

Trial Examination 2010

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	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	7	7	14
2. Learning	7	7	14
3. Research investigation	7	7	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 18 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 2010 VCE Psychology Unit 4 Written Examination.

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SECTION A – Multiple-choice questions

Instructions for Section A

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

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

AREA OF STUDY 1 – Memory

Question 1

As an active information processing system, memory _____ information received through the senses.

- A. receives, organises, stores and retrieves
- B. receives, perceives, manipulates and stores
- C. perceives, receives, stores and retrieves
- D. perceives, receives, manipulates and stores

Question 2

When sitting the test for her Learner's Permit, Blair is required to complete a series of multiple choice questions relating to various driving scenarios.

The measure of retention used would be

- A. free recall.
- B. recognition.
- C. relearning.
- D. serial recall.

Question 3

Rehearsal of information occurs in the _____ memory.

- A. sensory
- B. short-term
- C. long-term
- D. sensory and short-term

Question 4

Short-term memory has a capacity of _____ of information and a duration of up to _____.

- A. 5 ± 2 items; 18 seconds
- B. 7 ± 2 items; 20 seconds
- C. 6 ± 3 items; 22 seconds
- D. 4 ± 1 items; 24 seconds

Question 5

When riding her bike to the supermarket, Shaye repeats the shopping list her mother told her over and over in her mind.

This technique is known as

- A. consolidation.
- B. the reference effect.
- C. maintenance rehearsal.
- D. elaborative rehearsal.

Question 6

Information stored in the long-term memory is typically stored in terms of its

- A. meaning.
- B. physical qualities.
- C. sensory experience.
- D. chemical composition.

Question 7

Procedural memory would be used in which of the following situations?

- A. identifying an assailant in a police line-up
- B. recalling the name of a childhood pet
- C. reciting a poem
- D. describing how to change a car tyre

Question 8

Suzanne spent 30 seconds trying to memorise a list of 15 different types of flowers, by reading through it twice.

- | | | |
|--------------------|---------------|-------------------|
| 1. Tulips | 6. Carnations | 11. Sunflowers |
| 2. Dutch Irises | 7. Orchids | 12. Gyp |
| 3. Oriental Lilies | 8. Jasmine | 13. Apple Blossom |
| 4. Roses | 9. Gerberas | 14. Pansies |
| 5. Poppies | 10. Daisies | 15. Begonias |

According to the primacy effect, when recalling this list of flowers, Suzanne will most likely remember the

- A. orchids.
- B. begonias.
- C. poppies.
- D. tulips.

Question 9

The _____ is responsible for suppressing irrelevant thoughts from Laura’s conscious awareness when she is making a speech at school assembly.

- A. phonological loop
- B. visuo-spatial sketchpad
- C. central executive
- D. repressed memory

Question 10

Kevin is studying very hard in preparation for his Bar Mitzvah, but he is frustrated by the fact that he seems to forget some of the information rather quickly.

According to the Forgetting Curve proposed by Ebbinghaus, Kevin is likely to forget nearly 60% of the information studied within

- A. 10 minutes.
- B. 20 minutes.
- C. 30 minutes.
- D. one hour.

Question 11

The pattern of forgetting demonstrated in the Forgetting Curve can be curbed if

- A. the information is meaningful.
- B. the encoding of the information was thorough at the time of learning.
- C. the learning occurs over extended periods of time.
- D. all of the above

Question 12

When telling a joke to his friends, Allan suddenly forgets the punch line. He feels that the last part of the joke is “on the tip of his tongue”.

The TOT phenomenon is explained as part of

- A. his memory fading through disuse over time.
- B. the retrieval failure theory.
- C. retroactive interference.
- D. proactive interference.

Question 13

Les is a healthy 40 year old who is a fanatical follower of the soccer World Cup, which is held every four years. Les watched every team many times during the 2006 World Cup. After he watches every team many times during the 2010 World Cup, he cannot remember many of the teams who participated back in 2006.

This demonstrates

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

Question 14

Laura notices that she has trouble remembering certain information since her retirement from the workforce. According to the decay theory of forgetting, Laura's problem is the result of

- A. senility as she ages.
- B. motivated forgetting as she no longer wants to recall work-related information.
- C. retroactive interference as the new information she is learning as a retiree is interfering with the information she learned at work.
- D. the chemical memory trace fading over time through disuse.

Question 15

Five minutes before the Unit 3 Accounting exam, Drew reads over his notes, but his teacher tells him to relax and stop reading because it is too late to learn any new material.

Drew's inability to learn new material 5 minutes before the exam can be best explained by

- A. the limited capacity of short-term memory.
- B. the limited capacity of long-term memory.
- C. the time required for neuronal changes in the brain to create a memory trace.
- D. retroactive interference.

Question 16

An experiment on the effects of sleep deprivation on the capacity of short-term memory set a level of significance at 0.05. When the means of the results from the experimental and control groups were compared, the calculated p value was <0.05 .

Thus the statistical conclusion was

- A. the probability that the hypothesis is incorrect is less than 5%.
- B. the probability that the hypothesis is correct is less than 5%.
- C. the probability that the differences in results are due to chance is more than 5%.
- D. the probability that the differences in results are due to chance is less than 5%.

Question 17

Peter is unable to tell police the identity of the person who attacked him because during the assault he was struck to the head with a hard object.

This inability to recall the identity of his attacker is most likely due to

- A. post-traumatic stress disorder.
- B. retrograde amnesia.
- C. anterograde amnesia.
- D. motivated forgetting.

Question 18

Ageing may have a negative impact on the functioning of the short-term memory, especially where such memories are involved in

- A. recalling childhood memories.
- B. remembering painful experiences.
- C. performing a complex task.
- D. performing a routine task.

Question 19

Self-referencing is a technique that can be used to improve memory in the process of _____ information.

- A. receiving
- B. encoding
- C. storing
- D. retrieving

Question 20

Sitting in the lounge room downstairs, Claire decides to go upstairs to her bedroom to find a magazine she has left there. Once she walks into the bedroom, Claire suddenly forgets why she has come upstairs. As she goes back to the lounge room, Claire remembers that she went upstairs for the magazine.

Recalling this information when back in the lounge room can be attributed to

- A. retracing her steps.
- B. state dependent cues.
- C. context dependent cues.
- D. maintenance rehearsal.

Question 21

Mnemonic devices are used to enhance memory of information stored in the

- A. sensory memory.
- B. short-term memory.
- C. long-term memory.
- D. entire memory system.

Question 22

When learning a series of marketing terms at university, Rebecca puts the terms into a story format.

This technique is known as

- A. the method of loci.
 - B. narrative chaining.
 - C. state dependent memory.
 - D. context dependent memory.
-

AREA OF STUDY 2 – Learning**Question 23**

Learning can

- A. only occur intentionally and cannot be modified.
- B. occur intentionally or unintentionally and cannot be modified.
- C. occur intentionally or unintentionally and can be modified.
- D. only occur intentionally and can be modified.

Question 24

Six-year-old Zachary and two-year-old Xander are playing in the backyard when they see a snake under the house. Zachary screams as soon as he sees it, whereas Xander shows no fear and walks over towards the snake to play with it.

Zachary's scream at the sight of the snake is an example of

- A. a learned response.
- B. maturation.
- C. a reflex.
- D. a fixed action pattern.

Question 25

Behaviours dependent on maturation generally occur at _____ times during development and are controlled by _____.

- A. predictable; genetic inheritance
- B. unpredictable; genetic inheritance
- C. predictable; environmental stimulus
- D. unpredictable; environmental stimulus

The following scenario relates to Questions 26 to 29.

Hillary drank some contaminated water from a green water flask on the Year 8 outdoor education camp, and consequently she was ill for two days. A year later, when attending the Year 9 camp, Hillary felt nauseous when watching some of her friends drink from green water flasks.

Question 26

The nausea that Hillary experienced on the Year 9 camp was

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

Question 27

The sickness that Hillary experienced on the Year 8 camp was

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

Question 28

The sight of the green water flask (being used by her friends) at the Year 9 camp was

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

Question 29

The contaminated water that Hillary drank on the Year 8 camp was

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

Question 30

Raymond developed a phobia of flying as a result of a plane crash that he experienced when he was a boy.

Raymond's phobia is due to

- A. classical conditioning but not operant conditioning.
- B. operant conditioning but not classical conditioning.
- C. either classical or operant conditioning.
- D. neither classical nor operant conditioning.

Question 31

Which one of the following is **not** an example of similarities between classical conditioning and one-trial learning?

- A. In both, the learner is passive.
- B. Both involve a pairing of two or more stimuli.
- C. Both the responses closely follow the stimulus during the original learning.
- D. Both result in reflexive responses.

Question 32

Steph's dog, Cujo, used to sneak out of the backyard of the family's Box Hill house from a hole in the fence and wander the streets. When the family moved to Bulleen, Cujo tried a few different ways of escaping from the backyard including looking for gaps in the fence. Eventually Cujo found a way out of the yard by going under the house to the front driveway. A few weeks later, whenever Cujo wished to leave the backyard he would go under the house to the driveway to wander the streets.

Cujo's behaviour demonstrates

- A. classical conditioning.
- B. instrumental learning.
- C. observational learning.
- D. learning set.

Question 33

The pressing of the lever by rats in the Skinner box could be used as part of

- A. punishment.
- B. negative reinforcement only.
- C. positive reinforcement only.
- D. both positive and negative reinforcement.

Question 34

In order to reduce student disruptions during class time, Miss Behave issues a 30 minute after-school detention for any student who calls out whilst she is teaching the class.

Miss Behave is using

- A. negative reinforcement.
- B. classical conditioning.
- C. punishment.
- D. observational learning.

Question 35

Roger and Rafael both get jobs at the Australian Open. Rafael walks around the stadiums during matches selling ice creams, drinks, etc. He is paid \$1 for each item he sells. Roger is a ball boy and he gets paid \$15 per hour he works on court.

Rafael is paid according to a _____ schedule; Roger is paid according to a _____ schedule.

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

Question 36

Shaping is most likely to be used for a behaviour that is

- A. likely to occur naturally.
- B. learned by observing others and noting the consequences.
- C. learned gradually in stages.
- D. a reflexive response.

Question 37

For Skinner's experiment with rats, initially a _____ reinforcement schedule was used, resulting in a _____ acquisition.

- A. continuous; rapid
- B. continuous; gradual
- C. partial; rapid
- D. partial; gradual

Question 38

Sniffer dogs that have been used at airports are trained to identify marijuana (as opposed to other leafy substances) by initially being rewarded with food each time they successfully identify the drug concealed in luggage.

The dogs have been _____ conditioned using _____ to identify the marijuana.

- A. classically; stimulus generalisation
- B. classically; stimulus discrimination
- C. operantly; stimulus generalisation
- D. operantly; stimulus discrimination

Question 39

Lebron usually has sore hamstrings after his weekly basketball game. Recently he tried having an ice bath after a game, and consequently he felt no hamstring soreness after his ice bath. He now has an ice bath after every game.

This is an example of

- A. learning set.
- B. positive reinforcement.
- C. response cost.
- D. negative reinforcement.

Question 40

When Mr Xerdes started his job as a bookkeeper it took him over a year to develop a good understanding of the business accounting software that is used in his job. When he changed jobs, the new company was using a different type of accounting software. Mr Xerdes developed a good understanding of the new software in two months, largely because he was able to apply his previous knowledge of the software used in his old job to the new software.

Mr Xerdes has demonstrated

- A. instrumental learning.
- B. observational learning.
- C. learning set.
- D. the law of effect.

Question 41

In operant conditioning, the response occurs _____ the stimulus. For classical conditioning, the response occurs _____ the stimulus.

- A. after; before
- B. before; before
- C. after; after
- D. before; after

Question 42

Scott took his younger brother Donald to the skateboard ramp for the first time to watch him skate. Scott was not wearing any protective gear and was hospitalised after a bad fall. Now Donald does not skate at the skateboard ramp to avoid ending up like his brother.

Donald has learned to avoid the skateboard ramp via

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

Question 43

As a result of the bobo doll experiments, Bandurra concluded that

- A. if a child does not imitate modelled behaviour, then it means that the child has not learned the behaviour.
- B. girls are just as aggressive as boys when modelling aggressive behaviour.
- C. learning only occurs when behaviour has been reinforced or punished.
- D. children would sometimes imitate modelled behaviour that had been punished.

Question 44

Jan played competitive squash for 15 years, but then she tried tennis and had difficulty with her serve, forehand, footwork, etc. In this case, a negative transfer has occurred.

This can be best explained by which of the following?

- A. Tennis is harder to learn than squash.
 - B. It is harder to learn to play a skilled sport when you are older.
 - C. Playing squash has hindered Jan's ability to play tennis.
 - D. Learning squash first has hindered Jan's ability to learn the skills required to play tennis.
-

SECTION B – Short-answer questions

Instructions for Section B

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

AREA OF STUDY 1 – Memory

Question 1

Describe the process of encoding.

1 mark

Question 2

a. Which is the least sensitive measure of retention?

1 mark

b. Justify your response to part a.

1 mark

Question 3

Explain two differences between iconic and echoic memory.

2 marks

Question 4

What is chunking and how does it affect the capacity of the short-term memory?

2 marks

Question 5

Describe how information is stored in the long-term memory according to the semantic network theory.

2 marks

Question 6

How do repression and suppression operate as a means of motivated forgetting?

2 marks

Question 7

Outline the three steps involved in utilising the method of loci to recall information.

3 marks

AREA OF STUDY 2 – Learning

Question 8

Identify two differences between a reflex and a fixed action pattern.

2 marks

Question 9

In Watson and Raynor’s experiment (1920) with Little Albert, explain two requirements that should have been established to satisfy the ethical principle of informed consent.

2 marks

Question 10

Whilst attempting a somersault on a balance beam during her nightly gymnastics training session, Mary-Lou missed the beam and badly injured her back. Now, having physically recovered from the accident, Mary-Lou gets highly anxious whenever she approaches a balance beam.

a. Explain, using an example, how Mary-Lou might experience stimulus generalisation.

2 marks

b. Explain how Mary-Lou might experience stimulus discrimination.

1 mark

Question 11

Explain how Thorndike's experiments with cats led to his theory of the law of effect.

2 marks

Question 12

Distinguish between classical and operant conditioning by completing the following table.

	Classical conditioning	Operant Conditioning
Nature of response		
Role of learner		

2 marks

Question 13

Jan's mother has decided to teach her daughter how to erect a plastic Christmas tree. Jan's mum explains that there are seven steps that must be completed in order, and then she proceeds to show Jan the seven steps involved.

According to the five stages of observational learning, identify the second stage and describe the importance of this stage in order for Jan to successfully erect the tree.

2 marks

Question 14

Derek has been playing baseball competitively for 15 years. He joins a cricket team during the summer and has found it a lot more difficult to learn the skills for cricket than for baseball.

In this case there has been a _____ of his learning.

1 mark

AREA OF STUDY 3 – Research investigation

Read the following research study. All the questions that follow relate to this study. Answer all questions.

Dr Calculus conducted a study on the impact of online mathematics programs on primary students' numeracy.

1 April 2010: To test this he surveyed and pre-tested each student using a numeracy test for every Grade 3 student at Box Hill South Primary School where his children attend.

The parents of the students were then notified of the study and informed that their child would be using an online mathematics program or a school supplied workbook, in order for Dr Calculus to identify the value of online mathematics programs.

Students were put into pairs according to their scores on the mathematics aptitude test. Each pair of students was separated into either the online program group or a workbook group.

Over a three month period, students in the online program group were required to use the mathematics online program in class for an hour and a half per week. Students in the workbook group were required to complete set work in the school provided mathematics workbook for one and half hours per week.

30 June 2010: At the end of the three month period, all students were given another numeracy test to identify any improvements made.

	Online participants	Workbook participants
Mean score on numeracy test 1 April	63.5%	63.6%
Mean score on numeracy test 30 June	71.4%	70.9%

A test of significance was calculated and $p > 0.05$.

Question 15

Name the independent variable and the dependent variable in this study.

independent variable _____

dependent variable _____

2 marks

Question 16

Write an operational hypothesis for this study.

2 marks

Question 17

Identify and describe one advantage of the experimental design used in this experiment.

2 marks

Question 18

Was a single blind procedure used in this experiment? Justify your response.

2 marks

Question 19

a. Name an inferential and a descriptive statistic that was used in the results of this experiment.

inferential statistic _____

descriptive statistic _____

2 marks

b. Explain the purpose of using descriptive statistics in an experiment.

1 mark

c. Was there a statistical difference between the two groups of students? Justify your response.

2 marks

d. Based on the results, state the conclusion that should be made for the experiment.

1 mark

Question 20

At the conclusion of the study, some of the parents were unhappy about their child's involvement in the study. Consequently they wished to have their child's results on the numeracy tests excluded from the findings.

Discuss the subject's rights in terms of the use of results at the conclusion of the study. Identify the ethical principle in your response.

2 marks

Question 21

Discuss what is meant by an 'extraneous variable'. Give an example of a possible extraneous variable from this study.

2 marks

END OF QUESTION AND ANSWER BOOKLET