CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International Advanced Subsidiary and Advanced Level

MARK SCHEME for the May/June 2015 series

9698 PSYCHOLOGY

9698/11 Paper 1 (Core Studies 1), maximum raw mark 80

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Section A

1 From the study by Mann et al. (lying):

(a) Explain what is meant by 'cognitive load'. [2]

The effect of thinking about complex tasks (mental effort in working memory) causing neglect of body language, reducing overall movement (i.e. inhibits ability to think about other things)

"people engaging in cognitively complex tasks make fewer movements such as fewer illustrators (arm and hand movements that are designed to modify and/or supplement speech), self-manipulations (scratching the head, wrists, etc.), and other subtle hand movements, and suggests that the increase in cognitive load results in a neglect of body language, reducing overall animation ... Also increased cognitive load can result in increased speech disturbances (both speech fillers and speech errors) and longer pauses before giving an answer ... Finally, it has been found that increased cognitive demand results in eyeblink suppression."

1 mark partial (brief – must be more than just a definition of cognition e.g. complex/ simultaneous)
2 marks full (some detail – as first sentence above – needs more than just 'nervousness')

Thinking too hard about lying makes means they can't focus on avoiding nervous things = 2 marks

NB It is *losing* control that causes suppression of behaviours, *not* gaining control (i.e. no marks for references to deliberate behavioural control)

(b) To what extent do the results of the study support the effect of cognitive load on the behaviour of liars? [2]

YES: supports cognitive load: less blinking and longer pauses are indicators and these were seen
NO: lots of measures had no difference/differences in opposite directions, so no clear pattern

1 mark partial (brief e.g. just data), 2 marks full (some written or numerical data and conclusion)

NB Accept only blinking and pausing as descriptive answers but if accurate numerical data given for non-significant differences, accept that too.
NB No marks for just saying 'yes it does support' or 'no it doesn't support'

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2 Describe <u>two</u> ways in which Loftus and Pickrell (false memories) ensured their study was ethical. [4]

that the real events supplied by relatives would **not be painful** for the relatives **or** participants in the **debriefing** they: explained about the false event / apologised for the deception / explained why it had been necessary for the research on memory.
right to withdraw – participants could have not returned their questionnaire/responded to telephone call
confidentiality – no participants named

2 marks for one way × **2**

1 mark partial (brief description of way ethical issue was solved e.g. generic description)
2 marks full (name of ethical issue + brief description of way ethical issue was solved OR detailed description of way ethical issue was solved in which the issue is implicit but not named)

NB Consent (from participants) is **incorrect** (paper does not indicate about relatives)

3 In the study by Held and Hein, after two days of testing the passive kittens in group X were put in a continuously illuminated room for 48 hours.

(a) Why were this group of kittens treated in this way? [2]

To see whether the effects of rearing could be **reversed** (not simply 'changed')
so they would know if the changes were **permanent**
as a further test of the effects of **nurture**

1 mark partial (brief), 2 marks full (some detail)
for ethical reasons is incorrect (but if go on to explain **reverse damage/undo harm, credit it**)

(b) What did the results of this part of the study show? [2]

The kittens had normal visually-guided paw placement after light exposure
they performed all descents to the shallow side of the visual cliff
that (depth) perception is the product of nurture (not nature)

1 mark partial (brief), 2 marks full (some detail)
NB can be results or conclusions
NB Conclusion of main study (experience needed for perception…) is true here too so = 1 mark

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4 In the study by Milgram (obedience) the participants had a range of occupations.

(a) Identify <u>two</u> of these occupations. [2]

Postal clerks, (high school) teachers [ignore 'biology' etc.], salesmen, engineers, labourers (also: skilled and unskilled workers, business and white collar workers, professional) [Not examples]

Any 1 occupation = 1 mark, ×**2**

(b) Explain why it was important that there was a range of occupations. [2]

So that generalisations could be made/to make it representative
because people in different professions might differ
e.g. engineers might know more about the painfulness of shocks
or in terms of their obedience e.g. if workers more obedient than professionals
so as DV is obedience it could produce a bias

1 mark partial (brief), 2 marks full (some detail)
NB <u>*Not*</u> to study influence of occupation on obedience

5 From the study by Haney, Banks and Zimbardo (prison simulation):

(a) What did the guards believe about the purpose of the experiment? [2]

1 mark partial (brief)
2 marks full (some detail)
NB 'prison inspector' answers = 0 marks
That they were there to act as guards in a prison simulation
so that the researchers could observe the prisoners

(b) Why was it important that the guards believed this? [2]

So that their behaviour would be spontaneous/genuine/unaffected by demand characteristics
rather than attempting to behave in the way they thought the researchers wanted
as they would if they believed they were participants

1 mark partial (brief), 2 marks full (some detail e.g. linked to study)

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6 From the study by Piliavin et al. (subway Samaritans):

(a) Describe the behaviour of the model in the model conditions. [2]

"If the victim received no assistance by the time the train slowed to a stop, the model **helped him to his feet**."
(**NB** adjacent/late: **raised victim to a sitting position**, **stayed with him** for rest of trial)

1 mark partial (brief), 2 marks full (some detail)

The model stood in the critical/adjacent area of the car and **waited** until passing the 4^{th}/6^{th} station (and stopped) before helping the victim (to his feet). 2 marks

answers only referring to 'stepping in' / 'helping' = 1 mark

NB *For info only, giving the 4 conditions does not answer the question.*
1. Critical area—early. Model **stood in critical area and waited until passing fourth station to assist victim** (approximately 70 seconds after collapse).
2. Critical area—late. **Model stood in critical area and waited until passing sixth station to assist victim** (approximately 150 seconds after collapse).
3. Adjacent area—early. **Model stood in middle of car in area adjacent to critical area and waited until passing fourth station**.
4. Adjacent area—late. **Model stood in adjacent area and waited until passing sixth station. When the model provided assistance, he *raised the victim to a sitting position and stayed with him for the remainder of the trial***. An equal number of trials in the no-model condition and in each of the four model conditions were preprogrammed by a random number table and assigned to each team."

(b) Describe <u>two</u> effects of the model helping on the behaviour of passengers. [2]

Models caused others to help
The early model elicited help more often than the late model.
No effect of area of model on helping.
Help was received on all (3) cane trials but not in all (16) drunk trials.

1 mark per effect ×2

NB The model did *<u>not</u>* cause an increase in verbal responses. (More comments before anyone (at all) helped.)

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7 In study 1 by Tajfel, he concludes that only one factor was responsible for the intergroup categorisation shown by the boys.

(a) What was the factor responsible for the intergroup categorisation? [2]

"…terms 'your group' and 'the other group' in the instructions and on the booklets of … matrices."
which referred to the division of the boys into groups with an apparent, if flimsy, identity.

Most likely:
the (mere) categorisation into groups e.g. 1 mark for naming groups (because it identifies categorisation into groups) (allow any reference to random division into groups)
they (thought were) over or under-estimators/accurate or inaccurate/Klee or Kandinsky fans

1 mark partial (brief), 2 marks full (some expansion e.g. given reasons for groupings)

(b) As the boys knew each other, Tajfel thought this would have caused them to choose fairly. Explain why the results did <u>not</u> show this. [2]

Because they based their choices on maximum difference, not maximum joint profit.

1 mark partial (brief/muddled e.g. relevant data unexplained), 2 marks full (clear statement)

NB Candidates may alternatively interpret 'why' as because the (artificial/experimental) group influence was more powerful that the knowledge that the other boy was a familiar individual.

8 Explain what Bandura et al. did to ensure that differences between individual children could not be responsible for differences in levels of imitative aggression between the groups. [4]

rated all participants
for **aggression**
on a **five point scale**
by an **experimenter and teacher**
for **physical and verbal** (to inanimate objects/aggressive inhibition/aggression anxiety)
the **four rating were summed**
and on the basis of these rating, children were divided into **triplets** of similar aggressiveness
Each threesome gave a participant to eac**h level of the IV** / non-aggressive, aggressive or control

1 idea in brief = 1 mark
2 ideas in brief = 2 marks
2 ideas, at least 1 in detail = 3 marks
3 ideas in brief = 4 marks etc. *detail* e.g. rating or dividing between conditions

NB Accept reference to **matched pairs** as indication of idea of matching.

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9 From the study by Freud (little Hans):

(a) Describe little Hans's phobia. [2]

Of horses (that would bite off widdler)
Especially white ones with bridles/ nosebands/blinkers/dark facial marking
'of bath' is also acceptable

1 mark partial (e.g. horses), 2 marks full (some detail)

NB fear of castration was unconscious, so not a phobia = 0 marks
description of explanation for phobia = 0 marks (ignore it and look for description of phobia)

(b) How did little Hans benefit from having this phobia? [2]

He was able to stay with his mother
About whom he fantasised.

1 mark partial (e.g. mother's attention), 2 marks full (some detail)

attention <u>from his mother</u> = 1 mark
Accept <u>clear</u> arguments for '<u>defence mechanisms</u> allowed for the socially <u>acceptable release</u> of unconscious fear to be expressed'

10 The general aim of Langlois et al. was to investigate whether previous findings about infant facial preference applied to different types of faces.

(a) Identify <u>two</u> types of faces they investigated. [2]

Male (compared to female)
black (compared to white)
young (compared to old)
attractive (compared to unattractive)

1 variation = 1 mark $\times$ 2

NB Presentation mode was an IV but does not answer this question (not a facial type) so scores 0.

(b) Describe the overall conclusion from Langlois et al. [2]

That preference for attractiveness is innate (or learned from minimal exposure)
so is independent of culture
or age
and that the preferred face type may be an 'average' (accept 'symmetrical')

1 mark partial (brief conclusion), 2 marks full (some detail to conclusion)
NB Results only = 0 marks.

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11 The study by Nelson (children's morals) found evidence that children look for a logical (congruent) connection between motives and outcomes.

(a) How did the children respond when the motive and outcome were incongruent? [2]

They **tried to explain the incongruence**
e.g. by saying that the **actor had changed his mind**

1 mark partial (brief), 2 marks full (some detail)

They solved the mismatch by believing that he had changed his mind = 2 marks

NB Answers referring to data but not 'congruent connection' ie **avoiding incongruence =** max 1

- '3 yr old verbal: used motives'
- 'focused on negative'
- 'Outcome more than motive in good motive stories'

Bad outcomes or motives **mattered most** = 1 mark
Outcomes mattered most if it was **good** but **motives** mattered more if it was **bad** = 1 mark
They chose the bad motive or outcome to solve the problem if they were different = 1 mark
They just **used valence instead of motive or outcome** when they conflicted = 1 mark

(b) Describe what Nelson found from presenting outcome information before motive information. [2]

That many children used motives alone for moral judgments
The motive information was no less important than outcome information
so motive information is important in its own right.

1 mark partial (brief), 2 marks full (some detail)

It didn't make a difference, valence was still more important than motive or outcome = 2 marks

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12 In the study by Schachter and Singer (emotion), the extent to which the participants joined in with the euphoric behaviour of the stooge was measured with an 'Activity index'.

(a) Describe the 'Activity index' which reflected the nature of the participants' behaviour. [2]

"The index was devised by assigning the following weights to the subject's activities: 5—hula hooping; 4—shooting with slingshot; 3—paper airplanes; 2—paper basketballs;1—doodling; 0—does nothing." 5= most active

1 mark partial (brief, muddled), 2 marks full (some accurate details)

A 5-point scale / A 6-point scale. =1 mark
scale from 5 (hula hoop) to 1 (doodling) = 2 marks

(It measured) **how much** they joined in with/reacted to the stooge = 1 mark
NB No marks for just listing examples from scale

(b) State the difference in the results between the Epi Ign and Epi Inf conditions for the euphoric participants. [2]

Epi Ign copied the activity of the stooge / acted more euphorically / felt more emotional
Epi Inf did not copy the activity of the stooge / acted less euphorically (than the Epi Ign)

1 mark partial (either Epi Ign or Epi Inf correct), 2 marks full (both correct – no data needed)

Epi Ign copied the activity of the stooge more /were more emotional than Epi Inf = 2 marks

NB Question stem is about activity index, so **do not** accept general answers, eg Epi Ign experienced more palpitations, tremors, numbness, headaches
NB Question is asking for the difference, not for an explanation of that difference.

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

(a) Describe the aim. [2]

To investigate whether we can tell the sane from the insane = 1 mark
To investigate whether clinicians can tell the sane from the insane in the context of a mental institution = 2 marks

1 mark partial (brief/muddled), 2 marks full (clear and accurate)

To investigate whether context affects the validity of diagnosis of mental illness = 2 marks
Investigate if sane people are diagnosed as insane if unexpected but as insane ones as sane if pseudo-patients are expected = 2 marks
To test the validity and reliability of diagnosis is mental hospitals = 1 mark

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(b) Suggest how ecologically valid the study was. **[2]**

EV: Tested symptoms relating to a real mental illness
in real mental hospitals
Staff (participants) were unaware so results are likely to generalise
Pseudo-patients behaved like real patients (pretended to take medication etc.)
not: patients don't usually self-refer
patients don't usually have only one symptom
patients' symptoms don't usually disappear instantly upon admission

1 mark partial (brief/muddled/generic – **1 max**)
2 marks full (point applied)

e.g. used deception so participants were naïve (generic) = 1 mark
good because it was a field experiment (generic) = 1 mark

14 Thigpen and Cleckley used hypnosis to study multiple personality disorder.

(a) Describe the incident which caused hypnosis to be used. **[2]**

Eve White's **amnesia** (even if in wrong context)
for a recent (**shopping) trip** (**NB** *Not* letter)

1 mark partial (brief: **either** amnesia/blackout/memory loss **or** shopping)
2 marks full (accurate and complete – as above)

(b) Describe why hypnosis was used in this study. **[2]**

Initially to lift Eve White's amnesia
To subsequently access Eve Black
(and then revert to talking to Eve White)

1 mark partial (brief), 2 marks full (e.g. two simple points or one with detail)
NB No marks for therapy, question says 'to study'

15 In the study by Billington et al. (empathising and systemising) many independent variables were studied.

Describe <u>two</u> of the independent variables. **[4]**

brain type/cognitive style: *<u>E / S</u>* (or EE, E, B, S, ES)
FC-EFT performance: *<u>high / low</u>* score (on a scale of 0–24)
Sex/gender: *<u>male/female</u>*
degree subject: (physical) *<u>science/humanities</u>*.
Eyes Test performance: *<u>high / low</u>* score (on a scale of 0–72)

1 mark partial (IV only – in bold), 2 marks full (levels of IV explicitly stated) ×**2**

Find the **two IVs (don't need to be stated):** for each one - are **both levels stated or only 1?**

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Section B

16 Evaluate <u>one</u> of the studies listed below in terms of reliability.

Mann et al. (lying)
Maguire et al. (taxi drivers)
Demattè et al. (smells and facial attractiveness) **[10]**

No marks for description of study.
Max 5 if only about being reliable or only about being non-reliable.

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 strengths or weaknesses in terms of reliability **or** lack of depth and/or breadth. The answer is general rather than focused on study but shows some understanding.	4–5
Both strengths and weaknesses in terms of reliability 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 strengths or weaknesses in terms of reliability and both are focused on the study. Discussion is detailed with good understanding and clear expression.	8–10

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Mann et al.

- *Reliable* because measured inter-rater reliability between coders **and it was high** (e.g. 0.99 for blinking, self-manipulations, illustrators etc.)
- *Reliable* because used objective measures such as blinking.
- *Not reliable* because some measures were more subjective, such as pauses (r = 0.55)
- *Not reliable* because for some behaviours there were big individual differences (e.g. head movements, arm movements and gaze aversion, with standard deviations around 10 or more)

Maguire et al.

- *Reliable* because controls e.g. films, locations etc.
- *Reliable* because used objective measures such as brain scanners (MRI and PET)
- *Not reliable* because scans were normalised, averaged and superimposed thus obscuring some differences which may have artificially increased apparent reliability
- *Not reliable* because homogeneous (and small) sample, as all right handed males from London.

Demattè et al.

- *Reliable* because controls eg distance from screen, olfactometer etc.
- *Reliable* because dilutions ensured IV of smell was consistent
- *Not reliable* because the measure of attractiveness was subjective (1 (least attractive) to 9 (most attractive)).
- *Not reliable* because although many cues to assist participants to 'sniff' and 'look' at the right times, they may not have been.

NB in answering this question, candidates may observe that increasing reliability invariably increases validity, and other general points, which can be credited as breadth.

NB Comments on sample size or sample bias are acceptable.

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17 Use <u>one</u> of the studies listed below to discuss the use of quantitative data.

Baron-Cohen et al. (eyes test)
Dement and Kleitman (sleep and dreaming)
Veale and Riley (mirror gazing) **[10]**

No marks for description of study, e.g. simply listing examples of quantitative data from the study. Max 5 if only about being advantages or only about disadvantages.

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 and disadvantages of gathering quantitative data 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 of gathering quantitative data and both are focused on the study. Discussion is detailed with good understanding and clear expression.	8–10

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Baron-Cohen et al.

- *strength* able to collect objective data e.g. using quantitative measures such as the Eyes Test and AQ
- *strength* able to use statistical procedures, which is not possible on qualitative data, enabling confirmation of patterns of eyes test responses in people with ASD.
- *weakness* although most the data were quantitative, responding to the eyes test involves decision making which could be subjective so assumptions about the validity and reliability of the quantitative data may be misplaced.
- *weakness* quantitative data about one person's beliefs about the feelings of another person does not provide in-depth information about their understanding, whereas qualitative data may be able to provide more detailed insight into perception of emotional states.

Dement and Kleitman

- *strength* able to collect objective data e.g. using quantitative measures such as EEG and timing, which are reliable
- *strength* able to use statistical procedures, which is not possible on qualitative data, leading to generalisations e.g. about typical patterns of such as being able to accurately estimate dream duration.
- *weakness* although most of the data were quantitative, some was qualitative data and these revealed individual differences (e.g. nature of dream content, detail of dream reports) which quantitative data tends to obscure.
- *weakness* Most quantitative data cannot provide such a good information about dream content so qualitative data were needed too.

Veale and Riley

- *strength* able to systematically and consistently collect the same quantitative data from both groups of participants (BDD and controls) and in different situations (e.g. long and short sessions), i.e. likely to have high reliability whereas qualitative data would be less consistent
- *strength* able to use statistical procedures, which is not possible on qualitative data, and led to generalisations which could help most patients most of the time rather than being specific to one.
- *weakness* although most of the data were quantitative, some was qualitative data and these revealed individual differences (e.g. in choice of reflective surfaces) which quantitative data tends to obscure.
- *weakness* More qualitative data cannot provide such a good insight into individual false beliefs

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