GCE
AS and A Level

Psychology B

AS exams 2009 onwards
A2 exams 2010 onwards

Unit 1:
Specimen mark scheme
Version 1.1

Version 1.1

AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE
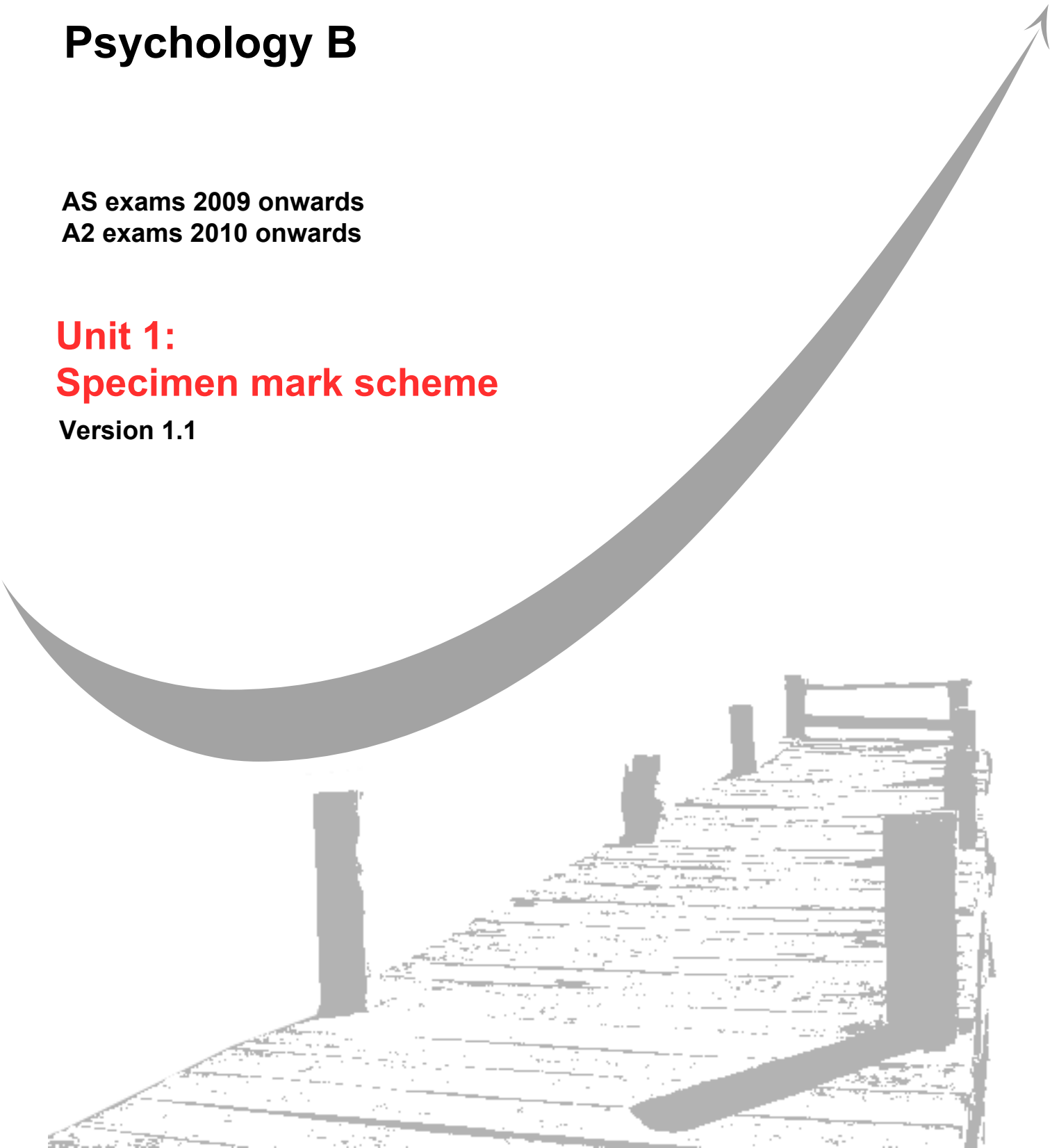
General Certificate of Education

Psychology
Specification B

Unit 1 (PSYB1)   Introducing Psychology

Specimen Mark Scheme

SECTION A: BIOPSYCHOLOGY AND OTHER KEY APPROACHES

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

(a)   What do social learning theorists mean by the term *modelling*? Give an example of how modelling might be used by someone going to an exercise class for the first time.
(2 marks)

[AO1 = 1, AO2 = 1]

AO1   One mark for correct definition of the term.

Possible answer: Modelling refers to imitating the behaviour of a person who has acted as a role model (AO1, 1).

AO2   One mark for an appropriate illustration of modelling related to an exercise class.

(b)   Psychologists use many methods to identify areas of cortical specialisation in the brain.

(i)   Explain **one** methodological problem which might arise when using neurosurgery to identify areas of cortical specialisation in the brain.   *(2 marks)*

[AO3 = 2]

AO3   One mark for identification of a problem.
One further mark for explanation in relation to the method.

Possible answer: One methodological problem which might arise when using neurosurgery is the difficulty in relating a specific area of the brain to its function (AO3, 1). Removing one part of the brain may only show the performance of the rest of the brain, not necessarily the missing part (AO3, 1).

(ii)   Explain **one** ethical issue that might arise when using PET scans to identify areas of cortical specialisation in the brain.   *(2 marks)*

[AO3 = 2]

AO3   One mark for identification of an issue.
One further mark for explanation in relation to the method.

Possible answer: One ethical issue which might arise when using PET scans is informed consent (AO3, 1). Patients must be made fully aware that this form of scanning involves the injection of radioactive glucose into the bloodstream (AO3, 1).

(c)   Niamh is eight years old and suffers from a medical condition which means she often has to go into hospital. Each time she goes into hospital, the treatment makes her feel sick. One day, Niamh's mother took her to visit her grandmother in hospital. When they arrived at the hospital, Niamh complained to her mother that she felt sick.

Referring to features of the behaviourist approach in psychology, explain why Niamh felt sick when she went to visit her grandmother in hospital.   *(4 marks)*

[AO1 = 2, AO2 = 2]

AO1   Up to two marks for knowledge of features of the behaviourist approach, eg behaviour is learnt, behaviour is conditioned, learning by association, learning of new responses to stimuli, 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 to illustrate the identified features.

(d)   Describe and evaluate the following methods used by psychologists to investigate the genetic basis of behaviour.

- twin studies
- adoption studies.   *(10 marks)*

[AO1 = 5, AO2 = 5]

AO1   Up to five marks for description of the two methods used by psychologists to investigate the genetic basis of behaviour. Two of these marks are for description of studies, either one mark each for two studies, or two marks for one study done well.

Twin studies – this method involves taking either monozygotic (MZ) or dizygotic (DZ) twins who have been reared together or reared apart and measuring a particular psychological characteristic such as intelligence. Credit the appropriate use of terminology such as concordance. Candidates may produce evidence in the form of the genetic basis of schizophrenia and/or intelligence. For example, Gottesman and Shields (1972) found that concordance rates for schizophrenia in DZ twins was 9% whereas for MZ twins, the concordance rate was 42% indicating a genetic basis. Bouchard and McGue (1981) found an MZ correlation of .85 and DZ correlation of .58 for intelligence.

Adoption studies – this method involves comparing a trait or characteristic between adopted children and their biological or adopting parents. This method may involve comparing adopted children in one family with biological children in another family or, studying families with both adopted and biological children. Credit the appropriate use of terminology such as concordance. Candidates may refer to Heston (1966) who found that adopted children whose biological mothers were schizophrenic were five times more likely to be diagnosed schizophrenic than those of mothers who had not been diagnosed with schizophrenia. Horn (1983) – Texas Adoption Study – found that at age eight, the adopted children had a correlation of .25 with their biological mother and .15 with their adopted mother.

AO2   Up to five marks for analysis/evaluation of each method and/or for evaluation of specific studies.

Twin studies – although many twin studies show higher concordance rates for MZ than DZ none show 100% therefore there must be some environmental influence; twin environments are more similar for MZ than DZ; in older studies judgements about zygosity were based on appearance not genetic testing.

Adoption studies – children ought really to have been adopted at birth; adoptive parents are often matched with biological parents; biological parents sometimes have contact with adopted children; small samples in most studies.

Credit use of relevant evidence.

Maximum 6 marks if only one method
Maximum 6 marks if no evidence presented

Mark bands

8 – 10 marks   **Good answers**
The answer shows accurate, well-organised and detailed description of the two methods used by psychologists to investigate the genetic basis of behaviour. The evaluation of each method is presented with clarity, coherence and detail. There is appropriate reference to relevant evidence. The answer is well focused with little or no misunderstanding.

The answer is well-structured with effective use of paragraphs and sentences. There are very few errors of spelling and punctuation.

4 – 7 marks   **Average answers**
The answer shows reasonably accurate and organised description of method(s) though it may lack detail. The evaluation of each method(s) may lack some clarity, coherence or detail. There may be some irrelevance, inaccuracy or lack of focus. An otherwise good answer referring to only one method may gain a maximum of six marks.

The answer has some structure with some appropriate use of paragraphs and sentences. There are some errors of spelling and punctuation.

1 – 3 marks   **Poor answers**
The answer shows basic or limited knowledge/evaluation of the method(s) chosen. The response is likely to be poorly focused.

There is little evidence of structure in terms of correct use of sentences and paragraphs. There are frequent errors of spelling and punctuation.

0 marks   **No relevant content.**

Total AO1 marks for Question 1: 8
Total AO2 marks for Question 1: 8
Total AO3 marks for Question 1: 4

Total marks for Question 1: 20

SECTION B: GENDER DEVELOPMENT

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

(a) (i) Identify **one** way in which Klinefelter's syndrome might affect an individual.   *(1 mark)*

[AO1 = 1]

AO1   One mark for an appropriate symptom.

Likely answers: underdeveloped genitals; less body hair; infertile; longer limbs, eg arms; development of breasts; shy and passive; poor language development.

(ii)   Explain how studying people with atypical sex chromosome patterns can contribute to our understanding of gender.   *(4 marks)*

[AO3 = 4]

AO3   Up to four marks for an appropriate explanation. For example, by studying people with atypical sex chromosomes and comparing their development with that of people with typical sex chromosomes, psychologists are able to make inferences as to what aspects of gender behaviour are genetic. If psychologists find that there are differences in gender behaviours between atypical and typical sex chromosome people, then this behaviour may suggest a genetic basis. However, these differences may in fact be due to other factors.

(b)   A number of students have a disagreement about which of the three definitions below is a definition of the term *identification*.

  A   A person's desire to be like another person or to be part of a particular social group
  B   A procedure whereby a person attaches him/herself to a model who possesses qualities seen as rewarding
  C   The process by which a response is strengthened

  Tick which of these (**A**, **B** or **C**) illustrates the term *identification*.   *(1 mark)*

[AO2 = 1]

AO2   (B)/ A procedure whereby a person attaches him/herself to a model who possesses qualities seen as rewarding.

(c)   Madeleine and Naomi were discussing their friend Harry, who is very good at mending cars. Madeleine commented, "I think boys are naturally good at that sort of thing."

State what is meant by *nature* and *nurture* in relation to gender. Refer to the example of Harry in your answer.   *(4 marks)*

[AO1 = 2, AO2 = 2]

AO1   One mark each for correct identification of the terms in relation to gender.

Possible answer: Nature refers to the belief that gender differences in behaviour are determined by hormonal and genetic factors (AO1, 1). Nurture refers to the idea that gender differences are a result of social and cultural factors – the environment (AO1, 1).

AO2   Two marks for reference to the stimulus material that illustrates aspects of the terms identified. The application to the stimulus material should be detailed to gain two marks. For example, Madeleine thinks Harry is very good at mending cars as a result of nature – he is a boy/male. However, Harry may have acquired his ability to mend cars as a result of nurture – the acquisition of the skill.

'Nature' can be credited in terms of inheritance as well as the biological fact of Harry being a male.

(d) Describe and evaluate **one** cognitive explanation of gender development. Refer to **one other** explanation of gender development in your answer. *(10 marks)*

[AO1 = 5, AO2 = 5]

AO1 Up to five marks for description in detail of the cognitive explanation of gender development. Candidates are likely to refer to Kohlberg's theory, where a child's understanding of their own gender concept becomes more sophisticated with age. The three stages of gender development are:

Gender Identity – around two years, where a child is simply able to label his/her own sex correctly and to identify other people as boys or girls.

Gender Stability – between three-and-a-half and four-and-a-half years, where a child understands that he/she stays the same sex throughout life.

Gender Constancy – between four-and-a-half and seven years, where a child understands that someone stays the same biological sex even though he/she may appear to change, by wearing different clothes, for example.

Alternatively, candidates may refer to Martin and Halverson (1983) regarding gender schema theory. Damon (1977) with regard to demonstrating how a child's understanding of gender develops with age. Credit description of relevant evidence (one mark).

AO2 Up to five marks for evaluation. Candidates may consider how Kohlberg's theory may be more descriptive than explanatory. The theory does not account for individual differences in a child's understanding of masculinity/femininity. Candidates may make reference to studies such as Slaby and Frey (1975) who showed how pre-school children rated as having gender constancy actively sought information in developing gender appropriate behaviour. Maccoby (1980) found that 3-year-olds learn many gender-role stereotypes before they attend to same-sex models. Money and Erhardt (1972) claimed that gender reassignment was difficult after the age of three. Candidates may choose to contrast the cognitive explanation of gender development with the biological approach – genetic and hormonal factors cause gender-appropriate behaviours. The social learning explanation advocates that the development of a child's schema is a result of reinforcement and modelling.
Credit use of relevant evidence.

Credit should only be given if the inclusion of other approaches is used to evaluate the cognitive approach.

Maximum 6 marks if no other explanation

Mark bands

8 – 10 marks **Good answers**
The answer shows accurate, well-organised and detailed description of appropriate features of a cognitive explanation of gender development. The evaluation is clear, coherent and detailed. There is appropriate reference to one other explanation. The answer is well focused with little or no misunderstanding.

The answer is well-structured with effective use of paragraphs and sentences. There are very few errors of spelling and punctuation.

4 – 7 marks   **Average answers**
The answer shows reasonably accurate and organised description of some features of a cognitive explanation though it may lack detail.   Evaluation may lack clarity, coherence or detail. There may be some inaccuracy or irrelevance.

The answer has some structure with some appropriate use of paragraphs and sentences. There are some errors of spelling and punctuation.

1 - 3 marks   **Poor answers**
The answer shows basic or limited knowledge/evaluation of a cognitive explanation. The response is likely to be poorly focused.

There is little evidence of structure in terms of correct use of sentences and paragraphs. There are frequent errors of spelling and punctuation.

0 marks   **No relevant content**

Total AO1 marks for Question 2: 8
Total AO2 marks for Question 2: 8
Total AO3 marks for Question 2: 4
Total marks for Question 2: 20

SECTION C: RESEARCH METHODS

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

| (a) | What might the psychologists conclude from the results shown in **Table 1**?   *(3 marks)* |

[AO3 = 3]

AO3   Three marks for description of results.

Any combination of relevant points, eg pairs of girls show most friendly behaviour, boy-girl pairs show the least friendly behaviour, pairs of boys show more friendly behaviour than boy-girl pairs, boys show less friendly behaviour than girls, girls show more friendly behaviour than boys, same-sex pairs show more friendly behaviour than boy-girl pairs.

| (b) | Draw an appropriate graphical display of the data presented in **Table 1**. Correctly label your display.   *(3 marks)* |

[AO3 = 3]

AO3   Bar chart of the frequency of friendly behaviours in same-sex and boy-girl pairs
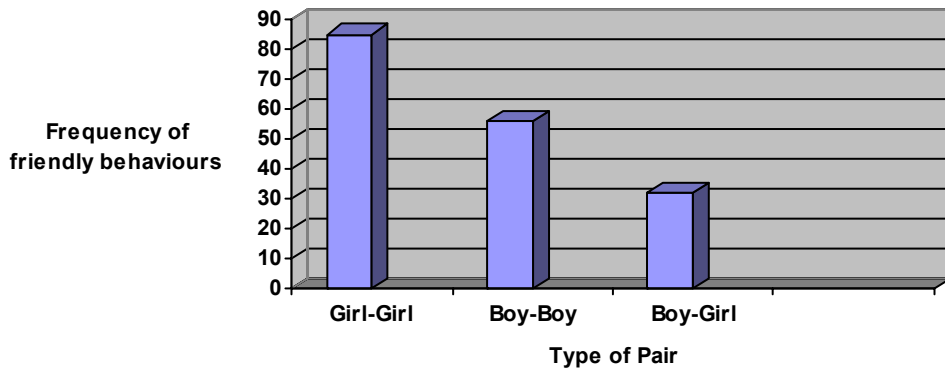
To gain the maximum three marks, candidates must provide the following:

- A title for the bar chart
- Accuracy of bars on the bar chart
- Appropriate axes and labelled.

| (c) | Identify the dependent variable in this study.   *(1 mark)* |

[AO3 = 1]

AO3   One mark for the frequency of friendly behaviour.

| (d) | State an appropriate hypothesis for this study. | *(2 marks)* |

[AO3 = 2]

AO3 One mark if one variable present or response is partially correct.
Two marks for both variables identified, but need not be fully operationalised.

One-tailed: The frequency of friendly behaviours is higher in same sex pairs of children (AO3, 1) than in boy-girl pairs (AO3, 1).

Two-tailed: There will be a difference between the frequency of friendly behaviours of same-sex pairs (AO3, 1) and boy-girl pairs (AO3, 1).

Null: There will be no difference between the frequency of friendly behaviours of same-sex pairs (AO3, 1) and boy-girl pairs (AO3, 1).

| (e) (i) | Identify the sampling method used by the psychologists in this study. | *(1 mark)* |

[AO3 = 1]

AO3 One mark for opportunity sampling.
Credit may be given for quota sampling – based on boys/girls.

| (ii) | Explain **one** limitation of the sampling method that you have identified in 3(e)(i). | *(2 marks)* |

[AO3 = 2]

AO3 One mark for identification of the limitation.
Two marks for explanation of the limitation.

Possible answer: One limitation of opportunity sampling is that it may not be representative of the target population (AO3, 1) as the psychologist selects the participants from whoever is around and available at the time (AO3, 1).

| (f) | Explain **one** methodological reason why it was important for both psychologists to observe the children in this study. | *(3 marks)* |

[AO3 = 3]

AO3 One mark for reason identified e.g. to permit checking for reliability.
Two marks for explanation of the reason identified, eg allows the psychologists to compare their records of observation (AO3, 1) and therefore check the consistency/accuracy of the recording of the social behaviours observed (AO3, 1).

(g) (i) Identify **one** ethical issue raised by this study.	*(1 mark)*

[AO3 = 1]

AO3 One mark for identification of ethical issue, eg consent, deception, protection of participants.

(ii) Explain how the issue which you have identified in your answer to 3(g)(i) could have been addressed.	*(2 marks)*

[AO3 = 2]

AO3 Two marks for explanation of how the ethical issue could be overcome.

eg for consent, the psychologists would need to gain consent from the children's parents as they are under sixteen years of age (AO3, 1). This could be overcome in the form of a signed letter of agreement (AO3, 1).

(h) The psychologists conducted follow-up interviews with the children's nursery school teachers.
(i) Write **one** closed question that might be used to obtain information about a child's play behaviour. *(1 mark)*

[AO3 = 1]

AO3 One mark for an appropriate example of a closed question.

Possible answer: Does Emily always like to play by herself? (Yes/No)

(ii) Write **one** open question that might be used to obtain information about a child's play behaviour.	*(1 mark)*

[AO3 = 1]

AO3 One mark for an appropriate example of an open question.

Possible answer: Describe the sort of toys that Jason likes to play with.

Total AO3 marks for Question 3: 20
Total marks for Question 3: 20

ASSESSMENT OBJECTIVE GRID - PSYB1

Question			A01	A02	A03	Total
1	(a)		1	1		
	(b)	(i)			2	
		(ii)			2	
	(c)		2	2		
	(d)		5	5		20
2	(a)	(i)	1			
		(ii)			4	
	(b)			1		
	(c)		2	2		
	(d)		5	5		20
3	(a)				3	
	(b)				3	
	(c)				1	
	(d)				2	
	(e)	(i)			1	
		(ii)			2	
	(f)				3	
	(g)	(i)			1	
		(ii)			2	
	(h)	(i)			1	
		(ii)			1	20
Total						60