GCE 2005
January Series

AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark Scheme

Psychology B Specification

PYB1   Introducing Psychology

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

PYB1

Quality of Written Communication

Where candidates are required to produce extended written material in English, the scheme of assessment must make explicit reference to the assessment of the quality of written communication. Candidates must be required to:

- select and use a form and style of writing appropriate to purpose and complex subject matter;

- organise relevant information clearly and coherently, using specialist vocabulary when appropriate;

and

- ensure text is legible, and spelling, grammar and punctuation are accurate, so that meaning is clear.

The assessment criteria for quality of written communication apply only to questions with 10 marks, ie part (d) in AS unit test questions. The following criteria should be applied in conjunction with the mark scheme.

The awards of marks within a particular mark band can be achieved only if the criteria for the mark scheme and quality of written communication bands have been met.

The quality of written communication bands must be regarded as part of the appropriate mark scheme band even though they are listed separately in the mark scheme. If a candidate satisfies only part of the criteria, for either the mark scheme or the quality of written communication, then s/he cannot be awarded marks in that band. The next lower band must then be considered.

General Approach

Apply the principles below *only* to questions which require a banded mark scheme according to 'Guidelines for Mark Schemes'. This means questions worth ten marks or more.

Band 1	Good quality of written communication	The candidate will express complex psychological ideas clearly and fluently, with well-linked sentences and paragraphs using appropriate psychological terminology. Presentation of psychological concepts and arguments will be relevant and well-structured. There will be few, if any, errors of grammar, punctuation and spelling.
Band 2	Average quality of written communication	The candidate will express complex psychological ideas clearly if not always fluently. Some limited but not consistent use of psychological terminology. Sentences and paragraphs reasonably well connected. Presentation of psychological concepts and arguments may sometimes be less relevant and poorly structured. Some errors of grammar, punctuation and spelling.
Band 3	Poor quality of written communication	The candidate will express simple psychological ideas clearly but be imprecise with more complex ideas. Sentences and paragraphs may not be connected and may be disjointed. Use of mainly non-specialist terms with only occasional psychological terminology. Presentation of psychological concepts and arguments may be of doubtful relevance or obscure. Errors of grammar, punctuation and spelling will be present and obtrusive.

SECTION A: APPROACHES

1   **Total for this question:** *20 marks*

(a)   Explain **one** way in which Darwin influenced the development of psychology.   *(3 marks)*

[3 marks: AO1 = 2, AO2 = 1]

AO1   One mark for identification of a relevant influence but brief or slightly muddled account.
Two marks for identification and elaboration of the influence.

AO2   One mark for explaining how this influenced the development of psychology.

Example: Theory of evolution (AO1, 1). Darwin showed how humans and other organisms evolved in the same way (AO1, 1). This influenced many psychologists, particularly behaviourists, to study the behaviour of animals and apply findings to humans (AO2, 1).

Likely answers: role of heritability/genetics, evolutionary psychology / cross-cultural psychology / Freud's theories / comparative psychology.

(b)   The table below is not complete. It should contain the names of key approaches in psychology and a basic assumption of each approach. In your answer book, identify the key approaches for (i) and (ii), and give a basic assumption for the cognitive approach in (iii). Label your answers clearly.   *(3 marks)*

[3 marks: AO1 = 3]

AO1   One mark for the correct identification of each approach.
One mark for the basic assumption given.

(i) Humanistic approach
(ii) Behaviourist approach
(iii) Most likely answers – Humans as information processors / focus on internal mental processes important in understanding behaviour / active processing of information / beliefs influence behaviour.

(c) Shelby had a new set of crayons. However, rather than use them in her colouring book, she scribbled all over the wallpaper. Shelby's mother was very angry and sent her to her bedroom. When Shelby was left alone again, she crayoned in her book, rather than on the wallpaper.

Identify **two** features of the behaviourist approach and say how they might explain Shelby's change in behaviour. *(4 marks)*

[4 marks: AO1 = 2, AO2 = 2]

AO1   Candidates may choose to answer with general reference to the behaviourist approach, or specific reference to operant conditioning.

Up to two marks for reference to features of the behaviourist approach, eg learning by association, behaviour is conditioned, behaviour is learnt, learning of new responses to stimuli, reinforcement, punishment, principles of operant conditioning, principles of classical conditioning. Credit may be given for a diagrammatic representation although this is not required by the question.

AO2   Up to two marks for reference to the stimulus material which illustrates the identified features. The application to the stimulus material should be detailed to gain two marks. For example, Shelby was sent to her bedroom, which is seen as punishment. Her behaviour has been conditioned, so she now associates a new response to the stimulus, ie colouring in her book rather than on the wallpaper.

(d) Discuss **at least two** ways in which Freud influenced the development of psychology. *(10 marks)*

[10 marks: AO1 = 4, AO2 = 6]

AO1   Four marks allocated for reference to two ways in which Freud influenced the development of psychology. Examples may include – his theoretical work on the mind, early childhood experiences are important in determining adult personality, influence on psychiatry, unconscious motivation, theories of personality, concept of repression / defence mechanisms.

AO2   Candidates will discuss how Freud has influenced the development of psychology. If the candidate has identified childhood as a critical period of development, they could discuss how this has influenced developmental psychology, for example. Also, the development of the psychodynamic approach has influenced other theorists. Candidates may choose to discuss how Freud's emphasis on childhood sexuality has been widely criticised. The influences identified may be discussed in terms of alternative approaches, eg behaviourists, who deny the importance of the mind in explaining behaviour.

Maximum of 6 marks if only one influence identified.

Mark Bands

8 – 10 marks   **Good answers**
The candidate will have clearly identified and explained at least two ways in which Freud influenced the development of psychology. Discussion of the influences identified is presented in detail and with focus on the question. The answer is mostly relevant with little misunderstanding.

4 – 7 marks   **Average answers**
At the top of the band, candidates may have referred to at least two ways in which Freud influenced the development of psychology. There must be some discussion. There may be some inaccuracy and/or irrelevance.

At the bottom of the band, candidates may have referred to only one influence and/or have presented largely descriptive answers. Discussion may be present, albeit limited.

1 – 3 marks   **Poor answers**
Candidates will have recognised an influence but have only described what this feature was. There will be no recognition of how this feature has led to the development of psychology.

Total AO1 marks for Question 1: 11
Total AO2 marks for Question 1: 9
Total marks for Question 1: 20

2   **Total for this question: *20 marks***

(a)   Identify **two** functions of the parasympathetic branch of the autonomic nervous system.
(2 marks)

[2 marks: AO1 = 2]

AO1   One mark for each function identified.

       Example: Slows heart rate / increases digestion / constricts pupils, etc.

The parasympathetic nervous system supports normal body activity by conserving and storing bodily energy (AO1, 1). It also slows the activities of the body that have been increased by the sympathetic nervous system (AO1, 1).

(b)   The table below is not complete. In your answer book, write the names of the cortical areas of the brain that should be placed in (i) and (ii). For (iii), describe the main function of the visual area. Label your answers clearly. *(3 marks)*

[3 marks: AO1 = 3]

AO1   One mark for the correct identification of each cortical area of the brain.
      One mark for the main function described.

      (i) Motor area / Frontal lobe
      (ii) Somatosensory area / Parietal lobe
      (iii) Receives information from the visual system / visual processing.

(c)   Explain how selective breeding studies can be used to find out about the genetic basis of behaviour. *(5 marks)*

[5 marks: AO1 = 2, AO2 = 3]

AO1   Up to two marks for a description. For example, it involves the artificial selection of male and female animals (AO1, 1) that are put together to breed and produce offspring (AO1, 1). Credit explanation inherit in an example, eg intelligence. One mark if this description is not complete or is slightly inaccurate.

AO2   Three marks for explanation of how the findings are interpreted. For example, to observe whether a trait or characteristic continues over successive generations. A trait continues over successive generations, then there is a genetic basis. If a trait does not continue over successive generations, then a genetic basis may be ruled out. Selective breeding has been used to breed/eliminate (un)desirable traits. Tyron (1940) may be cited as evidence. Reference to examples of breeding programmes, eg racehorses may be accepted if explicitly linked to behaviour.

(d) Discuss **at least two** methods that have been used to investigate cortical specialisation in the brain.   *(10 marks)*

[10 marks: AO1 = 4, AO2 = 6]

AO1 Up to four marks allocated for a description of the methods of investigating cortical specialisation in the brain. Examples may include – EEGs – shows patterns of brain waves. Scans: PET – assesses metabolic activity in different parts of the brain. CAT – shows horizontal sections of the brain. MRI – gives a clear and detailed picture of brain structures. Electrical stimulation - a weak current is applied to a small region of the brain. Neurosurgery, eg lesions – cutting connections of the brain. Post-mortem studies of people with known deficits. May include reference to a study.

AO2 Candidates will discuss how these methods have been used to investigate cortical specialisation in the brain. For example, with neurosurgery, candidates may discuss the accuracy of this technique however; the use of expensive equipment and the invasive exposure of the brain may be questioned. Candidates may choose to discuss the ethical issues involved with this type of method – conclusions drawn from animals may not always generalise to humans. The use of EEGs has enabled the detection of electrical activity in specific parts of the brain via a non-invasive procedure. PET scans for example, have been used to investigate brain injuries and associated behavioural changes. However, this method of scanning is expensive and involves the ethical issue of injecting radioactive glucose into the bloodstream of patients. Credit also application to studies, eg how scans are used to aid people with language deficits.

Maximum of 6 marks if only one method identified.

Mark Bands

8 – 10 marks   **Good answers**
The candidate will have accurately displayed knowledge of at least two methods used to investigate cortical specialisation in the brain. Discussion of these methods will be evident throughout the answer. The answer is mostly relevant with little misunderstanding.

4 – 7 marks   **Average answers**
At the top of the band, the candidate may have referred to at least two methods used to investigate cortical specialisation. There may be some inaccuracy in the description. Discussion of these methods will be evident.

At the bottom of the band, the candidate may have referred to only one method of investigation and/or have presented largely descriptive answers. The answer may contain inaccuracy and/or irrelevance. Discussion may be present, albeit limited.

1 – 3 marks   **Poor answers**
The candidate demonstrates some limited understanding of the method used to investigate cortical specialisation and is largely descriptive in their response. The response may lack focus to the question.

Total AO1 marks for Question 2: 11
Total AO2 marks for Question 2: 9
Total marks for Question 2: 20

SECTION B: RESEARCH METHODS

3   **Total for this question: 20 marks**

(a) Using the values given in **Table 1**,
    (i) calculate the mean score for the sleep deprivation condition **and** for the control condition;
    (ii) give the mode for the sleep deprivation condition **and** for the control condition.

Label your answers clearly.   *(4 marks)*

[4 marks: AO2 = 4]

AO2   One mark for each correct calculation:

    (i) Sleep deprivation condition: mean = 2.0
    Control condition: mean = 4.8

    (ii) Sleep deprivation condition: mode = 1
    Control condition: mode = 6

(b) What do the total scores indicate about the effects of sleep deprivation? Justify your answer.
    (2 marks)

[2 marks: AO1 = 1, AO2 = 1]

AO1   One mark for description of results, eg fewer mathematical problems were solved in the sleep deprivation condition.

AO2   One mark for the analysis of data, eg sleep deprivation therefore has a detrimental effect in performance of cognitive tasks. Credit also expansions, eg in the sleep deprivation condition, participants get half as many problems correct.

(c) Prior to the experiment, the psychologist conducted a pilot study. Outline why the psychologist conducted a pilot study.   (2 marks)

[2 marks: AO1 = 2]

AO1   Two marks for reason identified, eg to highlight any possible problems in the planned study. If there are any extraneous variables, then these will show up in the results.

(d) Explain **one** problem that might have arisen if the psychologist had chosen to use a repeated measures design in **this** study.   *(3 marks)*

[3 marks: AO1 = 1, AO2 = 2]

AO1   One mark for identification, eg participants would take part in both conditions of the experiment.

AO2   Two marks for explanation, eg there may be order effects. Participants in the second condition might perform better in solving mathematical problems because they now know what to do. This would then cast doubt on the effects of sleep deprivation.

(e) (i) The psychologist used stratified sampling to select the twenty participants.

Outline what is meant by *stratified sampling*.   *(2 marks)*

[2 marks: AO1 = 2]

AO1 One mark for the researcher identifies the different strata or sub-groups. One mark for further outline, eg the researcher works out the proportions needed for the sample to be representative.

(ii) Identify **one** strength and **one** limitation of stratified sampling.   *(2 marks)*

[2 marks: AO1 = 2]

AO1 One mark for identification of the strength, eg it is likely to produce a more representative sample. One mark for identification of the limitation, eg rather a time-consuming method as detailed knowledge of the relevant characteristics of the population, and their relative proportions is needed.

(f) Identify and explain **one** ethical issue that the psychologist should have taken into account in **this** study.   *(3 marks)*

[3 marks: AO1 = 1, AO2 = 2]

AO1 One mark for identification of an ethical issue, eg protection of participants.

AO2 Two marks for explanation of the ethical issue identified. For example, participants in the sleep deprivation condition were subjected to physical discomfort (AO2, 1). Participants should feel no worse about themselves following their involvement in this study than they did before (AO2, 1).

(g) Identify **one** strength and **one** limitation of the experimental method in psychology.   *(2 marks)*

[2 marks: AO1 = 2]

AO1 One mark for identification of the strength, eg control of many extraneous variables so that reliability is high and alternative explanations of events is eliminated. Enables inference about cause and effect. One mark for identification of the weakness, eg can produce quite artificial conditions and measures of variables.

Total AO1 marks for Question 3: 11
Total AO2 marks for Question 3: 9
Total marks for Question 3: 20

SECTION C: PSYCHOLOGY OF GENDER

4   **Total for this question: *20 marks***

(a)   Outline what is meant by the term *content analysis*.   *(2 marks)*

[2 marks: AO1 = 2]

AO1   Two marks for recognition of the term.

Example: Content analysis is a method used to analyse communication, eg in the media (AO1, 1). This may be one-way as in books, films, essays or cartoons, or interpersonal as in a conversation (AO1, 1).

(b)   Outline **one** strength and **one** limitation of using cross-cultural research to investigate gender differences.   *(4 marks)*

[4 marks: AO1 = 4]

AO1   Two marks for an outline of the strength identified.
Two marks for an outline of the limitation identified.

Strength: The importance of discovering innate, universal behaviours (AO1, 1). If behaviour is found to be similar across different cultures, then these characteristics must be genetically determined (AO1, 1).

Limitation: Researchers may misinterpret an action during their observations (AO1, 1). This may be due to the researchers' own cultural biases which produce expectations and therefore alter what is 'observed' (AO1, 1).

(c)   Jason received a model train set for his fifth birthday. His sister, Lisa, said, "When I grow up, I want to be a train driver". Jason replied, "No, you can't. Girls don't drive trains."

Explain what is meant by a *sex-role* stereotype. Refer to Jason and Lisa's conversation in your answer.   *(4 marks)*

[4 marks: AO1 = 2, AO2 = 2]

AO1   Two marks for recognition of the term, eg a sex-role stereotype is a belief about what is considered typical behaviour for a male or female. It is an oversimplified, general attitude of how males and females are expected to behave.

AO2   Two marks for reference to the stimulus material that illustrates aspects of the term identified. The application to the stimulus material should be detailed to gain two marks. For example, Jason has observed only boys playing/driving trains and therefore sees this form of behaviour as appropriate for boys and not girls.

(d) Discuss **at least two** issues which might arise when using the experimental method to investigate gender differences. Refer to **at least one** study in your answer.   (10 marks)

[10 marks: AO1 = 4, AO2 = 6]

AO1   At least two issues will be described. For example, the candidate may raise ethical issues such as the focus on psychological well-being, the implications of exposure to stereotypical behaviour which may lead individuals to perceive themselves and/or others in a negative way. Candidates may choose to focus on methodological issues, eg strength of control, reliability in the data, replicability or any other appropriate response.

AO2   The issues should be discussed with explicit reference to at least one gender study. Candidates may discuss the problem of exposure to stereotypical behaviour (Damon, 1977) or the issue of generalisability to 'real-life' (Kitto, 1989). Candidates may discuss methodological issues in relation to a gender study, eg Piaget and Inhelder's 'water-level task' (1958) – the materials used in the study influenced the performance of men and women. Therefore, a change in the design of a study can show a very different view of gender differences. Candidates who have raised ethical issues in AO1 should discuss how these ethical issues may be overcome with explicit reference to a gender study, eg debriefing, the right to withdraw, consent may be sought from a child's parent or any other appropriate response.

Maximum of 5 marks if no reference to a study.
Maximum of 6 marks if only one issue presented.

Mark Bands

8 – 10 marks   **Good answers**
                The candidate will have correctly described at least two issues which might arise when using the experimental method. The issues raised are relevant to the study of gender. Discussion of the issues with reference to at least one study is accurately presented throughout the response and with focus on the question. The answer is mostly relevant with little misunderstanding.

4 – 7 marks   **Average answers**
                At the top of the band the candidate correctly describes at least two issues relevant to the study of gender. Discussion of the issues will be present albeit limited There is reference to at least one gender study.

                At the bottom of the band the candidate may refer to one issue and/or presented largely descriptive answers when using the experimental method. There is some reference to gender, but the response lacks relevance in relation to the issue. There must be some discussion for 5 marks. Below this mark, there may be no discussion or reference to a gender study. There may be some inaccuracy and/or irrelevance.

1 – 3 marks   **Poor answers**
                The candidate may have referred to an issue but there are inaccuracies in the explanation. No specific relation to gender is present in the response. The response is likely to be poorly focused.

Total AO1 marks for Question 4: 12
Total AO2 marks for Question 4: 8
Total marks for Question 4: 20

5   **Total for this question: *20 marks***

> (a) Below are statements made by three children.
>
>   • "My name is Michael. I have long, brown hair."
>
>   • "My name is Valerie. When I grow up, I am going to be a mummy."
>
>   • "My name is Kate and I am a girl."
>
> In your answer book, write down the statement which illustrates the concept of
> (i) gender identity;
> (ii) gender stability.   *(2 marks)*

[2 marks: AO2 = 2]

AO2   (i) "My name is Kate and I am a girl."
          (ii) "My name is Valerie. When I grow up, I am going to be a mummy."

> (b) Identify **one** atypical sex chromosome pattern and outline how it might affect an individual.
>   *(3 marks)*

[3 marks: AO1 = 3]

AO1   One mark for the identification of an atypical sex chromosome pattern.

      One mark for an outline which may include slight inaccuracy.
      Two marks for an outline which is appropriate and accurate.

      Example: XXY (Klinefelter's syndrome) (AO1, 1). The syndrome may result in poor
      language skills (AO1, 1). Boys who suffer from this syndrome may show a passive
      temperament (AO1, 1).

      Physical examples include, less body hair, under-developed genitals.

      XO (Turner's syndrome) (AO1, 1). Girls who suffer from this syndrome may display higher
      than average verbal ability (AO1, 1), but lower than average spatial ability (AO1, 1).

      Physical examples include, lack of maturation at puberty, webbing of the neck.

> (c) Describe **one** study in which the development of gender identity was investigated. Indicate in
> your answer why the study was conducted, the method used, the results obtained, and the
> conclusion drawn.   *(5 marks)*

[5 marks: AO1 = 5]

AO1   Any appropriate study in which the development of gender identity was investigated, eg
Damon (1977), Martin and Halverson (1983), Thomson (1975).

      One mark – why the study was conducted
      One mark – information about the method
      One mark – identification of the results
      One mark – indication of the conclusion drawn
      One mark – additional descriptive detail, eg detailed results.

(d)　Discuss the social learning theory explanation of gender.　　　　　　*(10 marks)*

[10 marks: AO1 = 4, AO2 = 6]

AO1　Up to 4 marks for a description of social learning theory. Candidates are likely to refer to how gender role identity is learned through reinforcement and modelling, where a child is rewarded for sex-appropriate behaviour and punished for inappropriate behaviour. Candidates may describe how behaviour is also learned indirectly through modelling of parents, stereotypes and the media. Therefore, any feature within society plays an important role in the acquisition of gender identity.

AO2　Candidates will discuss the theory of the acquisition of gender identity presented in AO1. The response will focus on supporting/conflicting evidence for the theory presented. For example, the cognitive approach offers some middle-ground to the social learning theory in stating that aspects of society can be an important feature in providing information which then can be incorporated into the gender schema. However, the psychoanalytic theory states that society plays no particular role beyond the behaviour of the parents. Candidates may further provide discussion relating to the biological theory which states that gender is innate and universal – society plays no role in the acquisition of gender identity. Credit answers where candidates legitimately focus on gender differences.

Mark Bands

8 – 10 marks　　**Good answers**
　　　　　　　　Candidates will have provided an accurate description of the social learning theory. Discussion will be evident throughout the answer, with the focus on the explanation of gender. The response contains little inaccuracy and/or irrelevance. The answer is mostly relevant with little misunderstanding.

4 – 7 marks　　**Average answers**
　　　　　　　　At the top of the band candidates will have accurately described the social learning theory. Discussion of the theory in relation to explaining gender will be present albeit limited. There may be some inaccuracy and/or irrelevance.

　　　　　　　　At the bottom of the band candidates will have presented largely descriptive answers. There may be some discussion of the social learning theory but this is little more than a comment. The response may not focus on explaining gender. Maximum of 5 marks if there is no discussion.

1 – 3 marks　　**Poor answers**
　　　　　　　　Candidates will present a response that does not go beyond identifying and describing the social learning theory. The response is likely to be limited and/or poorly focused.

Total AO1 marks for Question 5: 12
Total AO2 marks for Question 5: 8
Total marks for Question 5: 20

AS/A PSYCHOLOGY SPECIFICATION B

ASSESSMENT OBJECTIVE GRID – UNIT 1: INTRODUCING PSYCHOLOGY – JANUARY 2005

Question	Weighting for knowledge and understanding (AO1)		Weighting for analysis and application (AO2)		Total marks
	Marks	**Percentage**	**Marks**	**Percentage**	
Q1 (a)	2		1		
(b)	3		0		
(c)	2		2		
(d)	4	55	6	45	20
Q2 (a)	2		0		
(b)	3		0		
(c)	2		3		
(d)	4	55	6	45	20
Q3 (a)	0		4		
(b)	1		1		
(c)	2		0		
(d)	1		2		
(e) (i)	2		0		
(ii)	2		0		
(f)	1		2		
(g)	2	55	0	45	20
Q4 (a)	2		0		
(b)	4		0		
(c)	2		2		
(d)	4	60	6	40	20
Q5 (a)	0		2		
(b)	3		0		
(c)	5		0		
(d)	4	60	6	40	20