

Trial Examination 2021

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 21 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 2021 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 one of the following divisions of the nervous system is responsible for dilating the pupils when an individual moves from a bright, well-lit environment to a darker environment?

- A. somatic nervous system
- B. sympathetic nervous system
- C. spinal cord
- D. brain

Use the following information to answer Questions 2–4.

Shirley was at the beach, sunbathing on a towel. She rolled over and her thigh came into contact with the hot sand, causing her to reflexively jerk her thigh back onto the towel.

Question 2

Shirley's movement of jerking her thigh away from the hot sand is best described as

- A. a stress response.
- B. the fight-flight-freeze response.
- C. autonomic.
- D. a spinal reflex.

Question 3

Which one of the following types of neuron is responsible for initiating Shirley's reflexive movement?

- A. somatic
- B. sensory
- C. motor
- D. interneuron

Question 4

Which part of the neuron was responsible for conducting the message towards Shirley's spinal cord?

- A. axon
- B. myelin sheath
- C. soma
- D. dendrite

Question 5

In the lock-and-key process of signal transmission that occurs in the motor areas of the brain that enable fine motor control of bodily movements, the 'keys' are the

- A. glutamate receptors.
- B. glutamate neurotransmitters.
- C. dopamine receptors.
- D. dopamine neurotransmitters.

Question 6

In terms of the effects of gamma-amino butyric acid (GABA) on the nervous system, the release of GABA into a synapse will have an inhibitory effect on the

- A. axon terminal of the pre-synaptic neuron.
- B. axon terminal of the post-synaptic neuron.
- C. post-synaptic neuron after binding with a complementary receptor.
- D. post-synaptic neuron before it binds with a complementary receptor.

Question 7

In an individual who has symptoms of Parkinson's disease, the motor areas of the brain experience

- A. a lack of the excitatory effects of the neurotransmitter dopamine.
- B. an excess of the excitatory effects of the neurotransmitter dopamine.
- C. a lack of the inhibitory effects of the neurotransmitter dopamine.
- D. an excess of the inhibitory effects of the neurotransmitter dopamine.

Question 8

The muscle rigidity that is experienced by individuals who suffer from Parkinson's disease can be attributed to

- A. the degeneration of motor neurons.
- B. the degeneration of the neurons in skeletal muscles.
- C. the long-term depression that occurs in the motor areas of the brain.
- D. a lack of neural input to the motor areas of the brain.

Use the following information to answer Questions 9–14.

Jadeling is a Year 12 student who applied for a number of music scholarships at a range of overseas universities. She was not confident that she would receive a scholarship. When she found out that she had earned a scholarship at a prestigious university, she was initially surprised and unable to move or speak. As Jadeling started to consciously register the news and feel excited, she texted her family members and close friends to tell them about her good news. That night, Jadeling had difficulty sleeping, and in the morning she started to feel nervous about moving to another country. However, as she was determined to remain positive and focus on how fortunate she was to have the opportunity, she developed a sense of confidence that she was well-equipped to study overseas.

Question 9

The news of Jadeling's scholarship is best identified as which one of the following sources of stress?

- A. a major stressor
- B. a challenge
- C. eustress
- D. acculturative stress

Question 10

Immediately after Jadeling discovered she had been granted a scholarship, and was unable to move or speak, she was experiencing

- A. a freeze response.
- B. counter shock.
- C. distress.
- D. resistance.

Question 11

In terms of Selye's General Adaptation Syndrome, once Jadeling had consciously registered the news of her scholarship and felt excitement, she was experiencing

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

Question 12

In terms of Lazarus and Folkman's Transactional Model of Stress and Coping, when Jadeling woke up the morning following the news of her scholarship, she was

- A. experiencing counter shock.
- B. making a primary appraisal.
- C. making a secondary appraisal.
- D. exercising context-specific effectiveness.

Question 13

According to Lazarus and Folkman's Transactional Model of Stress and Coping, Jadeling's primary appraisal of the news of her scholarship would be best identified as

- A. a significant threat.
- B. benign positive.
- C. insignificant.
- D. a significant challenge.

Question 14

Which one of the following would have been released from Jadeling's adrenal gland when she started to feel excited about her scholarship?

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

Question 15

A distinguishing feature between distress and eustress is that

- A. eustress activates the parasympathetic nervous system, whereas distress activates the sympathetic nervous system.
- B. eustress tends to be beneficial, whereas distress tends to be detrimental.
- C. eustress tends to have a long-term effect on the body, whereas distress tends to have a short-term effect on the body.
- D. eustress triggers a flight response, whereas eustress triggers a fight response.

Question 16

A limitation of Lazarus and Folkman's Transactional Model of Stress and Coping is that

- A. research data from human participants has not been gathered about the model.
- B. it fails to cater to individual differences.
- C. it fails to account for stress responses that occur without conscious thought.
- D. it fails to account for environmental factors that impact on stress.

Use the following information to answer Questions 17 and 18.

Abe was driving along a narrow street when he collided with a parked car. Abe briefly stopped and looked around, but could not see any witnesses. He then sped down the street. A few days later, Abe had a voicemail message on his phone to contact the police in relation to an incident with a parked car. Abe's heart started racing and his body started to shake as he thought about what he was going to say to the police. He decided to go for a run before he returned their call.

Question 17

Abe's decision to go for a run was an

- A. approach coping strategy.
- B. avoidance coping strategy.
- C. example of a high-level of coping flexibility.
- D. example of context-specific effectiveness.

Question 18

Going for a run will help Abe, as it will

- A. enable his parasympathetic nervous system to calm him down during his run.
- B. cease his muscle activity, which was activated when he was shaking.
- C. give him time to think about how to approach the conversation with the police.
- D. flush out all the cortisol in his bloodstream so that he is completely calm when he finishes his run.

Question 19

The development of Selye's General Adaptation Syndrome was based on data gathered from research conducted on rats.

Which one of the following techniques was used to gather the data?

- A. rating scales
- B. experiments
- C. case studies
- D. secondary data

Question 20

Which neurotransmitter or neurohormone plays the largest role in the long-term potentiation of a procedural memory?

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

Question 21

Long-term depression

- A. has an inhibitory effect on a pre-synaptic neuron.
- B. results in the post-synaptic neuron becoming less responsive.
- C. has an antagonistic effect on a post-synaptic neuron.
- D. blocks the reuptake of neurotransmitters on a pre-synaptic neuron.

Use the following information to answer Questions 22–26.

Anterograde amnesia has been identified as one of the side effects of electroconvulsive therapy. A medical research team conducted a study on the extent of anterograde amnesia in patients exposed to electroconvulsive therapy for treatment of depression. The research team had six months to generate a report of their findings.

Question 22

Given the nature of the research, it would be most difficult to generate

- A. a control group and a separate experimental group.
- B. qualitative data.
- C. a sample.
- D. primary data.

Question 23

The research team could gather secondary data by

- A. conducting an experiment on electroconvulsive therapy patients.
- B. observing the effects of electroconvulsive therapy on participants and the reporting of their findings.
- C. searching for past research on the side effects of electroconvulsive therapy on memory.
- D. asking participants to complete a self-report both before and after the electroconvulsive therapy treatment.

Question 24

A non-counterbalanced repeated measures experiment on the effects of electroconvulsive therapy on memory requires several different processes.

Which one of the following processes is **not** required?

- A. the allocation of participants
- B. the sampling of participants
- C. obtaining informed consent from participants
- D. the debriefing of participants

Question 25

Which one of the following would be an appropriate dependent variable for the experiment?

- A. the time taken to form a new procedural memory (following the electroconvulsive therapy treatment)
- B. the time between the electroconvulsive therapy treatment and memory test
- C. the number of words retrieved from a list of twenty words, five minutes after the exposure to the words (following the electroconvulsive therapy treatment)
- D. the accuracy of the reconstruction of a memory that was formed prior to the electroconvulsive therapy treatment

Question 26

Which one of the following methods would generate qualitative data in the research team's study?

- A. calculating a measure of central tendency
- B. using a rating scale
- C. self-reporting
- D. generating descriptive statistics

Question 27

The reliability of experimental data can best be evaluated

- A. by ensuring informed consent procedures have been adhered to.
- B. through replication of the experiment.
- C. by operationalising the variables.
- D. by debriefing the participants.

Question 28

One of the ethical criticisms of Watson and Rayner's 'Little Albert' experiment is the failure of Watson and Rayner to extinguish Little Albert's conditioned emotional response.

Extinguishing Little Albert's conditioned emotional response should have been

- A. managed during the informed consent process.
- B. part of the debriefing process.
- C. completed during Little Albert's withdrawal from the conditioning phase of the experiment.
- D. completed by the ethics committee overseeing the experiment.

Use the following information to answer Questions 29–33.

A research and development team from a furniture store wanted to generate data on the effectiveness of instructional videos versus in-store demonstrations of how to assemble various furniture items. A page was created for the store's website that called for volunteer customers to participate in a study, where the length of time taken to assemble a desk after viewing assembly instructions would be recorded. The volunteers were offered an incentive in the form of free store vouchers.

Out of the 400 responses to the advertisement, 40 participants were randomly selected. Participants were divided into two even groups, alphabetically by family name. Group 1 participants were shown a detailed step-by-step video of how to assemble the desk. Group 2 participants were shown a live demonstration of the desk assembly by an in-store employee. Both groups were then isolated in separate rooms and asked to construct the desk under timed conditions.

Question 29

The sampling and allocation methods that were used are

- A. random sampling and random allocation.
- B. convenience sampling and random allocation.
- C. random sampling and non-random allocation.
- D. convenience sampling and non-random allocation.

Question 30

Which one of the following types of research investigation are the researchers using to generate their data?

- A. case study
- B. observational study
- C. independent groups
- D. experiment

Question 31

Which one of the following methods of retrieval were the participants using when they were trying to remember how to assemble the desk after watching either the video or the live demonstration?

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

Question 32

Which memory store would have been the most active when the participants were trying to remember how to assemble the desk?

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

Question 33

The offer of a free store voucher to participate in the research would play the most significant role in which one of the following processes for the participants?

- A. retention
- B. reproduction
- C. motivation
- D. vicarious reinforcement

Use the following information to answer Questions 34 and 35.

Joe is a pilates instructor at a local gym. While planning his classes, he likes to play the music that he will use during the class to help him remember the order of the various movements that he will demonstrate.

Question 34

Joe's use of music while planning his classes will act as a

- A. context-dependent cue to help his retrieval of the movements during the class.
- B. context-dependent cue to enhance his rehearsal of the movements.
- C. state-dependent cue to help his retrieval of the movements during the class.
- D. state-dependent cue to enhance his rehearsal of the movements.

Question 35

Joe's memory of the order of pilates movements is classified as

- A. procedural.
- B. short-term memory.
- C. semantic.
- D. flashback.

Question 36

The significant reduction in which one of the following neurotransmitters is a contributing factor for Alzheimer's disease?

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

Question 37

Within the brains of individuals with Alzheimer's disease, neurofibrillary tangles directly cause

- A. the pruning of dendrites and axon terminals of hippocampal neurons.
- B. the destruction of hippocampal neurons.
- C. a barrier that blocks communication between hippocampal neurons.
- D. the rapid removal of the myelin sheath of hippocampal neurons.

Question 38

Adrenaline plays a key role in mediating which one of the following types of memory?

- A. episodic
- B. procedural
- C. semantic
- D. short-term

Question 39

Deception in research is primarily used to

- A. help generate large sample sizes.
- B. ensure that research has merit and integrity.
- C. control the effects of participant expectancy.
- D. minimise psychological harm or distress for participants.

Question 40

Elizabeth Loftus conducted research on the fallibility of eyewitness testimony.

According to this research a memory is most fallible during the

- A. buffering of the material while it was in sensory memory.
- B. encoding of material from sensory memory to short-term memory.
- C. rehearsal of material from short-term memory to long-term memory.
- D. retrieval of material from long-term memory to short-term memory.

SECTION B**Instructions for Section B**

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

Question 1 (4 marks)

Outline **two** differences between the role of the axon terminals and dendrites in the transmission or reception of a signal across a synapse.

Difference 1 _____

Difference 2 _____

Question 2 (6 marks)

While on holiday, Sarah was walking along a beach when she noticed a swimmer experiencing difficulty in the water. She quickly removed her shoes and swam out to the swimmer to rescue them.

- a.** Outline the roles of the **two** major subdivisions of both the central **and** peripheral nervous systems in Sarah's response to rescue the swimmer. 4 marks

- b.** Describe the impact of this event on Sarah's adrenal gland activity. 2 marks

Question 3 (9 marks)

Vesna and Roy are an elderly couple that have visited their local medical clinic for a health assessment. The clinic is small and does not have any scanning devices. Doctor Atara does a series of routine tests on both of them individually before confiding to Roy that Vesna appears to be suffering from the early stages of Alzheimer's disease.

- a.** Explain how Vesna's diagnosis is both a major stressor **and** a life event for Roy. Include an example in your answer. 3 marks

- b.** Describe how Roy may use context-specific effectiveness to deal with the stress of Vesna's diagnosis. 2 marks

- c.** In terms of the brain structures responsible for memory, explain why Vesna is likely to have a more significant decline in her explicit memory compared to her implicit memory. 4 marks

Question 4 (13 marks)

For Claudia's research investigation assessment, she decided to conduct a memory test in which she varies the organisation and presentation of a list of 15 words in order to determine if it will alter the amount of words that participants can remember.

She recruited 30 students from her year level to participate in the experiment, whom she randomly allocated into three groups of 10 students. The experiment was conducted in a classroom at lunchtime.

Group 1: The participants had 20 seconds of exposure time to list A via an image on a data projector. They were given an additional 60 seconds to rehearse the words (following the exposure time). They were then required to write down as many of the words as they could remember, in any order.

Group 2: The participants listened to a pre-recorded audio file of the words from list A, read out at two-second intervals. After the final word was read, the participants were required to write as many of the words as they could remember, in any order.

Group 3: The participants had the same experimental conditions as group 1, except that they were told prior to the exposure of list B that the words would be arranged in alphabetical order in a table; starting with a word beginning with the letter A, then a word beginning with the letter B, and so on until the fifteenth word starting with the letter Q.

Lists A and B are shown below.

List A

quit	lamp	aunt	goal	fall
cent	open	bell	inch	junk
kelp	pole	hope	east	door

List B

aunt	bell	cent	door	east
fall	goal	hope	inch	junk
kelp	lamp	open	pole	quit

- a. Outline how group 1 and group 2 may have used different forms of recall when attempting to retrieve the words from memory during the testing phase of the experiment. 4 marks

- b.** When analysing her results, Claudia noted that group 2 had a serial position effect.

Explain this serial position effect in terms of the relevant memory stores from the multi-store model of memory.

4 marks

- c.** If Claudia had used a repeated-measures research design in this experiment, a problem may have arisen.

Explain what this problem could have been and identify the type of variable involved.

3 marks

- d.** Identify and describe a useful measure of spread that could have been calculated for each of the groups.

2 marks

Question 5 (8 marks)

Hill Valley Secondary College was interested in gathering data from a cross-sectional study on the impact of punishment on the wellbeing of their Year 7–10 students.

- a.** Justify the school's choice of a cross-sectional study. 2 marks

- b.** Explain how a stratified sample could be employed in this study. 3 marks

- c.** Identify a similarity between punishment and response cost in relation to this study. 1 mark

- d.** Explain how a teacher may employ a response cost for students who fail to submit work by a due date. 2 marks

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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