Neap

Trial Examination 2020

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

Section	*Number of questions*	*Number of questions to be answered*	*Number of marks*
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 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 2020 VCE Psychology Units 3&4 Written Examination.

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
The peripheral nervous system is resonsible for

A. initiating conscious motor responses to sensory stimuli.
B. regulating the activity of the motor neurons, sensory messages and interneurons.
C. transmitting sensory information to and motor information from the central nervous system.
D. registering that the body is under threat.

Question 2
A neural message that is transported via an axon

A. will travel from the soma to the axon terminal.
B. must first be released by the myelin sheath into the axon.
C. can travel in either direction – either towards the soma or away from the soma.
D. will travel from specialised receptors toward the soma.

Question 3
Parkinson's disease is classified as

A. a somatic nervous system disorder.
B. a central nervous system disorder.
C. an autonomic nervous system disorder.
D. a skeletal nervous system disorder.

Question 4
Parkinson's disease is caused by a lack of dopamine input to the

A. skeletal muscles.
B. substantia nigra.
C. motor areas of the brain.
D. hippocampus.

Question 5
In the lock-and-key process of neural transmission,

A. the 'key' is released from a postsynaptic cell.
B. the 'lock' is located in the axon terminal.
C. the binding of the 'key' can sometimes prevent the postsynaptic cell from firing.
D. the lock-and-key mechanism only relates to the formation or retrieval of memory.

Use the following information to answer Questions 6–10.

Laura is a single mother of two young children. Earlier in the month, Laura learned that the rental property where she was living had been sold and that she had thirty days to vacate.

Initially, Laura went into shock. Shortly after, she started to feel anxious; she did not think that she could find another suitable property to rent in thirty days. After thinking about the problem that night, she woke up the next day with a plan to call some home rental agencies for assistance. After a few days, the stress had taken its toll and Laura developed symptoms of a cold. Despite this, she continued to work effectively as a part-time secondary-school teacher during a busy time of the semester.

After not having much success finding a new rental property, Laura managed to secure a live-in teaching job at a boarding school.

Question 6

When Laura first started to feel anxious about the thought of being homeless, she was most likely experiencing

A. eustress.

B. acculturative stress.

C. a freeze response.

D. distress.

Question 7

When Laura first started to feel anxious about the thought of being homeless, she was most likely experiencing which one of the following stages of the General Adaptation Syndrome?

A. exhaustion

B. resistance

C. alarm – countershock

D. alarm – shock

Question 8

When Laura developed the symptoms of a cold, she was most likely experiencing which one of the following stages of the General Adaptation Syndrome?

A. exhaustion

B. resistance

C. alarm – countershock

D. alarm – shock

Question 9

According to the Lazarus and Folkman Transactional Model of Stress and Coping, when Laura was first becoming stressed about being homeless, she

A. was making a secondary appraisal.

B. had made a primary appraisal that the stressor was benign.

C. had made a primary appraisal that the stressor was a significant challenge.

D. had made a primary appraisal that the stressor was a significant threat.

Question 10

Laura accepted the teaching job as a live-in supervisor at a boarding school in order to deal with her stress about her accommodation problem.

This is an example of

A. context-specific effectiveness.

B. avoidant coping.

C. a secondary appraisal.

D. eustress.

Question 11

Which one of the following statements about the relationship between the release of cortisol and the immune response is correct?

A. Cortisol has no effect on the immune system.

B. Cortisol suppresses the immune response.

C. Cortisol activates the immune response.

D. Cortisol initially suppresses the immune response, but then activates the immune response when the body becomes vulnerable to illness due to reaching a state of exhaustion.

Question 12

Which two components of the nervous system are involved in a spinal reflex?

A. somatic nervous system and autonomic nervous system

B. spinal cord and brain

C. sympathetic nervous system and parasympathetic nervous system

D. somatic nervous system and spinal cord

Question 13

Which one of the following statements correctly identifies a different between the autonomic nervous system and the somatic nervous system?

A. The autonomic nervous system initiates visceral muscle activity, whereas the somatic nervous system regulates skeletal muscle activity.

B. The autonomic nervous system regulates visceral muscle activity, whereas the somatic nervous system activates skeletal muscle activity.

C. The autonomic nervous system initiates skeletal muscle activity, whereas the somatic nervous system regulates visceral muscle activity.

D. The autonomic nervous system regulates skeletal muscle activity, whereas the somatic nervous system activates visceral muscle activity.

Question 14

Gamma-amino butyric acid (GABA) is stored in which part of the neuron?

A. axon terminal

B. soma

C. myelin sheath

D. dendrites

Use the following information to answer Questions 16–20.

When Prith was a child, he was caught in a rip and nearly drowned at a surf beach at Anglesea. He had to be rescued by the lifeguards on duty, which was a stressful experience. Now Prith refuses to go to Anglesea for a family holiday due to his memory of the incident. Whenever Prith goes near any other surf beaches he becomes tense; however, he also plays water polo and experiences no distress when he is in the pool.

Question 15

Which one of the following brain structures is largely responsible for Prith's retrieval of the specific details of the memory of his near-drowning?

A. hippocampus

B. amygdala

C. hypothalamus

D. cerebellum

Question 16

Which one of the following brain structures is largely responsible for triggering Prith's stress response when he goes near to a surf beach following the incident?

A. hippocampus

B. amygdala

C. cerebral cortex

D. cerebellum

Question 17

Which one of the following neurohormones would have played a key role in Prith encoding the fear experienced when he was drowning?

A. glutamate

B. acetylcholine

C. dopamine

D. adrenaline

Question 18

Which one of the following components of the nervous system is responsible for Prith's response to protest any family plans to go to Anglesea for a holiday?

A. the brain

B. sympathetic nervous system

C. somatic nervous system

D. autonomic nervous system

Question 19

Prith's ability to play water polo indicates that the fear he experiences when he is exposed to ocean water is a form of

A. spontaneous recovery.

B. stimulus generalisation.

C. stimulus discrimination.

D. social learning.

Question 20

A strength of the Lazarus and Folkman Transactional Model of Stress and Coping is that

A. the model was based on experimental evidence involving human participants.

B. it highlights the role of physiological responses to stress.

C. it is a linear model that clearly distinguishes between the onset and completion of both the primary and secondary appraisals.

D. it identifies the role of psychological determinants in the evaluation of stress.

Question 21

Long-term depression can most aptly be explained by

A. a lengthy period in which a memory has not been recalled.

B. synaptic pruning.

C. the repeated low-frequency input from a presynaptic neuron to a postsynaptic neuron, which causes the weakening of a memory trace over time.

D. anterograde amnesia.

Use the following information to answer Questions 22–26.

Last year, Leah would regularly post photos of herself on social media, but was generally disappointed with the lack of comments from her connections. Consequently, she stopped posting material on social media. After a few months of avoiding social media, she conducted a personal experiment by regularly commenting on posts from her connections. She found that her actions resulted in her receiving more comments from her connections. Now when she posts photos of herself, she gets excited by the number of comments she receives.

Question 22

Leah's association between commenting on other people's posts and the number of and comments she has received has been learned via

A. classical conditioning.

B. operant conditioning.

C. social learning.

D. a combination of operant conditioning and observational learning.

Question 23

In terms of the three-phase model of operant conditioning, when one of Leah's connections posted something on social media while she was conducting her personal experiment, this acted as

A. an antecedent.

B. a behaviour.

C. a consequence.

D. a conditioned stimulus.

Question 24

The excitement that Leah experienced when she received numerous comments was a form of

A. eustress that increased activity in her parasympathetic nervous system.

B. eustress that increased activity in her sympathetic nervous system.

C. distress that increased activity in her parasympathetic nervous system.

D. distress that increased activity in her sympathetic nervous system.

Question 25

Which one of the following best explains Leah's initial reduction in the amount of material she posted on social media?

A. a response cost

B. positive punishment

C. negative reinforcement

D. an absence of a desirable consequence

Question 26

Leah's behaviour of commenting on the social media posts of her connections was

A. punished.

B. positively reinforced.

C. negatively reinforced.

D. extinguished.

Use the following information to answer Questions 27–31.

A cognitive psychologist conducted a case study on a young patient suffering from a mild case of anterograde amnesia by performing a series of tests. The first test involved reading out a list of twenty words at two-second intervals and then asking the patient to recall as many words as possible, in any order, immediately after the last word had been read.

Question 27

In terms of the serial position effect, the results expected for the patient would reflect

A. both a primacy and a recency affect.

B. a primacy effect only.

C. a recency effect only.

D. neither a primacy nor a recency effect due to the patient's condition.

Question 28

Which one of the following techniques would the patient be most likely to use during the exposure to the twenty words from the test?

A. maintenance rehearsal

B. elaborative rehearsal

C. context-dependent cues

D. state-dependent cues

Question 29

What type of data was the cognitive psychologist collecting in this case study?

A. primary, qualitative data

B. primary, quantitative data

C. secondary, qualitative data

D. secondary, quantitative data

Question 30

An advantage of the use of a case study in this scenario is that

A. the researcher can carefully control all of the variables in the experiments.

B. the patient's behaviour can be observed in a natural setting.

C. the researcher can gain an in-depth understanding of the patient's condition.

D. the findings will be highly reliable.

Question 31

Which one of the following brain structures is the most likely to be affected by the patient's condition?

A. amygdala

B. cerebral cortex

C. hippocampus

D. hypothalamus

Use the following information to answer Questions 32–35.

Twelve-year-old Malena was playing in the football final for her team the Redbacks. They narrowly lost after an umpires' controversial decision at the end of the game. Shortly after the conclusion of the game, Malena, while in close proximity, observed her coach appear to punch the opposition coach, who then lost their balance and fell backwards. Malena was called as a witness for a tribunal hearing several weeks later, as the Redbacks coach had been charged with bringing the game into disrepute. Video footage of the incident was used at the tribunal hearing.

Question 32

Presuming that Malena has not been asked any leading questions inbetween the incident and providing her version of events at the hearing, at which one of the following stages is her memory most malleable to change and likely to contain false information?

A. when details of the event enter her sensory memory

B. when details of the event are encoded in her short-term memory

C. when details of the event are passively stored in her long-term memory

D. during the reconstruction of the event back into her short-term memory

Question 33

Based on the consequences of her coach's actions, Malena has learned that violence and intimidation in junior sport is inappropriate via

A. operant conditioning.

B. social learning.

C. a combination of operant conditioning and social learning.

D. classical conditioning.

Question 34

During the tribunal hearing, Malena was shown some video footage of the incident, which triggered a highly detailed and vivid recall of her memory of the incident.

This is an example of

A. an implicit memory.

B. a procedural memory.

C. a semantic memory.

D. a flashbulb memory.

Question 35

The video footage of the incident triggered the distress that Malena felt when she witnessed the incident. This seemed to help her remember some of the details of the incident.

The video footage acted as

A. a state-dependent cue.

B. a context-dependent cue.

C. both a context-dependent cue and state-dependent cue.

D. a form of priming.

Use the following information to answer Questions 36–40.

A VCE Unit 1 Psychology class from Wombat Secondary College was required to participate in a memory experiment in order to generate data for a VCE Unit 3 Psychology research investigation.

The participants were split into two groups based on their birthdays; group 1 was the students born between January 1 and June 30 and group 2 was the students born between July 1 and December 31.

Both groups were exposed to a list of fifteen words presented on a sheet during recess time on a school day and they were instructed to rehearse these words during recess. At the end of recess, they were told that they would be tested on their retrieval of the words during recess the following day.

The fifteen words were as follows:

branch	dance	stop	water	drop
break	scream	flame	shine	person
eagle	pick	rope	soil	open

During the rehearsal period the two groups were separated into different rooms. Group 1 was instructed to try to simply repeat the words, while group 2 was instructed to try and make up a story about the fifteen words in order to add more meaning to them. Following the rehearsal, the group went to their normal classes for the remainder of the day.

The students from the Unit 3 Psychology class predicted that group 2 would retrieve more words due to their use of elaborative rehearsal, as opposed to group 1 with the use of maintenance rehearsal. Some of the Unit 3 Psychology students were concerned that the use of two different rooms with variations in lighting and noise from adjoining rooms may have an effect on the rehearsal, and thus on the results.

Question 36

The use of elaborative rehearsal by group 2 would

A. increase the capacity of their short-term memory.

B. increase the duration of their short-term memory.

C. provide additional cues during retrieval from long-term memory to short-term memory.

D. enhance the consolidation of material from sensory memory to short-term memory.

Question 37

Which one of the following was the form of allocation used in this experiment?

A. random

B. non-random

C. convenience

D. stratified

Question 38

Which one of the following would be the **most** useful tool to evaluate the spread of the data generated from the experiment?

A. the mean of the number of words retrieved from each of the two groups

B. the mean of the percentage of words retrieved from each of the two groups

C. the standard deviation of the number of words retrieved by each of the two groups

D. a bar graph of the scores for the two groups

Question 39

The use of different rooms, with varied lighting and noise levels during the rehearsal processes, can best be identified as which one of the following variables?

A. dependent

B. independent

C. confounding

D. extraneous

Question 40

The rehearsal of the words initially occurred when the words entered which one of the following memory stores?

A. iconic memory

B. echoic memory

C. short-term memory

D. long-term memory

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 (7 marks)

GABA is a neurotransmitter that plays a vital role in regulating synaptic transmission in the brain.

a. In terms of the lock-and-key process, describe the effects of GABA on central nervous system activity. 4 marks

b. Outline the role of the following structures of the neuron in the reception **and** transmission of information across the synapse.

i. dendrites 1 mark

ii. axons 1 mark

iii. myelin sheath 1 mark

Question 2 (10 marks)

In 1919, Watson and Rayner conducted a now famous experiment involving the classical conditioning of a fear response in a subject known as Little Albert.

a. Using the language of classical conditioning, describe the stages of this classical conditioning experiment. 3 marks

b. Identify and describe the role of the key neurohormone involved in the formation of the classically conditioned memory. 3 marks

c. In terms of long-term potentiation, explain how Watson and Rayner used classical conditioning to develop a conditioned emotional response in Little Albert. 4 marks

Question 3 (5 marks)
Identify **two** key stress hormones in the body's response to a stressor according to the General Adaptation Syndrome **and** describe their roles in each of the three stages of the General Adaptation Syndrome.

Question 4 (7 marks)

Krystal was an active member of the army for twenty years. She recently learned that she has been discharged from the army after an audit revealed that she had falsified some of the citizenship documents that she supplied to the army for her job application twenty years ago. Krystal was devastated by her discharge from the army, as she had planned to remain in the army for the rest of her working life. She was stressed about her ability to find another job. After seeing a careers counsellor from the army, she applied and was accepted for a short-term job as a security officer to ensure that she could still remain actively employed.

a. Using Lazarus and Folkman's Transactional Model of Stress and Coping, identify **and** describe the source of stress that Krystal has experienced. 3 marks

b. In terms of Lazarus and Folkman's Transactional Model of Stress and Coping, explain why Krystal may need to make a secondary appraisal of her discharge from the Army. 2 marks

c. Describe how Krystal has used context-specific effectiveness to deal with her stress. 2 marks

Question 5 (11 marks)

A neurologist used a cross-sectional study to investigate the effects of aging on the speed of spinal reflexes. The neurologist tested the rate of response of a simple knee-jerk reflex test, which involved a tap on the patellar tendon just below the kneecap. They used a convenience sample of young people aged 18–28 and a sample of elderly people aged 70 – 89.

a. Explain why the neurologist chose a cross-sectional study in this case as opposed to an alternative research design. 3 marks

b. Describe an advantage of using a convenience sample in this case. 2 marks

c. Explain how the validity of this research investigation could be evaluated. 2 marks

d. Explain why the knee-jerk reflex is an example of an unconscious response to sensory stimuli. 2 marks

e. Describe the role of the motor neuron in the knee-jerk reflex. 2 marks

Question 6 (10 marks)

Jervis is a young child who has difficulty processing written material. He walks a short distance everyday from school to his house, using a pedestrian crossing at a busy intersection to cross the road. Jervis has been conditioned to wait if he hears a slow beeping signal and to start walking when he hears a rapid beeping signal, which signifies that pedestrians are safe to walk across the crossing.

Explain:

- the acquisition of Jervis's behaviour if he was operantly conditioned to cross at the sound of the beep;
- the acquisition of Jervis's behaviour if he was classically conditioned to **not** cross the road at the sound of the slow beep, and;
- how Jervis is able to recall the rules for crossing at the pedestrian crossing at the sound of a specific beeping noise in terms of the multi-store model, including the methods of retrieval.

END OF QUESTION AND ANSWER BOOKLET

Extra space for responses

Clearly number all responses in this space.

Neap

Trial Examination 2020

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	15	A	B	C	D	29	A	B	C	D					
2	A	B	C	D	16	A	B	C	D	30	A	B	C	D					
3	A	B	C	D	17	A	B	C	D	31	A	B	C	D					
4	A	B	C	D	18	A	B	C	D	32	A	B	C	D					
5	A	B	C	D	19	A	B	C	D	33	A	B	C	D					
6	A	B	C	D	20	A	B	C	D	34	A	B	C	D					
7	A	B	C	D	21	A	B	C	D	35	A	B	C	D					
8	A	B	C	D	22	A	B	C	D	36	A	B	C	D					
9	A	B	C	D	23	A	B	C	D	37	A	B	C	D					
10	A	B	C	D	24	A	B	C	D	38	A	B	C	D					
11	A	B	C	D	25	A	B	C	D	39	A	B	C	D					
12	A	B	C	D	26	A	B	C	D	40	A	B	C	D					
13	A	B	C	D	27	A	B	C	D										
14	A	B	C	D	28	A	B	C	D										

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