

Trial Examination 2017

VCE Psychology Unit 3

Written Examination

Question and Answer Booklet

Reading time: 15 minutes

Writing: 1 hour 30 minutes

Student's Name: _____

Teacher's Name: _____

Structure of Booklet

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	40	40	40
B	12	12	50
			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 correction fluid/tape.

No calculator is allowed in this examination.

Materials supplied

Question and answer booklet of 21 pages.

Answer sheet for multiple-choice questions.

Additional space is available at the end of this booklet if you need extra paper to complete an answer.

Instructions

Please ensure that you write **your name** and your **teacher's name** in the space provided on this booklet and in the space provided on the 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 unauthorised electronic 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 2017 VCE Psychology Units 3&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.

Question 1

Which of the following brain structures is responsible for the storage of explicit memories?

- A. amygdala
- B. cerebellum
- C. cerebral cortex
- D. hippocampus

Question 2

After repeatedly swearing at home, Zane's mother confiscates his phone for a month so that he will learn to stop swearing.

Zane's mother is using which of the following learning principles?

- A. positive punishment
- B. negative punishment
- C. negative reinforcement
- D. classical conditioning

Question 3

Which division of the nervous system is largely responsible for the initial detection of sensory stimuli?

- A. somatic
- B. sympathetic
- C. parasympathetic
- D. spinal cord

Use the following information to answer Questions 4–6.

Just minutes after going to sleep, Val was woken by the smell of smoke. She saw flames in the living room and ran to her children's bedrooms, before ushering them outside and calling emergency services. Unfortunately the house could not be saved and Val realised that she and her children were homeless for a while.

Answer the following questions in terms of Selye's General Adaptation Syndrome (GAS).

Question 4

Val's fight-flight-freeze response would have first been activated when she was experiencing which of the following stages?

- A. shock
- B. countershock
- C. resistance
- D. exhaustion

Question 5

Val's body's ability to meet the demands of being homeless starts to decline when she enters which of the following stages?

- A. shock
- B. countershock
- C. resistance
- D. exhaustion

Question 6

Val would most likely first become susceptible to colds and bacterial infection during which of the following stages?

- A. shock
- B. countershock
- C. resistance
- D. exhaustion

Use the following information to answer Questions 7–12.

Olivia was at her grandmother's house late one night when she heard a noise from the fig tree in the backyard. She went to investigate and, as she got close, a swarm of bats flew out from the tree towards her. To Olivia it seemed as if they were attacking her, so she fell backwards and froze in terror. Now, whenever Olivia sees a fig tree, her whole body tenses up in anticipation of being attacked by bats.

Question 7

Olivia's behaviour has been classically conditioned in this case, because her role in learning and the nature of her response is

- A. active and voluntary.
- B. passive and voluntary.
- C. active and involuntary.
- D. passive and involuntary.

Question 8

Which of the following is Olivia's conditioned stimulus?

- A. seeing a fig tree
- B. her whole body tensing up in anticipation of being attacked
- C. being attacked by a swarm of bats
- D. falling backwards and freezing in terror

Question 9

Which of the following is Olivia's unconditioned stimulus?

- A. seeing a fig tree
- B. her whole body tensing up in anticipation of being attacked
- C. being attacked by a swarm of bats
- D. falling backwards and freezing in terror

Question 10

Which of the following is Olivia's unconditioned response?

- A. seeing a fig tree
- B. her whole body tensing up in anticipation of being attacked
- C. being attacked by a swarm of bats
- D. falling backwards and freezing in terror

Question 11

Initially Olivia fell backwards and froze in terror.

Which division of Olivia's nervous system would have been dominant during her 'freeze' response?

- A. sympathetic
- B. parasympathetic
- C. somatic
- D. central

Question 12

Whilst Olivia was frozen with fear, which of the following physiological changes would have been most likely to occur?

- A. Her body temperature would decrease.
- B. Her heart rate would instantly accelerate.
- C. She would salivate uncontrollably.
- D. Adrenaline would flood into her bloodstream.

Question 13

Victims of Alzheimer's disease typically have lower levels of _____ neurotransmitters, which play a key role in memory.

- A. acetylcholine
- B. adrenaline
- C. gamma-aminobutyric acid (GABA)
- D. dopamine

Question 14

Which of the following type of long-term memories are the most likely to be falsely reconstructed?

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

Question 15

In terms of neural pathways involved in memory, long-term depression is a result of a _____ stimulation of a presynaptic neuron, which will _____ an existing synapse.

- A. low-frequency; strengthen
- B. low-frequency; weaken
- C. strong-frequency; strengthen
- D. strong-frequency; weaken

Use the following information to answer Questions 16–18.

Ben spent four years completing his Bachelor of Education. Upon completion of his degree at the end of last year, he accepted a teaching position in the country and has moved into a rental property with Vern, who is another first-year teacher. At the completion of the first semester (the first two terms), Ben feels exhausted; he is struggling with the high workload of teaching and has difficulty adjusting to his new life in the country. Ben is considering the implications of quitting his teaching job and spending the rest of the year travelling overseas to help him think about his future in a teaching career.

Answer the following questions in terms of Lazarus and Folkman's Transactional Model of Stress and Coping.

Question 16

At the completion of the first semester, Ben's primary appraisal of teaching can best be identified as

- A. benign.
- B. irrelevant.
- C. a threat.
- D. a challenge.

Question 17

Ben's consideration – quitting teaching and taking some time to travel and think about his future in a career in teaching – is an example of

- A. a primary appraisal.
- B. a secondary appraisal.
- C. emotion-focused coping.
- D. problem-focused coping.

Question 18

Vern's assessment of his first semester of teaching is different to Ben's.

Which of the following forms of primary appraisal is least likely to result in the need for a secondary appraisal by Vern?

- A. an evaluation of the harm
- B. an evaluation of threats
- C. an evaluation that teaching is a challenge
- D. an evaluation that the demands of teaching are benign

Question 19

Which of the following memory stores has the lowest capacity?

- A. long-term
- B. short-term
- C. iconic
- D. echoic

Question 20

As a result of brain surgery, Yolanda is temporarily experiencing anterograde amnesia. This will diminish her ability to consolidate which of the following type of memories?

- A. implicit
- B. sensory
- C. short-term
- D. declarative

Question 21

Drugs that effectively reduce the symptoms of Parkinson's disease achieve this by

- A. mimicking the effects of GABA on the receptors on postsynaptic dendrites.
- B. mimicking the effects of GABA on the axon terminals on presynaptic dendrites.
- C. blocking the effects of GABA on the axon terminals on presynaptic dendrites.
- D. blocking the effects of GABA on the receptors of postsynaptic neurons.

Question 22

Parkinson's disease is a result of an imbalance of GABA and which of the following neurotransmitters in the brain?

- A. glutamate
- B. adrenaline
- C. cortisol
- D. dopamine

Question 23

Which of the following methods of retrieval is the least sensitive measure?

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

Question 24

High levels of which neurohormone enhance the emotionality of an autobiographical memory?

- A. adrenaline
- B. GABA
- C. dopamine
- D. glutamate

Question 25

Eustress

- A. activates the parasympathetic nervous system.
- B. will trigger a release of GABA.
- C. often triggers a boost in energy levels.
- D. is a result of an accumulation of stress.

Use the following information to answer Questions 26–30.

A VCE Psychology class conducted an experiment on the serial position effect to determine the impact of delayed recall on the ability to recall a serial list of words. The males in the class formed group A and the females in the class formed group B. The teacher read out a list of fifteen words at two-second intervals. Once the teacher read out the final word, group A were required to write down as many words as they could using free recall, whilst group B was required to record on a piece of paper as many prime numbers as they could, starting from 1 and working their way up for one minute. After one minute, group B was then required to record as many of the fifteen words as they could.

Question 26

The class experiment used which of the following research designs?

- A. convenience samples
- B. repeated-measures
- C. matched-participants
- D. independent-groups

Question 27

Group A would be expected to have a recency effect due to the use of

- A. context-dependent cues.
- B. state-dependent cues.
- C. elaborative rehearsal.
- D. maintenance rehearsal.

Question 28

Based on the expected findings of the experiment, group B would have

- A. a primacy effect only.
- B. a recency effect only .
- C. both a primacy and a recency effect.
- D. neither a primacy nor a recency effect due to the interfering task.

Question 29

The males in the class were

- A. non-randomly allocated to the control group.
- B. non-randomly allocated to the experimental group.
- C. randomly allocated to the control group.
- D. randomly allocated to the experimental group.

Question 30

The impact of spending one minute to list a series of prime numbers would have the most significant effect on which of the following memory stores (in terms of the subsequent ability to recall the fifteen words)?

- A. echoic
- B. iconic
- C. short-term
- D. long-term

Question 31

In terms of observational learning processes according to Bandura, an observer is more likely to pay attention to a model that is demonstrating behaviour when the model

- A. is unknown to the observer.
- B. has a high status.
- C. demonstrates behaviour that is perceived to be beyond the capabilities of the observer.
- D. has traits that are perceived to be distinctly different from the observer.

Question 32

In terms of sources of stress, life events

- A. cause distress only.
- B. cause eustress only.
- C. can cause either eustress or distress.
- D. cause neither eustress or distress.

Question 33

GABA can be best described as a

- A. neurohormone that has an inhibitory effect on the brain.
- B. neurohormone that has an excitatory effect on the brain.
- C. neurotransmitter that has an inhibitory effect on the brain.
- D. neurotransmitter that has an excitatory effect on the brain.

Question 34

Which part of the neuronal structure stores glutamate?

- A. myelin sheaths
- B. soma
- C. axon terminals
- D. dendrites

Question 35

The myelin sheath surrounds the

- A. soma and slows the electrical impulses travelling through the neuron.
- B. soma and speeds up the electrical impulses travelling through the neuron.
- C. axon and slows the electrical impulses travelling through the neuron.
- D. axon and speeds up the electrical impulses travelling through the neuron.

Question 36

Exercise can be an effective strategy for coping with stress by

- A. reducing the levels of beta endorphins, which are stress hormones that linger in the brain.
- B. releasing additional beta endorphins, which increases arousal.
- C. releasing additional beta endorphins, which provide a sense of well-being.
- D. reducing the level of beta endorphins, and thus having a calming effect on the body.

Question 37

Which of the following strategies for dealing with stress would be considered the least effective in reducing the physiological response to stress?

- A. a problem-based approach
- B. an avoidance strategy
- C. exercise
- D. utilising coping flexibility

Question 38

Which of the following forms of learning is **not** influenced by the consequences that result from behaviour?

- A. social learning theory
- B. classical conditioning
- C. operant conditioning
- D. observational learning

Question 39

Which of the following forms of learning is most likely to occur latently (that is, the learning has occurred at a cognitive level, but has not been demonstrated yet)?

- A. social learning theory
- B. classical conditioning
- C. operant conditioning
- D. the reflex arc

Question 40

John Watson conditioned Little Albert's emotional response to the presence of a white rat through which of the following forms of learning?

- A. social learning theory
- B. classical conditioning
- C. operant conditioning
- D. the reflex arc

END OF SECTION A

SECTION B – SHORT-ANSWER QUESTIONS

Instructions for Section B

Answer **all** questions in the spaces provided. Write using blue or black pen.

Question 1 (2 marks)

In terms of the neural basis of memory, identify **two** differences between long-term potentiation and long-term depression.

Question 2 (4 marks)

Glutamate plays a key role in memory.

a. Describe the role of glutamate in memory.

2 marks

b. Explain what is meant by the lock-and-key process of transmission of neural information in relation to glutamate.

2 marks

Question 3 (3 marks)

Lucia stood on a nail sticking out of the floor in her bare feet and then reflexively withdrew her foot.

Describe the role of the two major divisions of the nervous system in Lucia's reflex arc in this scenario.

Question 4 (3 marks)

For an upcoming 20-year school reunion, Georgia was trying to remember the twenty-three other students that were in her Year 12 homeroom. She was initially surprised that she could only remember the names of five students. She then looked at a photo of the year level and was able to recall the names of eighteen students.

In terms of methods of retrieval, explain why Georgia can remember more names when looking at the photo of the year level.

Question 5 (2 marks)

Identify and describe an ethical implication of the 'Little Albert' experiment.

Question 6 (2 marks)

Distinguish between implicit and explicit memories.

Question 7 (4 marks)

Millie had a long drive during the first day of the holidays in order to get to her destination interstate. She had limited sleep over the last two days due to the demands of her job and thus she was feeling tired. Late in the day, she briefly lost awareness of the road and consequently her car ran off it and she collided with some hay bales on a farm. As Millie came to her senses she froze for several seconds, before endeavouring to work her way out of the crumpled car that she was stuck in.

- a.** In terms of the fight-flight-freeze response, explain what happened to Millie's body whilst she froze briefly after the accident.

2 marks

- b.** Explain the role of cortisol in Millie's stress response.

2 marks

Question 8 (4 marks)

Eloise has to learn several lines for her VCE Drama monologue.

Describe how both context-dependent and state-dependent cues could help her recall of her lines.

Question 9 (4 marks)

Drew is a school principal who finds aspects of his job stressful.

- a.** Describe how the use of approach coping strategies could assist him in dealing with stressors from his job.

2 marks

- b.** Describe **one** advantage of using an approach strategy for coping with stress.

1 mark

- c.** Describe **one** disadvantage for using an approach strategy for coping with stress.

1 mark

Question 10 (7 marks)

A Psychology class was asked to complete an experiment exploring the impact of leading questions on the reliability of eyewitness testimony.

The class gained the informed consent of the school library staff prior to the commencement of the experiment.

One lunchtime when the library was full of students, one of the students from the Psychology class yelled a series of abusive comments at the top of their voice towards the librarians at the desk. She then proceeded to rip pages out of a book and threw the crumpled bits of paper at the librarians, who stood there frozen. The student then stormed out of the library.

The students who witnessed this were then interviewed by a variety of teachers who also consented to participate in the experiment. Half of the students who witnessed the incident were asked the following leading question: "After the student threw a book at the librarians, what happened next?" The other half of the students were asked open-ended questions such as: "Describe what you saw during the incident."

A week later, all of the students who witnessed the incident were asked to return to a classroom for a second interview. They were asked to describe what they had seen during the incident and if they could remember a book being thrown at the librarians by the student (which did not actually occur).

- a.** What was the independent variable in this experiment? 1 mark

- b.** Identify and explain the method of retrieval the students were using to remember details of the incident the week after witnessing it. 2 marks

- c.** Identify the members of the control group. 1 mark

- d.** What is meant by a 'leading question'? 1 mark

- e. Based on the research completed by Loftus on the reliability of eyewitness testimony, what would be the expected findings of this experiment? 2 marks

Question 11 (5 marks)

Don used to suffer from foot blisters when he would go for a run. Now he wears special 'toe' socks which separate his toes and he no longer suffers from blisters.

- a. In terms of the three-phase model of operant conditioning, identify the antecedent, behaviour and consequence in this case. 3 marks

- b. Identify and explain which form of reinforcement has been applied in this case. 2 marks

Question 12 (10 marks)

Professor Trueman wanted to investigate the effectiveness of an international student immersion program for reducing acculturative stress for university students who have come to Australia on a student visa for the duration of the degree.

Professor Trueman called for volunteers from Winter University who had enrolled in a three-month immersion program for international students immediately prior to commencing their degrees. The program aimed to help students with language, cultural changes and dealing with racial prejudice. 155 students agreed to participate in the survey.

Professor Trueman collaborated with Summer University, which did not have an immersion program, asking for volunteers to also take part in the experiment. 177 students from Summer University agreed to participate.

The experiment required the volunteer participants to complete a pre-semester one survey within a week of arriving in Australia, and then a follow-up survey after the completion of their first semester. The survey asked a series of questions relating to the anxiety and stress they felt in relation to studying in Australia.

The results are presented in the tables below.

Table 1 Results for survey responses from Winter University international students

	Pre-semester one responses (scored from 0–5)	Post-semester one responses (scored from 0–5)	Change in score from pre- and post-survey responses
Anxiety level about language barriers (0 = no anxiety, 5 = extreme anxiety)	3.6	2.1	–1.5
Anxiety level about dealing with cultural changes	3.3	1.9	–1.4
Anxiety level about dealing with racial prejudice	3.2	3.0	–0.2

Table 2 Results for survey responses from Summer University international students

	Pre-semester one responses (scored from 0–5)	Post-semester one responses (scored from 0–5)	Change in score from pre- and post-survey responses
Anxiety level about language barriers (0 = no anxiety, 5 = extreme anxiety)	3.8	3.2	–0.4
Anxiety level about dealing with cultural changes	3.4	3.5	+0.1
Anxiety level about dealing with racial prejudice	3.6	3.6	0

Based on statistical analysis of the results from the two groups of students, Professor Trueman concluded that the immersion program for international students had successfully reduced the anxiety levels of students, based on the p -value < 0.05 .

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Extra space for responses

Clearly number all responses in this space.

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