UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the May/June 2010 question paper

for the guidance of teachers

9698 PSYCHOLOGY

9698/22 Paper 22 (Core Studies 2), maximum raw mark 50

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 must be read in conjunction with the question papers and the report on the examination.

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International Examinations

1 In the study by Tajfel the dependent variable was intergroup categorisation.

(a) Explain how Tajfel measured the dependent variable. [2]

Most likely answer:
The boys were asked to complete a matrix allocating points to members of both the in-group and out-group.
The boys were asked to assign points to other boys in either their own group or their out-group.
1 mark for identification of the DV and 1 mark for expansion.

(b) Explain *one* way this measure lacks ecological validity. [2]

Most likely answer:
When we favour the in-group in everyday life we don't just give points but we give them, for example, money (or any other relevant example).
1 mark for explanation and one mark for example/link to study.

2 Describe how the study by Schachter and Singer (emotion) broke *two* ethical guidelines. [4]

Any two from: deception, informed consent, physical/psychological harm.
Most likely answers:

- Ps who were in the misinformed group were deceived as they were told the wrong side effects of the vitamin/adrenaline.
- Ps were all deceived as they thought they were receiving an injection of a vitamin called suproxin when in fact they were receiving epinephrine/adrenaline.
- There was no informed consent as the Ps thought the study was on the effects of vitamins on vision when in fact it was on the two factor theory of emotion.
- Ps may have been physically harmed as adrenaline causes the heart to race.

1 mark for guideline broken. 1 mark for explanation from the study.

3 From the study by Milgram on obedience a number of different methods were used to collect the data.

(a) Outline the qualitative and quantitative data gathered in this study. [2]

Most likely answers:
The quantitative data collected was:

- The number of Ps continuing to shock up to different shock levels from 15 volts to 450 volts.
- The Ps were asked to rate the severity of the shock received by the learner on a scale of 1–14.
- The number of Ps in the study who had a laughing fit was counted.
- The number of Ps who had a fit/seizure was counted.

The qualitative data collected in the study was:

- The behaviour of the Ps observed during the study (e.g. digging fingernails into their hands).
- Comments made by the Ps during the study were noted (e.g. 'The guy is suffering in there').
- 1 mark for a partial outline of both or one that is clear. 2 marks for both types of data outlined.

(b) Why was qualitative data gathered in this study? [2]

Example answer:
To find out how the Ps felt about what they were doing to the P in the study. It showed how much they believed the situation that they were really harming someone.
1 mark for explanation and one mark for example from the study.

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4 From the study by Baron-Cohen, Leslie and Frith on autism:

(a) Describe how the children were matched in this study. [2]

Matched on IQ score (Mental Age)
Autistic – 5 years 5 months
Down's syndrome – 2 years 11 months
'Normal' children – 4 years 5 months
2 marks for stating they were matched on IQ score or mental age. One mark for an unclear or vague answer that implies IQ score or mental age.

(b) How does this matching of the children contribute to the validity of the study? [2]

1 mark for showing an understanding that validity improves and 1 mark for explaining this in terms of controlling for participant variables.

5 The study by Raine, Buchsbaum and LaCasse (brain scans) showed there were differences of brain activation between murderers and non-murderers.

(a) Describe *one* of these differences. [2]

Most likely answers
The NGRIs were found to have less activity in their
- prefrontal area
- parietal areas
- corpus callosum

The NGRIs were found to have more activity in their occipital areas.
They also found an imbalance of activity between the two hemispheres in three other subcortical structures.
In the amygdala and the hippocampus, compared to the controls, the NGRIs had less activity in the left side and more activity in the right side. Also, in the thalamus the NGRIs had more activity in the right side, though no difference in the left side.
1 mark for identification and 1 mark for making the comparison between NGRI and controls.

(b) Outline *one* possible application of this research. [2]

Any one from:
- The results of the study could be used by solicitors to help cases where the plaintiff is pleading not guilty by reason of insanity. They could have a brain scan to prove their insanity.
- The results could be used to prevent people from ever becoming murderers. Anyone with similar activity in their brain could be shut away so they don't murder anyone.
- It could prevent couples from giving birth to murderers by doing genetic screening during pregnancy.
- The results give a better understanding of the brain activities of murderers and this can be used to further future research into the causes of violence.

1 mark for brief application and one mark for expansion.

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6 Ecological validity refers to how realistic a study is compared to everyday life.

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

Haney, Banks and Zimbardo (prison simulation)
Loftus and Palmer (eyewitness testimony)
Hraba and Grant (doll choice)
Piliavin, Rodin and Piliavin (subway Samaritans)

(a) Describe how behaviour and experience were measured in each of these studies. [10]

Emphasis on study. Answers must be related to named studies. One point from each study.

Zimbardo: data from video and tape recordings, self report measures, etc.
Loftus and Palmer: data from answering the leading question about speed of car, self report on broken glass.
Hraba and Grant: data from the 8 closed questions about racial self identification, racial awareness and racial preference.
Piliavin: data gathered by the observers about the age, gender, ethnicity of all the passengers in the critical and adjacent areas of the subway. Observers also noted how fast people helped the victim and where the helpers came from on the train. Also noted down comments made by passengers.

For each point up to a maximum of FOUR points:

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 how behaviour was measured.	[1]
Description of point about how behaviour was measured (comment without comprehension).	[2]
As above but with **analysis** (comment with comprehension) about how behaviour was measured.	[3]

[max 10]

(b) What problems may psychologists have when they try to carry out ecologically valid studies? [10]

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

Indicative Content: ethics, validity, bias, restrictive sample, lack of control over variables, or any other relevant issue.

For each point up to a maximum of FOUR points:

Incorrect problem with the study.	[0]
Description of a general problem with a study OR identification of a problem related to ecological validity.	[1]
Description of problem related to ecological validity OR a weak description of a problem with an example from a study that relates to ecological validity.	[2]
Description of problem related to high ecological validity applied to study effectively.	[3]

[max 10]

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(c) Why is it important to have ecologically valid studies? Give reasons for your answer. [10]

Emphasis on point. Answers supported with named study (or other) studies/evidence.

No answer or incorrect answer.	[0]
One or two general statements which may be inaccurate, incomplete or muddled.	[1–2]
a. General statements are made which are focused on the question but are basic, lacking in detail and have no supporting evidence. b. For four marks there may be general statements with anecdotal evidence or vague reference to supporting psychological evidence.	[3–4]
a. A number of points are made which are focused on question and are generally accurate. b. There is some supporting psychological evidence but there is little detail and no attempt to justify the points OR as for 7–8 marks but with only two points.	[5–6]
a. Four points (best four) are made which are focused on the question and are accurate. b. There is supporting psychological evidence with an attempt to justify the points. c. There is increased detail but the range of arguments is limited and there may be an imbalance. OR as for 9–10 marks but with only 3 points.	[7–8]
a. A range of different points (best four) is made which are accurate and show understanding. b. Each point has appropriate supporting psychological evidence. c. The arguments are well expressed, well considered, are balanced, and reflect understanding which extends beyond specific studies. d. There may well be a consideration of the implications and effects.	[9–10]

[max 10]

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7 The nature/nurture debate refers to whether behaviour is determined by biological factors (nature) or the effects of experience (nurture).

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

Bandura, Ross and Ross (aggression)
Deregowski (picture perception)
Gould (intelligence testing)
Samuel and Bryant (conservation)

(a) Describe the extent to which each of these studies supports the nature or nurture view. [10]

Emphasis on study. Answers must be related to named studies. One point from each study.

Bandura: nurture – children imitate physical and verbal aggression; nature – boys more aggressive than girls, find behaviour of the female model does not fit expectations (could be argued for nurture as well), preference shown for same gender model as Ps more likely to imitate him/her.
Deregowski: picture perception is due to nurture due to results of Hudson's tests.
Gould: Yerkes argues intelligence is due to nature due to differences in the scores of black and white men. Gould argues it is due to nurture as the tests favour Americans and those more educated.
Samuel and Bryant: the stages of development occur due to nature as all children pass through the same stages but in order to be successful nurture must take place (with explanation for full marks).

For each point up to a maximum of FOUR points:

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 nature or nurture.	[1]
Description of point about influence of nature or nurture (comment without comprehension).	[2]
As above but with **analysis** (comment with comprehension) about influences on nature or nurture.	[3]

[max 10]

(b) What problems may psychologists have when they investigate whether behaviour develops through nature or nurture? [10]

Emphasis on problem. Answers supported with named (or other) studies. Each problem does not need a different study; can use same study.
Indicative Content: all participants have experienced some learning prior to the study, ethics, cultural bias, reductionism, ecological validity, individual differences etc.

For each point up to a maximum of FOUR points:

Incorrect problem with the study.	[0]
Identification of problem.	[1]
Description of problem OR a weak description of a problem which is applied to a study.	[2]
Description of problem linked to investigating nature/nurture and applied effectively to study.	[3]

[max 10]

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(c) "Human behaviour is entirely the result of nurture." To what extent do you agree with this statement? Give reasons for your answer. [10]

Emphasis on point. Answers supported with named study (or other) studies/evidence.

No answer or incorrect answer.	[0]
One or two general statements which may be inaccurate, incomplete or muddled.	[1–2]
a. General statements are made which are focused on the question but are basic, lacking in detail and have no supporting evidence. b. For four marks there may be general statements with anecdotal evidence or vague reference to supporting psychological evidence.	[3–4]
a. A number of points are made which are focused on question and are generally accurate. b. There is some supporting psychological evidence but there is little detail and no attempt to justify the points. OR as for 7–8 marks but with only two points.	[5–6]
a. Four points (best four) are made which are focused on the question and are accurate. b. There is supporting psychological evidence with an attempt to justify the points. c. There is increased detail but the range of arguments is limited and there may be an imbalance. OR as for 9–10 marks but with only 3 points.	[7–8]
a. A range of different points (best four) is made which are accurate and show understanding. b. Each point has appropriate supporting psychological evidence. c. The arguments are well expressed, well considered, are balanced, and reflect understanding which extends beyond specific studies. d. There may well be a consideration of the implications and effects.	[9–10]

[max 10]

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8 The longitudinal method is one in which a limited number of participants are studied by psychologists over a long period of time.

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

Freud (little Hans)
Thigpen and Cleckley (multiple personality disorder)
Gardner and Gardner (project Washoe)
Hodges and Tizard (social relationships)

(a) Describe the longitudinal method used in each of these studies. [10]

Emphasis on study. Answers must be related to named studies.

One point from each study
Freud: studied little Hans for 3½ years with correspondence from father.
Thigpen and Cleckley: studied Eve White and Eve Black for 14+ months and over 100 hours of interviews and therapy. Used hypnosis, psychometric test, projective test, EEG, etc.
Gardner and Gardner: spent 32 months with Washoe from 10 months onwards. Collected data via observation and very strict criteria for acceptance of a sign.
Hodges and Tizard: initially contacted the guardian/parent of the child at age 2, recontacted at age 4, researched teacher, child and parent at age 8 and finally did a detailed analysis of each adolescent and the comparisons at age 16.

For each point up to a maximum of FOUR points:

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 longitudinal method.	[1]
Description of point about longitudinal method (comment without comprehension).	[2]
As above but with **analysis** (comment with comprehension) about longitudinal method.	[3]

[max 10]

(b) What problems may psychologists have when they investigate behaviour using the longitudinal method? [10]

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

Indicative Content: subject attrition, observer/experimenter bias, ethics, subjectivity of researcher/over-involvement of researcher, time consuming, etc.

For each point up to a maximum of FOUR points:

Problem with study itself NOT related to longitudinal method.	[0]
Identification of problem related to longitudinal method.	[1]
Description of problem related to longitudinal method.	[2]
Description of problem related to longitudinal method and applied effectively to study.	[3]

[max 10]

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(c) "The longitudinal method is the only way to gain true insight into human behaviour." To what extent do you agree with this statement? Give reasons for your answer. [10]

Emphasis on point. Answers supported with named study (or other) studies/evidence.

No answer or incorrect answer.	[0]
One or two general statements which may be inaccurate, incomplete or muddled.	[1–2]
a. General statements are made which are focused on the question but are basic, lacking in detail and have no supporting evidence. b. For four marks there may be general statements with anecdotal evidence or vague reference to supporting psychological evidence.	[3–4]
a. A number of points are made which are focused on question and are generally accurate. b. There is some supporting psychological evidence but there is little detail and no attempt to justify the points. OR as for 7–8 marks but with only two points.	[5–6]
a. Four points (best four) are made which are focused on the question and are accurate. b. There is supporting psychological evidence with an attempt to justify the points. c. There is increased detail but the range of arguments is limited and there may be an imbalance. OR as for 9–10 marks but with only 3 points.	[7–8]
a. A range of different points (best four) is made which are accurate and show understanding. b. Each point has appropriate supporting psychological evidence. c. The arguments are well expressed, well considered, are balanced, and reflect understanding which extends beyond specific studies. d. There may well be a consideration of the implications and effects.	[9–10]

[max 10]

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