CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the October/November 2012 series

9698 PSYCHOLOGY

9698/13 Paper 1 (Core Studies 1), maximum raw mark 80

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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Section A (60 marks)

Answer all questions in this section.

1 Describe two characteristics of the participants from the study by Loftus and Pickrell (false memories). [4]

- males and females (3 M, 21 F)
- adults (aged 18–53 years)
- parent/child or sibling pairs (recruited by students [of University of Washington])
- youngest member of pair at least 18 years old
- within pair, 'relative' had to have knowledge of childhood experiences of 'subject' e.g. that they had not been lost in a mall around age 5.

1 mark partial, 2 marks full × 2.

2 From the study by Baron-Cohen et al (eyes test):

(a) What is meant by 'theory of mind'? [2]

ToM "is shorthand for the ability to attribute mental states to oneself or another person".

1 mark partial, 2 marks full.

'Mind reading/mentalising/social intelligence' alone is not explanation of what is *meant* (0 marks).

Knowing what some else is thinking (1 mark).

(b) The control group were much better on the eyes test than the experimental group (of high functioning autistics and people with Asperger syndrome). What does this tell us about theory of mind? [2]

Most likely:
That ToM normally helps to map mental states to facial expressions.

Also:
That first stage of ToM (attribution) requires identifying mental state from faces without a need to infer content.

1 mark partial, 2 marks full.

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3 The Held and Hein (kitten carousel) study was a laboratory experiment. Describe <u>two</u> features of a laboratory experiment. [4]

most likely:
- *has IV* (manipulated by experimenter)
- *has DV* (measured by experimenter)
- *uses a design to allocate participants to conditions* (e.g. RM/IG/MP)
- *controls* (to keep levels of the IV the same in all other aspects)
- aims to find causal effect.

1 mark partial (identified feature – in italics), 2 marks full (description of feature) × 2.

4 The study by Piliavin et al (subway Samaritans) was a field experiment.

(a) Describe <u>one</u> independent variable that was manipulated. [2]

- (condition of victim): drunk or ill (cane)
- (race): black (victim) or white (victim)
- early/late model.

1 mark partial, 2 marks full.

(b) Give <u>one</u> advantage of a field experiment as used in this study. [2]

- high ecological validity (as helping behaviour is a real world phenomenon not just one that happens in a lab)
- because it complements the high controls in lab experiments (such as Darley and Latane, 1968).

1 mark partial, 2 marks full (1 mark for advantage, however elaborated, 1 mark for applying to study, however briefly).

5 In experiment 2 of Tajfel's study on intergroup categorisation, participants used a matrix (like the one below) to award points. There were three options open to participants: maximum in-group profit, maximum joint profit and maximum difference.

24	22	20	18	16	14	12	10	8	6	4	2
9	10	11	12	13	14	15	16	17	18	19	20

(a) Using the matrix above, identify the pair of numbers that indicates maximum joint <u>profit</u>. [2]

24 and 9
(accept 'first column')

2 marks for correct answer.

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(b) Using the matrix above, identify the pair of numbers that indicates <u>maximum difference</u>. [2]

2 and 20
(accept 'last column')

2 marks for correct answer.

6 In their study of aggression, Bandura et al found several differences in behaviour between groups of participants.

(a) Outline <u>one</u> difference in behaviour between male and female participants. [2]

Most likely:
- males were more aggressive in general than females
- females more likely to imitate verbal aggression than males
- males more likely to imitate physical aggression than females.

TABLE 1
MEAN AGGRESSION SCORES FOR EXPERIMENTAL AND CONTROL SUBJECTS

Response category	Experimental groups				Control groups
	Aggressive		Nonaggressive		
	F Model	M Model	F Model	M Model	
Imitative physical aggression					
Female subjects	5.5	7.2	2.5	0.0	1.2
Male subjects	12.4	25.8	0.2	1.5	2.0
Imitative verbal aggression					
Female subjects	13.7	2.0	0.3	0.0	0.7
Male subjects	4.3	12.7	1.1	0.0	1.7
Mallet aggression					
Female subjects	17.2	18.7	0.5	0.5	13.1
Male subjects	15.5	28.8	18.7	6.7	13.3
Punches Bobo doll					
Female subjects	6.3	16.5	5.8	4.3	11.7
Male subjects	18.9	11.9	15.6	14.8	15.7
Nonimitative aggression					
Female subjects	21.3	8.4	7.2	1.4	6.1
Male subjects	16.2	36.7	20.1	22.3	24.6
Aggressive gun play					
Female subjects	1.8	4.3	2.6	2.3	3.7
Male subjects	7.3	15.9	8.9	10.7	14.3

1 mark partial (statement of direction of difference), 2 marks full (numbers).

(b) Suggest <u>one</u> reason for this difference. [2]

- prior social learning (from verbally/physically aggressive same-gender models)
- biological predisposition (males innately more physically aggressive).

1 mark partial, 2 marks full.

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7 Freud says in his study of little Hans that his approach does not have any scientific value. Outline <u>two</u> criticisms that can be made about the scientific value of Freud's work. [4]

Most likely:
- Hans was not a normal child (so differed from other children/so generalisation may be invalid)
- the analysis was based on information from Hans's father who was aware of Freud's theoretical views (so could not have been objective).

1 mark partial, 2 marks full × 2 (1 mark for identifying problem, 1 mark for applying to study).

[Direct quote from Freud "I must deal with two objections which will be raised against my making use of the present analysis for this purpose. The first objection is that Hans was not a normal child; it would be illegitimate, therefore, to apply to other normal children conclusions which might perhaps be true of him.
According to the second, an analysis of a child conducted by his father, who went to work instilled by my theoretical views and infected with my prejudices, must be entirely devoid of any objective worth."

8 From the study by Langlois et al (infant facial preference), describe <u>two</u> findings from study 1. [4]

Most likely:
- infants looked for longer at attractive than unattractive faces (irrespective of sex of face)
- boys looked for longer at male faces than female faces (and girls showed a same sex preference)
- no significant effects were found for maternal attractiveness on infant preferences (with regard to infant sex/sex of stimulus face/attractiveness of stimulus face)
- no effect of maternal attractiveness on preference regarding any other variable (sex of infant, sex of stimulus, attractiveness of stimulus).

Extract of Table 1
Mean fixation times for high and low attractiveness slides

type of face	high attractiveness		low attractiveness	
	mean	SD	mean	SD
black female	7.05	1.83	6.52	1.92

Table 2
Mean fixation times for sex of infant × sex of face interaction

	male face		female face	
sex of infant	mean	SD	mean	SD
male	7.95	1.45	7.36	1.31
female	7.69	1.35	7.81	1.33

1 mark partial (statement of direction of difference), 2 marks full (numbers/elaboration) × 2.

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9 Describe <u>two</u> conclusions from the study by Nelson (children's morals). [4]

Most likely:
- "…making a moral judgment requires understanding of the evaluative concepts (i.e. 'good', 'bad') to be applied."
- "Also required is comprehension of the motives or goals involved (e.g. 'sharing,' 'helping,' 'hurting.' "

Also:
- younger children are more likely than older ones to make opposite valence motives and outcomes congruent
- 'bad' is more important to younger children than good / than to older children
- young children make more recall errors on motives than on outcomes
- children develop the concept of 'good' before 'bad' (initially 'good' = no 'badness') so use the first negative cue (whether outcome or motive)

1 mark partial, 2 marks full × 2.

10 From the study by Schachter and Singer (emotion):

(a) All the participants in this study were cleared by the student health service. Give <u>two</u> features of the sample apart from being cleared. [2]

- male
- (college) students
- taking introductory psychology
- at University of Minnesota
- (90%) received (2) extra points on final exam (for every hour they served as an experimental subject).

1 mark × 2.

(b) Describe why the experimenters had to clear every participant with the student health service. [2]

To ensure no harmful effects would result (from the injection of adrenaline / epinephrine / saline).

1 mark partial, 2 marks full.

11 From the study by Maguire et al (taxi drivers):

(a) Describe the sequential non-topographical task. [2]

"Memory for films: recalling and describing the plots of familiar famous films between given points in the storyline".

1 mark partial, 2 marks full.

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(b) Why was it important to do this task as well as the sequential topographical one? [2]

To see whether navigation requires sequencing and, if so, whether this uses the same brain areas as nontopographical sequencing.

1 mark partial, 2 marks full.

12 Prior to the experiment conducted by Demattè et al (smells and facial attractiveness) the participants filled in a confidential questionnaire asking about their senses and general health.

(a) Give <u>two</u> examples of the questions asked. [2]

Most likely:
- "Are you currently suffering from a cold/flu, or any other temporary respiratory problems?"
- "Do you suffer from asthma or any form of air-born allergy?"
- "Is there anything else concerning your health that you think we should know about?"

They were also asked about:
- having a normal sense of smell
- (no) history of olfactory dysfunction
- normal or corrected-to-normal vision.

1 mark × 2.

(b) Explain why <u>one</u> of these questions was asked. [2]

- *"Are you currently suffering from a cold/flu, or any other temporary respiratory problems?"* stuffed-up nose matters to olfaction
- *"Do you suffer from asthma or any form of air-born allergy?"* stuffed-up nose matters to olfaction/risk of allergies to smells
- *"Is there anything else concerning your health that you think we should know about?"* stuffed-up nose matters to olfaction/risk of allergies to smells
- *having a normal sense of smell* otherwise couldn't do task (statement of obvious)
- *(no) history of olfactory dysfunction* otherwise couldn't do task (statement of obvious)
- *normal or corrected-to-normal vision* needed to see faces.

1 mark partial, 2 marks full.

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13 From the study by Rosenhan (sane in insane places):

(a) Give <u>one</u> example of how staff interpreted the behaviour of the pseudopatients. [2]

Most likely:
- queuing early for food: oral-acquisitive behaviour (symptom of disorder/rather than boredom)
- note-taking: engaging in writing behaviour (symptom of forgetting/compulsion of schizophrenia rather than recording events)
- walking corridors: nervous behaviour (rather than boredom).

1 mark partial, 2 marks full.

(b) How did the real patients interpret the behaviour of the pseudopatients? [2]

Most likely:
- thought they were journalists
- thought they were professors
- thought they were checking up on the hospital
- often insisted the pseudopatient was sane (even when the staff did not).

1 mark partial, 2 marks full (one reason well expressed or two ideas).

14 In the study on multiple personality disorder, Thigpen and Cleckley carried out a number of tests. Briefly describe the findings of <u>two</u> of these tests. [4]

- *IQ*: *White* 110, *Black* 104
- *Memory*: *White* memory far above IQ, *Black* memory on a par with IQ
- *Rorschach*: *Black* – healthier but hysterical, able to conform with environment, *White* – obsessive compulsive, constriction, anxiety, rigid, unable to cope with hostility;
- *Rorschach/human figures*: eg defence mechanisms: *White* – regression of married life, *Black* – regression of life before marriage
- *Projective tests* <u>generally</u>: *White* – repressive, Black – regressive

1 mark partial (statement of direction of difference), 2 marks full (numbers/elaboration) × 2.

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15 From the study by Veale and Riley (mirror gazing):

(a) Why, according to the cognitive behavioural model of body dysmorphic disorder, is mirror gazing damaging? [2]

"Mirror gazing is a crucial factor in maintaining the preoccupation with one' s appearance… It increases self-consciousness and selective attention, and may magnify the patient's perception of their perceived defects. It therefore distorts their aesthetics judgement."

1 mark partial, 2 marks full × 2.

(b) Give <u>two</u> objects or surfaces, other than mirrors, used by body dysmorphic disorder patients for mirror gazing. [2]

Backs of CDs, cutlery, shop windows, car mirrors (accept this), car windows, car bumpers, fish knives (accept in addition to 'cutlery'), TV screens, reflective table tops, glass watch faces, washroom taps.

1 mark × 2.

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Section B (20 marks)

Answer both questions in this section.

16 Evaluate one of the studies listed below in terms of ethnocentric bias. [10]

Mann et al (lying)
Milgram (obedience)
Haney, Banks and Zimbardo (prison simulation)

No marks for description of study.

Comment	Mark
No answer or incorrect answer.	0
Anecdotal evaluation, brief detail, minimal focus. Very limited range. Evaluation may be inaccurate, incomplete or muddled.	1–3
Either points illustrating ethnocentric bias lack depth and/or breadth *or* only considered whether the study is or is not biased. The answer is general rather than focused on study but shows some understanding.	4–5
Evaluation is focused on the study and considers both its strengths and weaknesses in terms of ethnocentrism although the evaluation may be imbalanced in terms of quality and/or depth. The answer shows reasonable understanding.	6–7
Balance of detail and quality between strengths and weaknesses in terms of ethnocentrism and both are focused on the study. Evaluation is detailed with good understanding and clear expression.	8–10

Examples of possible evaluation points:

Mann, Vrij and Bull
- only 2 ethnic groups (Caucasian/Asian)
- very biased numbers (15 Caucasian/1 Asian)
- also language bias (15 English first language, 1 Punjabi speaker but fluent in English)
- problem because crime linked to educational level and may be difficult to access education in additional language
- ***but*** majority of population in US is English speaking.

Milgram
- specific attempt to investigate 'Germans are different' hypothesis so needed to use typical Americans
- no specific data on ethnic groups which is a problem – precisely because trying to investigate racially-based hypothesis
- especially as all from local area
- ***but*** in other respects range of occupations, ages etc.
- so perhaps sample *was* typical of Americans
- especially as paid for attending so transport cost was not a deterrent so no differences in access (which might have been a problem in the 1960s).

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Haney, Banks and Zimbardo

- only 2 ethnic groups (Caucasian/Oriental)
- very biased numbers (23 Caucasian/1 Oriental)
- potentially a problem because conformity varies between individualist and collectivist societies
- ***but*** varied in location e.g. from colleges across the US
- and paid for attending so transport cost was not a deterrent so no differences in access (which might have been a problem in the 1970s).

17 Use <u>one</u> of the studies listed below to discuss the benefits of gathering quantitative data. [10]

Dement and Kleitman (sleep and dreaming)
Langlois et al (infant facial preference)
Billington et al (empathising and systemising)

No marks for description of study

Comment	Mark
No answer or incorrect answer.	0
Anecdotal discussion, brief detail, minimal focus. Very limited range. Discussion may be inaccurate, incomplete or muddled.	1–3
Either points limited to illustrating advantages or disadvantages of gathering quantitative data *or* lack of depth and/or breadth. The answer is general rather than focused on study but shows some understanding.	4–5
Both advantages or disadvantages are considered and are focused on the study although they may be imbalanced in terms of quality or quantity. The answer shows good discussion with reasonable understanding.	6–7
Balance of detail between advantages and disadvantages and both are focused on the study. Discussion is detailed with good understanding and clear expression.	8–10

Examples of possible discussion points:

Dement and Kleitman

- data such as frequency and voltage of brain waves very accurate therefore *reliable* [and valid]
- data such as eye movements can be recorded in relation to brain activity to give accurate *comparisons*
- accurate timing of REM and length of narrative suggest *valid* relationships
- recording of simple 1/0 quantitative data (such as recall/no recall or right/wrong) is unambiguous so *objective* and low error rate so reliable
- can use in statistical procedures, e.g. correlations between minutes in REM and number of words in narrative
- ***but*** use of scientific equipment to improve reliability/validity may put participants off (e.g. hard to sleep attached to electrodes).

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Langlois et al

- data such as fixation times (on different genders/attractiveness faces) very accurate therefore *valid* [and reliable]
- data such as visual preference allows for *comparisons* to be made (e.g. between genders/attractiveness/race faces)
- quantitative measures can be assessed for *reliability* e.g. rating of attractiveness of stimuli on Likert scales by white and black judges was checked (and was high)
- can use *objective* statistical procedures on results, e.g. MANOVAs to look for interactions between variables such as sex of stimulus face and attractiveness (there wasn't one)
- ***but*** repetition of experimental protocol may have caused fatigue in infants (so had to reduce the number of trials even though this reduces reliability).

Billington et al

- data such as from the forced-choice Embedded Figures Task done online produced *reliable* data (scores correlated highly with scores on the original EFT task)
- data from the SQ-R and EQ produce singles scores allowing *comparisons* to be made e.g. between males/females or science/humanities.
- the eyes test (and EFT) used response times per item as well as total score, making the test more *valid* (as it overcomes the problem of some individuals spending longer to reach the same conclusion)
- the EFT has an unambiguous correct answer to each item so is *objective* and likely to be reliable (although was a new version so wasn't tested)
- can use in statistical procedures, e.g. chi-squared tests to look for associations between gender, EQ/SQ-R scores and degree type
- ***but*** use of forced choice self-reports may limit validity if participants want to make a choice that isn't available.

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