

Cambridge
International
AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

PSYCHOLOGY

9990/04

Paper 4 Specialist Options: Application

For Examination from 2018

SPECIMEN MARK SCHEME

1 hour 30 minutes

MAXIMUM MARK: 60

This document consists of **22** printed pages.



CAMBRIDGE
International Examinations

Section A: Psychology and abnormality

Question	Answer	Marks
1(a)	<p>Give <u>one</u> conclusion that can be drawn from this table.</p> <p>Award 1 mark for any one finding but no conclusion. Award 2 marks for any one finding and any appropriate conclusion using data in the table.</p> <p>For example:</p> <ul style="list-style-type: none"> • conditioning explains why people acquire a blood or injection phobia (1) • 49.4% of blood phobics said the cause was conditioning whereas 17.3% could not recall a specific cause. (1) <p>Other appropriate responses should also be credited.</p>	2
1(b)	<p>Give <u>two</u> advantages of the treatment of applied tension for blood phobia.</p> <p>For each advantage: Award 1 mark for identification. Award 2 marks for identification with elaboration.</p> <p>For example:</p> <ul style="list-style-type: none"> • once learned the technique can be applied by anyone (1) in any place at any time (1) • it doesn't involve taking drugs to raise blood pressure (1) meaning it isn't addictive and there is no medication to take at any point. (1) <p>Other appropriate responses should also be credited.</p>	4
1(c)	<p>Fear of blood and injections are common phobias.</p> <p>Describe how a different phobia can be explained through conditioning.</p> <p>Award 1–2 marks for a basic description. Award 3–4 marks for a detailed description with elaboration.</p> <p>Guidance:</p> <ul style="list-style-type: none"> • any phobia is acceptable • candidates can choose a known example (e.g. little Albert) or describe the conditioning process applied to any phobia. <p>For example:</p> <p>Basic answer</p> <ul style="list-style-type: none"> • a loud noise was made every time little Albert saw a white rat, (1) and he learned to associate the fear of the noise with the rat. (1) <p>Detailed answer</p> <ul style="list-style-type: none"> • little Albert's fear of rats was created by repeated association (1) of the sight of the white rat with a loud noise that elicited a fear response. (1) He would then show a fear response just on sight of the rat, without the loud noise (1) although he was not afraid of the rat at the start of the experiment. (1) <p>Other appropriate responses should also be credited.</p>	4

Question	Answer	Marks
1(d)	<p>Discuss the evidence suggesting that phobias are learned. You should consider both sides of the argument and include a conclusion.</p> <p>Award 1 mark for each argument for/against (up to a maximum of 4). Award 1 mark for appropriate conclusion.</p> <p>For:</p> <ul style="list-style-type: none"> • detailed explanation by behaviourists either through classical conditioning or through observational learning • examples from Watson (1920) and many others since • successful therapies (e.g. systematic desensitisation). <p>Against:</p> <ul style="list-style-type: none"> • alternative genetic and biomedical explanation (e.g. Ost et al., 1989) • alternative cognitive explanation (e.g. DiNardo et al., 1988). <p>Other appropriate responses should also be credited.</p>	5

Section A: Psychology and consumer behaviour

Question	Answer	Marks
2(a)	<p>Outline what Braun-LaTour et al. mean by ‘participants were randomly assigned’.</p> <p>Award 1 mark for explanation. Award 1 mark for elaboration.</p> <p>For example:</p> <ul style="list-style-type: none"> • random assignation means that each participant may be in any one condition of the independent variable. (1) There is an equal chance of being in each condition. (1) <p>Other appropriate responses should also be credited.</p>	2
2(b)	<p>Identify <u>one</u> strength and <u>one</u> weakness of the sample in this study. Give reasons for your answer.</p> <p>Award 1 mark for one strength or one weakness. Award 2 marks for one strength and one weakness or one with a reason. Award 3–4 marks for one strength and one weakness with elaboration/ reasons.</p> <p>Strengths:</p> <ul style="list-style-type: none"> • roughly equal balance (1) between male and female participants (1) • random allocation (1) • sixty-six (1) could be said to be a large sample size. (1) <p>Weaknesses:</p> <ul style="list-style-type: none"> • sixty-six (1) could be said to be a small sample size (1) • all students (1), all relatively young. (1) <p>Other appropriate responses should also be credited.</p>	4
2(c)	<p>Describe <u>two</u> alternative ways in which a sample for this study could have been gathered.</p> <p>Marks allocated according to:</p> <ul style="list-style-type: none"> • whether one or two alternatives are suggested • whether there is elaboration (i.e. basic or detailed) • whether the alternatives are related to the named study. <p>Award 1–2 marks for basic answer. Award 3–4 marks for detailed answer.</p> <p>Guidance:</p> <ul style="list-style-type: none"> • any sampling technique: random sample, opportunity sample, self-selecting via advertisement • sample must be related to ‘this study’. <p>Other appropriate responses should also be credited.</p>	4

Question	Answer	Marks
2(d)	<p>Discuss the advantages and disadvantages of using students in psychology experiments. You should include a conclusion in your answer.</p> <p>Award 1 mark for each advantage/disadvantage (up to a maximum of 4). Award 1 mark for appropriate conclusion.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • students as a sample are readily available (e.g. in a class) often without the need to advertise (e.g. in a newspaper) • students may be more motivated, be physically fit, cognitively healthy, and enthusiastic (especially psychology students). <p>Disadvantages:</p> <ul style="list-style-type: none"> • students may not be representative due to age, limited experience or educational background • students participate because they receive course credits, are paid, or because they want to impress a tutor. <p>Other appropriate responses should also be credited.</p>	5

Section A: Psychology and health

Question	Answer	Marks
3(a)	<p>Outline <u>one</u> physiological measure of patient adherence.</p> <p>Award 1 mark for identification or a very basic outline of a measure. Award 2 marks for appropriate measure with elaboration.</p> <p>For example:</p> <ul style="list-style-type: none"> • blood, urine or saliva test. (1) For example, antacid medication neutralises acidity in the stomach and the pH of the blood can be measured. (1) <p>Other appropriate responses should also be credited.</p>	2
3(b)	<p>Give <u>two</u> weaknesses of subjective self-reports to measure adherence.</p> <p>Award 1–2 marks for one (or two) brief reason(s). Award 3–4 marks for two reasons with elaboration (or one with elaboration and one without).</p> <p>For example:</p> <ul style="list-style-type: none"> • patients may want to please or impress the practitioner (1) asking the questions about adherence (1) • patients may want to give desirable answers (1) to avoid embarrassment (1) • patients (people) are not very good at estimating. (1) <p>Other appropriate responses should also be credited.</p>	4
3(c)	<p>Suggest <u>two</u> reasons why physiological tests of adherence are valid.</p> <p>Award 1–2 marks for one (or two) brief reason(s). Award 3–4 marks for two reasons with elaboration (or one with elaboration and one without).</p> <p>For example:</p> <ul style="list-style-type: none"> • they are measures of physiological processes (1) whose function is known (1) • the measure cannot be influenced (1) by any psychological variable/ subjectivity (1) • the measure of the presence of a drug is 100% accurate. (1) <p>Other appropriate responses should also be credited.</p>	4

Question	Answer	Marks
3(d)	<p>Discuss the strengths and weaknesses of using pill counts to measure patient adherence. You should include a conclusion in your answer.</p> <p>Award 1 mark for each strength/weakness (up to a maximum of 4). Award 1 mark for appropriate conclusion.</p> <p>Strengths:</p> <ul style="list-style-type: none">• the measure isn't prone to subjective estimations by a patient• the counting of pills is 100% accurate. <p>Weaknesses:</p> <ul style="list-style-type: none">• just because the pill has left the bottle it doesn't mean it has been taken• once a patient has been tested once they could throw away medication for any future test. <p>Other appropriate responses should also be credited.</p>	5

Section A: Psychology and organisations

Question	Answer	Marks
4(a)	<p>Give <u>one</u> weakness with the wording of the OCQ question in the study.</p> <p>Award 1 mark for identification or very basic weakness. Award 2 marks for appropriate weakness with elaboration.</p> <p>For example:</p> <ul style="list-style-type: none"> • the question is leading (1) in that it suggests a worker would accept any job for the organisation (1) • the question suggests that this is what a worker must do (1) to keep their job. (1) <p>Other appropriate responses should also be credited.</p>	2
4(b)	<p>Give <u>two</u> strengths of psychometric tests using the OCQ as an example.</p> <p>Marks allocated according to:</p> <ul style="list-style-type: none"> • whether one or two strengths are given • whether there is elaboration (i.e. basic or detailed) • whether the strengths are related to the named study. <p>Award 1–2 marks for basic answer. Award 3–4 marks for detailed answer.</p> <p>For example:</p> <ul style="list-style-type: none"> • psychometric tests are said to be reliable (1) and valid (1) • psychometric tests allow comparisons/generalisations to be made with other tests (1) • psychometric tests are claimed to be objective/scientific (1) • psychometric tests such as the OCQ produce quantitative data. (1) <p>Award a maximum of 3 marks if no reference to the OCQ.</p> <p>Other appropriate responses should also be credited.</p>	4
4(c)	<p>Suggest how an alternative method to a questionnaire could be used to gather qualitative data.</p> <p>Award 1–2 marks for suggestion that would gather qualitative data. Award 3–4 marks for suggestion that would gather qualitative data with an elaboration.</p> <p>Guidance:</p> <ul style="list-style-type: none"> • identification of open-ended questionnaire; sample question; analysis of responses; any other relevant information receives credit • identification of structured (or semi-structured) interview with sample question; analysis of responses; any other relevant information receives credit. <p>Other appropriate responses should also be credited.</p>	4

Question	Answer	Marks
4(d)	<p>An alternative scale has 6 points, without ‘neither disagree nor agree’.</p> <p>Discuss the advantages and disadvantages of including this point on a scale. You should include a conclusion in your answer.</p> <p>Award 1 mark for each advantage/disadvantage (up to a maximum of 4). Award 1 mark for appropriate conclusion.</p> <p>Advantages/disadvantages:</p> <ul style="list-style-type: none"> • 7-point allows a person to truly state that they neither agree nor disagree • 7-point allows a person to opt out so their true attitude can remain hidden • 7-point allows a wider range of answers than a 6-point scale • 6-point prevents opt-out meaning a person has to commit to one side or the other • 6-point means that a person is forced to make a choice. <p>Other appropriate responses should also be credited.</p>	5

Section B – Generic levels of response marking grids**Table A**

The table should be used to mark the 10 mark part (a) 'Design' questions for Section B.

Level	Marks	Level descriptor
4	9–10	<ul style="list-style-type: none"> The design is appropriate to the named investigation and is based on thorough psychological knowledge. The design is accurate, coherent and detailed, and it tests the proposed investigation competently. Four or five design features are included. The features are clearly applied to the design throughout the answer and the candidate clearly understands the main features involved in designing an investigation. The response has proposed an appropriate design, has applied a range of relevant methodological design features with competence and shown clear understanding.
3	7–8	<ul style="list-style-type: none"> The design is appropriate to the named investigation and is based on good psychological knowledge. The design is accurate, coherent and detailed, and it tests the proposed investigation competently. Two or three design features are included. The features are often applied to the design and the candidate shows good understanding in places. The response has proposed an appropriate design, has applied some relevant methodological design features and has shown good understanding.
2	4–6	<ul style="list-style-type: none"> The design is mostly appropriate to the named investigation and is based on psychological knowledge. The design is mostly accurate, coherent and detailed in places and it tests the proposed investigation. Design features are limited in their understanding.
1	1–3	<ul style="list-style-type: none"> The design may not be appropriate to the named investigation and use of terminology is sparse or absent. Basic psychological understanding is shown. The design lacks coherence and is limited in understanding. One or two appropriate design features are identified but incorrectly applied. The response lacks detail.
0	0	<ul style="list-style-type: none"> No response worthy of credit.

Table B

The table should be used to mark the 8 mark part (b) 'Explain' questions for Section B.

Level	Marks	Level descriptor
3	6–8	<ul style="list-style-type: none"> Quality and depth of explanation is thorough. Description of knowledge is accurate, coherent and detailed. Use of terms is accurate and use of psychological terminology is comprehensive. Understanding of methodology (such as elaboration, use of example, quality of description) is very good. The design is effectively explained in relation to the topic area. There is a balance of methodology and topic area/relevant study knowledge.
2	4–5	<ul style="list-style-type: none"> Quality of explanation and depth of explanation is competent. Description of knowledge is mainly accurate, coherent and reasonably detailed. Use of terms is mainly accurate and use of psychological terminology is competent. Understanding of methodology (such as elaboration, use of example, quality of description) is good. The design is adequately explained in relation to the topic area. There is an imbalance of methodology and topic area/relevant study knowledge.
1	1–3	<ul style="list-style-type: none"> Quality of explanation and depth of explanation is basic. Description of knowledge is often accurate, generally coherent, but lacks detail. Use of terms is basic and use of psychological terminology is adequate. Understanding of methodology (such as elaboration, use of example, quality of description) is limited. The design is poorly explained in relation to the topic area. There is an imbalance of methodology and topic area/relevant study knowledge.
0	0	<ul style="list-style-type: none"> No response worthy of credit.

Section B: Psychology and abnormality

Question	Answer	Marks
5(a)	<p>Design a study to investigate whether obsessive-compulsive disorder (OCD) is more effectively treated by psychological or biomedical techniques.</p> <p>Mark according to the levels of response descriptors in Table A.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • candidates may choose any method • five or more features of the chosen method and study design are expected. <p>The features of each method are those listed in the research methods section of the syllabus.</p> <p>All research methods:</p> <ul style="list-style-type: none"> • sampling technique and sample • type of data • ethics • reliability • validity • data analysis. <p>Experiments:</p> <ul style="list-style-type: none"> • type of experiment • IV • DV • controls • experimental design. <p>Observations:</p> <ul style="list-style-type: none"> • type of observation • setting • response categories • sampling (time/event) • number of observers. <p>Questionnaires and Interviews:</p> <ul style="list-style-type: none"> • type • setting • example of question • scoring/rating scale • analysis of responses. <p>Other appropriate responses should also be credited.</p>	10

Question	Answer	Marks
5(b)	<p>Explain the psychological and methodological evidence on which your study is based.</p> <p>Mark according to the levels of response descriptors in Table B.</p> <p>Additional guidance:</p> <ul style="list-style-type: none">• syllabus: OCD (bullet 3): biomedical (SSRIs) and psychological: cognitive and exposure and response prevention• candidates are expected to justify their decisions or evidence presented regarding the design made in answer to question part (a). <p>Other appropriate responses should also be credited.</p>	8

Section B: Psychology and consumer behaviour

Question	Answer	Marks
6(a)	<p>Design an experiment to investigate whether different types of music influence consumer behaviour in a shop.</p> <p>Mark according to the levels of response descriptors in Table A.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • candidates must design an experiment (most likely a field experiment) • five or more features of experiments and study design are expected. <p>The features of each method are those listed in the research methods section of the syllabus.</p> <p>All research methods:</p> <ul style="list-style-type: none"> • sampling technique and sample • type of data • ethics • reliability • validity • data analysis. <p>Experiments:</p> <ul style="list-style-type: none"> • type of experiment • IV • DV • controls • experimental design. <p>Other appropriate responses should also be credited.</p>	10
6(b)	<p>Explain the psychological and methodological evidence on which your experiment is based.</p> <p>Mark according to the levels of response descriptors in Table B.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • syllabus: physical environment (bullet 2): sound and consumer behaviour: music in restaurants, in open air markets, background noise and food perception • candidates are expected to justify their decisions or evidence presented regarding the design made in answer to question part (a). <p>Other appropriate responses should also be credited.</p>	8

Section B: Psychology and health

Question	Answer	Marks
7(a)	<p>Design an experiment to test whether sending a reminder improves attendance at a medical appointment.</p> <p>Mark according to the levels of response descriptors in Table A.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • candidates must design an experiment (most likely a field experiment) • five or more features of experiments and study design are expected. <p>The features of each method are those listed in the research methods section of the syllabus.</p> <p>All research methods:</p> <ul style="list-style-type: none"> • sampling technique and sample • type of data • ethics • reliability • validity • data analysis. <p>Experiments:</p> <ul style="list-style-type: none"> • type of experiment • IV • DV • controls • experimental design. <p>Other appropriate responses should also be credited.</p>	10
7(b)	<p>Explain the psychological and methodological evidence on which your experiment is based.</p> <p>Mark according to the levels of response descriptors in Table B.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • the work of Yokley and Glenwick (1984) is likely to feature in part (b) • candidates are expected to justify their decisions or evidence presented regarding the design made in answer to question part (a). <p>Other appropriate responses should also be credited.</p>	8

Section B: Psychology and organisations

Question	Answer	Marks
8(a)	<p>Design a study to investigate worker preference for job rotation or job enrichment.</p> <p>Mark according to the levels of response descriptors in Table A.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • candidates may choose any method (most likely a questionnaire) • five or more features of the chosen method and study design are expected. <p>The features of each method are those listed in the research methods section of the syllabus.</p> <p>All research methods:</p> <ul style="list-style-type: none"> • sampling technique and sample • type of data • ethics • reliability • validity • data analysis. <p>Experiments:</p> <ul style="list-style-type: none"> • type of experiment • IV • DV • controls • experimental design. <p>Observations:</p> <ul style="list-style-type: none"> • type of observation • setting • response categories • sampling (time/event) • number of observers. <p>Questionnaires and Interviews:</p> <ul style="list-style-type: none"> • type • setting • example of question • scoring/rating scale • analysis of responses. <p>Other appropriate responses should also be credited.</p>	10

Question	Answer	Marks
8(b)	<p>Explain the psychological and methodological evidence on which your study is based.</p> <p>Mark according to the levels of response descriptors in Table B.</p> <p>Additional guidance:</p> <ul style="list-style-type: none"> • the techniques of job design – enrichment, rotation and enlargement are likely to feature in part (b) • job enrichment – giving workers more responsibility such as in planning and doing the job; increases in both responsibility and involvement • job rotation – moving workers from one specialised job to another; no change in responsibility or involvement • job enlargement – allowing workers to take on additional and more varied tasks; no change in responsibility or involvement but an increase in work-load • candidates are expected to justify their decisions or evidence presented regarding the design made in answer to question part (a). <p>Other appropriate responses should also be credited.</p>	8

Section C – Generic levels of response marking grid**Table C**

The table should be used to mark the 12 mark 'To what extent' questions for Section C.

Level	Marks	Level descriptor
4	10–12	<ul style="list-style-type: none"> • Both sides of the argument are considered and are relevant to the question. • Appropriate examples are included which fully support both sides. • Discussion is detailed with good understanding and clear expression. • A conclusion is drawn with appropriate justification.
3	7–9	<ul style="list-style-type: none"> • Both sides of the argument are considered and are relevant to the question. They may be imbalanced in terms of quality or quantity. • Some examples are included, are appropriate and often support both sides. • The answer shows good discussion with reasonable understanding. • A basic conclusion is drawn with little or no justification.
2	4–6	<ul style="list-style-type: none"> • Reasons are limited to one side of the argument. • Limited reference to examples, or lack of detail. • The answer shows some understanding. • There is no conclusion.
1	1–3	<ul style="list-style-type: none"> • Anecdotal discussion, brief detail, minimal relevance. Very limited range. • Discussion may be inaccurate or incomplete. • May evaluate topic area studies, making only indirect reference to the question.
0	0	<ul style="list-style-type: none"> • No response worthy of credit.

Section C: Psychology and abnormality

Question	Answer	Marks
9	<p>‘Conducting a case study is the only valid way to find out about obsessive, compulsive and related disorders.’</p> <p>To what extent do you agree with this statement? Use examples of research you have studied to support your answer.</p> <p>Mark according to the levels of response descriptors in Table C.</p> <p>Answers may include:</p> <p>For:</p> <ul style="list-style-type: none"> • a case study is a detailed investigation into one ‘thing’, in the case of abnormality, this would be a person • unique cases can be understood which adds to knowledge about the disorder • a range of different methodologies are often used: interviews, questionnaires, tests (psychometric, projective and physiological). <p>Against:</p> <ul style="list-style-type: none"> • a case study can be of one individual and so cannot be generalised • individual differences (or ‘everyone is unique’) in disorders (e.g. cognitions) means that what is applied to one person cannot be applied to others • people who have disorders are by definition abnormal and so findings cannot be applied to people without the disorder. <p>Examples: Rappaport’s case study of ‘Charles’.</p> <p>Other appropriate responses should also be credited.</p>	12

Section C: Psychology and consumer behaviour

Question	Answer	Marks
10	<p>‘Studies of retail/leisure design environments have not helped psychologists understand buyer behaviour.’</p> <p>To what extent do you agree with this statement? Use examples of research you have studied to support your answer.</p> <p>Mark according to the levels of response descriptors in Table C.</p> <p>Answers may include:</p> <p>For:</p> <ul style="list-style-type: none"> • studies of environmental determinism are reductionist in that they isolate factors rather than considering the impact of all factors • studies of environmental determinism are culturally biased in that what applies in one culture may not apply in another • individual differences mean that whereas one person may be more influenced by factor ‘x’, another person will not be. <p>Against:</p> <ul style="list-style-type: none"> • (physical) environmental determinism has been shown to determine behaviour, e.g. Vrechopoulos et al. (2004), write how store layout (e.g. grid and freeform) influences buyer behaviour • it has been shown that lighting and colour (Kutlu et al., 2013) and odour (Chebat and Michon, 2003) affect shopper behaviour. <p>Other appropriate responses should also be credited.</p>	12

Section C: Psychology and health

Question	Answer	Marks
11	<p>‘Arousing fear is the most effective way to promote health.’</p> <p>To what extent do you agree with this statement? Use examples of research you have studied to support your answer.</p> <p>Mark according to the levels of response descriptors in Table C.</p> <p>For:</p> <ul style="list-style-type: none"> • studies have shown that fear arousal promotes an increase in health behaviour (e.g. Leventhal et al.) • ethical argument that ‘the ends justify the means’ (e.g. some upset is acceptable if it saves a life). <p>Against:</p> <ul style="list-style-type: none"> • studies have shown that fear arousal does not promote an increase in health behaviour (e.g. Janis and Feshbach, 1953) • ethical argument in that no person should come to any psychological harm (be upset) by any health promotion programme • argument that the providing information technique (e.g. Lewin, 1992) is as, if not more, effective • a focus on features of communication, other than the message itself, can increase overall effectiveness of a communication (e.g. Yale model). <p>Other appropriate responses should also be credited.</p>	12

Section C: Psychology and organisations

Question	Answer	Marks
12	<p>‘A high level of pay is the only motivator any worker needs.’</p> <p>To what extent do you agree with this statement? Use examples of research you have studied to support your answer.</p> <p>Mark according to the levels of response descriptors in Table C.</p> <p>For:</p> <ul style="list-style-type: none"> • pay is a major motivator • other reward systems such as bonuses, profit sharing and performance-related pay have all been shown to increase motivation. <p>Against:</p> <ul style="list-style-type: none"> • pay is effective in manual jobs but less effective than job satisfaction in professional jobs • intrinsic motivation is often said to be a more effective motivator • non-monetary rewards such as praise, respect, recognition and empowerment are also effective. <p>Other appropriate responses should also be credited.</p>	12