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MARKSCHEME

May 2014

PSYCHOLOGY

Higher and Standard Level

Paper 1

SECTION A

Biological level of analysis

1.   **Describe *one* study that demonstrates the effect that the environment can have on *one* physiological process.**   *[8 marks]*

Refer to the paper 1 section A markbands below when awarding marks.

The command term "describe" requires candidates to give a detailed account of one study related to the effect of the environment on one physiological process. Responses should clearly describe the aim, method and findings of one study in which it is clear how the environment can affect one physiological process.

Studies could include, but are not limited to:
- Meaney's (1988) study of how environmental stressors lead to hippocampal cell loss in rats
- Rosenzweig, Bennett and Diamond's (1972) study on stimulating environments and dendritic branching
- Maguire's (2000) study on taxi drivers and hippocampal change
- Kasamatsu and Hirai's (1999) study on sensory deprivation and its effect on serotonin leading to hallucinations
- Small and Vorgan's (2008) study on the effect of computer use on the brain
- the effects of jet lag on bodily rhythms.

In order to access the top markband, candidates must make an explicit link between the effect of the environment on one physiological process and the study that is described.

If a candidate describes more than one study, credit should be given only to the first description.

If a candidate addresses more than one physiological process, credit should be given only to the first physiological process addressed.

Section A markbands

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 3	There is an attempt to answer the question, but knowledge and understanding is limited, often inaccurate, or of marginal relevance to the question.
4 to 6	The question is partially answered. Knowledge and understanding is accurate but limited. Either the command term is not effectively addressed or the response is not sufficiently explicit in answering the question.
7 to 8	The question is answered in a focused and effective manner and meets the demands of the command term. The response is supported by appropriate and accurate knowledge and understanding of research.

Cognitive level of analysis

2. **With reference to *one* research study, explain how *one* biological factor may affect *one* cognitive process.**   *[8 marks]*

Refer to the paper 1 section A markbands below when awarding marks.

The command term "explain" requires candidates to give a detailed account, including reasons or causes, of how one biological factor may affect one cognitive process. A specific biological factor must be clearly identified. Possible cognitive processes include, but are not limited to, memory, language acquisition, problem solving, and perception.

Research studies may include, but are not limited to:
- Broca's (1861) and Wernicke's (1874) studies on the role of damage to specific regions of the brain on language production and language understanding
- Martinez and Kesner's (1991) investigation of neurotransmission and memory consolidation
- Milner *et al*. (1968) and Blakemore's (1988) case studies of HM and Clive Wearing, investigating the role of the hippocampus on memory consolidation and retrieval
- Newcomer (1998) or Meaney's (1988) studies on the role of glucocorticoids (cortisol) on memory impairment.

The focus of the response should be on the explanation of how one biological factor affects one cognitive process, not on the description of the study.

If a candidate only describes an appropriate study without explaining how one biological factor may affect one cognitive process, apply the markbands up to a maximum of *[3 marks]*.

If a candidate explains how one biological factor may affect one cognitive process without making reference to a relevant study, apply the markbands up to a maximum of *[4 marks]*.

If a candidate refers to more than one study, credit should be given only to the first study.

If a candidate refers to more than one biological factor, credit should be given only to the first biological factor.

If a candidate refers to more than one cognitive process, credit should be given only to the first cognitive process.

Section A markbands

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 3	There is an attempt to answer the question, but knowledge and understanding is limited, often inaccurate, or of marginal relevance to the question.
4 to 6	The question is partially answered. Knowledge and understanding is accurate but limited. Either the command term is not effectively addressed or the response is not sufficiently explicit in answering the question.
7 to 8	The question is answered in a focused and effective manner and meets the demands of the command term. The response is supported by appropriate and accurate knowledge and understanding of research.

Sociocultural level of analysis

3. **Outline how *one* principle that defines the sociocultural level of analysis has been demonstrated in *one* example of research (theory or study).** *[8 marks]*

    Refer to the paper 1 section A markbands below when awarding marks.

    The command term "outline" requires candidates to give a brief account of an appropriate principle and show how this principle is clearly demonstrated in a study or theory relevant to the sociocultural level of analysis.

    Acceptable principles may include, but are not limited to:
    *   social and cultural factors influence individual behaviour (for example, social learning theory)
    *   we want connectedness with, and a sense of belonging to, others (for example, Asch)
    *   we construct our conceptions of the individual and social self (for example, social identity theory)
    *   people's views of the world are resistant to change (for example, Festinger *et al*.'s When Prophecy Fails study, 1956)
    *   our behaviour is influenced by others even when we believe we are acting independently (for example, Sherif's autokinetic effect).

    After outlining the principle and giving a brief summary of one study or theory, candidates should make an explicit link between the principle and the theory or study – for example*,* how Asch's conformity study demonstrates an individual's need to belong to a group.

    If a relevant principle and research are outlined but not explicitly linked, apply the markbands up to a maximum of *[6 marks]*.

    If a candidate outlines more than one principle in relation to one or more theories or studies, credit should be given only to the first principle outlined in the first theory or study used.

    If a candidate outlines a principle making no link to an example of research at the sociocultural level of analysis, up to a maximum of *[4 marks]* should be awarded.

    If a candidate outlines a theory or study relevant to the sociocultural level of analysis but there is no principle outlined, apply the markbands up to a maximum of *[3 marks]*.

    Section A markbands

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 3	There is an attempt to answer the question, but knowledge and understanding is limited, often inaccurate, or of marginal relevance to the question.
4 to 6	The question is partially answered. Knowledge and understanding is accurate but limited. Either the command term is not effectively addressed or the response is not sufficiently explicit in answering the question.
7 to 8	The question is answered in a focused and effective manner and meets the demands of the command term. The response is supported by appropriate and accurate knowledge and understanding of research.

Section B assessment criteria

A — Knowledge and comprehension

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 3	The answer demonstrates limited knowledge and understanding that is of marginal relevance to the question. Little or no psychological research is used in the response.
4 to 6	The answer demonstrates limited knowledge and understanding relevant to the question or uses relevant psychological research to limited effect in the response.
7 to 9	The answer demonstrates detailed, accurate knowledge and understanding relevant to the question, and uses relevant psychological research effectively in support of the response.

B — Evidence of critical thinking: application, analysis, synthesis, evaluation

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 3	The answer goes beyond description but evidence of critical thinking is not linked to the requirements of the question.
4 to 6	The answer offers appropriate but limited evidence of critical thinking or offers evidence of critical thinking that is only implicitly linked to the requirements of the question.
7 to 9	The answer integrates relevant and explicit evidence of critical thinking in response to the question.

C — Organization

Marks	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1 to 2	The answer is organized or focused on the question. However, this is not sustained throughout the response.
3 to 4	The answer is well organized, well developed and focused on the question.

SECTION B

4. **Examine *one* evolutionary explanation of *one* behaviour.**   *[22 marks]*

Refer to the paper 1 section B assessment criteria when awarding marks.

The command term "examine" requires candidates to consider one evolutionary explanation of one behaviour in a way that uncovers the assumptions and interrelationships of the evolutionary explanation of behaviour.

Assumptions that may be addressed include, but are not limited to:
*   the basic principles of natural selection (adaptation)
*   human behaviours may be inherited
*   the mechanism of sexual selection.

Candidates must choose one behaviour to examine, such as but not limited to:
*   human mating behaviours (Buss, 1990)
*   emotional behaviour (for example, disgust, Fessler, 2006; universality of emotional expressions, Ekman and Frieson, 1971)
*   dysfunctional behaviour (for example, depression, Andrews and Thompson, 2009; phobias, Seligman, 1971)
*   altruism (Dawkins, 1976).

Candidates may examine a specific emotional or dysfunctional behaviour such as disgust or depression or may examine emotional or dysfunctional behaviour in general. Both approaches are equally acceptable.

Candidates may look at the underlying assumptions. They may also evaluate the evidence in support of the explanation as well as discuss its strengths and limitations. Comparison with another explanation of the behaviour is also a plausible approach to this question, but the primary focus needs to be on the evolutionary argument.

If a candidate examines more than one evolutionary explanation of one or more behaviours, credit should be given only to the first explanation of the first behaviour. However, candidates may address other explanations of the same behaviour and be awarded marks for these as long as they are clearly used to examine the evolutionary explanation addressed in the response.

5.   **Evaluate schema theory.**   *[22 marks]*

Refer to the paper 1 section B assessment criteria when awarding marks.

The command term "evaluate" requires candidates to make an appraisal by weighing up the strengths and limitations of schema theory. Although a discussion of both strengths and limitations is required, it does not have to be evenly balanced to gain high marks.

Research may include, but is not limited to:
- Loftus and Palmer (1974) on schema processing as a consequence of leading questions
- Anderson and Pichert's (1978) study on the effect of schema processing on memory encoding and retrieval
- Wynn and Logie's (1998) study using real-life experiences in schema processing
- Brewer and Treyen's (1981) "office schema" study
- Piaget's studies on the reorganization of schema during child development
- studies on gender schemas (for example, Martin *et al*., 1995; Bee, 1999)
- Bartlett's (1932) seminal study ("War of the Ghosts").

Evaluation of the theory may include, but is not limited to:
- the degree of empirical support
- biological support for the theory
- methodological considerations of research used to support the theory
- application to real life (for example, eye witness testimony, CBT)
- if the theory has practical relevance for understanding cognition and/or behaviour (for example, gender or cultural roles)
- Cohen's (1993) criticism of schema theory.

If a candidate addresses only strengths or only limitations, the response should be awarded up to a maximum of *[5 marks]* for criterion B, critical thinking, and up to a maximum of *[2 marks]* for criterion C, organization. Up to full marks may be awarded for criterion A, knowledge and comprehension.

6.   Discuss *two* errors in attribution.   *[22 marks]*

Refer to the paper 1 section B assessment criteria when awarding marks.

The command term "discuss" requires candidates to offer a considered and balanced review of two errors in attribution.

Appropriate attribution errors may include, but are not limited to:
- fundamental attribution error
- defensive attribution bias
- illusory correlation
- self-serving bias
- modesty bias
- in-group bias
- the halo effect
- actor-observer bias

Responses may refer to studies such as, but not limited to:
- Ross *et al*. (1977), Jones and Harris (1967) on the fundamental attribution error
- Jellison and Green (1981), Miller (1984), Cousins (1989) on the cultural differences in the fundamental attribution error
- Myers and Bach (1976), Gilovich (1983), Miller and Ross (1975) on the self-serving bias
- Kashima and Triandis (1986), Chandler *et al*. (1990), Bond *et al*. (1982) on the cultural differences in the self-serving bias and modesty bias
- Walster (1966) on the defensive attribution bias.

Discussion may address issues such as, but not limited to:
- the context in which these errors appear
- the reasons for their occurrence
- the cultural differences in the expression of these errors
- the degree of empirical support.

If a candidate discusses more than two errors in attribution, credit should be given only to the first two errors.

If a candidate discusses only one error in attribution, the response should be awarded up to a maximum of *[5 marks]* for criterion A, knowledge and comprehension, up to a maximum of *[4 marks]* for criterion B, critical thinking, and up to a maximum of *[2 marks]* for criterion C, organization.