

Trial Examination 2006

VCE Psychology Unit 4

Written Examination

Question and Answer Booklet

Reading time 15 minutes
Writing time 1 hour 30 minutes

Student's Name: _____

Teacher's Name: _____

Structure of Booklet

Section	Area of study	Number of questions	Number of questions to be answered	Number of marks
A	1. Memory	22	22	22
	2. Learning	22	22	22
B	1. Memory	6	6	14
	2. Learning	6	6	14
	3. Research investigation	10	10	18
				Total 90

Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers. Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape. No calculator is allowed in this examination.

Materials supplied

Question and answer booklet of 19 pages.

Answer sheet for multiple-choice questions.

Instructions

Please ensure that you write your **name** and your **teacher's name** in the space provided on this booklet and on your answer sheet for multiple-choice questions.

All written responses must be in English.

At the end of the examination

Place the answer sheet for multiple-choice questions inside the front cover of this booklet.

Students are NOT permitted to bring mobile phones and/or any other electronic communication devices into the examination room.

Students are advised that this is a trial examination only and cannot in any way guarantee the content or the format of the 2006 VCE Psychology Unit 4 Written Examination.

SECTION A – MULTIPLE-CHOICE QUESTIONS**Instructions for Section A**

Section A consists of 44 questions.

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

A correct answer scores 1, an incorrect answer scores 0. Marks will not be deducted for incorrect answers. No mark will be given if more than one answer is completed for any question.

Area of study 1 – Memory**Question 1**

The three stages of memory, in sequential order, are

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

Question 2

Which type of memory is the **least** sensitive measure of retention?

- A. relearning
- B. recognition
- C. recall
- D. retrieval

Question 3

In June, Jenna's mother teaches her how to program the DVD player to record a television show. It takes Jenna five attempts to get it right. Six months later Jenna is asked to record another show, but she claims to have forgotten how to do this. Jenna's mother shows her again; this time it takes Jenna four attempts to successfully program the recording.

According to Ebbinghaus, this represents a savings score of

- A. four out of five.
- B. one out of five.
- C. one out of four.
- D. five out of four.

Question 4

Short-term memory (STM) tends to store information in terms of its _____ ; while long-term memory (LTM) tends to store information in terms of its _____ .

- A. physical qualities; semantics (its meaning)
- B. semantics; physical qualities
- C. original form; encoded form
- D. semantics; semantics

Question 5

Timmy's Maths teacher conducts a memory experiment in which nine single-digit numbers are read out in succession, with a one-second pause between each number. Students are not allowed to write down any numbers. Timmy simply keeps saying the numbers to himself in the same order that his teacher did, with the same one-second pause between each number. At the end of the five minutes, Timmy successfully recalls the nine numbers in order. He has most likely used _____ to achieve this feat.

- A. chunking
- B. semantic encoding
- C. elaborative rehearsal
- D. maintenance rehearsal

Question 6

Vinny receives his university student number in the mail; it is 14261986. Vinny is confident he can remember this because 14 is the number on his basketball shirt, 26 is the most points he has scored in a game this year and 1986 is the year he was born. A few minutes after working this out, Vinny gets a phone call from his girlfriend who has been injured in a car accident and is in hospital. Later that day, Vinny has completely forgotten his student number.

This can **best** be explained by

- A. proactive interference.
- B. interruption to the consolidation process.
- C. lack of attention leading to discarding of information.
- D. the fact that maintenance rehearsal does not transfer information to LTM.

Question 7

In order for information to be transferred from sensory memory to short-term memory and then to long-term memory, incoming information must be

- A. attended to and then encoded while in sensory memory.
- B. encoded while in sensory memory before being attended to in short-term memory.
- C. attended to while in sensory memory before being encoded in short-term memory.
- D. maintained in sensory memory before being attended to in short-term memory.

Question 8

Beyonce studied VCE Accounting five years ago; however, the only thing she can remember is the Accounting equation $A = L + OE$, which is the fundamental formula used for all Accounting reports.

This is an example of a/an _____ memory.

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

Question 9

According to Baddeley's model of working memory, _____ stores information such as the location of objects in the environment.

- A. the visuospatial sketchpad
- B. the phonological loop
- C. the articulatory control system
- D. iconic memory

Question 10

According to the Semantic Network Theory, the process of retrieving information from long-term memory involves _____; whereby the _____ the link between the nodes, the stronger the association.

- A. nodes activating cues; shorter
- B. cues activating nodes; longer
- C. cues activating nodes; shorter
- D. nodes activating cues; longer

Question 11

Proactive interference occurs when

- A. short-term memories cannot be formed.
- B. long-term memories cannot be recalled.
- C. new information hinders the retrieval of old information.
- D. previously learned information hinders the ability to remember new information.

Question 12

Wayne cannot remember his old phone number, but he claims it is on the 'tip of the tongue'. His inability to access information that exists in his long-term memory is an example of

- A. proactive interference.
- B. retroactive interference.
- C. decay theory.
- D. retrieval failure.

Questions 13 and 14 relate to the following scenario.

In a memory experiment, unrelated four-letter nouns were presented visually on a screen for one-second intervals and then replaced by a subsequent word. After the twentieth word, subjects were asked to recall as many words as possible using serial and free recall.

Question 13

If subjects were required to recall the words in the same order in which they were presented, we would expect recall to be **highest** for the words at/in the _____ of the list.

- A. start
- B. middle
- C. end
- D. start and end (roughly equally)

Question 14

If subjects were required to recall the words in any order, we would expect recall to be **lowest** for the words at/in the _____ of the list.

- A. start
- B. middle
- C. end
- D. start and end (roughly equally)

Question 15

After being involved in a car accident Heath developed anterograde amnesia. Which of the following processes would be **least** affected?

- A. His ability to store new episodic memories indefinitely.
- B. His ability to transfer information from short-term memory to long-term memory.
- C. His ability to attend to incoming information and store it in short-term memory.
- D. His ability to make permanent memories.

Question 16

According to the Ebbinghaus forgetting curve, a person who learns a series of nonsense syllables and does not review the material again for twenty-four hours would be expected to remember approximately _____ of the material.

- A. twenty per cent
- B. thirty-four per cent
- C. sixty per cent
- D. eighty per cent

Question 17

Ageing can slow the rate at which information is processed by the short-term memory. This can **best** be explained by

- A. loss of motivation.
- B. lack of use.
- C. slowing of the central nervous system.
- D. lack of confidence.

Question 18

Georgina's eighty-year-old grandfather is in good health, apart from a bad hip. He has always had an interest in politics and gardening, and regularly uses public transport. Which of the following memories would **most** likely be affected by his age?

- A. The steps needed to start the lawnmower.
- B. Who the prime minister of Australia was in 1984.
- C. How to find his way home from the train station.
- D. Childhood events, such as the celebration for his tenth birthday.

Question 19

During the first four weeks of the school year, Jonah's class studied Physics. The science room had no air conditioning and was hot for every Physics class. Consequently, Jonah often felt light-headed in this class. However, the first Physics SAC was completed in a room with air conditioning and Jonah achieved a disappointing result. He feels he would have performed better if he had the same light-headed feeling while completing the SAC. Jonah is referring to the use of

- A. state-dependent cues.
- B. context cues.
- C. episodic memories.
- D. mnemonic devices.

Question 20

Mnemonic devices make it easier to _____ information.

- A. store
- B. encode
- C. retrieve
- D. all of the above

Questions 21 and 22 relate to the following scenario.

Representatives from A.D. High School wanted to investigate whether there were any differences in the study scores of Year 11 versus Year 12 students who completed Units 3&4 Psychology. It was found that Year 11s slightly outperformed Year 12s. The p value obtained was 0.21. The results of those students whose study score far exceeded expectations (based on the GAT) were published in an education journal. The school also obtained students' GAT results to compare with their Psychology exam results.

Question 21

As a result of the investigation, an appropriate conclusion was that

- A. the dependent variable caused changes in the independent variable.
- B. the independent variable caused changes in the dependent variable.
- C. there was no significant difference shown in the results, so the results probably occurred due to chance.
- D. extraneous variables made the results invalid.

Question 22

The participants' right of _____ was breached, because they were not told _____ how the data would be used.

- A. confidentiality; at the conclusion of the study
 - B. voluntary participation; at the conclusion of the study
 - C. voluntary participation; prior to the commencement of the study
 - D. confidentiality; prior to the commencement of the study
-

Area of study 2 – Learning**Question 23**

For a response to be considered ‘learned’, it must be characterised by a relatively permanent change in behaviour due to _____.

- A. chance
- B. experience
- C. reward
- D. punishment

Question 24

Baby Charlotte has demonstrated many behaviours in the time from her birth to her current age of eighteen months. Which of the following responses would be classified as a behaviour that is **not** reliant on maturation?

- A. A sucking response when Charlotte is breastfed.
- B. Charlotte lifting up her chest while lying on the floor.
- C. Charlotte engaging in her first conversations.
- D. Charlotte walking across the room from her mother to her father.

Question 25

Classical conditioning is a form of learning that occurs when

- A. behaviours that are positively reinforced are repeated.
- B. fixed-action patterns become generalised from one species to another.
- C. a mental association is made between two stimuli that are presented together, one of which elicits the response to be conditioned.
- D. an unconditioned response becomes an unconditioned stimulus.

Question 26

When Ivan Pavlov removed the unconditioned stimulus of the meat powder from his experiment, _____ occurred after several trials.

- A. acquisition
- B. extinction
- C. generalisation
- D. spontaneous recovery

Question 27

Prior to learning through classical conditioning, a neutral stimulus may exist which, during conditioning, becomes the

- A. conditioned stimulus.
- B. unconditioned stimulus.
- C. conditioned response.
- D. unconditioned response.

Question 28

In some instances, a change in behaviour may not require the repeated associations between two stimuli common during classical conditioning. Such 'one-trial' learning occurs because

- A. the learner possesses advanced cognitive skills.
- B. both stimuli are very similar in their characteristics.
- C. experience has been had through observational learning.
- D. the unconditioned stimulus causes intense reactions.

Question 29

Taste aversions typically develop through an episode of 'one-trial' learning. As a result of this, they are

- A. easily generalised.
- B. subject to influences from other variables.
- C. resistant to extinction.
- D. all of the above.

Question 30

Using various methods to eventually learn a skill or solve a problem is the basic premise of

- A. trial and error learning.
- B. aversion therapy.
- C. operant conditioning.
- D. spontaneous recovery.

Question 31

Edward Thorndike developed a 'puzzle box' to test the ability of cats to escape the confines of the box in order to reach food. He found that the primary factor influencing the cats' success in getting out of the box was their

- A. level of determination.
- B. appetite.
- C. instinctual ability.
- D. experience of trying to escape in previous trials.

Question 32

B.F. Skinner proposed a type of learning called 'operant conditioning'. He found that learning in this manner relied predominantly on the effect of

- A. reinforcement.
- B. punishment.
- C. motivation.
- D. consequences.

Question 33

In one condition of Skinner's experiment, a rat was placed in the 'Skinner Box'. Mild electric shocks were administered through bars in the floor, unless the rat performed the desired behaviour of pressing a lever. In this instance, Skinner was utilising

- A. negative reinforcement.
- B. positive reinforcement.
- C. punishment.
- D. incentive as a motivational tool.

Questions 34 and 35 refer to the following scenario.

Mr Elray is a guide who takes groups of tourists to Egypt's major historical sites. He is often inconvenienced by tourists who wander off or fail to meet with the group at set times.

He decides that the only way to teach tourists to be prompt is to reward those tourists he notices are back on time with discount vouchers for souvenir shops they will be visiting.

The souvenir shops later provide Mr Elray with more vouchers, so he decides to give all punctual tourists a voucher whenever they are on time.

Question 34

Which 'schedule of reinforcement' does Mr Elray initially use?

- A. fixed-ratio schedule
- B. continuous reinforcement
- C. fixed-interval schedule
- D. variable-interval schedule

Question 35

Which 'schedule of reinforcement' is shown by the second method Mr Elray uses?

- A. continuous reinforcement
- B. variable-ratio schedule
- C. fixed-interval schedule
- D. variable-interval schedule

Question 36

Punishment is most effective in reducing unwanted behaviour when it is

- A. enforced sometime after the response, so that the individual has time to evaluate his or her behaviour.
- B. administered prior to the response, in order to act as a deterrent.
- C. administered immediately after the undesired behaviour has occurred.
- D. severe enough to frighten the individual from acting in such a manner again.

Questions 37 and 38 refer to Watson's 'Little Albert' experiment.

Question 37

The aim of Watson's experiment was to determine

- A. the effects of fear on the development of the child.
- B. if emotional responses could become conditioned.
- C. how fear could be eradicated once it had become a conditioned response.
- D. all of the above.

Question 38

Which of the following ethical considerations did Watson breach in his 'Little Albert' experiment?

- A. informed consent procedures
- B. debriefing
- C. deception in research
- D. all of the above

Question 39

In classical conditioning, the role of the learner is _____; whereas during operant conditioning, the learner is more _____.

- A. passive; active
- B. active; passive
- C. instinctive; considered
- D. considered; instinctive

Question 40

Claire notices that whenever Shelley goes out carrying her Louis Vuitton bag, she receives many compliments. Subsequently, Claire purchases her own Louis Vuitton bag in order to obtain admiring comments.

In this instance, Claire's behaviour is the result of

- A. classical conditioning.
- B. one-trial learning.
- C. learning set.
- D. observational learning.

Question 41

The four elements of observational learning are

- A. attention, retention, reproduction and motivation-reinforcement.
- B. attention, retention, modelling and motivation-reinforcement.
- C. selection, attention, retention and modelling.
- D. selection, attention, modelling and motivation-reinforcement.

Question 42

Bandura's BoBo Doll experiment found that

- A. aggressive behaviour was due mainly to increased exposure to television violence.
- B. seeing a model being rewarded for aggressive behaviour had little or no impact on the behaviour of the children.
- C. girls were almost as aggressive as boys if they were given a reward for behaving in that way.
- D. girls were as aggressive as boys in all conditions of the study.

Question 43

'Learning set' is said to occur when

- A. an individual has a sudden insight into a problem he or she has been trying to solve.
- B. experience from a previous learning situation improves learning in a subsequent similar situation.
- C. certain types (or 'sets') of behaviours are learned at one time.
- D. information is consolidated in the mind of the learner.

Question 44

In his research with monkeys Harlow found that they had 'learned how to learn'. The monkeys demonstrated this by

- A. applying lessons learned in one circumstance to a new problem-solving task.
- B. using the strategies Harlow had taught them to undertake problem-solving tasks.
- C. cooperating with one another to solve different problems.
- D. increasing their level of attention from one task to another.

SECTION B – SHORT-ANSWER QUESTIONS**Instructions for Section B**

There are 22 questions covering each of the three areas of study.

Answer **all** questions in the spaces provided.

Area of study 1 – Memory**Question 1**

Dusty is reading a story aloud to her daughter Laura. Explain the role of the phonological loop section of Laura's working memory, which enables her to make sense of the words and sentences that she hears from her mother.

2 marks

Question 2

Provide **two** differences between maintenance rehearsal and elaborative rehearsal.

2 marks

Question 3

Dwayne's nephew is asking him some specific questions about his childhood; however, Dwayne explains that some of his childhood memories have been repressed.

- a. Explain what is meant by 'repression' (also known as 'motivated forgetting').

1 mark

- b. What is the purpose or benefit of repression?

1 mark

- c. Suggest **one** limitation of the theory of repression.

1 mark

Question 4

In his experiments Ebbinghaus devised the 'forgetting curve'. Describe what the forgetting curve measures.

2 marks

Question 5

Josie devises a strategy to help memorise the three levels of government. She pictures herself walking from the French room (associated with the Federal Government), then passing through the Science room (State Government) and then reaching the Library (Local government).

- a. Name the technique that Josie is using.

1 mark

- b. What are **two** key steps involved in using this memory technique?

2 marks

Question 6

A school wants to investigate whether students who are active at lunchtime (e.g. involved in a sporting activity) are better able to recall material learnt after lunch than students who are passive at lunchtime. Tests of significance need to be performed before any conclusions can be made.

What is the purpose of statistical tests of significance?

2 marks

Area of study 2 – Learning

Question 7

What is meant by ‘association’ in relation to classical conditioning and why is it so crucial?

2 marks

Question 8

a. Describe the process of aversion therapy.

2 marks

b. Provide **one** example where aversion therapy may be used.

1 mark

Question 9

Outline the ‘law of effect’ as proposed by Edward Thorndike.

2 marks

Question 10

Identify **one** difference and **one** similarity between positive reinforcement and negative reinforcement when they are used as tools in operant conditioning.

2 marks

Question 11

One criticism of using punishment to influence behaviour is that it may sometimes act as a positive reinforcer. Explain how this may be so.

2 marks

Question 12

Suggest **three** features of a model that make it more likely to be imitated, according to Albert Bandura.

3 marks

Area of study 3 – Research investigation

*Read the following research investigation and answer questions 13 to 22,
which relate to the experimental process and findings.*

Mrs Lopez noticed that each year the senior students from her girls' school seemed much happier in the weeks leading up to the school dance. When she asked them why this was so, some reported that they were merely excited about the dance, whereas other students claimed their improved mood was due to exposure to ultraviolet light at the solarium.

Intrigued by this, Mrs Lopez randomly divided all 120 Year 12 girls into two groups. One group (Group A) attended the solarium twice a week during the three months prior to the dance, while the other group (Group B) did not attend the solarium.

The day before the school dance, all Year 12 students completed a mood scale. Each girl was given a score out of 100, with the higher score indicating a greater sense of happiness. A statistical analysis of the results yielded a p value of < 0.05 .

The results were:

Group A had an average score of 82;

Group B had an average score of 71.

Question 13

Suggest an operational hypothesis for this research.

1 mark

Question 14

a. Which group of students formed the control group in this study?

1 mark

b. Why is it important to have a control group in an experiment such as this?

1 mark

Question 15

a. Identify the independent variable.

1 mark

b. Identify the dependent variable.

1 mark

Question 16

Name and describe **one** ethical consideration that was breached in this study.

2 marks

Question 17

a. Which research design did Mrs Lopez use in this study?

1 mark

b. Explain why any **one** of the other types of research design would **not** suitable for this experiment.

2 marks

Question 18

Name and list an extraneous variable that existed in this experiment, and state how it influenced the results.

2 marks

Question 19

Suggest a method of controlling this extraneous variable.

1 mark

Question 20

Can the results of this experiment be generalised to the population of all VCE students? Explain.

1 mark

Question 21

Define the term ‘single-blind procedure’ and state why it could **not** have been used in this study.

2 marks

Question 22

Differentiate between descriptive and inferential statistics.

2 marks

END OF QUESTION AND ANSWER BOOKLET