

Trial Examination 2022

VCE Psychology Unit 3

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

<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	6	6	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 24 pages

Answer sheet for multiple-choice questions

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

Instructions

Write your **name** and your **teacher's name** in the space provided above on this page, and 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 2022 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

When comparing the speeds of a conscious response and an unconscious response to sensory stimuli,

- A. both speeds are identical.
- B. a conscious response is generally more rapid than an unconscious response.
- C. an unconscious response is generally more rapid than a conscious response.
- D. an unconscious response is only more rapid than a conscious response if it is a spinal reflex.

Question 2

Saskia's hand accidentally touched the hot stove while she was cooking. Her hand reflexively withdrew from the stove via activity in both of the major divisions of the nervous system.

Which one of the following identifies the correct order of activity in the major divisions of the nervous system for the detection of heat and subsequent movement of Saskia's hand?

- A. central → peripheral
- B. peripheral → central
- C. peripheral → central → peripheral
- D. central → peripheral → central

Use the following information to answer Questions 3–7.

Spiro is a surgeon who has been accused of malpractice after a patient claimed that during a surgery he had removed part of their leg without lawful consent. When first notified of the accusation, Spiro went into shock. He was then told that there would be an investigation and that he had been suspended from his practice. Spiro spent several days at home experiencing a high level of tension, irritability and headaches due to thoughts that his career as a surgeon may be over. After a few days, he contacted a union representative to learn more about the effect of the accusation on his career, as well as to get advice on how to best defend his decision to perform the surgical procedure.

Question 3

In terms of Selye's General Adaptation Syndrome, when Spiro went into shock, his

- A. sympathetic nervous system would have been the dominant division of his autonomic nervous system.
- B. bloodstream would have been flooded with adrenaline.
- C. heart rate would have rapidly increased from its normal resting rate.
- D. blood pressure would have dropped.

Question 4

In terms of Selye's General Adaptation Syndrome, when Spiro had high levels of tension, irritability and headaches, he was experiencing

- A. resistance.
- B. exhaustion.
- C. the counter shock phase of the alarm stage.
- D. the shock phase of the alarm stage.

Question 5

As Spiro's body tried to cope with the stress of the accusation of malpractice and his consequential suspension, cortisol would initially have been released into his bloodstream.

In terms of Selye's General Adaptation Syndrome, this describes

- A. resistance.
- B. exhaustion.
- C. the counter shock phase of the alarm stage.
- D. the shock phase of the alarm stage.

Question 6

According to Lazarus and Folkman's Transactional Model of Stress and Coping, which one of the following would Spiro's primary appraisal most likely be identified as?

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

Question 7

Following the news of his suspension, Spiro initially spent several days at home experiencing high levels of stress before he decided to contact a union representative for assistance.

This indicates Spiro experienced both

- A. acculturative stress and a catastrophe.
- B. avoidant coping and approach coping.
- C. context-specific effectiveness and exercise.
- D. a state of exhaustion and coping flexibility.

Question 8

When gamma-amino butyric acid (GABA) is released from a pre-synaptic cell, it

- A. blocks the receptors on the post-synaptic cell.
- B. will have no effect on the post-synaptic cell.
- C. reduces the excitability of the post-synaptic cell to which it binds.
- D. is reabsorbed back into the axon terminal before it can travel into the synapse.

Use the following information to answer Questions 9–13.

A group of university-based researchers decided to investigate the effectiveness of exercise as a strategy for coping with stress by studying how heart rate is affected by exercise. The researchers advertised for volunteers from the university. The students who responded to the advertisement were screened prior to being selected to participate in the investigation. Any students who had a recent history of cardiovascular ailments or physical injuries were not selected. The participants were then asked questions about their diet, sleep routine and exercise habits. Based on the different responses, participants were classified into three groups.

- Group 1: participants who averaged less than 30 minutes of vigorous exercise per week
- Group 2: participants who averaged 30–120 minutes of vigorous exercise per week
- Group 3: participants who averaged more than 120 minutes of vigorous exercise per week

Using a single-blind procedure, the participants were required to walk on a treadmill that gradually increased in gradient and pace while they were connected to a heart rate monitor. The participants were required to continue to walk on the treadmill until their heart rate reached a maximum of 170 beats per minute (bpm). They then ceased the activity and had their heart rate recorded one hour after ceasing the activity.

The researchers aimed to demonstrate that individuals who exercise regularly cope more effectively with the effects of stress on their body, as reflected by a reduction in heart rate one hour after the body is aroused from exercise. Consequently, the researchers ignored the results of group 2 and compared the results of group 1 to group 3.

A summary of the results is shown in the following table.

	Group 1	Group 3
Average heart rate one hour after reaching 170 bpm during treadmill exercise	88.5 bpm	72.1 bpm

Question 9

Which type of research method was used in this investigation to compare the two groups identified in the table above?

- A. cross-sectional study
- B. independent groups
- C. matched participants
- D. repeated measures

Question 10

Which one of the following identifies the extraneous or confounding variables controlled by using a single-blind procedure and the research method used in this investigation?

	Variable controlled by using a single-blind procedure	Variable controlled by using the research method used
A.	placebo effect	participant-related variables
B.	placebo effect	experimenter effect
C.	order effect	participant-related variables
D.	placebo effect	order effect

Question 11

Following the completion of the investigation, a colleague of the researchers pointed out that many of the participants in group 3 would have cardiovascular systems better equipped to rapidly recover from the effects of exercise and would also have lower resting heart rates than the participants in group 1.

This would have systematically affected the results and acted as

- A. the dependent variable.
- B. the independent variable.
- C. a confounding variable.
- D. an extraneous variable.

Question 12

The data obtained by the researchers was

- A. primary and quantitative.
- B. primary and qualitative .
- C. secondary and quantitative.
- D. secondary and qualitative.

Question 13

Exercise is an effective strategy for coping with stress.

Which one of the following gives the best explanation for this observation?

- A. When exercising, the sympathetic nervous system shuts down.
- B. Exercise results in high levels of cortisol in the bloodstream, which has a calming effect on the mind.
- C. Exercise rids the body of endorphins.
- D. Exercise can divert attention away from a stressor.

Use the following information to answer Questions 14–16.

Guadalupe is a physical education teacher at a high school and regularly volunteers to runs free health and fitness activities in her local community. She was recently diagnosed with gout, a medical condition that causes sharp pain in her toes and makes walking and standing unbearably painful. She is currently on leave from work for two months and is anxious about her ability to work and volunteer. While on leave, she has had trouble sleeping because she is worried about her future.

Question 14

Which one of the following sources of stress is Guadalupe's gout diagnosis is best identified as?

- A. acculturative stress
- B. insignificant stress
- C. distress
- D. eustress

Question 15

In terms of Lazarus and Folkman's Transactional Model of Stress and Coping, Guadalupe is most likely to adopt an approach coping strategy to manage the news of her condition

- A. during a resistance stage.
- B. prior to her primary appraisal.
- C. between her primary and secondary appraisals.
- D. following her secondary appraisal.

Question 16

Due to Guadalupe's ongoing concern about the impact of gout on her ability to work as a physical education teacher and volunteer, an increased level of cortisol will be maintained in her bloodstream.

Which one of the following will occur as a result of this increased level?

- A. the release of additional glucose from her liver
- B. strengthening of her immune system
- C. an initial sense of fatigue
- D. slowing down of her metabolism

Question 17

Which one of the following descriptive statistics provides the most useful measure of spread for the collection of data?

- A. mean
- B. standard deviation
- C. a bar graph
- D. a table

Question 18

The proposition that the results of a research investigation are replicable relates most specifically to

- A. the conclusion.
- B. the generalisation.
- C. validity.
- D. reliability.

Use the following information to answer Questions 19–23.

Canadian psychologist Donald Hebb (1904–1985) demonstrated that the strength of neural connections is largely determined by the activity that occurs at a synapse.

Question 19

Which one of the following is the location of the reception of neural information?

- A. axon
- B. axon terminal
- C. dendrites
- D. myelin sheath

Question 20

The transmission of a neurotransmitter can best be described as occurring

- A. across a synapse.
- B. along a dendrite and then along an axon.
- C. along an axon and then across a synapse.
- D. along a dendrite, then along an axon and then across a synapse.

Question 21

The repeated activity of a pre-synaptic neuron and a post-synaptic neuron results in

- A. long-term potentiation only.
- B. long-term depression only.
- C. either long-term potentiation or long-term depression.
- D. neither long-term potentiation nor long-term depression.

Question 22

In terms of neural plasticity, which one of the following results in the strengthening of neural connections?

- A. having larger pre-synaptic and post-synaptic neurons connected
- B. having older pre-synaptic and post-synaptic neurons connected
- C. the repeated co-activation of the pre-synaptic and post-synaptic neurons that are connected
- D. having a greater number of pre-synaptic and post-synaptic neurons connected

Question 23

In terms of a lock-and-key process of neural transmission across a synapse, the 'keys' are stored in the

- A. axon terminals.
- B. myelin sheath.
- C. middle of the synapse.
- D. dendrites.

Question 24

Which one of the following is a similarity between long-term potentiation and long-term depression?

- A. has short-lasting effects
- B. involves glutamate
- C. results in the growth of new dendrites
- D. results in the release of additional neurotransmitters

Question 25

In terms of the reproduction stage of observational learning, reproduction occurs when the observer has

- A. a mental image of the observed behaviour.
- B. the ability to copy the observed behaviour.
- C. copied the observed behaviour.
- D. seen the model's behaviour reinforced.

Question 26

Adrenaline play a key role in the formation of

- A. sensory memory.
- B. short-term memory.
- C. procedural memory.
- D. a conditioned emotional response.

Use the following information to answer Questions 27–33.

A group of Psychology students conducted a study that tested the memory of a group of Year 7 students. The Year 7 students were exposed to 12 words that were read aloud in six pairs with a three-second interval between each pair. The Year 7 students were allocated to either group 1 or group 2 based on their family names. Students with family names starting with letters A to M were allocated to group 1 and students with family names starting with letters N to Z were allocated to group 2.

- Group 1 participants were exposed to word pairs with no relationship or sequence.
- Group 2 participants were exposed to word pairs in alphabetical order, with each pair of words ending in the same letter. For example, the first pair of words was ‘aunt’ and ‘bolt’; the words start with ‘a’ and ‘b’, respectively, and both end with ‘t’.

The order of the word pairs for each group are shown in the following table.

	Group 1	Group 2
First pair	fort and coal	aunt and bolt
Second pair	jive and kelp	coal and doll
Third pair	aunt and grid	edit and fort
Fourth pair	idle and bolt	grid and hold
Fifth pair	hold and doll	idle and jive
Sixth pair	lump and edit	kelp and lump

After the six pairs of words had been read aloud, both groups had 20 seconds of rehearsal time. They were then required to write down as many of the words as they could remember in a serial order starting with the first pair.

Question 27

Which one of the following methods of allocation was used in this study?

- A. random
- B. non-random
- C. convenience
- D. stratified

Question 28

In terms of the likely rehearsal methods used by the two groups,

- A. both groups were forced to use maintenance rehearsal.
- B. both groups were easily able to use elaborative rehearsal.
- C. group 2 would have been more likely to use elaborative rehearsal than group 1.
- D. neither group could have rehearsed the words because the capacity of short-term memory was exceeded by the number of words to which the participants were exposed.

Question 29

In terms of the serial position effect, group 1 would be expected to demonstrate

- A. a higher recall of the middle four words compared to the other words.
- B. a higher recall of the first four words compared to the last eight words.
- C. a higher recall of the last four words in comparison to the first eight words.
- D. an equally high recall of the first four words and the last four words compared to the middle four words.

Question 30

Which one of the following methods of retrieval was used by the participants to remember the words?

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

Question 31

Which one of the following would represent the independent variable in the study?

- A. the number of the words that were retrieved from memory
- B. the serial position effect
- C. whether or not the words were presented in alphabetically ordered pairs ending with the same letter
- D. whether the participants' family names started with letters A to M or N to Z

Question 32

In which one of the following memory stores would the rehearsal of the words during the 20 seconds of rehearsal time have mainly occurred?

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

Question 33

The research investigation was

- A. a self-report.
- B. a case study.
- C. an observational study.
- D. an experiment.

Question 34

Which one of the following are involved in the reconstruction of memory?

- A. long-term memory only
- B. short-term and long-term memory only
- C. short-term and sensory memory only
- D. short-term, long-term and sensory memory

Question 35

According to Loftus, a leading question can impact the fallibility of a memory by

- A. altering the initial rehearsal of the memory of an event.
- B. creating source confusion during the consolidation process.
- C. creating source confusion during the retrieval process.
- D. altering the memory trace of the memory stored in short-term memory.

Question 36

During the conditioning phase of the 'Little Albert' experiment, a loud sound was produced repeatedly

- A. whenever Little Albert looked at the white rat.
- B. just prior to Little Albert reaching towards the white rat.
- C. just as Little Albert's hand touched the white rat.
- D. several seconds after Little Albert touched the white rat.

Use the following information to answer Questions 37–40.

A Pilates instructor conducted a class for a co-educational group of Year 10 students during a physical education lesson. Some of the students enthusiastically observed the instructor's demonstration of various poses and copied them when given the opportunity to 10 minutes after the demonstration. Other students were not interested in the class and did not pay attention to the demonstration and were thus unable to replicate the poses.

Question 37

In terms of social learning, the students would be more likely to pay attention to

- A. an instructor of the opposite gender.
- B. an unknown instructor rather than a familiar instructor.
- C. an instructor who is much older than them.
- D. an instructor who demonstrates poses that the students perceive to be easy to replicate rather than poses that they perceive to be difficult to replicate.

Question 38

Which one of the following brain structures would play a key role in consolidating the posture and balance required to hold some of the poses after repetition of the poses?

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

Question 39

The inability of some of the students to replicate the poses 10 minutes after the demonstration can be best attributed to

- A. the absence of context-dependent cues.
- B. the limitations of the capacity of short-term memory.
- C. a failure to store details of the exercises in long-term memory.
- D. anterograde amnesia.

Question 40

During mealtime with their family later that day, one of the students was describing some of the highlights of the Pilates class to his parents.

Which one of the following types of memory would be used by the student?

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

END OF SECTION A

SECTION B**Instructions for Section B**

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

Question 1 (8 marks)

A research team is interested in conducting research on human participants using the three stages of Selye's General Adaptation Syndrome.

- a.** Explain the key principles of Selye's General Adaptation Syndrome. 2 marks

- b.** Explain how a case study could be implemented by the research team. 2 marks

- c.** Identify and explain one ethical consideration that may prevent the research team from conducting an experiment with human participants. 2 marks

- d.** In terms of Selye's General Adaptation Syndrome, explain how an individual may move from the resistance stage to the exhaustion stage. 2 marks

Question 2 (6 marks)

Mahmut learned that he had been voted school captain of his high school for 2022 and initially experienced an acute form of eustress. Once he had more time to think about it, he became chronically stressed about the thought of needing to do public speaking, which he lacked confidence in. Mahmut thus perceived this to be a life event.

- a.** Explain Mahmut's eustress as evidenced in the scenario. 3 marks

- b.** Using an example, explain how Mahmut perceived his school captaincy as a life event. 3 marks

Question 3 (6 marks)

Cheng Lin, a successful barrister, recently joined a gym. She goes to the gym six times per week to attend different classes. The yoga class is quite intense in terms of the stretching component. The spin class lasts for 30 minutes. According to her sports watch, Cheng Lin's average heart rate is around 75 bpm during the yoga class and around 150 bpm during the spin class, as shown in the table below.

Day	Class	Average heart rate during class (bpm)
Monday	yoga	75
Tuesday	spin class	150
Wednesday	yoga	75
Thursday	spin class	150
Friday	yoga	75
Saturday	spin class	150

- a. Describe two distinct functions of Cheng Lin's somatic nervous system when she is attending the yoga class.

2 marks

- b. Explain the roles of the two subdivisions of Cheng Lin's autonomic nervous system when she is attending and then recovering from her spin class.

4 marks

Question 4 (10 marks)

Alphonso was weeding his front garden when he heard the screech of tyres, causing him to look up just in time to see a car collide with his neighbour's brick fence. The front of the car was badly damaged, and the driver and front-seat passenger were trapped inside. Alphonso experienced an adrenaline rush as he sprang into action to render assistance. The driver had obtained a serious injury to his arm, which Alphonso found distressing as he tried to free the driver and passenger. Shortly after, emergency services arrived and rescued the driver and passenger from the wreckage.

The police interviewed Alphonso and asked him a series of questions immediately after the incident occurred and one week later. In the second interview, Alphonso could recall seeing the car lose control before colliding with the wall. Alphonso sometimes experiences a vivid episodic memory of the incident.

- a.** Explain how Alphonso's episodic memory was formed and how it may be regularly retrieved via the presence of context clues. 4 marks

- b.** Explain why Alphonso's retrieval of the details of the incident may have varied between his initial account and his account one week later, according to Loftus's theory of the reconstructive nature of memory. 3 marks

- c. The driver may have experienced a temporary case of anterograde amnesia following the incident.

Explain why this may have occurred and describe how it could have affected their memory of the incident.

3 marks

Question 5 (10 marks)

Jorja was concerned that their untrained dog Tara was attacking the native penguin population that lived on their Tasmanian coastal property. Jorja attempted to condition Tara using the following two-phase approach.

- Phase one: Jorja bought some life-sized robotic penguin toys and covered them in penguin feathers they had collected. Jorja put the penguin toys in their backyard and let them move around, while observing Tara. Whenever Tara approached one of the penguin toys, Jorja would sound a high-pitched alarm that caused Tara to become frightened. After Jorja repeated this procedure for a few days, Tara would run to her kennel to hide when she saw a penguin toy.
- Phase two: One week later, Jorja followed a similar procedure to the first phase, but in this phase, if Tara sighted a penguin toy and moved away from it, Jorja would reward Tara with a dog treat.

- a.** Using appropriate conditioning language, explain the three stages of conditioning for both phase one and phase two of Jorja's approach.

8 marks

Phase one _____

Phase two _____

- b.** Explain two advantages of the type of conditioning used in phase one to condition avoidant behaviour in comparison to the type of conditioning used in phase two.

2 marks

22

VCE Psychology Unit 3

Written Examination

Multiple-choice Answer Sheet

Student's Name: _____

Teacher's Name: _____

Instructions

Use a **pencil** for **all** entries. If you make a mistake, **erase** the incorrect answer – **do not** cross it out. Marks will **not** be deducted for incorrect answers.

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

All answers must be completed like this example:

A	B	C	D
---	---	---	---

Use pencil only

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D

16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D
21	A	B	C	D
22	A	B	C	D
23	A	B	C	D
24	A	B	C	D
25	A	B	C	D
26	A	B	C	D
27	A	B	C	D
28	A	B	C	D
29	A	B	C	D
30	A	B	C	D

31	A	B	C	D
32	A	B	C	D
33	A	B	C	D
34	A	B	C	D
35	A	B	C	D
36	A	B	C	D
37	A	B	C	D
38	A	B	C	D
39	A	B	C	D
40	A	B	C	D