (affective) disorders: depressive disorder (unipolar). Key study on association analysis of genetics of depressive disorder: Oruč et al. (1997). Marks: Award 4 marks for a detailed description decreasing to 1 mark for a partial description. Could be 1 mark for each different feature identified or 2 marks for 2 features with detail. Answers may include (<u>other appropriate responses to be credited</u>): • Participants interviewed and diagnosis confirmed. Completed SADS-L (Schedule for Affective Disorders). • Interviewed about first degree relatives (family history). • Medical records checked, they have bipolar disorder type 1 (BP1). • Data checked by a second psychiatrist. • Blood test taken: 5-HTR2c alleles and 5-HTT.	4
1(b)	Suggest <u>one</u> way in which the validity of this study could be tested. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for reason identified but not applied. Note: does not need identification of type of validity for 2 marks. Answers may include (<u>other appropriate responses to be credited</u>): • Temporal validity (generalised to a different time period / tested over time) (1 mark): people with 5-HTR2c alleles and 5-HTT alleles should have them for life (+1 mark). • Criterion validity (measure compared with another measure) (1 mark): genetic data received could be compared with what is said in the clinical interview and / or with what is in the case notes (+1 mark). • Predictive validity to see if the measure can predict a future outcome (1 mark): this is what the key study is all about (+1 mark).	2

Question	Answer	Marks
1(c)	Explain <u>two</u> strengths of using biological measures to study the genetics of depression. Marks: Up to 2 marks for each strength. Award 2 marks for an appropriate strength stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: • Biological measures provide objective (with explanation such as ‘factual’ data) (1 mark) so family relationships can be known (+1 mark). • The test is reliable (same test repeated on every person) (1 mark) so accurate data on genes / DNA / alleles for every person (+1 mark). • The measure / test is valid (same test for all) (1 mark) when testing 5-HTR2c alleles and 5-HTT (+1 mark). • ‘Biology’ is the same for all humans (1 mark) and so there can be direct comparisons regarding the genetics of depressive disorder such as 5-HTR2c alleles and 5-HTT (+1 mark).	4

Question	Answer	Marks
2(a)	Outline the cognitive explanation of schizophrenia. Syllabus 1.1.2 Explanations of schizophrenia. Psychological (cognitive) explanation. Marks: Award 2 marks for a detailed outline. Award 1 mark for a partial outline. Answers may include the following (<u>other appropriate responses to be credited</u>). General: the cognitive explanation suggests that schizophrenia is a result of ‘dysfunctional / faulty thought processing’ (1 mark) due to specific ‘cognitive deficits’ such as impairments in mental mechanisms, e.g. attention, perception, and self-monitoring (any one +1 mark). Frith (1992): • Central control dysfunction, involving the inability to suppress automatic thoughts and speech, which may lead to disorganized thinking or speech derailment (+1 mark). • Attention-deficit: the inability to filter out irrelevant information, causing sensory overload and misinterpretation of reality (+1 mark). • Dysfunctional thought processing: hallucinations, delusions etc., result from a faulty mental interpretation of the world (+1 mark). • Meta-representation failures: a dysfunction here means patients cannot distinguish between generated internal thoughts and external stimuli, leading to hallucinations and delusions of control (+1 mark).	2
2(b)	Suggest <u>one</u> method that could be used to investigate the cognitive explanation of schizophrenia. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Answers may include (<u>other appropriate responses to be credited</u>): • Observation: covert or overt; structured; non-participant, natural – or any combination of these (1 mark) over a period of time to see how many cognitive features of schizophrenia are evident (+1 mark). • Interview (format and / or technique) (1 mark) where people with schizophrenia are interviewed about their condition (+1 mark). • Questionnaire (format / technique) where open and / or closed questions are used (1 mark); where people with schizophrenia answer questions about their condition (+1 mark). • Case study of one person (1 mark) to see how many cognitive features of schizophrenia are evident (+1 mark). • Experiment where a schizophrenic is exposed to a task or situation (1 mark) and their ‘cognitive features’ are tested (+1 mark).	2

Question	Answer	Marks
2(c)	Explain <u>two</u> weaknesses of the method you suggested in <u>2(b)</u> to investigate the cognitive explanation of schizophrenia. Marks: Up to 2 marks for each weakness. Award 2 marks for an appropriate weakness stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate weakness stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Weaknesses: • Experiment: any weakness of a laboratory experiment or a field experiment (1 mark), e.g. people with schizophrenia might not respond well to being 'investigated' in a laboratory (+1 mark). • Interview: any weakness of a face-to-face or phone or online interview OR type of interview (structured / semi / unstructured) (1 mark), e.g. people with schizophrenia might not respond well to being 'investigated' face-to-face or by phone (+1 mark). • Questionnaire: any weakness of closed or open questions OR type of format (paper / pencil or online or postal) (1 mark); people with 'cognitive deficits' might not answer questions honestly (+1 mark). • Observation: any weakness (about four features of observations) (1 mark); difficult to observe cognitive deficits (+1 mark).	4

Question	Answer	Marks
3	The key study by Snyder and DeBono (1985) on consumer personality and advertising was an experiment with data gathered by telephone interview.	
3(a)	Outline <u>two</u> ways in which the procedure of study three was standardised. Syllabus: 2.5.2 Advertising – consumer interaction. Key study on consumer personality and advertising: Snyder and DeBono (1985). Focus on study 3, specifics of methodology for study 1 and study 2 will not be needed. Marks: Award 2 marks for a detailed outline. Award 1 mark for a partial outline x2. Answers may include (<u>other appropriate responses to be credited</u>): • The whole telephone call followed a script (1 mark) (for the image message or the quality message) (+1 mark). • The instructions that followed the messages were always the same (1 mark) (i.e. the questions and scale) (+1 mark). • The messages (image or quality) were always word-for-word the same (1 mark). • The tone of voice was always the same (the male experimenter) (1 mark). • The gender of the voice was always the same (the male experimenter) (1 mark).	4
3(b)	Suggest how a personality variable might affect advertising strategies, other than the variable of self-monitoring. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Answers may include (<u>other appropriate responses to be credited</u>): • One of the 'big five variables': extraversion, neuroticism, openness to experience, conscientiousness, and agreeableness (1 mark); might lead a person to be more or less open to the influence of advertising (+1 mark). • Brand personality is a set of human characteristics that are attributed to a brand name: excitement, sincerity, ruggedness, competence and sophistication (1 mark). Note: question asks 'how', so identification alone is insufficient. Note: no credit for age or gender.	2

Question	Answer	Marks
3(c)	Explain <u>one</u> strength and <u>one</u> weakness of using a standardised procedure in study three. Marks: Up to 2 marks for each strength and up to 2 marks for each weakness. Award 2 marks for an appropriate strength / weakness stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength / weakness stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: • The same procedure can be replicated many times with different participants (1 mark) resulting in consistent data about personality and advertising being comparable (+1 mark). • Ensures all participants follow the same steps, reducing bias and making results more reliable and replicable (1 mark); related to study (+1 mark). Weaknesses: • Standardising too many procedures could create artificial situations (1 mark); some participants may be suspicious of details in the 'phone call' from the experimenter (+1 mark). • Standardising procedures reduces flexibility (1 mark); researchers could not answer any question the participants might have had about the shampoo (+1 mark). Note: no credit for controls.	4

Question	Answer	Marks
4(a)	Outline <u>one</u> way that people defend their space in a queue. Syllabus: 2.2.3 Consumer behaviour and personal space. Defending place in a queue including nature of intrusion, number of intrusions, social structure of a queue, responses of people queuing, including a study, e.g. Milgram et al. (1986). Marks: Award 2 marks for a detailed outline. Award 1 mark for identification. Answers may include (<u>other appropriate responses to be credited</u>): • Physical action (1 mark) including touching, tugging at the sleeve, tapping the shoulder of the intruder and even pushing the intruder firmly out of the line (+1 mark). • Verbal objection (1 mark) which can be specific to the intruder 'Excuse me, you have to go to the back of the line', or generalised 'Excuse me, it's a line.' (+1 mark). • Non-verbal objections (1 mark) including hostile stares and gestures to the invader to get out of the line (+1 mark).	2
4(b)	Suggest how an intruder might respond to a defensive action by a person in a queue. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Note: question does not specify one way, so two different suggestions can be credited (1 mark each). Answers may include (<u>other appropriate responses to be credited</u>): • The intruder might apologise (1 mark) and go to the back of the line (+1 mark). • The intruder may start to argue with the person (1 mark). • The intruder may become physically aggressive with the person (1 mark) because of their personality or because they think their invasion is legitimate (+1 mark). • The intruder may ignore the person defending the space and push in (1 mark) because they think they are more important / have a legitimate need (+1 mark).	2

Question	Answer	Marks
4(c)	Explain <u>one</u> strength and <u>one</u> weakness of using a face-to-face interview to investigate how people defend their space in a queue. Marks: Up to 2 marks for each strength and up to 2 marks for each weakness. Award 2 marks for an appropriate strength / weakness stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength / weakness stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: • Face-to-face interviews are more ‘personal’; the interviewer can smile and give positive feedback to the person being interviewed (1 mark) and this could lead to the interviewee being more honest about what they say about space invasions (increases disclosure) (+1 mark). • Face-to-face interviews allow researchers to gather information about non-verbal communication by the interviewee (e.g. gesture, posture, facial expression) (1 mark) which might help the interviewer decide whether the answers given about space intrusions are honest or not (+1 mark). Weaknesses: • Face-to-face interviews are more ‘personal’ and the interviewee might feel like they are being ‘interrogated’, feel uncomfortable, and disclose less (1 mark) and this could lead to the interviewee not being honest about what they say about space invasions (+1 mark). • Face-to-face interviews need a location which may be impractical; for people to travel to a laboratory / office or for the researcher to travel to each person individually (1 mark).	4

Question	Answer	Marks
5	From the key study by Savage and Armstrong (1990) on the effect of practitioner style on patient satisfaction:	
5(a)	Outline <u>two</u> reasons why participants were excluded from the study. Syllabus: 3.1.2 Patient and practitioner diagnosis and style. Key study for the effect of practitioner style on patient satisfaction: Savage and Armstrong (1990). Marks: Award 2 marks for a detailed outline. Award 1 mark for a partial outline ×2. Definitive answers (from the study): • Patients under 16 and over 75 were excluded (1 mark). • Patients were excluded if they presented with a life-threatening condition (1 mark). • Patients were excluded if they presented for administrative or preventive measures only (1 mark). • Patients were also excluded if RS (one of the doctors in the study) thought that they were not suitable (1 mark), i.e. they would be upset by taking part in the study or would be incapable of completing a part of it (+1 mark). • Four were excluded because of existing illnesses (1 mark); three had schizophrenia, one had manic depression (+1 mark). • One was excluded for legal reasons (1 mark); one mentally subnormal adult subject to a court protection order (+1 mark). Note: 0 marks for (i) 4 participants declining to participate (ii) 120 participants not completing assessment. These are withdrawing, not being excluded by doctors.	4
5(b)	Suggest <u>one</u> reason why participants were sent a second questionnaire one week after completing the first questionnaire. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Answers may include (<u>other appropriate responses to be credited</u>): • One week is appropriate for people to reflect on their experiences; respond with thought rather than immediate emotional response (1 mark). This means that data gathered will be more appropriate (valid) to consulting style (+1 mark). • A second questionnaire would confirm (or not) what was written on the first questionnaire (1 mark), rather like test-retest reliability (+1 mark). • Questionnaires completed at home are in a more relaxed environment with no pressure of a researcher waiting (1 mark) and so answers are more thoughtful, perhaps honest and so valid (+1 mark). • To test reliability of answers (like test-retest) (1 mark) to see whether preference for one style or other was confirmed (+1 mark).	2

Question	Answer	Marks
5(c)	Explain <u>two</u> strengths of excluding some participants from studies on patient satisfaction. Marks: Up to 2 marks for each strength. Award 2 marks for an appropriate strength stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: • Maintains ethical guidelines (protection from psychological harm) (1 mark); those who had life-threatening illnesses or would be upset or incapable were excluded (+1 mark). • Participants with additional characteristics (participant variables) can interfere with (confound) the study (1 mark); in this instance, three had schizophrenia and one had manic depression which may interfere with judgment of doctor style (+1 mark). • Guards against exploitation of vulnerable people (1 mark); in this instance, one was a mentally subnormal adult subject to a court protection order (+1 mark). Note: 0 marks for (i) 4 participants declining to participate (ii) 120 participants not completing assessment. These are withdrawing, not being excluded by doctors.	4

Question	Answer	Marks
6(a)	Outline the second phase of stress inoculation training. Syllabus: 3.4.3 Managing stress. Preventing stress: three phases of stress inoculation training. Marks: Award 2 marks for an outline. Award 1 mark for identification of stage. Definitive answer: Skill acquisition (or rehearsal) phase (1 mark): • The person is taught skills and techniques such as breathing exercises and relaxation (+1 mark). • Involves raising awareness of anxious self-talk (+1 mark). • Teaches self-statements which help to counter any negative self-statements (+1 mark). • Taught problem solving in stressful situations (+1 mark). • Self-reward for coping with a stressful situation (+1 mark). Note: 0 marks for stage 1: conceptualisation or stage 3: application / follow-through.	2
6(b)	Suggest <u>one</u> closed question that could be asked to test the effectiveness of stress inoculation training. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Answers may include (<u>other appropriate responses to be credited</u>): Any appropriate closed question (1 mark). Any appropriate closed answer format including question and response choices (1 mark). For example: • ‘Has the stress inoculation technique reduced your response to stressful situations?’ (1 mark). • Yes / No / Don’t know (1 mark) OR • 1–5 (very successfully / successfully / perhaps / not really / not at all) (1 mark).	2

Question	Answer	Marks
6(c)	Explain <u>one</u> strength and <u>one</u> weakness of stress inoculation training. Marks: Up to 2 marks for each strength and up to 2 marks for each weakness. Award 2 marks for an appropriate strength / weakness stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength / weakness stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: • SIT focuses on the cause of stress rather than the symptoms (1 mark) so no medication / drug is involved in treating symptoms of stress (+1 mark). • SIT teaches skills such as self-statements (1 mark) and once learned SIT skills can be applied to any future stressor (+1 mark). • SIT is designed to meet the needs of an individual (1 mark). Weaknesses: • It is too complex with many skills to be learned and applied (1 mark); simple relaxation techniques such as progressive muscle relaxation can be just as effective (+1 mark). • Requires a significant time commitment from the individual to learn and practise the skills learned (1 mark) which would not be required if medication was taken (+1 mark). • Does not remove the cause of stress (1 mark) due to the individual circumstances of the person (+1 mark). Note: 0 marks for 'it is unethical' (uncomfortable, etc.) as participants can withdraw at any time. Note: Stage 1 conceptualisation, where individuals identify and understand their stress; Stage 3 application and follow-through, where they apply these skills in real-life situations.	4

Question	Answer	Marks
7	From the key study by Cuadrado et al. (2008) on women's access to managerial positions:	
7(a)	Describe how the supervisor's leadership capacity was measured. Syllabus: 4.2.2 Leadership style. Key study on leadership style and gender: Cuadrado et al. (2008) Marks: Award 4 marks for a detailed description decreasing to 1 mark for partial description (could be 1 mark for four of the following). Answers may include (from study): • 14 adjectives (7 positive, 7 negative) that apply to the supervisor: competent, intelligent, loyal, honest, clever, responsible, and optimistic. Careless, forgetful, discouraging, harmful for the team, bossy, snobbish, dishonest. • Supervisor's leadership capacity 4 items. Questionnaire with closed questions. How would you evaluate X's general leadership capacity? How would you evaluate X's capacities and aptitudes as a supervisor? How would you evaluate X as a leader or supervisor? X is a competent supervisor. 7-point, Likert-type scale from 1 (totally negative / totally disagree) to 7 (totally positive / totally agree). • (Effectiveness of supervisor: 5 items e.g. X is an effective manager. X knows how to manage people effectively. 7-point, Likert-type scale from 1 (totally negative / totally disagree) to 7 (totally positive / totally agree). Note: 0 marks for 'questionnaire'. Note: 7-point Likert scale can only be credited once.	4
7(b)	Suggest <u>one</u> way that the supervisor's leadership capacity could be investigated, other than the measure you described in 7(a). Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Answers may include (<u>other appropriate responses to be credited</u>): • Use an observation (inclusion of at least one of four features of observations) (1 mark), some aspect of leadership capacity – any behaviour that shows effective leadership (+1 mark). • Use interview (format and / or technique) (1 mark) where people are interviewed about some aspect of leadership capacity (any feature from (a) (+1 mark). • Design a psychometric test of leadership capacity (1 mark) to test the attitude and knowledge required for effective leadership (+1 mark). • Design an experiment (lab or field) where leaders are given tasks to complete (1 mark) to test the attitude and knowledge required for effective leadership (+1 mark).	2

Question	Answer	Marks
7(c)	Explain <u>two</u> strengths of using quantitative data to assess the supervisor's leadership capacity. Marks: Up to 2 marks for each strength. Award 2 marks for an appropriate strength stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: • Some types of quantitative data are unambiguous (and objective) (1 mark); this allows a precise judgement to be made about the leader's capacity (+1 mark). • Quantitative data can be used to make comparisons, e.g. measure can be repeated on numerous occasions (1 mark) and so the leader's capacity can be seen over time (+1 mark).	4

Question	Answer	Marks
Section B		
8(a)	Outline <u>one</u> way in which rapid rotation shiftwork can be organised. Syllabus: 4.4.2 Temporal conditions of work environments. Design of work: shiftwork: rapid rotation and slow rotation, on-call and flexitime including definitions and examples of each. Marks: Award 1 mark for identification and +1 mark for example / detail. Note: award 2 marks without identification if outline is exact. Answers may include (<u>other appropriate responses to be credited</u>): Rapid rotation involves frequent shift changes (e.g. once per week). There are two types: • Metropolitan rota: (1 mark) work two early (6am to 2pm), two late (2pm to 10pm), two night (10pm to 6am), two rest. Then repeat (+1 mark). • Continental rota (+1 mark) (rotates through 4 weeks): <u>week 1</u>: 2 early, 3 late, 2 night; <u>week 2</u>: 2 off, 3 early, 2 late. <u>Week 3</u>: 2 night, 3 off, 2 early. <u>Week 4</u>: 2 late, 3 night, 2 off (+1 mark).	2
8(b)	Suggest <u>one</u> way in which the design of work can be organised, other than shiftwork. Marks: Award 2 marks for an appropriate suggestion stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate suggestion identified but not applied. Answers may include (<u>other appropriate responses to be credited</u>): • ‘Traditional’ (1 mark): 8 hours per day for 5 days per week (a 40-hour week) (+1 mark). • Those who are self-employed often work more hours than people who are employed (1 mark). Some businesses (e.g. a shop) might open for 12 hours per day, for 7 days per week (+1 mark). • A compressed working week (1 mark) might mean working 12 hours per day, for 3 or 4 days per week rather than 5 (+1 mark). • People such as doctors work an on-call system (1 mark), where they work as needed or all the time over a 36-hour period, for example (+1 mark). • A flexi-time system (1 mark) means people work the same hours per week but can work whenever they choose (e.g. 7 am to 3 pm or 11 am to 7 pm) (+1 mark). • Piece-work / rate pay (1 mark) where workers are paid an amount per unit, or task completed, e.g. some types of factory workers, delivery drivers (deliver load however long it takes) (+1 mark).	2

Question	Answer	Marks
8(c)	Explain <u>one</u> strength and <u>one</u> weakness of a 'rapid rotation' design of work. Marks: Up to 2 marks for each strength and up to 2 marks for each weakness. Award 2 marks for an appropriate strength / weakness stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate strength / weakness stated but not applied. Answers may include the following (<u>other appropriate responses to be credited</u>). Strengths: - Workers are never working the same shift for very long (1 mark), e.g. continental rota pattern changes every four weeks (+1 mark). - Workers get each weekday off (in rotation), i.e. Mon / Tue, Tue / Wed etc. (1 mark); good for doing things that can only be done during weekdays (banking, children to school, etc.) (+1 mark). - Avoids boredom, keeps them active with lots of change (1 mark). - Good for employer as shift work ensures continuous 24 hour productivity (1 mark). Weaknesses: - It is bad for health (1 mark). - Disrupted sleep patterns as rota changes every 2 days (+1 mark). - Increase in number of accidents (+1 mark). - Any other known health effect such as cardiovascular (+1 mark).	4

Question	Answer	Marks		
9(a)	Plan an <u>experiment</u> to investigate gender differences in the words used to attribute mental states to virtual reality avatars. Your plan must include details about: • type of data • dependent variable. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. <table><tr><td> The specific features of the plan <u>should</u> include: • type of experiment • independent variable • dependent variable • controls • choice of experimental design. If appropriate: • counterbalancing, random allocation (RCT) • single blind / double blind • other appropriate features. </td><td> The general features of the plan <u>should</u> include (if appropriate): • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable. </td></tr></table>	The specific features of the plan <u>should</u> include: • type of experiment • independent variable • dependent variable • controls • choice of experimental design. If appropriate: • counterbalancing, random allocation (RCT) • single blind / double blind • other appropriate features.	The general features of the plan <u>should</u> include (if appropriate): • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.	10
The specific features of the plan <u>should</u> include: • type of experiment • independent variable • dependent variable • controls • choice of experimental design. If appropriate: • counterbalancing, random allocation (RCT) • single blind / double blind • other appropriate features.	The general features of the plan <u>should</u> include (if appropriate): • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.			

Question	Answer	Marks								
9(b)	For <u>one</u> piece of psychological knowledge on which your plan is based:									
9(b)(i)	Describe this psychological knowledge. Syllabus: 1.1.1 Diagnostic criteria for schizophrenia. Key study using virtual reality to investigate persecutory ideation: Freeman et al. (2003). Answers are likely to include (<u>other appropriate responses to be credited</u>): Freeman et al. created a virtual environment to test whether non-threatening avatars provoke persecutory thoughts in non-clinical participants. After the event participants completed questionnaires (e.g. the Brief Symptom Inventory (BSI)). Participants were interviewed about the experience and their feelings of distress. These are some of the comments made: TABLE 2. A Selection of Comments Made About the Avatars (Each Comment is From a Different Participant) Positive ‘Friendly people just being friendly and offering a smile’ ‘People were nicer than real people’ ‘Part of a game (flirting but being shy)’ ‘It was nice when they smiled, made me feel welcome.’ ‘They looked friendly - that was my overall impression’ ‘I smiled and chuckled’ Negative ‘They were very ignorant and unfriendly’ ‘Sometimes appeared hostile, sometimes rude’ ‘It was their space: you’re the stranger.’ ‘They were telling me to go away’ ‘One person was very shy and another had hated me’ ‘The two women looked more threatening’ ‘Some were intimidating’ <table><tr><th>Marks</th><th>Description</th></tr><tr><td>3–4</td><td>The knowledge is appropriate. Relevant points are correctly described in good detail.</td></tr><tr><td>1–2</td><td>Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	3–4	The knowledge is appropriate. Relevant points are correctly described in good detail.	1–2	Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).	0	No creditable response.	4
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1–2	Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).									
0	No creditable response.									

Question	Answer	Marks										
9(b)(ii)	Explain how you used <u>two</u> features of this psychological knowledge to plan your experiment. Candidates should explain how the psychological knowledge described in (b)(i) has informed their plan in part (a). For each feature: <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.</td></tr><tr><td>1</td><td>Basic answer that identifies a feature.</td></tr><tr><td>0</td><td>No creditable response.</td></tr><tr><td>Note:</td><td>1 mark for explanation of follow on from (b)i; 1 mark for explanation appearing in (a) x2.</td></tr></table> Example: (i) Experiment location can be based on Freeman et al. using VR in a library setting, or using VR in an alternative setting, (ii) words used to attribute mental states can be some of those used by Freeman et al. such as 'I smiled and chuckled' (full list above).	Marks	Description	2	Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.	1	Basic answer that identifies a feature.	0	No creditable response.	Note:	1 mark for explanation of follow on from (b)i; 1 mark for explanation appearing in (a) x2.	4
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1	Basic answer that identifies a feature.											
0	No creditable response.											
Note:	1 mark for explanation of follow on from (b)i; 1 mark for explanation appearing in (a) x2.											
9(c)(i)	Explain <u>one</u> reason for your choice of type of data. Candidates must use the type(s) of data stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: - Quantitative data can be statistically analysed by researchers (1 mark); related to plan (+1 mark). - Qualitative data can allow participants to provide reasons for their answer (1 mark); related to plan (+1 mark). - Both quantitative and qualitative data can be gathered to provide 'best of both worlds' (1 mark); related to plan (+1 mark).	2										

Question	Answer	Marks
9(c)(ii)	Explain <u>one</u> weakness with your choice of type of data. Candidates must use the type(s) of data stated in (c)i. Award 2 marks: weakness is given and applied to the plan. Award 1 mark: weakness is given without being applied to the plan. Examples: - Quantitative data only provides numbers, it does not provide a reason behind the number unlike qualitative data (1 mark); related to plan (+1 mark). - Quantitative data may limit how a participant responds (1 mark); related to plan (+1 mark). - Quantitative data might reduce behaviour to a single number (1 mark); related to plan (+1 mark). - Qualitative data often has no numbers so no descriptive statistics or statistical analysis (1 mark); related to plan (+1 mark). - Qualitative data needs to be interpreted and if only one judge is used, this could result in bias (1 mark); related to plan (+1 mark).	2
9(c)(iii)	Explain <u>one</u> reason for your choice of dependent variable. Candidates must use the dependent variable stated in (a). Award 2 marks if an appropriate reason is given and justified. Explanation of why the specific DV was chosen (1 mark), related to study i.e. operationalised DV (2 marks). Award 1 mark if an appropriate reason is given but DV not operationalised. Examples: - It is to measure the effect or outcome of a study (1 mark). - It provides evidence to accept or reject a hypothesis (1 mark). - E.g. the number of words (1 mark) allocated to the avatars (+1 mark). - E.g. the range of different words (1 mark) allocated to the avatar (+1 mark).	2

Question	Answer	Marks		
10(a)	Plan a study using a <u>naturalistic observation</u> to investigate personal space distances between people of different ages queueing to buy a bus ticket. Your plan must include details about: • behavioural categories • analysis of data. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. <table><tr><td> The specific features of the plan <u>should</u> include: • structured or unstructured • covert or overt • controlled or naturalistic • participant or non-participant • number of observers (inter-rater reliability) • behavioural categories • event or time sampling. </td><td> The general features of the plan <u>should</u> include (if appropriate) • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable. </td></tr></table>	The specific features of the plan <u>should</u> include: • structured or unstructured • covert or overt • controlled or naturalistic • participant or non-participant • number of observers (inter-rater reliability) • behavioural categories • event or time sampling.	The general features of the plan <u>should</u> include (if appropriate) • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.	10
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Question	Answer	Marks								
10(b)	For <u>one</u> piece of psychological knowledge on which your plan is based:									
10(b)(i)	Describe this psychological knowledge. Syllabus: 2.2.3 Consumer behaviour and personal space. Defending place in a queue including nature of intrusion, number of intrusions, social structure of a queue, responses of people queuing, including a study, e.g. Milgram et al. (1986). Answers are likely to include the following (<u>other appropriate responses to be credited</u>). Several possibilities for inclusion: Hall (1966) outlines four zones of personal space: • intimate – for people in a relationship, close friends and family • personal – for friends and family • social – for interacting with work colleagues • public – for speaking in public, e.g. a lecture. Robson et al. (2011): personal space distances at tables. Distances could be used but peripheral. Milgram (1986) looked at aspects such as nature of intrusion, number of intrusions, social structure of a queue, responses of people queuing. Milgram focused on defending space (and this question is not about defending). <table><tr><th>Marks</th><th>Description</th></tr><tr><td>3–4</td><td>The knowledge is appropriate. Relevant points are correctly described in good detail.</td></tr><tr><td>1–2</td><td>Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	3–4	The knowledge is appropriate. Relevant points are correctly described in good detail.	1–2	Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).	0	No creditable response.	4
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1–2	Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).									
0	No creditable response.									

Question	Answer	Marks										
10(b)(ii)	Explain how you used <u>two</u> features of this psychological knowledge to plan your study. Candidates should explain how the psychological knowledge described in (b)(i) has informed their plan in part (a). For each feature: <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.</td></tr><tr><td>1</td><td>Basic answer that identifies a feature.</td></tr><tr><td>0</td><td>No creditable response.</td></tr><tr><td>Note:</td><td>1 mark for explanation of follow on from (i); 1 mark for explanation appearing in (a) x2.</td></tr></table> Example: (i) use of personal space distances which could be Hall's, Robson's or other, (ii) from Milgram could include distances due to nature of intrusion, number of intrusions, responses of people queueing.	Marks	Description	2	Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.	1	Basic answer that identifies a feature.	0	No creditable response.	Note:	1 mark for explanation of follow on from (i); 1 mark for explanation appearing in (a) x2.	4
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Note:	1 mark for explanation of follow on from (i); 1 mark for explanation appearing in (a) x2.											
10(c)(i)	Explain <u>one</u> reason for your choice of behavioural categories. Candidates must use the behavioural categories stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: - Behavioural categories were used because they could be agreed and defined before the observation started (1 mark); related to plan (+1 mark). - Behavioural categories were used because each observer would know exactly what they were looking for, reducing ambiguity and increasing inter-rater reliability (1 mark); related to plan (+1 mark).	2										

Question	Answer	Marks
10(c)(ii)	Explain <u>one</u> weakness with your choice of behavioural categories. Candidates must use the behavioural categories stated in (c)(i). Award 2 marks: weakness is given and applied to the plan. Award 1 mark: weakness is given without being applied to the plan. Examples: • Unique or behaviours not planned for could be observed and have to be excluded (1 mark); related to study (+1 mark). • The categories chosen might not fully apply or be ambiguous when the observation is conducted (1 mark); related to study (+1 mark).	2
10(c)(iii)	Explain <u>one</u> reason for the way you chose to analyse your data. Candidates must use the analysis of data stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: • As the data gathered is quantitative, the data can be analysed using descriptive statistics such as mean, median and mode (or scatter graph for correlation); related to study (+1 mark). • As the data gathered is qualitative, the data gathered can be presented to raters / judges who will independently categorise the words so conclusions can be drawn from the data (1 mark); related to study (+1 mark).	2

Question	Answer	Marks		
11(a)	Plan a study using <u>closed questions</u> to investigate which diagnostic features of Munchausen syndrome are most common. Your plan must include details about: •sample of participants •descriptive statistics. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. <table><tr><td> The specific features of the plan <u>should</u> include: Use either interview or questionnaire: • question technique (paper / pencil, online, postal) • question format (open and / or closed) • interview technique (telephone or face-to-face) • interview format (structured, unstructured, semi-structured) • examples of questions • question scoring / interpretation • number of questions. </td><td> The general features of the plan <u>should</u> include (if appropriate) • sample and sampling technique • ethical guidelines • a procedure • the location • type of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable. </td></tr></table> Credit other elements of the plan as appropriate using the marking grid.	The specific features of the plan <u>should</u> include: Use either interview or questionnaire: • question technique (paper / pencil, online, postal) • question format (open and / or closed) • interview technique (telephone or face-to-face) • interview format (structured, unstructured, semi-structured) • examples of questions • question scoring / interpretation • number of questions.	The general features of the plan <u>should</u> include (if appropriate) • sample and sampling technique • ethical guidelines • a procedure • the location • type of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.	10
The specific features of the plan <u>should</u> include: Use either interview or questionnaire: • question technique (paper / pencil, online, postal) • question format (open and / or closed) • interview technique (telephone or face-to-face) • interview format (structured, unstructured, semi-structured) • examples of questions • question scoring / interpretation • number of questions.	The general features of the plan <u>should</u> include (if appropriate) • sample and sampling technique • ethical guidelines • a procedure • the location • type of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.			
11(b)	For <u>one</u> piece of psychological knowledge on which your plan is based:			
11(b)(i)	Describe this psychological knowledge. Syllabus: 3.1.3 Misusing health services. Munchausen syndrome versus malingering. Diagnostic features of Munchausen (essential and supporting features), including a study, e.g. Aleem and Ajarim (1995). Answers are likely to include (<u>other appropriate responses to be credited</u>): • Neurological symptoms such as seizures, fainting or dizziness. • Test results manipulated by adding blood to urine samples. • Ingesting a substance, such as insulin.	4		

Question	Answer	Marks										
11(b)(i)	• People may injure themselves or even induce illnesses as injecting themselves with faecal matter (Aleem & Ajarim, 1995). • Travelling widely (peregrination) and changing name. • Telling lies (pathological lying). • Multiple hospital visits. • Feigned or simulated illness. <table><tr><th>Marks</th><th>Description</th></tr><tr><td>3–4</td><td>The knowledge is appropriate. Relevant points are correctly described in good detail.</td></tr><tr><td>1–2</td><td>Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	3–4	The knowledge is appropriate. Relevant points are correctly described in good detail.	1–2	Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).	0	No creditable response.			
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11(b)(ii)	Explain how you used <u>two</u> features of this psychological knowledge to plan your study. Candidates should explain how the psychological knowledge described in (b)(i) has informed their plan in part (a). For each feature: <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.</td></tr><tr><td>1</td><td>Basic answer that identifies a feature.</td></tr><tr><td>0</td><td>No creditable response.</td></tr><tr><td>Note:</td><td>1 mark for explanation of follow on from (b)(i); 1 mark for explanation appearing in (a) x2.</td></tr></table> Example: Questionnaire should focus on at least two aspects of diagnostic features (outlined in (b)(i), for example (i) multiple hospital visits; peregrination (two or more of these can be ‘two features’) (ii) the case study by Aleem & Ajarim, (1995).	Marks	Description	2	Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.	1	Basic answer that identifies a feature.	0	No creditable response.	Note:	1 mark for explanation of follow on from (b)(i) ; 1 mark for explanation appearing in (a) x2.	4
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Question	Answer	Marks
11(c)(i)	Explain <u>one</u> reason for your choice of sample of participants. Candidates must use the sample stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: • The number of participants in my study was X because (reason given) (1 mark) and related (+1 mark). • The sex / gender balance of participants in my study was X because (reason given) (1 mark) and related (+1 mark). • The location participants were chosen from in my study was because (reason given) (1 mark) and related (+1 mark). • The type of participants chosen to be in my study was because (reason given) (1 mark) and related (+1 mark). • The age range of participants chosen to be in my study was because (reason given) (1 mark) and related (+1 mark).	2
11(c)(ii)	Explain <u>one</u> weakness of your choice of sample of participants. Candidates must use the sample of participants stated in (c)i. Award 2 marks: weakness is given and applied to the plan. Award 1 mark: weakness is given without being applied to the plan. Examples: • The number of participants was too small because (reason given) (1 mark) and related (+1 mark). • The sex / gender balance of participants was imbalanced because (reason given) (1 mark) and related (+1 mark). • The location participants were from was restricted because (reason given) (1 mark) and related (+1 mark). • The type of participants chosen was restricted because (reason given) (1 mark) and related (+1 mark). • The age range of participants was restricted (reason given) (1 mark) and related (+1 mark).	2
11(c)(iii)	Explain <u>one</u> reason for your choice of descriptive statistics. Candidates must use the descriptive statistics stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: • Descriptive statistics describe (summarise) data via mean, median, mode, range so outcomes can be easily identified (1 mark); related to study (2 marks). • Descriptive statistics describe (summarise) data via a visual display bar chart, histogram, scatter graph (1 mark); related to study (2 marks).	2

Question	Answer	Marks		
12(a)	Plan a study using a <u>structured interview</u> to investigate which type of accident due to human error is most common in a shoe factory. Your plan must include details about: • sampling technique • interview technique. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. Note: candidates suggesting that participants deliberately have accidents (which could harm them) is unethical and depending on nature max 5 marks or 0 marks. <table><tr><td> The specific features of the plan <u>should</u> include: • interview technique (telephone or face-to-face) • interview format (structured, unstructured, semi-structured) • question format (open and / or closed) • examples of questions • question scoring / interpretation number of questions. </td><td> The general features of the plan <u>should</u> include (if appropriate): • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable. </td></tr></table>	The specific features of the plan <u>should</u> include: • interview technique (telephone or face-to-face) • interview format (structured, unstructured, semi-structured) • question format (open and / or closed) • examples of questions • question scoring / interpretation number of questions.	The general features of the plan <u>should</u> include (if appropriate): • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.	10
The specific features of the plan <u>should</u> include: • interview technique (telephone or face-to-face) • interview format (structured, unstructured, semi-structured) • question format (open and / or closed) • examples of questions • question scoring / interpretation number of questions.	The general features of the plan <u>should</u> include (if appropriate): • sample and sampling technique • ethical guidelines • a procedure • the location • type(s) of data, analysis of data, use of descriptive statistics • an aim or hypothesis (directional or non-directional) / null hypothesis • steps for making the study valid and reliable.			
12(b)	For <u>one</u> piece of psychological knowledge on which your plan is based:			
12b(i)	Describe this psychological knowledge. Syllabus: 4.4.3 Health and safety. Accidents at work focusing on human errors (errors of omission, commission, sequencing and timing) and system errors in operator–machine systems (machine controls and displays). Answers are likely to include the following (<u>other appropriate responses to be credited</u>). Riggio (1990) suggests when operating machines there can be errors of: • Omission – failing to do something, such as forgetting to turn something off. • Commission – performing an act incorrectly, i.e. doing something wrong. • Sequence errors – doing something out of order. • Timing errors – doing something too quickly, or too slowly.	4		

Question	Answer	Marks										
12(b)(i)	Errors can also be due to tiredness / fatigue, the use of alcohol and or drugs (including medications for illnesses), or because of accident proneness. When something does go wrong it is often because people apply what are known as motion stereotypes: a behaviour that is familiar and done without thinking about it. People make substitution errors – where one instrument is confused with another. <table><tr><th>Marks</th><th>Description</th></tr><tr><td>3–4</td><td>The knowledge is appropriate. Relevant points are correctly described in good detail.</td></tr><tr><td>1–2</td><td>Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	3–4	The knowledge is appropriate. Relevant points are correctly described in good detail.	1–2	Basic points are identified with some elaboration and understanding. The answer lacks detail (a sentence or two).	0	No creditable response.			
Marks	Description											
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12(b)(ii)	Explain how you used <u>two</u> features of this psychological knowledge to plan your study. Candidates should explain how the psychological knowledge described in (b)(i) has informed their plan in part (a). For each feature: <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.</td></tr><tr><td>1</td><td>Basic answer that identifies a feature.</td></tr><tr><td>0</td><td>No creditable response.</td></tr><tr><td>Note:</td><td>1 mark for explanation of follow on from (b)(i); 1 mark for explanation appearing in (a) ×2.</td></tr></table> Example: (i) Questions can be about different types of error (as detailed in (b)(i)). (ii) Questions could be about ‘worker features’ such as tiredness, use of alcohol, medication, accident proneness. Also possible (iii) application of motion stereotypes or substitution errors.	Marks	Description	2	Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.	1	Basic answer that identifies a feature.	0	No creditable response.	Note:	1 mark for explanation of follow on from (b)(i) ; 1 mark for explanation appearing in (a) ×2.	4
Marks	Description											
2	Suitable answer that relates a feature and explains how the feature was used, expanded or modified to make it appropriate to the plan. The knowledge has clearly been applied to the plan.											
1	Basic answer that identifies a feature.											
0	No creditable response.											
Note:	1 mark for explanation of follow on from (b)(i) ; 1 mark for explanation appearing in (a) ×2.											

Question	Answer	Marks
12(c)(i)	Explain <u>one</u> reason for your choice of sampling technique. Candidates must use the sampling technique stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: • A random sample was chosen so everyone in the target population has an equal chance of participating (1 mark); related to plan (+1 mark). • An opportunity sample was chosen because large numbers can be obtained relatively more easily than other methods (1 mark); related to plan (+1 mark). • A volunteer sample was chosen because people are willing and more likely to participate (1 mark); related to plan (+1 mark).	2
12(c)(ii)	Explain <u>one</u> strength of using a structured interview in your study. Candidates must use the structured interview stated in (c)(i). Award 2 marks: strength is given and applied to the plan. Award 1 mark: strength is given without being applied to the plan. Examples: • Used so all participants received the same questions in the same order (1 mark); related to plan (2 marks). • Used because all questions can be prepared in advance (1 mark); related to plan (+1 mark). • Used so the answers to questions can be compared (1 mark); related to plan (+1 mark).	2
12(c)(iii)	Explain <u>one</u> reason for your choice of interview technique. Candidates must use the interview technique stated in (a). Award 2 marks: reason is given and applied to the plan. Award 1 mark: reason is given without being applied to the plan. Examples: • Face-to-face and then non-verbal responses can be noted by the interviewer (1 mark); related to plan (+1 mark). • Face-to-face because it is much more 'personable' than talking on a telephone (1 mark); related to plan (+1 mark). • Telephone because the interview will be short and to the point (1 mark); related to plan (+1 mark). • Telephone because a much wider sample can be obtained - because there is no travelling involved by either interviewer or interviewee (1 mark); related to plan (+1 mark). • Telephone because the interviewee is in their own surroundings (at home?) and may feel more comfortable / relaxed when being interviewed (1 mark); related to plan (+1 mark).	2