



Cambridge International AS & A Level

PSYCHOLOGY

9990/04

Paper 4 Specialist Options: Application and Research Methods

For examination from 2024

MARK SCHEME

Maximum Mark: 60

Specimen

This document has **38** pages. Any blank pages are indicated.

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 descriptions for the question - the specific skills defined in the mark scheme or in the generic level descriptions 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 descriptions.
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).	

SPECIMEN**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 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 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.

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.	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.	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.	5–6
2	The response: • uses an appropriate method as required by the question. • identifies some appropriate method-specific features. • identifies 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.	3–4

Level	Description	Marks
1	The response: • may not use the method required by the question. • 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 creditable response.	0

Features, as used in the table above include: (i) **general features** of any method such as sample, sampling technique, ethics, types of data, reliability and validity. (ii) **features specific** to a method.

Section A**Clinical Psychology**

Question	Answer	Marks	Guidance
1	From the key study by Freeman et al. (2003) on virtual reality and persecutory ideation:		
1(a)(i)	Explain the sampling technique that was used to recruit participants in this study. Award 2 marks for a detailed explanation. Award 1 mark for a partial explanation. Example: - the sampling technique is volunteer (self-selecting sample). (1) 'participants were recruited by advertising within University College London.' (+1 detail)	2	
1(a)(ii)	Explain <u>one</u> reason why Freeman et al. did <u>not</u> use participants with a history of mental illness. Award 2 marks for a detailed explanation. Award 1 mark for a partial explanation. Answers may include: - the Freeman research was exploratory (1) a pilot study, to investigate whether the technique would be appropriate. (2) - participants without a mental illness could feed back on the technique (1), perhaps unlike people with mental illness (who have persecutory ideation). (2) Other appropriate responses to be credited.	2	

Question	Answer	Marks	Guidance
1(b)	Suggest how <u>one</u> sampling technique could have been used to recruit participants for this study, other than the technique used by Freeman et al. Award 2 marks for an appropriate technique stated and applied to study with detail / elaboration / example. Award 1 mark for an appropriate technique stated but not applied. Answers may include: • opportunity sample (1) used by asking people around the campus to participate. (2) • snowball sample (1) one person, perhaps known to researchers, mentions it to other students. (2) Other appropriate responses to be credited.	2	

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Question	Answer	Marks	Guidance
1(c)	Explain <u>one</u> strength and <u>one</u> weakness of using students as participants in research using virtual reality. 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: Strengths: - students may be more intelligent and so be able to provide better feedback to the researchers (1) on the applicability of virtual reality (VR). (2) - students are readily available on a university campus and in relatively large numbers so a larger sample can be obtained (1) which will be more representative of the general population in relation to responses to VR / ideation. (2) - students may be more familiar with virtual reality, having played VR games, and ‘modern technology’ (1) and so will be a good population to use to test VR applications. (2) Weaknesses: - students are often Westernised, Educated, from Industrialised, Rich Democracies (WEIRD) (1) and this may restrict the applicability of the VR technique worldwide. (2) - students may know about the research and so may bias or alter answers to fit aims of study (1) whereas the target population for this VR application would not know about the research. (2) Other appropriate responses to be credited.	4	

Question	Answer	Marks	Guidance
2	Case studies are often used to study fear-related disorders such as phobias.		
2(a)	Outline the psychodynamic explanation of phobias. Award 2 marks for a detailed outline / elaboration / example. Award 1 mark for a partial outline (e.g. unresolved conflicts between the id and the superego). Answers may include: Phobias are a defence mechanism (1) against the unresolved conflicts between the id and the superego. (+1) The anxiety can be transferred to an object, person or situation which has a symbolic connection to the anxiety. (+1) Other appropriate features to be credited.	2	
2(b)	Suggest how the psychodynamic explanation can explain why individuals differ in the development of phobias. Award 2 marks for a detailed suggestion / elaboration / example (e.g. related to childhood experiences). Award 1 mark for a partial suggestion (e.g. general comment such as more or less of id, ego, superego). Answers may include: These basic features of the explanation (id, ego and superego) apply to every person. (1) What differs is how much (or no phobia) and what the anxiety is transferred to, an object, person or situation (to produce different phobias). (+1) Other appropriate features to be credited.	2	

SPECIMEN

Question	Answer	Marks	Guidance
2(c)	Explain <u>one</u> strength and <u>one</u> weakness of using case studies to study phobias. 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. Note: any phobia can be used. Answers may include: Strengths: • unique cases can be understood which adds to knowledge about the disorder (1) applied to a phobia. (2) • a range of different methodologies are often used: interviews, questionnaires, tests (psychometric, projective and physiological) to study a person in depth (1) applied to a phobia. (2) • knowledge gained from studying one person may apply to other/all people (1) applied to a phobia. (2) Weaknesses: • the findings cannot be generalised because a case study can be of one individual / the person is unique (1) so cannot be applied to all people with the same phobia. (2) • case studies do not usually gather quantitative data (1) and so there may be no statistics to compare to others with the same phobia. (2) Other appropriate responses to be credited.	4	

Consumer Psychology

Question	Answer	Marks	Guidance
3	The key study by Robson et al. (2011) presented photographs of tables and seating (chair and banquette) in which tables were placed at different distances from each other.		
3(a)(i)	Describe the banquette seating as used in this study. Award 2 marks for a description with detail. Award 1 mark for a basic description with little or no detail. Answers may include: • a banquette is a 'dining bench'. (1) • that can be of different lengths. There are no arm rests or anything to identify specifically where a person sits. (+1) • this type of seating in a restaurant can seat fewer people (each with more space) or more people (each with less space). (+1) • sometimes it can be a semi-circle rather than along a wall. (+1)	2	
3(a)(ii)	Explain why table spacing distances of 6 and 24 inches were chosen by Robson et al. Award 2 marks for an explanation with detail. Award 1 mark for a partial explanation with little or no detail. • table spacing matched Hall's personal space distances. (1) • Hall's intimate distance was 6"; Hall's personal distance was 24". (2)	2	

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Question	Answer	Marks	Guidance
3(b)	Suggest <u>one</u> ethical issue that could apply if photographs of people sitting at tables had been used rather than photographs of empty tables and seating. Award 2 marks for identification of an ethical issue and description of how it applies to this study (suggestion must relate to the use of photographs). Award 1 mark for identification of an ethical issue only OR general statement with no ethical issue identified. Answers may include: • Informed consent – people used in photographs must give informed consent for their photograph to be used with participants. (1) It would be unethical for any researcher not to gain informed consent in relation to the use of photographs. (2) • Participants might know the people in the photos (1) and this might lead to inaccurate judgements or to inappropriate comments. (2) • People viewing the photographs might be offended (1) if men and women are sitting together too closely. (2) Other appropriate responses to be credited.	2	

Question	Answer	Marks	Guidance
3(c)	Explain two advantages for a restaurant which uses banquette seating for customers, rather than individual chairs. Up to 2 marks for each advantage: Award 2 marks for an appropriate advantage stated and applied as required by the question with detail / elaboration / example. Award 1 mark for an appropriate advantage stated but not applied. Answers may include: • Matching table mix to customer mix (both): Flexible seating accommodating size of party. A banquette (with two chairs) could seat three, four or five people. A table with chairs is less flexible. A banquette can also accommodate four parties of two people (four people on the banquette). • Revenue management: Maximising capacity. If three people sit on a banquette in the space for two people then the restaurant can make more profit. • Flexible space: Customers can choose to sit closer to each other or farther away when using a banquette depending on the type of relationship (business, friends, partners). Fixed chairs are less flexible. Other appropriate responses to be credited.	4	

Question	Answer	Marks	Guidance
4	Research on menu design sometimes involves tracking eye movement patterns when a customer scans a menu.		
4(a)	Describe <u>one</u> finding from research on eye movement patterns that shows how customers scan menus. Award 2 marks for a description with elaboration. Award 1 mark for a partial description with little or no elaboration. Answers may include: • the eye is drawn to the first (1) and last items rather than the middle items. (2) • eye magnets attract attention (1) and so the first and last items may not be scanned first. (2) • from the Pavesic example, previous research shows that customers spend an average of 109 seconds reading or scanning a menu (1) showing they read individual items or that they scan the whole (or most) of the menu. (2) Other appropriate features to be credited.	2	
4(b)	Suggest <u>one</u> way in which menu design can be studied, other than by tracking eye movement patterns. Award 2 marks for a detailed suggestion which is identified and applied to the question. Award 1 mark for a suggestion which is identified but not applied to the question. Answers may include: • field experiment • interview • questionnaire Example: A field experiment (or other method) could be conducted to study menu design. (1) For example, a field experiment could be used where participants in a café are given a menu and it is determined from which part of the menu they order from. (2) Other appropriate features to be credited.	2	

Question	Answer	Marks	Guidance
4(c)	Explain <u>two</u> strengths of using eye movement patterns to study menu design. 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: • eye movement tracking uses scientific equipment (1) resulting in reliable measurement. (2) • eye movement tracking is valid (1) because it shows exactly where the person has looked. (2) • the data acquired is objective (1) and is not open to subjective responses. (2) Other appropriate responses to be credited.	4	

Health Psychology

Question	Answer	Marks	Guidance
5	From the key study by Yokley and Glenwick (1984) on community interventions:		
5(a)	Outline <u>two</u> of the experimental conditions used in the study. For each experimental condition: Award 2 marks for an outline of an experimental condition. Award 1 mark for identification of an experimental condition. Answers may include: - The general prompt group: received a mailed prompt containing general inoculation/vaccination information and instructions that 'your child' needs inoculations/vaccinations. - The specific prompt group: received a mailing naming the target child and the specific inoculation/vaccination that child needed along with the location of the clinic and its opening hours. - The increased access group: same as specific prompt group but with additional information about clinic opening hours. - The monetary incentive group: same as the specific prompt group with additional information about 'giving away \$175 in cash prizes' for those attending the clinic. No marks for identification or outline of a control condition.	4	

Question	Answer	Marks	Guidance
5(b)	Suggest why Yokley and Glenwick included two control conditions in their study. Award 2 marks for a suggestion which is applied to the question. Award 1 mark for an appropriate suggestion which is not applied to the question. Control conditions were: • contact control group: telephone contact with basic inoculation/vaccination information but no mailing; no explicit prompt. • no contact control group: no contact at all during the study. Answers may include: • Inclusion of a control condition acts as a benchmark/baseline to which the experimental conditions can be compared (1) Yokley and Glenwick included two different control conditions to compare some contact or no contact with experimental conditions. (2) • Inclusion of two control conditions allowed the controls conditions to be compared (1) one with no contact at all (total baseline) one with basic contact by telephone rather than mail prompt. All experimental conditions were mailed. (2)	2	
5(c)	Explain <u>two</u> weaknesses of conducting field experiments to study participation in immunisation interventions in communities. Up to 2 marks for each weakness: Award 2 marks for a correct weakness with detail / elaboration / example. Award 1 mark for a correct weakness but not applied to inoculation/vaccination. Weaknesses may include: • a field experiment may have variables that are more difficult to control than a laboratory experiment (1) in this study 354 mailings were ‘returned to sender’ – participant variables are more difficult to control. (2) • often participants do not know they have taken part in a study at all; they could treat it as ‘advertising’ and not take the information as seriously as they might in a laboratory experiment (1) in this study participants receiving the mailed prompt could decide to act or not. (2) • it may be reductionist to isolate variables to study individual family circumstances (1) when many other variables that are controlled may contribute to deciding to take up the offer of inoculation/vaccination. (2) Other appropriate responses to be credited.	4	

Question	Answer	Marks	Guidance
6	The UAB pain behaviour scale can be used with patients in hospital. It uses repeated observations to measure changing levels of pain.		
6(a)	Describe how this scale is used with a patient in hospital. Award 2 marks for a description with elaboration. Award 1 mark for a partial description with little or no elaboration. Answers may include: • The UAB pain behaviour scale is used by a medical practitioner to judge the amount of pain a patient is experiencing. (1) • Various categories of pain are assessed (+1) such as verbal complaints and non-verbal complaints such as groans or gasps. (+1) • Each pain behaviour is rated (1) as none, occasional or frequent. (+1) • Each score is recorded and the next day the same assessment is completed (+1) to judge whether the level of pain is the same, worse or better. (+1) Other appropriate features to be credited.	2	
6(b)	Suggest why it is important to use repeated observations to measure changing levels of pain. Award 2 marks for a suggestion which is applied to the question. Award 1 mark for a suggestion that is not applied to the question. Answers may include: • The health practitioner can know whether the patient's pain is worse / the same / getting better as time progresses. (1) • Which is important because medication can be increased / remains the same / decreased or possibly the patient can be discharged from hospital. (2) Other appropriate features to be credited.	2	

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Question	Answer	Marks	Guidance
6(c)	Explain <u>one</u> strength and <u>one</u> weakness of using this scale to measure pain behaviour. 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: Strengths: • a medical expert observes pain behaviour and uses the scale (1) the same scale can be used by any medical expert. (2) • the pain behaviour rating is objective (1) and can be compared with ratings of other patients and over time. (2) Weaknesses: • the patient who experiences pain has no input in the rating, although it is their pain. (1) The patient experiences the pain, so they should be the best judge of how bad their pain is. (2) • the scale has only three options (1) and perhaps a wider scale, e.g. 5 points should be used. (2) • the scale only records how much pain (1), not the type of pain. (2) Other appropriate responses to be credited.	4	

SPECIMEN**Organisational Psychology**

Question	Answer	Marks	Guidance
7	From the key study by Giacalone and Rosenfeld (1987) on sabotage in the workplace:		
7(a)	Describe <u>two</u> ways in which ethical guidelines were followed in this study when presenting the questionnaires to workers. Up to 2 marks for each way: Award 2 marks for an ethical guideline identified and related to the study. Award 1 mark for an ethical guideline identified but not related to the study. Answers may include: - participants gave consent (1) participants were asked to complete a ‘packet’ (i.e. package/ bundle) of questionnaires. (2) confidentiality was maintained (1) participants were told that they should not write their names or any identifying information on the questionnaires. (2) Other appropriate responses to be credited. 0 marks for any ethical guideline not mentioned in the study. 0 marks for informed consent and any reference to sabotage (participants were told the study was for an industrial seminar). 0 marks for any ethical guideline that was broken, e.g. deception.	4	

Question	Answer	Marks	Guidance
7(b)	Suggest <u>one</u> reason why workers in this study would <u>not</u> want their managers to see their answers. Award 2 marks for a suggestion which is applied to the question. Award 1 mark for an appropriate suggestion which is not applied to the question. Answers may include: - the manager might discover that a worker was involved in an act of sabotage (1) and so the worker might lose their job. (2) - the manager might suspect the worker in any future act of sabotage (1) when the worker is innocent. (2) - the manager might suspect the worker of being a 'trouble-maker' (1) and a negative influence on other workers. (2) Other appropriate responses to be credited.	2	
7(c)	Give <u>two</u> reasons why unethical studies on workers in organisations should <u>not</u> be conducted. Up to 2 marks for each reason: Award 2 marks for a correct reason applied with detail / elaboration / example. Award 1 mark for a correct reason stated but not applied. Note: question is about workers in organisations in general. Answers may include: - Informed consent: participants should know exactly what a study is about (1) whatever the organisation or job a worker is doing. (2) - Confidentiality: if this guideline is not maintained a participant could be identified (1) and personal information could be seen by others (e.g. a manager who could act on that information). (2) - Deception: a participant should not be deceived because they would be completing a study (or assessment) for a different purpose from the one stated. (1) In the study by Giacalone and Rosenfeld participants were told the study was for an industrial seminar. (2) Other appropriate responses to be credited.	4	

Question	Answer	Marks	Guidance
8	McClelland proposed a theory of achievement motivation.		
8(a)	Outline <u>one</u> of the needs proposed by McClelland. Award 2 marks for a correctly identified need and outlined / elaborated / example. Award 1 mark for a correctly identified need with no elaboration. Answers may include: • need for achievement (1) – to get the job done, to be successful (2) • need for affiliation (1) – to be liked and accepted by people (2) • need for power (1) – having influence or control over others. (2)	2	
8(b)	The needs proposed by McClelland's theory are individual needs. Suggest why situational factors are also essential to the achievement of the need that you outlined in part (a). Award 2 marks for a suggestion which has elaboration of how one of these needs is situational. Award 1 mark for a basic suggestion with no elaboration of how a need is situational. Answers may include: • While needs are individual, all three needs can only be realised through other people (1) the need for affiliation can only be realised if other people like and accept the person. (2) • Achievement is usually measured by comparing with others (1) so any sense of achievement (or failure) needs other people doing the same job/task to act as a baseline for comparison. (2) • The need for power is individual and requires having control over other people (1) so a position of authority, such as being a manager, with control over other workers is needed. (2)	2	

Question	Answer	Marks	Guidance
8(c)	Explain <u>two</u> ways in which this theory is limited in its application. Up to 2 marks for each way: Award 2 marks for an explanation of a limitation with elaboration / example / detail. Award 1 mark for an explanation of a limitation which lacks detail. Answers may include: • The need theory was constructed on the basis of organisational behaviour in westernised, industrial societies (1) and might not apply to other cultures. (2) • The need theory is based on males working in organisations (1); it might not apply to females. (2) • The need theory is based on individualist cultures rather than collectivist cultures (1) and the needs of people in collectivist cultures may be very different. (2) Other appropriate responses to be credited.	4	

Section B

Question	Answer	Marks	Guidance
9	Schizophrenia can be treated biochemically with drugs, such as antipsychotics, but they are not always effective.		
9(a)	Plan an experiment to investigate the effectiveness of antipsychotic drugs to treat schizophrenia. Your plan must include details about: • sampling technique • a directional or non-directional hypothesis. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. The specific features of the plan should include: • type of experiment • independent variable • dependent variable • controls • choice of experimental design. The plan must include a sampling technique and a hypothesis. The sampling technique should be appropriate to the plan. The hypothesis should be directional/one-tailed or non-directional/two-tailed. A null hypothesis is not required. Credit other elements of the plan as appropriate using the marking grid.	10	

Question	Answer	Marks	Guidance								
9(b)	For <u>one</u> piece of psychological knowledge on which your plan is based:										
9(b)(i)	Describe this psychological knowledge. Syllabus: biochemical treatments including typical and atypical antipsychotics. Description: First generation = antipsychotics work as a 'chemical cosh' (e.g. chlorpromazine). Second generation = atypical antipsychotics worked by blocking dopamine receptors and had fewer side effects. Third generation = e.g. Aripiprazole. Candidates are likely to have two conditions: antipsychotics (experimental group) and control group either a placebo or an atypical antipsychotic. <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	
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.										
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 identifies 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></table>	Marks	Description	2	Suitable answer that identifies 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.	4	
Marks	Description										
2	Suitable answer that identifies 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.										

Question	Answer	Marks	Guidance								
9(c)(i)	State <u>two</u> reasons for your choice of sampling technique. Two reasons are required. Award 1 mark for each reason for choice. Answers may include: - random sample was chosen so everyone in the target population has an equal chance of participating. - self-selecting so participants can volunteer (or not) to participate. - an opportunity sample was not chosen to avoid researcher bias when selecting participants. Other appropriate answers can also receive credit.	2									
9(c)(ii)	Explain <u>one</u> strength of your choice of sampling technique. Candidates should use the sampling technique stated in (c)(i). <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Strength is given and applied to the plan (e.g. use of a randomised control trial eliminates researcher bias, allocating participants to either the antipsychotic group or control group randomly).</td></tr><tr><td>1</td><td>Strength is given without being applied to the plan.</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	2	Strength is given and applied to the plan (e.g. use of a randomised control trial eliminates researcher bias, allocating participants to either the antipsychotic group or control group randomly).	1	Strength is given without being applied to the plan.	0	No creditable response.	2	
Marks	Description										
2	Strength is given and applied to the plan (e.g. use of a randomised control trial eliminates researcher bias, allocating participants to either the antipsychotic group or control group randomly).										
1	Strength is given without being applied to the plan.										
0	No creditable response.										
9(c)(iii)	Explain <u>one</u> reason for your choice of directional or non-directional hypothesis. Award 2 marks if an appropriate reason is given and justified. Award 1 mark if an appropriate reason is given but not justified. Example: A directional hypothesis was chosen because it predicts the direction of the results (1) in this case it is predicted that antipsychotic drugs will be effective when compared to a control group. (1) (justified). Other appropriate answers can also receive credit.	2									

Question	Answer	Marks	Guidance
10	A pleasant odour, such as the smell of flowers, could be the most important retail atmospheric to influence the behaviour of consumers. However, some people do not like the smell of flowers, instead preferring the smell of fruit.		
10(a)	Plan an experiment to investigate the influence of different odours in a retail environment on the behaviour of customers. Your plan must include details about: • sampling technique • a directional or non-directional hypothesis. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. The specific features of the plan should include: • type of experiment • independent variable • dependent variable • controls • choice of experimental design. The plan must include a sampling technique and a hypothesis. The sampling technique should be appropriate to the plan. The hypothesis should be directional/one-tailed or non-directional/two-tailed. A null hypothesis is not required. Credit other elements of the plan as appropriate using the marking grid.	10	

Question	Answer	Marks	Guidance								
10(b)	For one piece of psychological knowledge on which your plan is based:										
10(b)(i)	Describe this psychological knowledge. Syllabus: the effects of odour on shopper pleasure-dominance-arousal. Description: The syllabus identifies the study by Chebat and Michon (2003) as an example. Answers are likely to be based on this research, but any research on the effects of odour on shopper behaviour is creditworthy. The study by Chebat and Michon was a field experiment conducted in a shopping mall. In week 1 there was no odour and in week 2 a light citrus scent. Questionnaires were completed and the citrus scent enhanced mood and improved the perception of the shopping environment. <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.										
10(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 identifies 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></table>	Marks	Description	2	Suitable answer that identifies 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.	4	
Marks	Description										
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Question	Answer	Marks	Guidance								
10(c)(i)	State <u>two</u> reasons for your choice of sampling technique. Two reasons are required. Award 1 mark for each reason for choice. Answers may include: - random sample was chosen so everyone in the target population has an equal chance of participating. - self-selecting so participants can volunteer (or not) to participate. - an opportunity sample was not chosen to avoid researcher bias when selecting participants. Other appropriate answers can also receive credit.	2									
10(c)(ii)	Explain <u>one</u> weakness of your choice of sampling technique. Candidates should use the sampling technique stated in (c)(i). <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Weakness is given and it is applied to the plan (e.g. use of an opportunity sample might lead to researcher bias, for example the researcher might choose a person in a retail environment who looks like they might prefer the smell of flowers).</td></tr><tr><td>1</td><td>Weakness is given without being applied to the plan.</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	2	Weakness is given and it is applied to the plan (e.g. use of an opportunity sample might lead to researcher bias, for example the researcher might choose a person in a retail environment who looks like they might prefer the smell of flowers).	1	Weakness is given without being applied to the plan.	0	No creditable response.	2	
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1	Weakness is given without being applied to the plan.										
0	No creditable response.										
10(c)(iii)	Explain <u>one</u> reason for your choice of directional or non-directional hypothesis. Award 2 marks if an appropriate reason is given and justified. Award 1 mark if an appropriate reason is given but not justified. Example: A non-directional hypothesis was chosen because it makes no prediction regarding the direction of the results (1) in this case it is not known whether participants prefer the smell of flowers or the smell of fruit. (2) Other appropriate answers can also receive credit.	2									

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Question	Answer	Marks	Guidance
11(a)	Plan a study using an interview to investigate age differences in rational non-adherence to medical requests. 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. The specific features of the plan should include: • interview format • interview technique • question format • question score/interpretation • examples of questions. The plan must include a sampling technique and an interview technique. The sampling technique should be appropriate to the plan. The interview technique is one of: telephone, face-to-face/one-to-one, clinical interview. Credit other elements of the plan as appropriate using the marking grid.	10	

Question	Answer	Marks	Guidance								
11(b)	For <u>one</u> piece of psychological knowledge on which your plan was based:										
11(b)(i)	Describe this psychological knowledge. Syllabus: explanations of why patients do not adhere – rational non-adherence. Description: The syllabus identifies the study by Laba (2012) as an example. Answers are likely to be based on this research, but any research on rational non-adherence is creditworthy. Patients do not adhere to medical requests because they think about their illness, how they feel about the drugs they take for that illness and the side-effects they experience. Some patients then make a rational choice to not adhere because the side-effects are worse than the symptoms of the illness. Some patients make the decision to continue with the medication. The example by Laba et al. (2012) lists factors that patients take into account when making a decision. These include: immediate and long-term medication harms and benefits, cost, regimen, symptom severity, alcohol restrictions. <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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0	No creditable response.										
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 identifies 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></table>	Marks	Description	2	Suitable answer that identifies 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.	4	
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Question	Answer	Marks	Guidance								
11(c)(i)	State <u>two</u> reasons for your choice of sampling technique. Two reasons are required. Award 1 mark for each reason for choice. Answers may include: • an opportunity sample was chosen because it is easier to do compared to setting up a random sample. • a random sample was not chosen because 'names in a hat' would require confidentiality to be broken. • a self-selecting sample was not chosen because only volunteers would be taking part. Other appropriate answers can also receive credit.	2									
11(c)(ii)	Explain <u>one</u> strength of your choice of sampling technique. Candidates should use the sampling technique stated in (c)(i). <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Strength is given and it is applied to the plan, (e.g. use of an opportunity sample allows the researcher to choose people who 'look appropriate' for example the researcher might choose a person in the waiting room who looks like they are of a particular age.)</td></tr><tr><td>1</td><td>Weakness is given without being applied to the plan.</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	2	Strength is given and it is applied to the plan, (e.g. use of an opportunity sample allows the researcher to choose people who 'look appropriate' for example the researcher might choose a person in the waiting room who looks like they are of a particular age.)	1	Weakness is given without being applied to the plan.	0	No creditable response.	2	
Marks	Description										
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Question	Answer	Marks	Guidance
11(c)(iii)	Explain <u>one</u> reason for your choice of interview technique. Award 2 marks if an appropriate reason is given and justified. Award 1 mark if an appropriate reason is given but not justified. Example: Using a face-to-face interview makes the interview more personal (1) and so the person may reveal more information about their reasons for non-adherence. (2) (justified) Other appropriate answers can also receive credit.	2	

Question	Answer	Marks	Guidance
12	Workers are absent from the workplace for different reasons. It would be useful for management to know the main reason for absenteeism.		
12(a)	Plan a study using a questionnaire to find the main reason for absenteeism among workers in a workplace. Your plan must include details about: • question format • sampling technique. Use Table A: AO2 Application to mark candidate responses to this question. Credit both general features and specific features of the plan. The specific features of the plan should include: • question format • questionnaire technique • question score/interpretation • examples of questions. The plan must include a question format and a sampling technique. The interview technique should be one of: face-to-face, telephone. The sampling technique should be appropriate to the plan. Credit other elements of the plan as appropriate using the marking grid.	10	

Question	Answer	Marks	Guidance								
12(b)	For <u>one</u> piece of psychological knowledge on which your plan was based:										
12(b)(i)	Describe this psychological knowledge. Syllabus: Blau and Boal's absenteeism and organisational commitment model including types of absence, categories of commitment. Description: Absenteeism might be involuntary (due to illness) but it can also be voluntary (an indicator of job dissatisfaction). Blau and Boal outline four types or categories of absence: • medical: high job involvement/high organisational commitment. • career-enhancing: high job involvement/low organisational commitment. • normative: low job involvement/high organisational commitment. • calculative: low job involvement/low organisational commitment. <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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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 design in part (a). For each feature: <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Suitable answer that identifies 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></table>	Marks	Description	2	Suitable answer that identifies 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.	4	
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Question	Answer	Marks	Guidance								
12(c)(i)	State <u>two</u> reasons for your choice of question format. Two features are required. Award 1 mark for each reason for choice. Answers may include: • a closed questionnaire was chosen with a yes/no answer box to make the questions easy to answer and to analyse. • a closed questionnaire was chosen to provide quantitative data which could be easily analysed. • a closed questionnaire with a 4-point Likert scale was used so participants could not opt-out with neutral answers. Other appropriate answers can also receive credit.	2									
12(c)(ii)	Explain <u>one</u> weakness of your choice of question format. Candidates should use the question format stated in (c)(i). <table><tr><th>Marks</th><th>Description</th></tr><tr><td>2</td><td>Weakness is given and it is applied to the plan (e.g. use of closed questions does not allow participants to provide a reason for their answer) so the reason for absence/type of absence would not be known, merely whether the person was absent or not.</td></tr><tr><td>1</td><td>Weakness is given without being applied to the plan.</td></tr><tr><td>0</td><td>No creditable response.</td></tr></table>	Marks	Description	2	Weakness is given and it is applied to the plan (e.g. use of closed questions does not allow participants to provide a reason for their answer) so the reason for absence/type of absence would not be known, merely whether the person was absent or not.	1	Weakness is given without being applied to the plan.	0	No creditable response.	2	
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1	Weakness is given without being applied to the plan.										
0	No creditable response.										

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Question	Answer	Marks	Guidance
12(c)(iii)	Explain <u>one</u> reason for your choice of sampling technique. Award 2 marks if an appropriate reason is given and justified. Award 1 mark if an appropriate reason is given but not justified. Example: Use of a random sample means that any worker in the organisation can be invited to take part in the research (1) so people with legitimate reasons for absence take part as well as those who may have less legitimate reasons for absence. (2) (justified) Other appropriate answers can also receive credit.	2	

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