UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

9698 PSYCHOLOGY

9698/22 Paper 2 (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.

- CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

UNIVERSITY of CAMBRIDGE
International Examinations

Section A

1 From the study by Hraba and Grant (doll choice) on racial preference:

(a) Give *two* questions that were asked in this study. [2]

Any two from:

1 mark for each correct question asked.

- Give me the doll that you want to play with.
- Give me the doll that is a nice doll.
- Give me the doll that looks bad.
- Give me the doll that is a nice colour.
- Give me the doll that looks like a white child.
- Give me the doll that looks like a coloured child.
- Give me the doll that looks like a negro child.
- Give me the doll that looks like you.

(b) Outline *one* way in which asking these questions lacked ecological validity. [2]

1 mark: No one would ever ask these types of questions.
2 marks: No one would ever ask these types of questions as asking which doll looks bad is an unusual way to refer to a doll.

1 mark for a partially correct answer or correct but incomplete as lacking explanation to demonstrate clear understanding.
2 marks for a clear explanation of why these type of questions are not asked in everyday life. Candidates might talk about how a stranger asked the children the questions or that they would have never heard anyone talk about dolls in this way.

2 Raine, Buchsbaum and LaCasse (brain scans) used standardised procedures to control their study.

(a) Outline *one* control used in this study. [2]

Likely answers all 2 marks:

There was a control group of non-murderers matched on age, gender and schizophrenia with the NGRIs (Not Guilty by Reason of Insanity).
All participants experienced the same PET scan of their brain activity and the scanning technique (e.g. ingesting radioactive glucose) was the same for all participants.
All participants completed the same Cognitive Processing Therapy (CPT) task prior to and during the study for 32 minutes.
All participants were medication-free for 2 weeks prior to the start of the study.

2 marks for describing the control in detail. 1 mark for a brief answer (e.g. participants completed the same task).

© UCLES 2010

(b) Explain the effect of this control on the validity of the study. [2]

1 mark: It improved the validity as the participants are all the same.
2 marks: The validity of the study will be improved as the participants are all experiencing the same CPT tests and therefore their brains should all be experiencing the same thought processes. This will ensure the study is measuring brain activity in a similar way across participants.

1 mark for mentioning the effect on the validity due to a control and 1 mark for explaining it in terms of the Raine study.

1 mark for as above but not linked to the control described in **2 (a)**.

3 In the study by Haney, Banks and Zimbardo (prison simulation) a number of different explanations are given for the guards' and prisoners' behaviour.

(a) Outline *one* situational explanation for the participants' behaviour in this study. [2]

1 mark: The guards were mean because they wore a uniform.
2 marks: The guards were mean because they wore a military-style uniform that made them feel more powerful.

Likely answers will focus on the situation in the prison and the effect this has on either the guards' or the prisoners' behaviour. Candidates may discuss both groups of participants. The candidates may also focus on how the participants treated each other and the effect this had on behaviour.

1 mark for a brief/partial answer and 2 marks for a clear answer with sufficient detail to demonstrate understanding. For 2 marks, the answer should focus on the effect on participants' **behaviour.**

(b) Outline *one* individual explanation for the participants' behaviour in this study. [2]

1 mark: Not all of the guards were aggressive.
2 marks: Not all of the guards were aggressive. Some were quite passive, showing there were individual differences between the guards' personalities and behaviour.

Likely answers will focus on possible individual explanations of the guards'/prisoners' behaviour.

Not all of the guards were aggressive. Some were quite passive, showing there were individual differences between the guards' personalities and behaviour.

The prisoners did respond differently. Some of the prisoners were not released early and did stay until the study ended. They may have had a less severe reaction to the prison due to their individual personality.

1 mark for a brief/partial answer and 2 marks for a clear answer with sufficient detail to demonstrate understanding.

© UCLES 2010

4 In the study by Samuel and Bryant on conservation, results were gathered on the cognitive ability of the children.

(a) Describe *one* way in which quantitative data were collected in this study. [2]

1 mark: Through the standard condition.
2 marks: By asking the same question twice in the standard condition about the mass of the object.

Likely answer:

The number of errors the child made on the conservation task was collected by asking the question 'Are they the same or are they different?'. Conditions in the study (standard, one judgement and fixed array).

1 mark for a brief answer (e.g. the question asked) and 1 mark for extending this to show that numerical data were collected.

(b) Explain *one* problem with quantitative data in this study. [2]

1 mark: Quantitative data lack detail.
2 marks: Quantitative data lack detail as they don't explain why the children in the study made the error about conservation.

Problems will include issues to do with lack of detail, lack of opportunity for the participant to explain their answer and participants had a 50/50 chance of getting the answer right.

1 mark for explaining a problem with quantitative data and 1 mark for linking it to the Samuel and Bryant study.

5 From the study by Sperry (split brain):

(a) Outline *one* technique used by Sperry to present information to only one side of the brain. [2]

Likely answers all 2 marks:

- One of the tasks used to send information to just one hemisphere involved asking participants to respond to visual information. One of the participants' eyes was blindfolded and they were asked to fixate on a point in the middle of the screen. A stimulus was projected onto the screen for 1/10th of a second.
- A stimulus was presented to one of the hands of the split brain patient by getting the participant to place their hands behind a screen. Objects could then be placed in one hand or the other.
- Auditory information was presented to the participant by blocking the ear and playing a sound so just one ear would hear it.
- Olfactory (smell) stimuli were presented to participants by blocking off one nostril and presenting it to the other.

1 mark for a partially correct answer or very brief answer. E.g. participants were blindfolded and objects were placed in one hand.
2 marks for an answer with sufficient detail that it does explain how information would be presented to one hemisphere alone. This may mean the description for the visual stimuli will need a longer explanation as it is more complex.

© UCLES 2010

(b) Explain why it is difficult to make generalisations from the data in this study. [2]

Likely answers all worth 1 mark (will be quite varied):

- Lack of ecological validity.
- Use of a very small sample.
- Use of a very unusual sample.

1 mark for every partially correct answer or very brief answer. 2 marks for one answer with sufficient detail that it does explain why generalisations are difficult to make from the Sperry study. E.g. the study lacked ecological validity and therefore it is difficult to say that split brain patients would respond the same in their everyday lives.

Partial/full answer

0 marks	No answer *or* incorrect answer.
1 mark	Partially correct answer *or* correct but incomplete, lacking sufficient detail or explanation to demonstrate clear understanding.
2 marks	Correct answer with sufficient detail or explanation to demonstrate clear understanding.

© UCLES 2010

Section B

6 The environment or setting used in psychological studies sometimes relates to everyday life.

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

Milgram (obedience)
Piliavin, Rodin and Piliavin (subway Samaritans)
Schachter and Singer (emotion)
Bandura, Ross and Ross (aggression)

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

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

Indicative content:
Milgram: Experimental room at Yale University, male experimenter in white lab coat, shock generator in room with teacher and experiment and learner in an adjacent room (away from sight of teacher), male learner. **Piliavin:** Field study in the New York subway with the four stooges. Two observers in the adjacent area and two actors in the critical area. Could include a brief description of the procedure of the study. **Schachter and Singer:** Lab experimenter at Minnesota University. Left in a room to wait for injection to take effect. In euphoria condition the room is in mild disarray and set out with paper, folders, pencil, rubber band and hula hoop with a stooge in the room. In anger condition there is a questionnaire in the room and a stooge. There was a one-way mirror in the room. **Bandura:** Lab experiment at Stanford University. First room is set out with adult-sized bobo doll and toys (potato prints, stickers, tinker toys, etc.) for both adult and child. Second room has very attractive toys and third room has child-sized bobo doll, mallet, peg board, dart gun, tea set, crayons, three bears and plastic farm animals. This room has a one-way mirror.

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 the environment used in the study. The description may be very brief or muddled.	2
Description of point about the environment used in the study. (Comment without comprehension.) A clear description that may lack some detail.	
As above but with analysis (comment with comprehension) about the environment used in the study. A clear description that is in sufficient detail.	3
Max mark	10

© UCLES 2010

(b) What problems do psychologists have when studying everyday life? [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:
Ethical problems in creating a realistic environment, difficult to make a study totally realistic, difficult to control variables if unrealistic, difficult to wait for a sample to come to a realistic situation, difficult to study certain behaviours as these may not occur naturally, etc.

1 mark: There may be ethical problems in creating a realistic environment.
2 marks: There may be ethical problems in creating a realistic environment as in order to make something believable and study natural behaviour it is not possible to get consent from a participant.
3 marks: There may be ethical problems in creating a realistic environment as in order to make something believable and study natural behaviour it is not possible to get consent from a participant. In the Piliavin study, no consent was obtained so the participants responded naturally to the victim collapsing.

For each point up to a maximum of four points	
No answer *or* incorrect answer.	0
Identification of problem not clearly related to studying everyday life **or** a very weakly described problem that is related to studying everyday life.	1
Description of problem related to studying everyday life **or** weak problem of studying everyday life and applied to a study.	2
Description of problem related to studying everyday life and applied to a study effectively.	3
Max mark	10

(c) Is it ever possible to create an ethical environment in which to study human behaviour? Give reasons for your answer. [10]

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

One or two general statements which may be inaccurate, incomplete or muddled.	1–2
General statements are made which are focused on the question but are basic, lacking in detail and have no supporting evidence. For four marks there may be general statements with anecdotal evidence or vague reference to supporting psychological evidence.	3–4
A number of points are made which are focused on the question and are generally accurate. 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
Four points (best four) are made which are focused on the question and are accurate. There is supporting psychological evidence with an attempt to justify the points. 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 range of different points (best four) is made which are accurate and show understanding. Each point has appropriate supporting psychological evidence. The arguments are well expressed, well considered, are balanced, i.e. expressing both sides of the argument, and reflect understanding which extends beyond specific studies. There may well be a consideration of the implications and effects.	9–10
Max mark	10

© UCLES 2010

7 The cognitive approach in psychology looks at cognitive processes such as person perception and picture perception, memory and language.

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

Deregowski (picture perception)
Baron-Cohen, Leslie and Frith (autism)
Loftus and Palmer (eyewitness testimony)
Gardner and Gardner (project Washoe)

(a) Outline the cognitive processes that were investigated in each of these studies. [10]

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

Indicative content:
Deregowski: Depth perception is developed through cultural experiences/nurture. Participants were tested using the picture of the man, antelope and elephant, trident illusion, split-style drawings to assess their depth perception. **Baron-Cohen:** Whether the autistic, Down's and normal children used in the study have a theory of mind. This is the understanding that other people's thoughts and beliefs are different from our own. Baron-Cohen used the Sally Anne task to test this cognitive process. **Loftus and Palmer**: Tested the effect that leading questions can have on memory. Loftus and Palmer did two experiments. The first involved participants watching short film clips and answering the critical question 'How fast were the cars going when they ******** into each other?' In the second experiment participants were asked 'How fast were the cars going when they hit/smashed into each other?' and then asked the question 'Was there any broken glass?'. **Gardner and Gardner:** Investigated the ability of a chimpanzee to learn American Sign Language (ASL). Washoe was tested both in lab conditions as well as in the 'field', which was the Gardners' home in Nevada, USA. They used the techniques of imitation and operant conditioning to teach Washoe. They had very strict criteria to determine if Washoe had acquired a sign.

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 cognitive processes. The description may be very brief or muddled.	1
Description of point about cognitive processes/procedure. (Comment without comprehension.) A clear description but may lack some detail. Any answer that focuses on the results of the study and not the cognitive processes should get a maximum of 2 marks.	2
As above but with analysis (comment with comprehension) about the cognitive processes/procedure that were investigated. A clear description that is detailed.	3
Max mark	10

© UCLES 2010

(b) What problems may psychologists experience when they study cognitive processes? [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 of investigating mental processes, restricted sample which lacks generalisability to the public about their cognitive processes, reductionistic explanation of cognitive processes, practical problems like poor concentration span/language skills of participants, demand characteristics of experimental settings which affect participants' behaviour, or any other relevant problem.

1 mark: Participants may have poor concentration skills.
2 marks: Participants may have poor concentration skills which mean their cognitive processes cannot be studied in a valid way.
3 marks: Participants may have poor concentration skills which mean their cognitive processes cannot be studied in a valid way. For example, the chimpanzee in the Gardners' study couldn't concentrate for very long, which may have inhibited his language skills.

For each point up to a maximum of four points	
Incorrect problem with the study.	0
Identification of problem not clearly related to studying cognitive processes **or** a very weakly described problem that is related to studying cognitive processes.	1
Description of problem related to studying cognitive processes **or** a weak description of a problem weakly related to studying cognitive processes and applied to a study.	2
Description of problem related to studying cognitive processes and applied effectively to a study.	3
Max mark	10

(c) 'The human mind is like a black box that is impossible to ever truly understand.' 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).

One or two general statements which may be inaccurate, incomplete or muddled.	1–2
General statements are made which are focused on the question but are basic, lacking in detail and have no supporting evidence. For four marks there may be general statements with anecdotal evidence or vague reference to supporting psychological evidence.	3–4
A number of points are made which are focused on the question and are generally accurate. 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
Four points (best four) are made which are focused on the question and are accurate. There is supporting psychological evidence with an attempt to justify the points. 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 range of different points (best four) is made which are accurate and show understanding. Each point has appropriate supporting psychological evidence. The arguments are well expressed, well considered, are balanced, i.e. expressing both sides of the argument, and reflect understanding which extends beyond specific studies. There may well be a consideration of the implications and effects.	9–10
Max mark	10

© UCLES 2010

8 Qualitative data are descriptive. Quantitative data are numerical.

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

Thigpen and Cleckley (multiple personality disorder)
Freud (little Hans)
Dement and Kleitman (sleep and dreaming)
Rosenhan (sane in insane places)

(a) Outline how qualitative data were collected in each of these studies. [10]

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

Indicative content:
Thigpen and Cleckley: A case study with 100+ hours of interviews, therapy and hypnosis with Eve Black/White/Jane over 14 months. Outside expert brought in to analyse Eve who observed her behaviour during the test and did the ink blot test on her. Candidates will possibly give examples of specific experiences of the Eves as well as the interpretation of the psychiatrists/outside expert. **Freud:** A case study of a 3- to 5-year-old boy. The boy's conversations and experiences were reported to Freud in letters from Hans' father. Candidates will describe Hans' conversations, experiences and Freud's analysis of this. **Dement and Kleitman:** An experiment was done to test the relationship between sleeping and dreaming. Participants were woken at various intervals during the night by a door bell and asked to describe the dream they had. Dement and Kleitman analysed this and linked the dream content to the direction of eye movement. Candidates will possibly describe some of the dreams reported by participants. **Rosenhan:** A study was done in the field where participants gained entry to 12 psychiatric institutions throughout the USA. The pseudopatients kept journals while they were in hospital to record the behaviour and some of the comments made by staff and patients. Hospital records of the pseudopatients were also analysed by Rosenhan. Candidates may describe the events in the hospital, comments by staff, etc.

For each point up to a maximum of four points	
No answer *or* incorrect answer. No credit given for quantitative data.	0
Identification of point relevant to question but not related to study. The description may be very brief or muddled.	1
Description of point about qualitative data. (Comment without comprehension.) A clear description but may lack some detail.	2
As above but with analysis (comment with comprehension) about qualitative data. A clear description that is detailed.	3
Max mark	10

© UCLES 2010

(b) What are the strengths and weaknesses of qualitative data? [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:
Weaknesses – difficult to analyse, subjective nature of interpretation of data, over-involvement of researcher, time-consuming to collect and analyse, confounding variables, observer/experimenter bias, intrusive type of data collection could break ethical guidelines or any other relevant weakness.

Strengths – detailed data collection, allows participants to explain and explore their feelings, allows researcher to build up a rapport with the participant as this type of data often takes time to collect or any other relevant strength.

1 mark: This type of data is difficult to analyse.
2 marks: This type of data is difficult to analyse as the participant gives very long and detailed answers and it is difficult for the researcher to give a summary of their results.
3 marks: This type of data is difficult to analyse as the participant gives very long and detailed answers and it is difficult for the researcher to give a summary of their results and they could exclude important data. For example, Rosenhan presented a summary of the negative experiences of the pseudopatients and it is possible he just ignored the positive experiences.

For each point up to a maximum of four points	
Incorrect problem with the study.	0
Identification of strength/weakness not clearly related to qualitative data **or** a very weakly described strength/weakness that is related to qualitative data.	1
Description of strength/weakness related to qualitative data **or** a weak description of a strength/weakness related to qualitative data and applied to a study.	2
Description of strength/weakness related to qualitative data and applied effectively to a study.	3
Max mark	10

© UCLES 2010

(c) Discuss the extent to which qualitative data can explain human behaviour. Give reasons for your answer. [10]

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

One or two general statements, which may be inaccurate, incomplete or muddled.	1–2
General statements are made which are focused on the question but are basic, lacking in detail and have no supporting evidence. For four marks there may be general statements with anecdotal evidence or vague reference to supporting psychological evidence.	3–4
A number of points are made which are focused on the question and are generally accurate. 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
Four points (best four) are made which are focused on the question and are accurate. There is supporting psychological evidence with an attempt to justify the points. 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 range of different points (best four) is made which are accurate and show understanding. Each point has appropriate supporting psychological evidence. The arguments are well expressed, well considered, are balanced, i.e. expressing both sides of the argument, and reflect understanding which extends beyond specific studies. There may well be a consideration of the implications and effects.	9–10
Max mark	10

© UCLES 2010