



Trial Examination 2019

VCE Psychology Units 3&4

Written Examination

Question and Answer Booklet

Reading time: 15 minutes
Writing time: 2 hours 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	50	50	50
B	9	9	70
			Total 120

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 29 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 2019 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.

Use the following information to answer Questions 1–4.

Lucy was working as a paramedic when her crew was called to a party to treat a victim of a drug overdose. Upon arrival she was assaulted by a partygoer. This triggered her fight-flight-freeze response.

Question 1

Which one of the following processes would have occurred first following the attack?

- A. Lucy's sympathetic nervous system was activated.
- B. Stress hormones were released into Lucy's bloodstream.
- C. A signal was sent to the fear centres of Lucy's brain.
- D. Lucy's fight-flight-freeze response was activated.

Question 2

Which one of the following stress hormones would have been released first to help the body respond to the attack?

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

Question 3

Which one of the following physiological systems would have suppressed activity during the fight-flight-freeze response?

- A. adrenal gland activity
- B. the digestive system
- C. the respiratory system, which is responsible for breathing
- D. the cardiovascular system, which is responsible for heart rate

Question 4

Which one of the following regulates the fight-flight-freeze response?

- A. a spinal reflex
- B. the brain
- C. the autonomic nervous system
- D. the somatic nervous system

Use the following information to answer Questions 5–8.

Zen suffers from anxiety. Recently, his mental health clinician prescribed a benzodiazepine to help alleviate his symptoms.

Question 5

Anxiety, as opposed to stress and phobias,

- A. triggers a fight-flight-freeze response.
- B. can result in either distress or eustress.
- C. is a state of arousal associated with a feeling of unease that something wrong is about to happen.
- D. is irrational.

Question 6

Benzodiazepines are an example of a _____ because of their _____ effect on the postsynaptic neurons that they target.

- A. stimulant; excitatory
- B. stimulant; inhibitory
- C. depressant; excitatory
- D. depressant; inhibitory

Question 7

The use of benzodiazepines in this case is an example of a _____ factor in terms of the effect on Zen's mental disorder.

- A. predisposing
- B. precipitating
- C. perpetuation
- D. protective

Question 8

Following the consumption of Zen's daily dose of benzodiazepines during the treatment period, which one of the following changes would be expected in his EEG readings in comparison to his normal waking consciousness?

- A. a reduction in both the frequency and amplitude of Zen's brain waves
- B. an increase in both the frequency and amplitude of Zen's brain waves
- C. a reduction in frequency and an increase in the amplitude of Zen's brain waves
- D. a reduction in amplitude and an increase in the frequency of Zen's brain waves

Question 9

An axon

- A. conducts a sensory message towards the soma.
- B. conducts a neural impulse away from the soma.
- C. conducts a neural impulse towards the soma.
- D. can conduct a neural message either towards or away from the soma.

Question 10

Eustress is most likely to cause

- A. an increase in both sympathetic and parasympathetic nervous system activity.
- B. an increase in sympathetic nervous system activity.
- C. an increase in parasympathetic nervous system activity.
- D. a decrease in both sympathetic and parasympathetic nervous system activity.

Question 11

A classically conditioned response is generally triggered by

- A. the autonomic nervous system.
- B. the somatic nervous system.
- C. the spine.
- D. any division of the nervous system.

Use the following information to answer Questions 12–15.

The director of a shopping centre was concerned about the number of parents who left their children in locked cars while they were shopping. Management responded by erecting a number of signs around the car park. The signs stated that parents could be fined up to \$500 for leaving a child unattended in a car parked in the car park.

Question 12

The use of a fine in this case will act as a form/type of

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

Question 13

In terms of the three-phase model of operant conditioning, the antecedent in this case would be

- A. receiving a fine.
- B. leaving a child in the car while shopping.
- C. arriving at the shopping centre car park with a child in the car.
- D. leaving the car park with the child in the car after shopping.

Question 14

A driver with a sleeping infant in the car pulls into the car park. He remembers the rule that he could be fined if he leaves the infant in the car.

Which type of memory is the driver retrieving?

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

Question 15

Management had hoped that the warning signs would prompt drivers to always be mindful of the dangers of leaving children in a locked car.

Which element of operant conditioning would this involve?

- A. stimulus discrimination
- B. stimulus generalisation
- C. stimulus recovery
- D. spontaneous recovery

Use the following information to answer Questions 16–21.

A class of Psychology students at Mont Albert Secondary College were required to complete an experiment that compares various methods of retrieval. The class was divided into two groups. Group 1 was composed of the students who were born between 1 January and 30 June. Group 2 was composed of the students born between 1 July and 31 December.

The following symbols were displayed via a data projector for twenty seconds:

>	?	*	&	%	∃)	{	Π	(
!	∩	^	Ω		#	;)	≅	↔

At the end of the exposure time, group 1 was required to write down as many of the symbols as they could. Group 2 was given a sheet that showed 80 symbols, with the correct symbols randomly dispersed on the sheet. They were required to circle the symbols that they believed were displayed via the data projector.

Question 16

The use of the symbols would have made it difficult for students to use _____ during the twenty-second exposure time.

- A. their short-term memory
- B. maintenance rehearsal
- C. elaborative rehearsal
- D. their iconic memory

Question 17

The method of allocation to the two experimental groups was

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

Question 18

Which one of the following methods of retrieval did group 1 use during the experiment?

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

Question 19

Which one of the following factors was the most limiting factor in determining the number of symbols recalled by both groups?

- A. the capacity of short-term memory
- B. the duration of short-term memory
- C. the capacity of sensory memory
- D. the capacity of long-term memory

Question 20

Which one of the following extraneous variables is the most likely to have affected the reliability of the results?

- A. the gender of the participants
- B. a practice effect
- C. a boredom effect
- D. the students' familiarity with the symbols

Question 21

It would be expected that

- A. both groups would retrieve the same amount of symbols.
- B. group 1 would retrieve more symbols than group 2.
- C. group 2 would retrieve more symbols than group 1.
- D. neither group would be able to retrieve any symbols due to the inability to store meaningless information in long-term memory.

Question 22

A leading question asked to a witness immediately following an event is most likely to alter the reconstruction of an

- A. implicit memory.
- B. episodic memory.
- C. iconic memory.
- D. echoic memory.

Use the following information to answer Questions 23–26.

Mavis, Ernie and Ting are all middle-aged friends that decided to travel to and from a 40th birthday party together. When it was time to drive home, Mavis was feeling drowsy after a hard day at work. She had been awake for 16 hours, but she had not consumed any alcohol or drugs. Ernie was sleep-deprived and had decided to take a depressant drug to help him sleep. Ting had consumed nine standard drinks over a three-hour period and registered a blood alcohol concentration (BAC) of 0.08 according to a breathalyser that the party host had on hand.

Question 23

Which one of the following statements correctly describes the states of consciousness of the friends?

- A. Mavis' state of consciousness is highest on the continuum.
- B. Ernie's state of consciousness is highest on the continuum.
- C. Ting's state of consciousness is highest on the continuum.
- D. All three partygoers are at a similar level on the continuum.

Question 24

Which one of the following statements correctly describes the current self-control of the friends?

- A. Mavis has the highest level of self-control.
- B. Ernie has the highest level of self-control.
- C. Ting has the highest level of self-control.
- D. All three friends have a similar level of self-control.

Question 25

Which one of the following statements correctly describes the cognition of the friends?

- A. Mavis has a higher level of cognition than Ting.
- B. Ting has a higher level of cognition than Mavis.
- C. All three friends have a similar level of cognition.
- D. Ting and Mavis have a similar level of cognition, which is higher than Ernie's.

Question 26

Ting woke up the next day. Ting had not slept well for two days and was sleep-deprived.

Which one of the following would be classified as an affective symptom of Ting's sleep deprivation?

- A. slower reaction time
- B. reduced cognition
- C. irritability
- D. impaired motor control

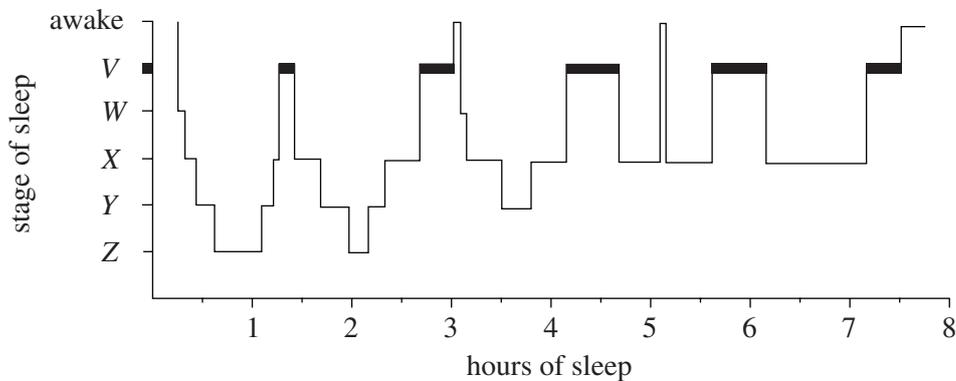
Question 27

Which one of the following stages of sleep has the lowest arousal threshold (from which people are most easily awoken)?

- A. NREM stage 1
- B. NREM stage 2
- C. NREM stage 4
- D. REM sleep

Use the following information to answer Questions 28–31.

A sleep researcher has recruited a young adult who is a regular sleepwalker to spend a night in a sleep laboratory to investigate her sleep cycles. The hypnogram below shows the data generated by the researcher after one night of the investigation.



Question 28

The hypnogram in this case provides the sleep researcher with

- A. primary, qualitative data.
- B. primary, quantitative data.
- C. secondary, qualitative data.
- D. secondary, quantitative data.

Question 29

According to the hypnogram, how many episodes of REM sleep did the subject experience?

- A. 1
- B. 3
- C. 5
- D. 17

Question 30

According to the hypnogram, when is the subject most likely to experience a sleepwalking episode?

- A. during the first 2.5 hours of sleep
- B. during the middle 3 hours of sleep
- C. during the last 2.5 hours of sleep
- D. any time during the night

Question 31

According to the hypnogram, which of the following stages of NREM sleep does the subject spend the most time in?

- A. 1
- B. 2
- C. 3
- D. 4

Question 32

High self-efficacy would be considered a _____ factor in terms of its effect on the progression of a mental disorder.

- A. predisposing
- B. precipitating
- C. perpetuation
- D. protective

Question 33

Which one of the following would be classified as an external factor that affects mental health over time?

- A. rumination
- B. coping skills
- C. the balance of neurotransmitters in the brain
- D. a conflict from an interpersonal relationship

Use the following information to answer Questions 34–36.

Dr Bourke examined a case study that investigated the relationship between substance abuse and mental illness in young adults.

Question 34

What is an advantage of a case study when compared to alternative forms of research investigations?

- A. A case study manipulates a variable to test its effect on another variable in order to generate cause-and-effect statements.
- B. The results of a case study are easily generalised to a wider population.
- C. A case study provides rich detail of the individuals studied.
- D. The procedure of a case study can be easily adapted to suit the needs of the researcher.

Question 35

Case studies

- A. rely on random sampling.
- B. use stratified sampling.
- C. require self-reporting procedures to be employed.
- D. are an in-depth study of an individual or a group.

Question 36

Dr. Bourke investigated a range of substances that appeared to be linked to mental illness.

Substance abuse in this case would

- A. only apply to depressants.
- B. only apply to illegal stimulants.
- C. only apply to illegal depressants or stimulants.
- D. apply to either depressants or stimulants that are either legally or illegally acquired.

Use the following information to answer Questions 37–43.

Drew is a middle-aged parent who suffers from a disorganised attachment, which is affecting his marriage, parenting and work relationships. He works in a high-pressure sales position and often experiences a stress response due to difficulties relating to his boss and work colleagues. This makes him feel anxious about going to work due to thoughts that he will experience conflicts with his colleagues. Drew often consumes alcohol to help reduce his anxiety. Drew is aware of his susceptibility to developing a mental disorder and would like to change his behaviour, but lacks the self-belief necessary to determine how he can change the negative cycle of behaviour.

Question 37

The origin of a disorganised attachment is primarily

- A. genetic.
- B. related to inconsistent parenting during infancy.
- C. related to inconsistent parenting during adolescence.
- D. related to a diminishing level of self-esteem that commences in adolescence.

Question 38

Drew often comes home from work and repeatedly thinks about some of the conflicts experienced at work that day. He dwells on these thoughts during the weekend in particular.

This best illustrates

- A. rumination.
- B. stigma.
- C. poor self-efficacy.
- D. cumulative risk.

Question 39

Which one of the following forms of intervention would be most suitable for dealing with the source of Drew's workplace anxiety?

- A. psychoeducation
- B. cognitive behavioural therapy
- C. breathing retraining
- D. systematic desensitisation

Question 40

Drew's stress response would be categorised as a potential _____ contributing factor to the development of a mental disorder.

- A. biological
- B. behavioural
- C. cognitive
- D. social

Question 41

Drew's workplace stress can best be classified as

- A. eustress.
- B. a daily pressure.
- C. a life event.
- D. acculturative stress.

Question 42

In terms of the transtheoretical model of behavioural change, which one of the following stages is Drew experiencing?

- A. contemplation
- B. precontemplation
- C. action
- D. preparation

Question 43

Drew is using alcohol to help reduce his anxiety.

This is an example of

- A. an application of the action stage of the transtheoretical model of behavioural change.
- B. an approach coping strategy.
- C. an avoidant coping strategy.
- D. context-specific effectiveness.

Question 44

Sarah's Physical Education teacher was demonstrating to the class how to perform a forward somersault during a diving lesson. Sarah was motivated to learn how to somersault but, due to her fear of heights, she doubts that she will have the necessary courage to attempt the dive.

Sarah's potential inability to attempt the dive is due to which one of the following stages of observational learning?

- A. attention
- B. retention
- C. motivation
- D. reproduction

Question 45

The level of the neurotransmitter _____ is more rapidly reduced in the brains of individuals who suffer from Alzheimer's disease when compared to the level in brains of individuals experiencing the normal ageing process.

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

Question 46

Which age group typically spends the highest proportion of their sleep in NREM sleep?

- A. newborn (aged 0–2 weeks)
- B. infant (aged 2–6 months)
- C. toddler (aged 1–2 years)
- D. child (aged 3–10 years)

Question 47

Bright-light therapy would be the **least** applicable form of treatment for which one of the following conditions?

- A. delayed sleep phase onset
- B. sleepwalking
- C. jetlag
- D. sleep disturbances caused by shift work

Question 48

In the process of systematic desensitisation, a relaxation strategy acts as

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

Question 49

Psychoeducation is targeted towards

- A. supporters of the mental health patient.
- B. the mental health patient.
- C. mental health clinicians that treat the mental health patient.
- D. the general public.

Question 50

Which one of the following is best demonstrated by the ability to maintain healthy relationships?

- A. emotional wellbeing
- B. social wellbeing
- C. a high level of daily functioning
- D. resilience to life stressors

END OF SECTION A

SECTION B

Instructions for Section B

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

Question 1 (4 marks)

Selma was walking around the garden with bare feet when she stood on a thistle. This triggered a reflexive withdrawal of her foot from the sharp barbs on the thistle.

Identify and describe the role of the **three** types of neurons involved in the spinal reflex.

Question 2 (6 marks)

Tim is suffering from the effects of Parkinson’s disease, which has been recently diagnosed by a neurologist.

- a.** Describe the observable symptoms that would have assisted the neurologist with their diagnosis of Tim’s condition. Give an example in your response. 2 marks

- b.** Explain the impact of nervous system dysfunction that results from Parkinson’s. In your answer, identify the brain areas and key neurotransmitter affected by the disease. 4 marks

Question 3 (4 marks)

Explain how adrenaline can act as both a hormone and a neurotransmitter.

Question 4 (3 marks)

In terms of the lock-and-key process, explain how GABA can act as an inhibitory neurotransmitter.

Question 5 (8 marks)

A researcher has recruited a group of student volunteers aged 16–17 who have been diagnosed with a circadian phase disorder. The group will participate in a cross-sectional study that compares the effectiveness of bright-light therapy for treating circadian phase disorders in males and females to determine if there are any gender differences.

- a.** What is meant by the term ‘cross-sectional study’? 2 marks

- b.** Describe **one** advantage of using a cross-sectional study in this research investigation. 2 marks

- c.** What is meant by the term ‘circadian phase disorder’? 2 marks

- d.** Explain how the sampling method used in this research investigation could affect the reliability of results. 2 marks

Question 6 (10 marks)

Watson and Rayner's 'Little Albert' experiment demonstrates classical conditioning in humans.

- a.** Using the language of classical conditioning, describe the acquisition stage of this experiment. 3 marks

- b.** Using the language of classical conditioning, describe how the experiment demonstrated the application of stimulus generalisation. 2 marks

- c.** Describe **two** ways that informed consent was possibly breached during the experiment. 2 marks

d. Explain the role of long-term potentiation in Little Albert's conditioned emotional response.

3 marks

Question 7 (11 marks)

Jeff failed a drug test at a temporary drug station set up by the police on the side of a busy road. The preliminary results indicated that he was under the influence of an illicit stimulant. He was then taken to the police station for further testing in order to determine if he was in an induced altered state of consciousness.

- a.** Explain how Jeff's state of consciousness is a psychological construct. 2 marks

- b.** What is meant by the term 'induced altered state of consciousness' in this case? 2 marks

- c.** Identify and describe **one** psychological and **one** physiological indicator of Jeff's induced altered state of consciousness. 4 marks

- d.** A month after the failed drug test, Jeff unexpectedly received notification that he was disqualified from driving for three months. Jeff briefly goes into shock before he experiences a stress response. He starts to feel overwhelmed by thoughts; as Jeff lives in a regional area, not being able to drive will result in a loss of independence and will affect his ability to get to work.

In terms of the General Adaptation Syndrome, distinguish between the substages of the alarm stage in Jeff's response to the stressor.

3 marks

Question 8 (14 marks)

A pharmaceutical company is interested in testing lorazepam, a drug that it has recently produced. Lorazepam is a type of benzodiazepine that is intended to treat the symptoms of patients who suffer from phobic disorders. A university was sponsored to conduct the research on a convenience sample of 60 participants who have been clinically diagnosed as suffering from a phobic disorder.

A counterbalanced repeated-measures research design would be used, featuring a six-week trial of the benzodiazepines and a six-week trial of placebos. Participants would be required to self-report scores out of ten that measure the severity of the symptoms of their phobic disorders. The self-reported scores would be completed on a weekly basis for each of the six-week periods and then averaged in order to compare the effectiveness of lorazepam and the placebo for reducing the severity of the symptoms of phobic disorders.

- a.** Write a research hypothesis for the proposed experiment. 3 marks

- b.** What is the advantage of using an experiment as the method of research investigation in this case as opposed to using a case study? 2 marks

- c.** What is meant by the term 'counterbalanced repeated-measures research design'? 2 marks

d. Evaluate the validity of the method of data collection in this case. 2 marks

e. Describe the potential ethical conflicts of placebo testing in this case in terms of obtaining informed consent from the participants. 3 marks

f. Explain how benzodiazepines function as GABA agonists in treating phobias. 2 marks
