CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the October/November 2013 series

9698 PSYCHOLOGY

9698/23 Paper 2 (Core Studies 2), maximum raw mark 70

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

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

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

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Section A

1 Demattè et al (smells and facial attractiveness) conducted a laboratory experiment on female college students. An alternative method to investigate this would be to conduct a field experiment, for example, at a social event.

(a) Describe the field experiment as a research method. [5]

Any five correct points.
1 mark for each point up to a maximum of five points.
No answer or incorrect answer, 0.

Indicative content

This is a study that takes place in the natural environment.
IV is manipulated.
DV is measured by researchers.
Variables are controlled as much as possible.
Causal relationships can be shown.
Participants may be unaware the study is taking place.

(b) Design an alternative study to the Demattè et al study using a field experiment and describe how it could be conducted. [10]

Candidates should describe the who, what, when, where and how.

Major omissions include an indication that it is a field experiment, what and how. Candidates must describe how the DV is collected. Candidates must give an indication, even if implied, of where the study was carried out. A description of the IV and DV is required (although the candidate doesn't have to label these).

Minor omissions include who and a clear description of the study as a field experiment (e.g. could state where the study is taking place).

It is possible to achieve 9 marks with a small minor omission.

Alternative study is incomprehensible.	[0]
Alternative study is muddled and impossible to conduct.	[1–2]
Alternative study is muddled and/or major omissions but possible.	[3–4]
Alternative study is clear with a few minor omissions and possible.	[5–6]
Alternative study is described with one minor omission and in some detail.	[7–8]
Alternative study is described in sufficient detail to be replicable.	[9–10]

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(c) Evaluate this alternative way of studying smells and facial attractiveness in <u>practical</u> terms rather than ethical terms. [10]

Indicative content

Candidates need to consider a number of points regarding their study. These points can be both positive and/or negative.

Appropriate points could include a discussion about:
Ecological validity of a field experiment.
Generalisability of the sample or situation.
Reliability if their study has a lot of controls or a comment on the difficulty in replicating the study.
Validity of measuring the dependent variable.
Demand characteristics/social desirability if the participants realise they are in a study.
Usefulness of the data collected.
Difficulty in setting up the scenario/recording data.
Any other appropriate point.

In order to achieve higher marks the candidate must link their points to their investigation described in part **(b)**.

Do not credit any discussion of ethical issues.

No evaluation.	[0]
Evaluation is muddled and weak.	[1–2]
Evaluation is simplistic and not specific to the investigation.	[3–4]
Evaluation is simplistic but specific to the investigation (may include general evaluation). May include one detailed point.	[5–6]
Evaluation is good and specific to the investigation. Two or more points.	[7–8]
Evaluation is detailed and directly relevant to the investigation.	[9–10]

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2 Maguire et al investigated the brain activity of taxi drivers using a PET scanner.

(a) What is meant by the term 'physiological processes'? [2]

1 mark partial
2 marks full

Brain activity – 1 mark.
Physiological processes are biological functions within the body such as heart rate – 2 marks.
Because the study investigates biological processes – 2 marks.

(b) Explain why Maguire et al's study is an example of the physiological approach. [3]

1–2 marks partial
3 marks full

Because the study uses a PET scanner – 1 mark.
Because the study investigates the brain activity of the hippocampus of taxi drivers – 2 marks.
Because the study investigates the link between experience of driving and the activity of the hippocampus in the brain – 3 marks.

A link between physiology and behaviour needs to be given for full marks.

(c) Discuss the strengths and weaknesses of using the snapshot method to investigate brain activity. [10]

Strengths
Quick study.
Easier to get participants as they don't have to commit for very long.
Less expensive as only using PET scanner once.
Less risk of participant attrition due to short nature of the study.

Weaknesses
Doesn't show change over time.
Cannot look at cause and effect over time.
Individual differences between participants might not controlled for as they are in longitudinal studies.

No comment on the snapshot method.	[0]
Comment given but muddled and weak.	[1–2]
Consideration of both strengths and weaknesses but not specific to investigation **OR** Consideration of either strength or a weakness but is simplistic but specific to investigation.	[3–4]
Consideration of two or more points (at least one strength and one weakness) which is clear and specific to investigation.	[5–6]
Consideration of both strengths and weaknesses which is good but brief and specific to investigation.	[7–8]
Consideration of both strengths and weaknesses which is detailed and directly relevant to the investigation.	[9–10]

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(d) Compare and contrast the physiological testing approach as used by Maguire et al with other ways of gathering data. [10]

Candidates may describe/evaluate physiological testing approach and other ways of gathering data with no comparison point. These candidates can achieve up to 4 marks maximum.

Other ways could include:

Self reports with either qualitative or quantitative data.
Observations which are either structured or unstructured.
Psychometric testing.
Qualitative data collected in either a lab experiment or field experiment.
Other types of quantitative data.

Appropriate comparison points will be varied. These could include:

Contrasts
Scientific nature of testing in contrast to other methods.
Biological processes investigated in contrast to other methods.

Comparisons/contrasts (can be argued either way).
Quantitative versus qualitative (scans are quantitative and self reports can be both).
Validity of measurement.
Reliability of measurement.
Ethics of measurement (e.g. scans are uncomfortable and self reports are intrusive).
Reductionism versus holism (scans are reductionist and self reports can be holistic).
Demand characteristics.
Social desirability.
Experimenter/observer bias.
Usefulness.
Any other appropriate point.

Candidates are awarded a maximum of 6 marks if they only do comparisons or contrasts and not both.

The answer does not give any creditworthy material.	[0]
Comment on a comparison/contrast issue which is muddled and weak **OR** brief descriptions/evaluation of physiological testing approach and one other approach.	[1–2]
Comment on comparison/contrast issues which is weak **OR** a clear and fairly detailed description/evaluation of the physiological testing approach and one other approach.	[3–4]
Comments on comparison/contrast issue/s which are simplistic with few examples.	[5–6]
Consideration of comparison and contrast issues which are fairly detailed with examples.	[7–8]
Consideration of comparison and contrast issues which are detailed and directly linked to relevant examples.	[9–10]

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Section B

3 (a) Outline what is meant by the term 'reductionism'. [2]

1 mark partial, 2 marks full

An approach to understanding the nature of complex things by reducing them to the interactions of their parts, or to simpler or more fundamental things.

Reductionism is the argument that we can explain behaviour and experiences by reference to only one factor, such as physiology or learning.

Indicative content
Only uses one thing – 1 mark.
Basic ideas – 1 mark.
Simple ideas – 1 mark
Reductionism is an overly simplistic explanation of behaviour – 2 marks.

Using the studies from the list below, answer the questions which follow.

Tajfel (intergroup categorisation)
Billington et al (empathising and systemising)
Bandura et al (aggression)

(b) Describe how the data were collected in each of these studies. [9]

Indicative content: Most likely answers (any appropriate answer receives credit):

Tajfel: Participants are placed into one of two groups and given matrices to complete. These involve selecting from a variety of options points to give members of either the participants' in group or their out group. The participant is told these points will be converted into money at the end of the study. Participants are all tested alone.

Billington et al: Participants were given the EQ (Empathy Quotient) and the SQ-R (Systemising Quotient) to show the differences in the cognitive style of participants choosing physical science subjects and those choosing humanities subjects. They were also given the eyes task and imbedded figures task.

Bandura et al: Data collected through a one way mirror. Children observed by two observers for imitative and non imitative behaviour. They were observed in five second intervals.

For each study	
No answer or incorrect answer.	[0]
Identification of point relevant to question but not related to study or comment from study but no point about data collection from the study. The description may be very brief or muddled.	[1]
Description of point about data collection from the study. (Comment with lack of understanding). A clear description that may lack some detail.	[2]
As above but with analysis (comment with comprehension) about data collection from the study. A clear description that is in sufficient detail.	[3]
Max mark	[9]

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(c) What are the advantages of using a reductionist explanation for psychologists? [9]

Emphasis on advantage. Answers supported with named (or other) studies. Each advantage does not need a different study; can use same study.

Indicative content:

Advantages

Useful.
Easy to understand.
Simplistic studies can show clear cause and effect.
Reductionist studies are often in the lab which has good control.
Easy to test as often the dependent variable is simple.
Simple to simulate.

Or any other relevant advantage.

Marks per point up to a MAXIMUM of three points.	
No answer or incorrect answer.	[0]
Identification of advantage.	[1]
Description of advantage related to reductionist explanations **OR** a weak description of an advantage related to reductionist explanations and applied to a study.	[2]
Description of advantage related to reductionist explanations and applied to the study effectively.	[3]
Max mark	[9]

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4 (a) Outline what is meant by the term 'ethical guideline'. [2]

1 mark partial, 2 marks full.
These are a set of protocols which psychologists carrying out research should follow.

Informed consent – 1 mark.
Groundrules to protect participants in psychological studies – 2 marks.

Using the studies from the list below, answer the questions which follow.

Milgram (obedience)
Loftus and Pickrell (false memories)
Nelson (children's morals)

(b) Outline <u>one</u> ethical guideline. Explain how it was addressed in each of these studies. [9]

The same guideline must be used throughout.

Milgram: Any issue is acceptable. How it was addressed could include following up participants one year later, offering right to withdraw at the start, worthy purpose of the study, full debrief at the end, etc.

Loftus and Pickrell: Any issue is acceptable. How it was addressed could include participants were all adults so more ethical than using children, the memory was a harmless one and not too upsetting for the participants, a full debrief was given and the researchers apologised for the deception, worthy purpose of the study for court cases, etc.

Nelson: Any issue is acceptable. How it was addressed could include that parental consent was obtained, the procedure of the study was not harmful in any way, the procedure was explained well to the children so they should not have been frightened about what they were being asked to do, worthy purpose of the study, etc.

For each study	
No answer or incorrect answer.	[0]
Identification of point relevant to question but not related to study or comment from study but no point about ethics from the study. The description may be very brief or muddled.	[1]
Description of point about ethics from the study. (Comment with a lack of understanding). A clear description that may lack some detail.	[2]
As above but with analysis (comment with comprehension) about ethics from everyday life. A clear description that is in sufficient detail.	[3]
Max mark	[9]

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(c) What problems do psychologists face when they try to create ethical studies? [9]

Emphasis on problem. Answers supported with named (or other) studies. Each problem does not need a different study; can use same study.

Indicative content

Studies may lack ecological validity.
Participants may show demand characteristics if they know they are in a study.
Cannot study negative human behaviour.
Social desirability may be shown.

Or any other relevant problem.

Marks per point up to a MAXIMUM of three points.	
No answer or incorrect answer.	[0]
Identification of problem.	[1]
Description of problem related to creating ethical studies **OR** a weak description of a problem related to creating ethical studies and applied to a study.	[2]
Description of problem related to creating ethical studies and applied to the study effectively.	[3]
Max mark	[9]

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