

Psychology

Written examinations – June and November

Introduction

The examination criteria and description were published in the *VCE Psychology Assessment Handbook 2005*. There will be two Psychology examinations. The outcomes of Unit 3 will be assessed in Examination 1 (June) and the outcomes of Unit 4 will be assessed in Examination 2 (November).

Each examination will be presented in a question and answer book and will consist of two compulsory sections: Section A and Section B. The examinations will assess a representative sample of the key knowledge and skills that underpin the outcomes of each unit.

The duration of each examination will be 90 minutes plus 15 minutes reading time. Each examination will be scored out of 90 marks.

Section A will consist of multiple-choice questions. Students will be required to mark their responses on a multiple-choice answer sheet.

Section B will consist of short-answer questions. Students will be required to provide answers to Section B within the spaces allocated on the paper. The number of lines provided after each question, together with the number of marks allocated, will indicate the appropriate length of the response.

Teachers may refer to past examination papers for examples of questions in areas in which there is little change in the Study Design. Previous Assessment reports on the written examination may also contain helpful advice.

The following sample material provides an indication of the type and range of questions teachers and students can expect on the Psychology examinations in June and November 2005. Full sample examination papers are not provided because the relatively small change to the Study does not warrant it.

Teachers should refer to the examination section of the *VCE Psychology Assessment Handbook* and the *VCAA Bulletins* for further advice during the year.

Examination 1 (June) Specifications

- Questions will require students to apply the knowledge and skills of Psychology undertaken in all Areas of Study from Unit 3.
- Section A will consist of multiple-choice questions with a total of 44 marks.
- Section B will consist of short-answer questions worth a total of 46 marks. There will not be any specified number of questions for each Area of Study in Section B.
- Over the entire examination, Area of Study 1 *Brain and nervous system* is worth approximately 40% of the marks, the other two Areas of Study, *Visual perception* and *States of consciousness*, are each worth approximately 30% of the total marks.

Examination 2 (November) Specifications

- Questions will require students to apply the knowledge and skills of Psychology undertaken in all Areas of Study from Unit 4.
- Questions for Area of Study 3 *Research investigation* will be contained in Section B only, and will be based around one or more case studies/research scenarios. Students will be required to use the knowledge and skills gained in Area of Study 3 and in their research investigation in answering questions about other research and investigations. Area of Study 3 is worth approximately 20% of the total marks available.
- Section A will consist of multiple-choice questions with a total of 44 marks.
- Section B will consist of short-answer questions worth a total of 46 marks. There will not be any specified number of questions for each Area of Study in Section B.

Examination 1 (June)**Sample questions Unit 3****Section A****Multiple-choice questions****AREA OF STUDY 1 – Brain and nervous system****Question 1**

Colin received a knock on his head during a gymnastics class. Complaining of headaches, Colin then visited a neurosurgeon.

Initially, which one of the following research techniques might be used to assist diagnosis?

- A. brain lesioning
- B. electrode implantation
- C. split brain surgery
- D. CT scan

Question 2

Which one of the following techniques uses equipment to monitor radioactive targeted sugars in the brain?

- A. computerised tomography
- B. magnetic resonance imaging
- C. position emission tomography
- D. functional magnetic resonance imaging

Question 3

When the sympathetic nervous system is activated, which of the following changes occur in the body?

- A. heart rate increases and lungs expand
- B. heart rate decreases and lungs contract
- C. heart rate increases and lungs contract
- D. heart rate decreases and lungs expand

Question 4

Andrew, a neuropsychologist, is researching Parkinson's disease. He wishes to compare MRI scans of children who have a parent suffering from the disease with those children who do not.

However, according to ethical guidelines, Andrew cannot carry out his research

- A. because children under 18 are unable to give informed consent.
- B. unless he obtains informed consent from the children's parents or legal guardians.
- C. because children are not allowed to participate in psychological research.
- D. unless he exposes the children to lasting harm.

AREA OF STUDY 2 – Visual perception

Question 1

The retina consists of _____ and _____. These are stimulated by _____ energy within the visible light spectrum.

- A. the iris; lens; electrochemical
- B. the iris; lens; electromagnetic
- C. cones; rods; electrochemical
- D. cones; rods; electromagnetic

Question 2

It is hypothesised that, during transmission, certain neurons respond to specific visual stimuli; such as horizontal, vertical and diagonal lines.

These neurons are known as

- A. feature detector cells.
- B. photoreceptors.
- C. sensory adaptations.
- D. Gestalts.

Question 3

Benita plans to carry out research into different eye problems and their effects on depth perception.

Benita must

- A. match the names of her participants with their results in her report.
- B. inform participants of their obligation to disclose all relevant information.
- C. inform participants that they are not allowed to withdraw from the research.
- D. ensure that her participant's personal details are not exposed.

Question 4

Philip is conducting research on children who have a particular eye disorder. His theory is that children with this eye disorder are unable to perceive the Müller-Lyer illusion. He conducts a study with two groups: one group of children with the eye disorder and a second group of children without the eye disorder. The two groups are matched on age, sex and intelligence.

In this research design, the group of children with the eye disorder is the _____ group and the group of children without the eye disorder is the _____ group.

- A. experimental; control
- B. control; experimental
- C. random; stratified
- D. stratified; random

AREA OF STUDY 3 – States of consciousness

Question 1

Which of the following statements best defines the term ‘consciousness’?

- A. the awareness of surrounding objects and events and one’s own existence and activities
- B. the state one is in when one is alert and conscious of their surroundings
- C. the awareness of one’s heightened emotional state and loss of self-control
- D. the state one is in when experiencing a sleep phenomenon

Question 2

A person who is sleepwalking is most likely to be

- A. in REM sleep.
- B. in NREM sleep.
- C. in a drowsy but awake state of consciousness.
- D. between stages of sleep.

Question 3

One of the advantages of using a repeated measures design when carrying out research on states of consciousness is that

- A. the need for counterbalancing is eliminated.
- B. participant-related extraneous variables are controlled.
- C. order effects may occur.
- D. random allocation of participants to groups is possible.

Question 4

Justine is a university professor who is conducting a study on sleep deprivation. She recruits a group of first-year students into her study. The students are told that if they do not agree to participate in the study, they will not pass their first-year psychology course. All of the participants are given plain language information sheets providing them with comprehensive information about the study.

Which ethical principle is being violated by the conduct of this study?

- A. avoidance of deception
- B. lack of access to social benefits of research
- C. voluntary participation
- D. provision of information before participation

Section B**Short-answer questions****AREA OF STUDY 1 – Brain and nervous system****Question 1**

- a. What information does an Electroencephalograph (EEG) recording provide about the brain?

- b. Describe one limitation with the use of an EEG recording to study the brain.

1 + 1 = 2 marks

Question 2

Describe a research technique that can be used to study hemispheric specialisation on people with intact brains. Clearly state how the research technique gives information on hemispheric specialisation.

4 marks

AREA OF STUDY 2 – Visual perception

Question 1

Trisha is researching the effect of context on visual perception. She intends to show participants an ambiguous image that can be interpreted as **waves in the ocean** or a **bird's face**. Trisha selected participants randomly from her target population and then randomly allocated them to two experimental groups. For each group, she plans to use context to create a different perceptual set; one of land and water, the other of animals.

- a. Give an example that Trisha could use that will help participants create a perceptual set in relation to this ambiguous figure.

- b. Outline one strength and one limitation of random sampling.

1 + 2 = 3 marks

Question 2

The Ames room distorts visual perception.

The Ames room is always viewed through a peephole. Why is this a crucial factor in order to create the illusion?

2 marks

AREA OF STUDY 3 – States of consciousness

Question 1

Monica is busy studying. She decides to halve her usual amount of sleep during the week leading up to her examination.

- a. How is Monica likely to perform on the monotonous task of checking her examination for spelling errors at the end of this week?

- b. Monica's family notice the effects that sleep deprivation is having on Monica's behaviour. Outline two physical problems that they may observe.

- c. Is Monica likely to have long-term physical consequences associated with this week of partial sleep deprivation?

1 + 2 + 1 = 4 marks

Question 2

George claims that a milk-based drink helps him sleep better at night. To test this claim, members of one group of participants are given his drink and members of another group are given a placebo drink. The quality of the participant's sleep is then recorded.

- a. What function does the placebo group serve?

- b. George uses a single-blind technique. Is this preferable to a double-blind technique? Explain.

2 + 2 = 4 marks

Examination 2 (November)**Sample questions Unit 4****Section A****Multiple-choice questions****AREA OF STUDY 1 – Memory****Question 1**

Information is stored for the shortest period of time in

- A. working memory.
- B. short-term memory.
- C. long-term memory.
- D. sensory memory.

Question 2

Within the working memory model, the _____ holds information in a speech-based form and assists the _____ with dealing with most cognitive tasks.

- A. visual-spatial sketch pad; central executive
- B. acoustic memory; short-term memory
- C. articulatory loop; central executive
- D. echoic memory; short-term memory

Question 3

Memory appears to change in most people as they age. In older adults, a decline appears to mainly occur in _____ memory, not _____ memory.

- A. semantic; episodic
- B. procedural; declarative
- C. episodic; semantic
- D. procedural; episodic

Question 4

Noni is studying for two exams: Psychology and English. She spends one hour studying Psychology and the next hour studying English. Later, when she tries to recall the Psychology material she studied, she finds the English material interfering with her recall of the Psychology material.

Noni's problem with recalling the Psychology material is probably due to _____.

- A. retroactive interference
- B. proactive interference
- C. retrograde amnesia
- D. anterograde amnesia

AREA OF STUDY 2 – Learning

Question 1

Thorndike's research on puzzle boxes is related most directly to which type of learning/conditioning?

- A. Pavlovian
- B. observational
- C. classical
- D. instrumental

Question 2

The most effective punishment tends to be

- A. unpredictable and immediate.
- B. consistent and delayed.
- C. consistent and immediate.
- D. unpredictable and delayed.

Question 3

When I get a poor quality picture on my television, I kick it and the picture quality returns to normal. According to the principles of operant conditioning, my behaviour of kicking the television has been

- A. positively reinforced.
- B. negatively reinforced.
- C. punished.
- D. extinguished.

Question 4

With regard to Watson's study on conditioned phobia

- A. Little Albert was protected from possible harm by being 'de-conditioned' at the end of the study.
- B. Little Albert gave informed, voluntary consent.
- C. it has been argued that the knowledge obtained from the study outweighs the possible harm caused to Little Albert.
- D. Little Albert was able to withdraw from the study at any time.

Section B**Short-answer questions****AREA OF STUDY 1 – Memory****Question 1**

What memory problems would a person suffering from retrograde amnesia experience?

1 mark

Question 2

Mr Keong taught half his class the mnemonic device narrative chaining. He did not teach a mnemonic device to the other half of the class. He then read out a list of unrelated words to the entire class. Afterwards, students were required to write as many words as they could remember and Mr Keong recorded the number of words recalled.

a. What is narrative chaining?

b. Write an operational hypothesis for this study.

c. Mr Keong tested for significance at the 0.05 level. He found that $p < 0.05$. Was his hypothesis supported?

1 + 2 + 1 = 4 marks

AREA OF STUDY 2 – Learning**Question 1**

- a. As a result of his research using puzzle boxes, Thorndike developed the Law of _____.
- b. This law states that

1 + 2 = 3 marks

Question 2

It has been argued that learning involved in the conditioning of taste aversion differs from most learning via classical conditioning. Explain one reason that supports this argument.

2 marks

AREA OF STUDY 3 – Research investigation

Professor Raven has developed a new speed-reading technique for primary school children. He wants to test his theory that his speed-reading technique leads to superior comprehension of text than normal reading techniques. He puts the names of 200 Grade 6 students in a bag and randomly allocates each child to one of two groups: Group 1 (speed-reading group) is trained to use Professor Raven's speed-reading technique and Group 2 (normal instruction group) receives no special training beyond their normal classroom instruction. At the end of the training, all of the children are given a well-known standardised test of reading comprehension. On this test, a higher score indicates better comprehension.

The results are as follows.

Speed-reading group: Mean comprehension score = 120

Normal instruction group: Mean comprehension score = 100

A statistical test on these results found that $p < .05$.

Question 1

Is this study an experiment? Justify your answer

2 marks

Question 2

What is the aim of this study?

1 mark

Question 3

Construct an operational hypothesis for this study.

2 marks

Question 4

a. What research design method was employed?

b. What is one advantage with using this design?

1 + 1 = 2 marks

Question 5

What is the independent variable?

1 mark

Question 6

What is the dependent variable?

1 mark

Question 7

What is the sample used in this study?

1 mark

Question 8

Random allocation was used in this study. What is random allocation?

1 mark

Question 9

Describe two ethical considerations, specifically related to children, that Professor Raven must take into consideration.

2 marks

Question 10

What statistical conclusion can Professor Raven reach from these results?

1 mark

Question 11

What conclusion can Professor Raven reach about the underlying population from which the sample was drawn?

1 mark

Question 12

a. What are **two** extraneous variables that might affect these results? Clearly explain how each could affect the results.

b. Describe one way in which these extraneous variables might be controlled.

4 + 1 = 5 marks