**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

**9698/13** Paper 13 (Core Studies 1), maximum raw mark 100

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.

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UNIVERSITY of CAMBRIDGE
International Examinations

## Section A

**1 A number of generalisations can be made from the study by Deregowski on picture perception.**

**(a) Suggest a generalisation that can be made from this study.**

Most likely:

- picture perception is learned
- pictures cannot be used as a 'lingua franca'/universal language
- any appropriate statement pertaining to this study

1 mark partial, 2 marks expansion. 1 mark max if no reference to picture perception. (2)

**(b) What is a generalisation?**

Most likely:

a generalisation is where a 'psychological ability' applies to most people most of the time.

1 mark partial, 2 marks elaboration (e.g. to whom it applies). (2) [4]

**2 Suggest *two* problems with the Sally-Anne test used by Baron-Cohen, Leslie and Frith to test autism.**

Any two problems (any appropriate problem to receive credit):

- use of dolls and not real people
- children in lab with 'stranger' i.e. Simon Baron-Cohen
- the study used boys and girls, and boys may be unfamiliar playing with dolls
- test can only apply to children, not adults

1 mark partial, 2 marks elaboration. (2 + 2) [4]

**3 In the study of Washoe by Gardner and Gardner:**

**(a) Identify *two* ways in which it was decided that Washoe had learned a new sign.**

Most likely:

- new sign reported by three different observers added to checklist
- sign must be appropriate and spontaneous
- must be observed at least once per day for 15 consecutive days

1 mark for each feature up to two max. (2)

**(b) Identify *two* of the four new signs Washoe learned during the first seven months.**

Gardner and Gardner quote: "4 new signs appeared during the first 7 months, 9 during the next 7 months and 21 during the next 7 months."

The four new signs that appeared during the **first seven months** were:

- come-gimme
- more
- up
- sweet

No other sign is acceptable.

1 mark for correct identification of sign, two max. (2) [4]

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**4 From the study on conservation by Samuel and Bryant:**

**(a) Describe *one* of the three independent variables.**

There were three IVs:

- **material:** volume v mass v number
- **Age:** 5 v 6 v 7 v 8 years of age
- **Conditions:** standard (Piaget two question) v one judgement

1 mark partial description e.g. age or material or 'one judgement' without expansion.
2 marks expansion e.g. full IV as above. (2)

**(b) What was the dependent variable?**

The DV was the same for each of the conditions:
The number of **errors** out of four. The results table from the study is 'the mean number of errors (out of four).
1 mark for general answers e.g. "to see if they can conserve or not", 2 marks for an answer mentioning errors. (2) [4]

**5 The study by Bandura, Ross and Ross on the imitation of aggression involved observing children.**

**(a) How did Bandura, Ross and Ross observe the children?**

Several possible answers here:

- two observers; 20 minutes divided into 5 second intervals with an electric interval timer (240 response units) using pre-determined categories
- laboratory or controlled observation using one-way mirror
- non-participant, covert observation.

1 mark partial description e.g. one of the above aspects, or partial answers such as 'through a one way mirror', 2 marks expansion with description of the above aspects. (2)

**(b) Suggest *one* advantage of observing them in this way.**

Most likely:

- reliability can be checked by inter-rater reliability as two observers were used: correlation .89 between ratings
- the children do not know they are being observed so behave naturally
- behaviour has no demand characteristics
- as is controlled then can be replicated and have reliability and validity
- 5 second interval allows time to observe and record; no behaviour missed

1 mark identification of advantage, 2 marks expansion (2) [4]

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**6 Hodges and Tizard ask whether there is an ex-institutional 'syndrome' (a pattern of social relationships different from the matched comparisons).**

**(a) Identify *two* of the five features that form this 'syndrome'.**

The five features listed are:

- more often adult oriented
- more likely to have difficulties in peer relations
- less likely to have a special friend
- less likely to turn to peers for emotional support if anxious
- less likely to be selective in choosing friends

1 mark for each feature up to 2 marks maximum. (2)

**(b) Suggest *one* weakness with proposing this 'syndrome'.**

Most likely (but any other appropriate point to receive credit):

- Hodges and Tizard state "very few ex-institutional adolescents, and no comparisons show all five…however, almost half the ex-institutionals show four out of five"
- in other words (but can be separate point) it would be a generalisation to say there is a syndrome
- Hodges and Tizard simply state half show four out of five, but do not say if any features are always present or if any features always appear together

1 mark partial e.g. it would be a generalisation, 2 marks expansion. (2) [4]

**7 The study by Freud looked at the development of little Hans over time.**

**(a) Give *one* advantage of studying development, giving an example from this study.**

Most likely answers (any appropriate answer receives credit):

- changes in development over time can be recorded (e.g. progress through phallic stage)
- lots of detailed data can be collected (e.g. everyday events/interaction with mother)

NB the question is about *development* and **not** longitudinal or case studies.

1 mark for advantage (as above), 1 mark for relating advantage to ***this*** study. (2)

**(b) Give *one* disadvantage of studying development, giving an example from this study.**

Most likely answers (any appropriate answer receives credit):

- children are not adults – we can't generalise from their behaviour. We should not assume that what they do as children will be what they do as an adult (Hans is not an adult)
- if development of one child is studied, can this be generalised to other children (only Hans was studied)
- children cannot communicate their thoughts and feelings clearly. They may become confused and may misinterpret what is required (father suggested thoughts to Hans)
- there may be problems of interpretation. Experimenters may also misinterpret what a child intends (father may have misinterpreted Hans' comments)
- children cannot give informed consent. They may well be studied even though they do not wish to be (but parents can: Hans' father gave consent)
- studies of development take time (study was over at least two years)

1 mark for disadvantage (as above), 1 mark for relating disadvantage to ***this*** study.

(2) [4]

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**8 The study by Schachter and Singer included anger and euphoria conditions:**

**(a) Briefly describe the procedure in the anger condition.**

Answer can begin with arrival at the lab, or instructions re suproxin or the injections. If any of above with no details (as below) then only 1 mark. Answers may start specifically at the anger condition.

Quote: "This began as the Euphoria condition did, but the participant and stooge were asked to spend the 20 minutes waiting time answering questionnaires. The five-page questionnaire started innocently enough, but then grew increasingly personal and insulting. The stooge, sitting opposite the participant, paces his own answers so that at all times they are both working on the same question. At regular points, the stooge makes a series of standardised comments about the questions, starting off innocently enough, but growing increasingly querulous and finally he ends up in a rage. Question 17 asks 'what is your father's annual income?' and the stooge says, 'This really irritates me. It's none of their business what my father makes. I'm leaving that blank'. Question 28 reads: 'How many times each week do you have sexual intercourse?' to which the stooge responds, 'The hell with it! I don't have to tell them all this'. He rips up his questionnaire, crumples the pieces and hurls them to the floor, saying, 'I'm not wasting any more time. I'm getting my books and leaving', and he stamps out of the room.

Summary of this expected.

1 mark partial, 2 marks elaboration. (2)

**(b) Suggest why it is important to standardise a procedure.**

Most likely answer:

- used as a control; same for all participants
- DV more likely due to IV and not confounded

1 mark partial, 2 marks full. (2) [4]

**9 The obedience study by Milgram used a stooge.**

**(a) Identify *two* ways in which the stooge was used to deceive the participants.**

Most likely: participants thought:

- stooge was another participant
- choice of role (teacher or leaner) was random. Stooge always learner
- stooge attachment to shock generator was genuine
- stooge was telling truth and had a heart condition
- oohs and aahs and screams from stooge were genuine

1 mark for each correctly identified deception by stooge up to 2 maximum. (2)

**(b) Give *one* advantage of using a stooge in psychological research.**

Most likely:

- a stooge keeps a participant naïve about the nature of the study
- a stooge may suggest to a participant how he or she may behave
- without the stooge the study may not have been possible

NB answer can apply to any study.

1 mark partial, 2 marks elaboration. (2) [4]

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**10 The Haney, Banks and Zimbardo prison simulation study recruited participants through a newspaper advertisement.**

**(a) Suggest *one* advantage of recruiting participants through newspaper advertisements.**

Most likely:

- target population wider and larger than say student sample
- potentially wide range of respondents: age, occupation, etc.
- the wording of advert can attract particular features or characteristics

1 mark partial, 2 marks expansion. (2)

**(b) Suggest *one* disadvantage of recruiting participants through newspaper advertisements.**

Most likely:

- may not be representative of wider population
- targets only those reading that particular newspaper
- those replying, volunteers, may possess particular characteristics
- the sample will not include those who will not reply to a newspaper advertisement

1 mark partial, 2 marks full. (2) [4]

**11 The setting in which a study takes place may affect the result.**

**(a) Describe the setting for the subway Samaritan study by Piliavin, Rodin and Piliavin.**

Most likely:

USA, New York; subway train; IND; 59th Street to 125th Street (7½ mins with no stop); 11am to 3pm; carriage with critical and adjacent areas; any other feature.

NB question concerns the **setting**. No credit for non-setting aspects.

Description required, but 1 mark for each different feature to 2 max. (2)

**(b) Give *one* advantage of this setting and give *one* disadvantage of this setting.**

Most likely:

Advantages:

- captive audience for 7½ minutes
- same subway line between same stations so features relatively constant/controlled
- audience and victim must be face-to-face

Disadvantages:

- captures only those between 11am and 3pm who travel this line
- same people may travel on same train each day
- it is New York and so cannot be generalised to other subways

1 mark for an advantage and 1 mark for a disadvantage. (2) [4]

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**12 The study by Tajfel on intergroup categorisation is a snapshot study.**

**(a) What makes the Tajfel study a snapshot study?**

Statement of obvious here, but candidate must know what a snapshot study is, and they must relate that to this study.

In the study each boy was presented with dots/pictures; asked to complete matrices. Study would have taken no longer than maybe 1 hour.

1 mark partial, 2 marks expansion. (2)

**(b) Give *one* disadvantage of a snapshot study.**

Most likely:

- it is a snapshot!
- it isolates behaviour from wider social context; is reductionist?
- it samples behaviour at that time only – result may depend on mood at time
- it may ignore reasons why behaviour is performed

1 mark identification of disadvantage, 2 marks for elaboration. (2) [4]

**13 The Gould study reviews Yerkes' construction of psychometric tests of intelligence. Describe any *two* advantages of psychometric tests.**

Most likely:

- should be reliable. Can be assessed with test-retest or split-half
- should be valid – should have construct and concurrent validity
- use of standardised measure is more scientific/objective
- allows comparisons to be made with others on normal distribution

NB answer does not have to be related to the Gould study, although it could be used for elaboration.

1 mark partial, 2 marks elaboration. Twice. (2 + 2) [4]

**14 The study by Hraba and Grant on doll choice involved children.**

**(a) Describe *two* features of the sample of children.**

Any two from: 4–8 years old; five public schools; all from Lincoln, Nebraska; 160 children, 89 black and 71 white; randomly chosen.

1 mark for each feature. (2)

**(b) Give *one* reason why the children in this study were not debriefed.**

Most likely:

- children were under 16 years of age and had not given full informed consent
- children would not understand the debrief if it was explained to them

1 mark partial, 2 marks explanation. (2) [4]

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**15 In the study by Rosenhan (sane in insane places) the pseudo-patients approached nurses with requests for information.**

**(a) How did the nurses respond to these requests?**

NB question asks about **nurses** and not psychiatrists.
Most likely:

- stops and talks 0.5%
- pauses and chats 1.5%
- makes eye contact 10%
- continues, looking the other way 88%

1 mark partial e.g. "nurses ignored them", 2 marks expansion e.g. more than one of above or with numbers. (2)

**(b) Explain why the nurses responded to the requests in the way they did.**

Most likely:

- it involves a situational explanation. Inmates are mentally ill and so cannot communicate/are non-people, etc.

Any other appropriate answer to receive credit.
1 mark partial, 2 marks elaboration. (2) [4]

Partial/full answer

| | |
|---|---|
| 0 marks | no answer **or**<br>incorrect answer |
| 1 mark | partially correct answer **or**<br>correct but incomplete, lacking sufficient detail or explanation to demonstrate clear understanding |
| 2 marks | correct answer with sufficient detail/explanation to demonstrate clear understanding |

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## Section B

**16 Psychological research is often carried out in laboratories using specialised apparatus and complex recording devices. Such equipment may produce very precise, detailed and accurate data. Choose any *one* of the studies from the list below and answer the questions which follow.**

**Dement and Kleitman (sleep and dreaming)**
**Raine, Buchsbaum and LaCasse (brain scans)**
**Sperry (split brain)**

**(a) Describe the way in which the equipment was used to collect data in your chosen study.**

Most likely answers (any appropriate answer receives credit):
**Dement:** electrodes attached to eye lids (EOG), and wired to EEG. No ECG. Doorbell; tape recorder.
**Raine:** use of PET brain scanner; injections into blood as trace marker.
**Sperry:** use of equipment to present image to LVF/RVF; table with screen which hides hands.

No answer or incorrect answer. (0)
Anecdotal evidence, general statements, minimal detail, minimal focus. (1–3)
Appropriate aspects identified. Description shows some understanding. Some detail and expansion of appropriate aspects though with omission of detail or lack of clarity (comment with some comprehension). (4–6)
Appropriate aspects identified and described in good detail. Description has clarity, is focused and well expressed. (7–10)
[max 10]

**(b) Outline the main findings of your chosen study.**

Most likely answers (any appropriate answer receives credit):
**Dement:** 152 instances of participants reporting dream from REM, 39 do not; 11 dream in NREM, 149 no dream from NREM. Also significant correlations between REM duration and number of words in dream narrative. Also 45 of those woken after 5 mins said 5 mins but 6 said 15 mins; 47 woken after 15 mins said 15 mins, 13 said 5 mins. Dream content related to direction of eye movements.
**Raine:** NGRIs, compared to controls:

- had lower glucose metabolism in prefrontal, parietal areas and corpus callosum
- no difference in temporal areas. Higher in occipital
- greater activity on right in thalamus
- amygdala and hippocampus: less activity in the left and more activity in the right

Cingulate, caudate, putamen, globus pallidus, midbrain and cerebellum – no significant differences.
**Sperry:** lots of results. Main: those presented with image to one half of visual field could only recognise it if it was presented to same visual field. If presented to opposite, participants respond as if it has never been seen.

No answer or incorrect answer. (0)
Anecdotal evidence, general statements, minimal detail, minimal focus. (1–3)
Appropriate aspects identified. Description shows some understanding. Some detail and expansion of appropriate aspects though with omission of detail or lack of clarity (comment with some comprehension). (4–6)
Appropriate aspects identified and described in good detail. Description has clarity, is focused and well expressed. (7–10)
[max 10]

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**(c) What are the advantages and disadvantages of using this equipment in your chosen study?**

Most likely answers (any appropriate answer receives credit):
Advantage – allows precise and accurate measurements not otherwise possible.
Advantage – allows quantitative data and so replication, comparison.
Advantage – recordings are reliable.
Disadvantage – equipment may be imprecise and give false readings.
Disadvantage – equipment will reduce ecological validity – must be done in laboratory.
Disadvantage – cannot assume cause and effect.

No answer or incorrect answer. (0)
Anecdotal description, brief detail, minimal focus. Very limited range. Description may be inaccurate, incomplete or muddled. (1–3)
Advantages and disadvantages which are focused on the question, are psychologically informed, but lack detail, elaboration or example. (4–5)
Advantages and disadvantages which are focused on the question and are psychologically informed. There is reasonable detail with some elaboration or examples. Discussion becoming clear and shows some understanding.
Half marks for advantages or disadvantages only. (6–7)
Range of advantages and disadvantages (2 + 2 or more) which are focused on the question and are psychologically informed. There is good detail with elaboration and examples. Discussion is good and shows understanding.
Half marks for advantages or disadvantages only. (8–10)
[max 10]

**(d) Suggest one way in which data could have been gathered for your chosen study without the use of this equipment and say how you think this might affect the results.**

No answer or incorrect answer. (0)
Anecdotal suggestion, brief detail, minimal reference to question.
Description may be inaccurate, incomplete or muddled. (1–3)
An appropriate suggestion which is focused on question.
Description shows some understanding.
Some detail and expansion of aspects, with consideration of effect on results.
Max mark of 6 if effect on results not considered. (4–6)
An appropriate suggestion which is focused on question.
Description is detailed with good understanding and clear expression.
The changes are well considered and reflect understanding of the area in question.
Consideration of effect on results is appropriate. (7–10)
[max 10]

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**17 Some studies in psychology describe behaviour and experience using numbers and statistics. This is the quantitative approach. Choose any *one* of the studies from the list below and answer the questions which follow.**

**Loftus and Palmer (eyewitness testimony)**
**Piliavin, Rodin and Piliavin (subway Samaritans)**
**Thigpen and Cleckley (multiple personality disorder)**

**(a) Outline the procedure of your chosen study.**

Most likely answers (any appropriate answer receives credit):
**Loftus:** participants watch videotapes of car crashes. Exp 1: estimate speed from one of five verbs. Expt 2: participants leave and return 1 week later. Questions on broken glass.
**Piliavin:** on train, victim becomes ill or drunk. Observers in carriage record behaviour of passengers on train.
**Thigpen:** use of many methods to gather data: over 100 hours of interviews, also hypnosis, psychometric and projective tests.

No answer or incorrect answer. (0)
Anecdotal evidence, general statements, minimal detail, minimal focus. (1–3)
Appropriate aspects identified. Description shows some understanding. Some detail and expansion of appropriate aspects though with omission of detail or lack of clarity (comment with some comprehension). (4–6)
Appropriate aspects identified and described in good detail. Description has clarity, is focused and well expressed. (7–10)
[max 10]

**(b) Describe the quantitative results of your chosen study.**

Most likely answers (any appropriate answer receives credit):
**Loftus:** study 1: participants with word 'smashed' estimated speed at 40.8 mph, decreasing trend to 'contacted' with 31.8 mph. Study 2: lots of participants (16, 7 and 6 for smashed, hit and control) said they saw broken glass that did not exist.
**Piliavin:** frequency of helping: 62/65 for cane; 19/38 drunk. Also relevant: speed of helping, race and number of helpers.
**Thigpen:** quantitative: results from IQ test, memory test and EEG only. NO Rorschach or human figure drawings. No results from any interview.
IQ test: Wechsler-Bellevue Intelligence Scale [white 110; black 104];
Wechsler memory test [black= same as IQ; white = far above IQ];
EEG [black = 12.5 cps, white and Jane 11cps].

No answer or incorrect answer. (0)
Anecdotal evidence, general statements, minimal detail, minimal focus. (1–3)
Appropriate aspects identified. Description shows some understanding. Some detail and expansion of appropriate aspects though with omission of detail or lack of clarity (comment with some comprehension). (4–6)
Appropriate aspects identified and described in good detail. Description has clarity, is focused and well expressed. (7–10)
[max 10]

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**(c) Using your chosen study as an example, what are the advantages and disadvantages of using the quantitative approach?**

Most likely answers (any appropriate answer receives credit):
Advantage – use of numbers and statistics allows direct comparison.
Advantage – is objective/scientific data. Possible replication.
Advantage – participants cannot give socially desirable answers (but depends…).
Disadvantage – heavy reliance on numbers taken in snapshot study.
Disadvantage – does not gain information on why people behave – no explanation.
Disadvantage – often snapshot and no in depth, rich detail or insight.

No answer or incorrect answer. (0)
Anecdotal description, brief detail, minimal focus. Very limited range. Description may be inaccurate, incomplete or muddled. (1–3)
Advantages and disadvantages which are focused on the question, are psychologically informed, but lack detail, elaboration or example. (4–5)
Advantages and disadvantages which are focused on the question and are psychologically informed. There is reasonable detail with some elaboration or examples. Discussion becoming clear and shows some understanding.
Half marks for advantages or disadvantages only. (6–7)
Range of advantages and disadvantages (2 + 2 or more) which are focused on the question and are psychologically informed. There is good detail with elaboration and examples. Discussion is good and shows understanding.
Half marks for advantages or disadvantages only. (8–10)
[max 10]

**(d) Suggest a different approach for your chosen study and say what effect, if any, this would have on the results.**

NB different approach interpreted in its widest sense. Does not automatically require qualitative data rather than quantitative.

No answer or incorrect answer. (0)
Anecdotal suggestion, brief detail, minimal reference to question.
Description may be inaccurate, incomplete or muddled. (1–3)
An appropriate suggestion which is focused on question.
Description shows some understanding.
Some detail and expansion of aspects, with consideration of effect on results.
Max mark of 6 if effect on results not considered. (4–6)
An appropriate suggestion which is focused on question.
Description is detailed with good understanding and clear expression.
The changes are well considered and reflect understanding of the area in question.
Consideration of effect on results is appropriate. (7–10)
[max 10]

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