



Victorian Certificate of Education 2017



STUDENT NUMBER

--	--	--	--	--	--	--	--

 Letter

--

PSYCHOLOGY

Written examination

2017

Reading time: 15 minutes
Writing time: 2 hours 30 minutes

QUESTION AND ANSWER BOOK

Structure of book

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 white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer booklet.
- 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 **student number** in the space provided above on this page.
- Check that your **name** and **student number** on your answer sheet for multiple-choice questions are correct.
- 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 book.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

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 score 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

Tony picks up a cup of coffee, but decides it is too hot to hold comfortably. He carefully places it back down onto the table.

Use the following options to best describe the coordination of the divisions of Tony's nervous system.

Heat from the cup is detected by sensory receptors in Tony's fingers, which is part of the _____ nervous system. Sensory signals are sent to the _____ nervous system for processing, where Tony decides that the cup is too hot to hold comfortably. Motor information is then sent from the _____ nervous system to the skeletal muscles, via the _____ nervous system, to put the cup down.

- A. somatic; central; central; somatic
- B. autonomic; central; central; autonomic
- C. central; peripheral; peripheral; central
- D. somatic; peripheral; peripheral; somatic

Question 2

Tegan accidentally touched a hot pot on the stove. Her hand immediately withdrew from the hot pot. The hand-withdrawal reflex is a

- A. conscious response.
- B. unconscious response.
- C. controlled response.
- D. voluntary response.

Question 3

What are the differences between an axon and a dendrite of a neuron?

- A. axons receive information from other neurons and there are often multiple axons for each neuron, whereas dendrites transmit information to other neurons and there is often only one dendrite for each neuron.
- B. axons transmit information to other neurons and there are often multiple axons for each neuron, whereas dendrites receive information from other neurons and there is often only one dendrite for each neuron.
- C. axons receive information from other neurons and there is often only one axon for each neuron, whereas dendrites transmit information to other neurons and there are often multiple dendrites for each neuron.
- D. axons transmit information to other neurons and there is often only one axon for each neuron, whereas dendrites receive information from other neurons and there are often multiple dendrites for each neuron.

Question 4

In the lock and key analogy, _____ are the lock and _____ are the key.

- A. neurotransmitters; receptor sites on the dendrite
- B. neurotransmitters; receptor sites on the axon
- C. receptor sites on the dendrite; neurotransmitters
- D. receptor sites on the axon; neurotransmitters

Question 5

To demonstrate the existence of explicit memory, a _____ task could be used, whereas to demonstrate the existence of implicit memory, a _____ task could be used.

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

Question 6

The motor symptoms of Parkinson's Disease are thought to be primarily caused by a lack of

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

Question 7

What is the difference between random sampling and random allocation?

- A. random sampling involves every member of the sample having an equal chance of being selected for the either the experimental or control group, whereas random allocation involves every member of the population having an equal chance of being selected for the sample
- B. random sampling involves every member of the population having an equal chance of being selected for the sample, whereas random allocation involves every member of the sample having an equal chance of being selected for either the experimental or control group
- C. random sampling involves every member of the sample having an equal chance of being selected for the population, whereas random allocation involves every member of the sample having an equal chance of being selected for either the experimental or control group
- D. random sampling involves every member of the population having an equal chance of being selected for the sample, whereas random allocation involves every member of the experimental or control groups having an equal chance of being selected for the sample

Question 8

Which of the following would be considered a circadian rhythm?

- A. sleep cycle
- B. 90-minute cycle of sleep
- C. REM/NREM cycle
- D. sleep-wake cycle

Question 9

In observational learning, the stage of reproduction

- A. requires vicarious reinforcement.
- B. involves trying out the model's behaviour, regardless of ability.
- C. is dependent on having the physical and/or mental ability to perform the model's behaviour.
- D. involves paying attention to the model.

Question 10

Life events could

- A. cause eustress.
- B. cause distress.
- C. cause eustress and/or distress.
- D. never cause stress.

Question 11

Crying at the thought of the death of your pet hamster would be considered both

- A. an emotion-focused coping strategy and an approach strategy.
- B. an emotion-focused coping strategy and an avoidance strategy.
- C. a problem-focused coping strategy and an approach strategy.
- D. a problem-focused coping strategy and an avoidance strategy.

Question 12

Long-term potentiation typically involves

- A. an increase in the amount of neurotransmitter (such as glutamate) released by the pre-synaptic neuron.
- B. an increase in the amount of neurotransmitter (such as GABA) released by the pre-synaptic neuron.
- C. a decrease in the amount of neurotransmitters released by the pre-synaptic neuron.
- D. a decrease in the amount of neurotransmitters released by the post-synaptic neuron.

Question 13

Short-term memory has a duration of _____ and a capacity of _____.

- A. a potentially unlimited time; a potentially unlimited capacity
- B. approximately 0.2-4 seconds; a potentially unlimited capacity
- C. approximately 20 seconds; 7 ± 2 pieces of information
- D. 7 ± 2 pieces of information; approximately 20 seconds

Question 14

If new information is encoded into short-term memory after the capacity of short-term memory is reached, which of the following processes is most likely to occur?

- A. retrieval
- B. rehearsal
- C. decay
- D. displacement

Use the following information to answer Questions 15-21.

Chemotherapy, the use of anti-cancer drugs to kill cancer cells, can have several side-effects, including nausea and vomiting. Over the past two weeks, Jill has eaten broccoli to boost her nutritional intake while receiving chemotherapy. Jill now dislikes the taste of broccoli, and feels nauseated even when she sees broccoli being cooked.

Question 15

For Jill, the neutral stimulus is

- A. broccoli, which is repeatedly associated with the conditioned stimulus.
- B. broccoli, which is repeatedly associated with the unconditioned stimulus.
- C. chemotherapy drugs, which is repeatedly associated with the conditioned stimulus.
- D. chemotherapy drugs, which is repeatedly associated with the unconditioned stimulus.

Question 16

The neutral stimulus becomes the conditioned stimulus

- A. before conditioning.
- B. during conditioning.
- C. after conditioning.
- D. when it is repeatedly associated with the conditioned response.

Question 17

Jill's conditioned response is

- A. salivation.
- B. feeling nauseated.
- C. feeling nauseated at broccoli.
- D. feeling nauseated at chemotherapy drugs.

Question 18

Jill noticed that she began to feel nauseated at the sight of cauliflower, but not carrots. This means that

- A. stimulus discrimination occurred with cauliflower, and stimulus discrimination occurred with carrots.
- B. stimulus generalisation occurred with cauliflower, and stimulus generalisation occurred with carrots.
- C. stimulus discrimination occurred with cauliflower, but stimulus generalisation occurred with carrots.
- D. stimulus generalisation occurred with cauliflower, but stimulus discrimination occurred with carrots.

Question 19

For Jill, the process of extinction could involve

- A. no longer taking chemotherapy drugs alongside broccoli.
- B. refusing to feel nauseated alongside broccoli.
- C. refusing to feel nauseated by the chemotherapy drugs.
- D. no longer eating broccoli.

Question 20

When is it said that extinction has occurred?

- A. when the unconditioned stimulus no longer occurs to the unconditioned response
- B. when the unconditioned response no longer occurs to the unconditioned stimulus
- C. when the conditioned stimulus no longer occurs to the conditioned response
- D. when the conditioned response no longer occurs to the conditioned stimulus

Question 21

Which of the following would demonstrate spontaneous recovery for Jill?

- A. feeling nauseated at broccoli, after apparent extinction of the conditioned response
- B. feeling nauseated at broccoli, after apparent extinction of the unconditioned response
- C. feeling nauseated at broccoli, after apparent extinction of the conditioned stimulus
- D. feeling nauseated at broccoli, after apparent extinction of the unconditioned stimulus

Use the following information to answer Questions 22 – 30.

Jack is a patient at his local hospital, and is receiving treatment that involves a course of injections.

Question 22

Jack has developed a persistent, intense and irrational fear of hospitals after repeated visits to the local hospital to have several painful injections. If this specific phobia impairs Jack's ability to function normally, this would indicate that he has

- A. a mental health problem.
- B. a mental disorder.
- C. mental health.
- D. a mental health continuum.

Question 23

Jack has developed a conditioned fear response just like

- A. Little Albert, albeit to a different conditioned stimulus.
- B. Little Albert, to the same conditioned stimulus.
- C. Henry Molaison (H.M.), albeit to a different conditioned stimulus.
- D. Henry Molaison (H.M.), to the same conditioned stimulus.

Question 24

When he is at home, Jack often thinks about his past and future visits to the hospital. Jack dwelling on his awful experiences at the hospital, without doing anything to reduce his fear, is known as

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

Question 25

Jack's repeated thoughts about the awful experiences at the hospital are likely to be a

- A. predisposing factor.
- B. precipitating factor.
- C. perpetuating factor.
- D. protective factor.

Question 26

Jack responds to an advertisement in the newspaper asking for volunteers with a specific phobia to take part in research testing the effectiveness of a drug. Which of the following is likely to be an active ingredient in the drug, with the aim of the drug to reduce phobic symptoms?

- A. a glutamate antagonist
- B. a glutamate agonist
- C. a GABA antagonist
- D. a GABA agonist

Question 27

As part of the research, Jack does not know if he has received a placebo or the actual drug. This is so that the researcher can control for the effects of

- A. the placebo effect
- B. the experimenter effect
- C. individual participant differences
- D. non-standardised procedures

Question 28

A placebo implies the use of

- A. random sampling.
- B. a single-blind procedure.
- C. counterbalancing.
- D. standardised instructions and procedures.

Question 29

If Jack does not know that it is possible that he may receive a placebo, then which of the following ethical guidelines is most at risk?

- A. withdrawal rights
- B. debriefing
- C. informed consent
- D. deception

Question 30

If Jack receives the actual drug, this would be considered a

- A. biological treatment.
- B. psychological treatment.
- C. social treatment.
- D. trans-theoretical treatment.

Use the following information to answer Questions 31-38.

Roger has a phobia of spiders.

Question 31

Due to his phobia, Roger has difficulty falling asleep each night. This is called

- A. sleep-maintaining insomnia, which is a dyssomnia.
- B. sleep-maintaining insomnia, which is a parasomnia.
- C. sleep-onset insomnia, which is a dyssomnia.
- D. sleep-onset insomnia, which is a parasomnia.

Question 32

Because Roger needs to wake early in the morning for work each day, he only gets an average of 5 hours of sleep. This is called

- A. partial sleep deprivation.
- B. total sleep deprivation.
- C. full sleep deprivation.
- D. inadequate sleep deprivation.

Question 33

Due to Roger's inadequate sleep, which of the following could be a change in his affective experience?

- A. reduced focus
- B. amplified emotional responses
- C. memory loss
- D. not being able to drive well

Question 34

One night, Roger's sleep deprivation was so bad that he did not get any sleep for a 24-hour period. Research suggests that his lowered ability to concentrate would be equivalent to a blood-alcohol concentration of

- A. 0.01%.
- B. 0.05%.
- C. 0.10%.
- D. 10%.

Question 35

In the morning, Roger takes a double-shot of coffee to help him stay alert. The caffeine is considered a

- A. suppressant.
- B. depressant.
- C. stimulant.
- D. intoxicant.

Question 36

Brain waves that are associated with alertness are typically

- A. theta waves.
- B. alpha waves.
- C. beta waves.
- D. delta waves.

Question 37

Roger goes to a psychologist who uses cognitive behavioural therapy (CBT) to treat his insomnia. Which of the following is not typically involved in this type of treatment?

- A. identifying the underlying causes and factors contributing to Jack's inability to sleep
- B. learning relaxation techniques
- C. sleep hygiene training
- D. pharmacotherapy, such as taking melatonin

Question 38

Roger gets his sleep back on track, and is sleeping normally. He is now 30 years old. When Roger is 90 years old, how is his sleep likely to change?

- A. when Roger is older, he is likely to have less sleep overall (than when he is 30)
- B. when Roger is older, he is likely to have more sleep overall (than when he is 30)
- C. when Roger is older, he likely to have less NREM sleep, but more REM sleep (than when he is 30)
- D. there will be no difference in his sleep patterns when Roger is older than when he is 30

Use the following information to answer Questions 39-41.

Shakira has caught a flu.

Question 39

Gerard gives Shakira a call to ask her how she is going. Shakira's phone rings, she picks up, and she talks with Gerard. Which of the following is the antecedent in this scenario for Shakira?

- A. Gerard's phone calling
- B. Shakira's phone ringing
- C. Shakira picking up the phone
- D. Shakira talking with Gerard

Question 40

Gerard enjoys speaking with Shakira, but Shakira doesn't really like speaking with Gerard, as he ends up dominating the phone call with dull details about his own life. Shakira is receiving _____ and is _____ likely to pick up her phone in future.

- A. positive punishment; less
- B. positive punishment; more
- C. positive reinforcement; less
- D. positive reinforcement; more

Question 41

Shakira picking up her phone and speaking with Gerard is an example of operant conditioning because

- A. the learning involves a reflexive behaviour.
- B. the learning involves a voluntary behaviour.
- C. the learning involves stimulus discrimination.
- D. Shakira is passive in her learning.

Question 42

Which of the following is **incorrect** about Alzheimer's disease?

- A. Alzheimer's disease is a type of dementia
- B. Alzheimer's disease is a neurodegenerative disease
- C. Alzheimer's disease can only be conclusively diagnosed through an autopsy
- D. Alzheimer's disease only involves anterograde amnesia

Use the following information to answer Questions 43-45.

Professor Loftus showed participants a video of a car accident, then asked participants one of four questions about the video.

Question 43

Which question is most likely to elicit the highest estimation of speed from participants?

- A. how fast were the cars going when they hit each other?
- B. how fast were the cars going when they smashed into each other?
- C. how fast were the cars going when they contacted each other?
- D. how fast were the cars going when they bumped into each other?

Question 44

Loftus did not ask participants more than one of the questions listed in Question 43, above. This suggests that she utilised

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

Question 45

Which of the following correctly operationalises the independent variable?

- A. the accuracy of the memory, operationalised as the estimated speed of the car crash in miles per hour
- B. memory
- C. misinformation
- D. the leading question, operationalised as the wording of the question, either using hit, smashed, contacted or bumped

Question 46

Simon eats junk food when he is stressed about all the study he must complete for his upcoming VCE exams, but he finds that his poor diet has led to low energy levels, which makes him unable to concentrate for a sufficient number of hours each night. Despite this, he has no intention of changing to a healthy diet. Which stage of the transtheoretical model is Simon likely to be in?

- A. maintenance/relapse
- B. action
- C. contemplation
- D. pre-contemplation

Question 47

The restoration theory of sleep suggests that

- A. sleep has a survival function
- B. sleep occurs when we are least prone to predators
- C. sleep allows for mental and physical rejuvenation
- D. NREM sleep consolidates memories

Question 48

Which of the following does **not** characterise a mentally healthy person?

- A. high levels of functioning
- B. social and emotional wellbeing
- C. resilience to life stressors
- D. low self-efficacy

Question 49

For people suffering from mental disorders, stigma is often _____ accessing treatment, and is primarily a _____ issue.

- A. an opportunity for; social
- B. an opportunity for; biological
- C. a barrier to; social
- D. a barrier to; biological

Question 50

The concept of cumulative risk suggests that

- A. biological factors increase the likelihood of mental health disorders.
- B. psychological factors increase the likelihood of mental health disorders.
- C. social factors increase the likelihood of mental health disorders.
- D. an accumulation of risk factors increases the likelihood of mental health disorders.

SECTION B**Instructions for Section B**

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

Question 1 (3 marks)

Sonny is an adolescent who finds it difficult to get to bed early at night, and wake up early for school the next morning. He consults a psychologist who suggests that he uses bright light therapy. Describe how bright light therapy could be used to help Sonny.

Question 2 (9 marks)

Ken is getting increasingly stressed at his home printer that refuses to print out a Psychology assignment that is due in class tomorrow. He thinks about his Psychology teacher who told the class that students who do not submit the assignment on time, and in print, will receive a detention. After unsuccessfully trying to print a couple of times, he decides to head to his local library to print his assignment there.

- a.** What are Ken's primary and secondary appraisals in this situation?

2 marks

Primary appraisal:

Secondary appraisal:

b. Discuss Ken's response to the stressor in relation to his coping flexibility.

2 marks

c. Discuss three distinct factors that would contribute to the context-specific effectiveness of Ken's response to the stressor.

3 marks

d. Ken successfully prints his assignment at his local library. He decides to go for a five-kilometre run around the local park to further reduce his stress. Describe two ways that exercise could reduce Ken's stress.

2 marks

Dr Seuss, Jenny's psychologist, decides to test whether Jenny can be classically conditioned to fear the sound of a buzzer. Dr Seuss does this by repeatedly pairing the sound of a buzzer with an electric shock.

- [illegible]

- c.** If Dr Seuss asks if Jenny can tell what will follow the sound of the buzzer, what is Jenny likely to say? Justify your answer. 2 marks

Dr Seuss has another patient, Lisa, who has damaged hippocampi, but intact amygdala and cerebellum. Dr Seuss wants to test whether she can be classically conditioned to fear the sound of a buzzer. Dr Seuss does this by repeatedly pairing the sound of a buzzer with an electric shock.

- d.** Could Dr Seuss tell if Lisa had been conditioned if he asks if she is afraid of the sound of the buzzer? Justify your answer. 2 marks

- e.** How else could Dr Seuss tell whether or not Lisa had been conditioned to fear the buzzer? 2 marks

Question 4 (5 marks)

- a.** Andrea listens to a list of 15 words by an experimenter, which she is asked to memorise. 3 marks
Immediately after the end of the list, she is asked to write down as many words, in any order, that she can remember. Which words would she be most likely to write down, and why?

- b.** Tim listens to a list of 15 words by an experimenter, which he is asked to memorise. After a 3 marks
five-minute delay, he is asked to write down as many words, in any order, that he can remember. Which words would he be most likely to write down, and why?

Question 5 (2 marks)

With the use of an example, describe how self-control is likely to change in an altered state of consciousness.

Question 6 (4 marks)

Name the last two stages of the General Adaptation Syndrome. What is the role of cortisol in these stages?

Question 7 (2 marks)

List two biological and two social risk factors that contribute to the development and/or progression of mental disorders.

Biological risk factors:

Social risk factors:

Question 8 (19 marks)

Ms Muffet wants to test the effect of context-dependent cues on the ability to recall a list of 20 words. She recruits 50 of her VCE Psychology students and asks them to memorise 20 unrelated four-letter nouns projected onto a screen in the library. Immediately after five minutes of studying the words, the participants recall the words by writing them down, in any order they wish. She collects their responses and finds the number of correctly recalled words out of 20. Ms Muffet calls the first part of her experiment the 'context congruent recall condition'.

The following week, Ms Muffet uses the same VCE Psychology students for another test – she calls this the 'context incongruent recall condition'. This time, she asks the participants to memorise a new set of 20 unrelated four-letter nouns, projected onto a screen in the library. After five minutes of studying the words, Ms Muffet walks the participants to the gym and asks them to recall the words by writing them down, in any order they wish. She collects their responses and finds the number of correctly recalled words out of 20.

Her findings are summarised in the table below.

	Mean recall	Standard deviation
Context congruent recall condition	18.1	0.3
Context incongruent recall condition	10.1	0.2

- a. Identify and operationalise the independent and dependent variables of Ms Muffet's experiment.

4 marks

- b.** Represent the means of Ms Muffet's investigation in a correctly labelled graphical representation using the grid provided below.

2 marks

- c.** What do the standard deviations found by Ms Muffet mean for the reliability of her results?

1 mark

- d.** What do the standard deviations found by Ms Muffet mean for the validity of her results?
Refer to statistics that allow for inferences about the population to be made.

2 marks

- e.** What experimental design did Ms Muffet use, and what potential extraneous variable is likely to be controlled through this design? 2 marks

- f.** Describe a confounding variable in Ms Muffet's experiment and how it could have confounded her results. 2 marks

6 marks

[illegible]

Dr Karl is looking to test the effectiveness of systematic desensitisation as a psychotherapeutic treatment for phobia. He has access to the following resources:

- Several research assistants trained in systematic desensitisation, but only has the capacity to use the therapy on 50 participants per week
- 100 volunteer participants who have a specific phobia of snakes and are happy to undergo treatment and be monitored once a week, for two weeks.
- A phobic symptoms rating scale, with 1 referring to 'no fear of snakes at all' to 10 referring to an 'extreme fear of snakes'

	Week 1	Week 2
Group A	8.2	3.2
Group B	3.3	8.1

Design an experiment that could lead Dr Karl to the above results and the conclusion 'that systematic desensitisation is more effective in the reduction of phobic symptoms in people who have a specific phobia of snakes in the short term, than no treatment at all'.

- the research design Dr Karl has employed, along with any allocation procedures
- a systematic desensitisation procedure that Dr Karl could use with his research assistants, using the language of classical conditioning
- the connections between the method and the results/conclusion Dr Karl has found/made
- what further research Dr Karl should undertake, if he has access to greater resources than listed above in future

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

© ACED 2017. This exam is only licenced to the purchasing school.

END OF QUESTION AND ANSWER BOOK

Clearly number all responses in this space.

[illegible]



VCE PSYCHOLOGY

Written Examination

ANSWER SHEET – 2017

STUDENT
NAME:

Use a **PENCIL** for **ALL** entries. For each question, shade the box which indicates your answer.

Marks will **NOT** be deducted for incorrect answers.

NO MARK will be given if more than one answer is completed for any question.

If you make a mistake, **ERASE** the incorrect answer – **DO NOT** cross it out.

1	A	B	C	D	18	A	B	C	D	35	A	B	C	D
2	A	B	C	D	19	A	B	C	D	36	A	B	C	D
3	A	B	C	D	20	A	B	C	D	37	A	B	C	D
4	A	B	C	D	21	A	B	C	D	38	A	B	C	D
5	A	B	C	D	22	A	B	C	D	39	A	B	C	D
6	A	B	C	D	23	A	B	C	D	40	A	B	C	D
7	A	B	C	D	24	A	B	C	D	41	A	B	C	D
8	A	B	C	D	25	A	B	C	D	42	A	B	C	D
9	A	B	C	D	26	A	B	C	D	43	A	B	C	D
10	A	B	C	D	27	A	B	C	D	44	A	B	C	D
11	A	B	C	D	28	A	B	C	D	45	A	B	C	D
12	A	B	C	D	29	A	B	C	D	46	A	B	C	D
13	A	B	C	D	30	A	B	C	D	47	A	B	C	D
14	A	B	C	D	31	A	B	C	D	48	A	B	C	D
15	A	B	C	D	32	A	B	C	D	49	A	B	C	D
16	A	B	C	D	33	A	B	C	D	50	A	B	C	D
17	A	B	C	D	34	A	B	C	D					