



2024 Trial Examination

STUDENT
NUMBER

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

Letter

--

PSYCHOLOGY

Units 3 & 4 – Written examination

Reading time: 15 minutes

Writing time: 2 hour and 30 minutes

QUESTION AND ANSWER BOOK

Structure of book

<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	13	13	80
			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 permitted in this examination.

Materials supplied

- Question and answer book of 25 pages.

Instructions

- Print your name in the space provided on the top of this page.
- All written responses must be in English.

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

SECTION A- Multiple-choice questions

Instructions for Section A

Answer all 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.

The following information relates to Questions 1 and 2.

Mary was gifted an experience to swim with sharks for her 21st birthday. On the day of this event, she was very excited but also terrified. Her heart was racing, her pupils were dilated, she was sweating, and her muscles were very tense. When she finished her swim, her heart rate went back to normal, and she was no longer sweating.

Question 1

Which of the following changes that Mary experienced are controlled by the somatic nervous system?

- A. Pupils dilating
- B. Sweating
- C. Tense muscles
- D. It is all controlled by the somatic nervous system.

Question 2

What division of the nervous system was responsible when Mary's heart rate went back to normal?

- A. Somatic Nervous System
- B. Sympathetic Nervous System
- C. Parasympathetic Nervous System
- D. Central Nervous System

Question 3

When discussing the gut-brain axis, gut microbiota and gut microbiome are common terms. Which of the following statements is correct?

- A. The gut microbiota is all of the genes of the microorganisms that live in the gut and the gut microbiome is all of the microorganisms that live in the gut.
- B. The gut microbiota is all of the microorganisms that live in the gut and the gut microbiome is all the genes of the microorganisms that live in the gut.
- C. The gut microbiota and gut microbiome is all the bacteria we have ever had in our guts.
- D. None of the above are correct.

Question 4

Clara was at the park playing with her dog. She stepped on a nail and immediately screamed and lifted her leg up in pain. She then realised she had stepped onto a nail. What type of response was shown by Clara?

- A. A conscious response.
- B. A semantic nervous system response.
- C. An involuntary response.
- D. An autonomic nervous system response.

Question 5

When you turned 18, you decided to go to the casino and put \$5 into a machine and won \$50. You then got so excited by this you continued to gamble for several hours. Which of the following would be the reason behind you continuing to gamble?

- A. The release of dopamine motivated you to engage in the rewarding behaviour again.
- B. The release of serotonin motivated you to engage in the rewarding behaviour again.
- C. Both dopamine and serotonin were involved in the rewarding behaviour.
- D. GABA was released causing the excitement.

Question 6

Which of the following prevent the overexcitation of neurons?

- A. Glutamate
- B. GABA
- C. Serotonin
- D. Dopamine

TURN OVER

Question 7

Which of the following is true about neuromodulators?

- A. Neuromodulators are GABA and Dopamine.
- B. Neuromodulators are Glutamate and Serotonin.
- C. Neuromodulators are chemical molecules that can have an effect on multiple post synaptic neurons.
- D. Neuromodulators are chemical molecules that can have an effect on multiple presynaptic neurons.

Question 8

When you were younger you were learning to ride a bike. Each time you rode the bike you continued to improve at it. Which of the following is said to be the reason your skill of riding a bike improved?

- A. Long-term potentiation occurred which is when the connections weakened every time you rode the bike.
- B. Long-term depression occurred, which is when the connections weakened every time you rode the bike.
- C. Long-term potentiation occurred, which is when the connections strengthened every time you rode the bike.
- D. Both long-term potentiation and long-term depression occurred.

Question 9

The longest cranial nerve that connects the gut and brain enabling communication is;

- A. The gut-brain axis
- B. The vagus nerve
- C. The enteric nervous system
- D. The gut microbiota

The following information relates to Questions 10, 11 and 12.

You are about to sit your final VCE exams. Your mum is putting so much pressure on you with what she wants you to achieve. You have feelings of self-doubt and feel like you are not good enough to do well in this exam. In addition to this stress, your dad is sick and has been for the past 10 years, so you are trying to also manage that.

Question 10

The feeling you have of self-doubt and feeling like you are not good enough is an example of what?

- A. An internal stressor
- B. An external stressor
- C. Chronic stress
- D. High self-esteem

Question 11

Your mum putting pressure on you is an example of what?

- A. An internal stressor
- B. An external stressor
- C. Chronic stress
- D. An ongoing stress

Question 12

Your dad being sick for the last 10 years and you trying to deal with this is an example of what type of stress?

- A. An internal stressor
- B. Chronic stress
- C. Acute stress
- D. Both an internal and external stressor

Question 13

During the process of classical conditioning what needs to occur in the acquisition stage?

- A. The neutral stimulus and unconditioned stimulus are paired.
- B. The neutral stimulus and unconditioned stimulus are repeatedly paired.
- C. The conditioned stimulus and the neutral stimulus are repeatedly paired.
- D. The neutral stimulus becomes the conditioned stimulus.

TURN OVER

Question 14

Which of the following best describes giving a student a detention for not doing their homework?

- A. Positive reinforcement
- B. Positive punishment
- C. Negative reinforcement
- D. None of the above.

Question 15

What does an EEG measure?

- A. It detects, amplifies and records electrical activity of the brain.
- B. It detects, amplifies and records electrical activity of the muscles.
- C. It detects, amplifies and records the electrical activities of the muscles responsible for eye movement.
- D. It detects, amplifies and records when you are dreaming.

Question 16

Which of the following would you not see in a sleep diary?

- A. Your estimated duration of sleep.
- B. The quality of your sleep.
- C. Your thoughts and feelings around sleep.
- D. The electrical activity of your brain.

Question 17

Which of the following would you see in a video monitor?

- A. Sleepwalking
- B. Brain waves
- C. REM and NREM sleep
- D. Only REM sleep

The following information relates to Questions 18-21.

Mark is a 17-year-old teenager, and his mother is 55 years old. Mark's mother always tells him off for going to bed too late. He tells her he is up on his phone and can't sleep.

Question 18

Which of the following is true for Mark's characteristics of sleep?

- A. He should sleep for 5 hours and have 80% REM and 20% NREM.
- B. He should sleep for approximately 8 hours with 20% REM and 80% NREM.
- C. He should sleep for approximately 8 hours with 80% REM and 20% NREM.
- D. He should sleep for 13 hours and 50% Rem and 50% NREM.

Question 19

What affect does the phone light have on Mark and his inability to fall asleep?

- A. Cortisol is being suppressed so Mark is finding it difficult to fall asleep.
- B. The bright light is hurting Mark's eyes making it hard for him to fall asleep.
- C. The use of bright light suppresses melatonin which is the sleep-inducing hormone.
- D. None of the above.

Question 20

If Mark is sleep deprived, which of the following would be considered under the affective component?

- A. Heightened emotions
- B. Risk taking behaviour
- C. Inability to concentrate
- D. Irrational thinking

Question 21

How could bright light therapy be used by Mark?

- A. Mark would be exposed to bright light therapy in the mornings to help him wake up.
- B. Mark would be exposed to bright light therapy in the evenings.
- C. Mark would not need to use bright light therapy.
- D. Mark would be exposed to bright light therapy in either the morning or day and this can alternate.

TURN OVER

Question 22

Which of the following is not considered to be a Zeitgeber?

- A. Light
- B. Body temperature
- C. Temperature of the room
- D. Eating and drinking

Question 23

Which of the following best describes Advanced Sleep Phase Disorder?

- A. It is a disorder where the person sleeps early and wakes up early.
- B. It is a disorder where the person sleeps late and wakes up late.
- C. It is a disorder that consists of sleeping in the daytime and being unable to sleep at night.
- D. It is a disorder that consists of sleeping at random times with no rhythm to follow.

Question 24

Which of the following does not show high levels of resilience?

- A. Seeking solutions to problems.
- B. Being flexible in changing circumstances.
- C. Being optimistic.
- D. Relying on unhealthy or unhelpful coping strategies.

Question 25

The social and emotional wellbeing framework consists of many dimensions. Which of the following best describes the connection to culture?

- A. Connection to wider social systems.
- B. Strong sense of identity in values and traditions.
- C. Connecting to immediate family.
- D. Connecting to your mind.

Question 26

When comparing blood alcohol concentration (BAC) with sleep deprivation which of the following is correct?

- A. 17 hours of sleep deprivation has an effect equivalent to a BAC of 0.10.
- B. 24 hours of sleep deprivation has an effect equivalent to a BAC of 0.5.
- C. 17 hours of sleep deprivation has an effect equivalent to a BAC of 0.05.
- D. 17 hours of sleep deprivation has an effect equivalent to a BAC of 0.5.

Question 27

Which of the following is true for Delayed Sleep Phase Syndrome (DSPS)?

- A. DSPS is most likely to occur in teenagers.
- B. DSPS is most likely to occur in adults.
- C. DSPS occurs due to the delayed release of cortisol.
- D. DSPS is unlikely to occur in teenagers.

Question 28

Which of the following would not be appropriate for someone wanting to improve their sleep hygiene?

- A. Going to bed at a reasonable time.
- B. Sleep in a quiet place.
- C. Using their phone before bed.
- D. Exercising during the day.

The following information relates to Questions 29 and 30.

Phoebe went to a party when she was younger and at that event a clown jumped out and scared her. Since that experience, she has avoided any event because she is fearful that there might be clowns there.

Question 29

In the above scenario, identify the (A) Antecedent, (B) behaviour and (C) consequence that will perpetuate Phoebe’s fear of clowns.

	Antecedent	Behaviour	Consequence
A.	The clown	Avoidance of clowns	Negative reinforcement
B.	The party	Avoiding all parties	Positive punishment
C.	Avoiding parties	Being fearful	Negative punishment
D.	The party	The clown attacking her	Positive reinforcement

TURN OVER

Question 30

Why can the above scenario be considered a phobia and not just anxiety? Choose the most correct response.

- A. There is an irrational fear of a known stimulus.
- B. There is an irrational fear of a known stimulus, and it is affecting her everyday life such as not going to parties.
- C. The clown jumped out – that is enough to scare anyone.
- D. None of the above are correct.

Question 31

Which of the following is not a biological contributing factor or intervention for a phobia?

- A. GABA dysfunction
- B. Long-term potentiation
- C. Adequate sleep
- D. Benzodiazepines

Question 32

Which of the following are cultural determinants for wellbeing?

- A. Connection to country and mind.
- B. Cultural continuity and connection to culture.
- C. Cultural continuity and self-determination.
- D. Self-determination and connection to body.

Question 33

What is one of the disadvantages of using a within subjects design?

- A. They are less time consuming.
- B. Less people are needed.
- C. They are good for real world settings.
- D. They can produce order effects.

Question 34

Which of the following could improve the external validity of an experiment?

- A. Having a larger sample size which is more representative of the population.
- B. Having a smaller sample size.
- C. Using a placebo.
- D. Checking for systematic errors.

Question 35

How would consent be given from a patient with Alzheimer's disease?

- A. They would sign a form like any other person.
- B. They cannot participate because of their condition.
- C. A guardian or legal carer would sign on their behalf.
- D. It would depend on how bad the Alzheimer's disease was.

Question 36

Donna is 70 years old and recently has started to forget past events that have occurred in her life. When asked about them she cannot retrieve them from her memory. Which statement best describes why this may be the case?

- A. She has Aphantasia and her episodic memory is affected.
- B. She has Alzheimer's disease; her hippocampus is affected as well as her implicit memories.
- C. She has Alzheimer's disease; her hippocampus is affected as well as her explicit memories.
- D. She has both Alzheimer's disease and Aphantasia.

Question 37

Which of the following is most accurate for someone with Aphantasia?

- A. They cannot see.
- B. They cannot remember.
- C. They cannot remember or see.
- D. They cannot see images in their mind.

Question 38

The memory of an emotionally significant event is encoded in which part of the brain?

- A. Amygdala
- B. Neocortex
- C. Basal ganglia
- D. Cerebellum

Question 39

The memory of your 13th birthday is stored where?

- A. Hippocampus
- B. Neocortex
- C. Cerebellum
- D. Amygdala

TURN OVER

Question 40

The memory of knowing how to swing a tennis racquet is encoded and stored where?

- A. Hippocampus
- B. Neocortex
- C. Cerebellum
- D. Amygdala

END OF SECTION A

b. Using your knowledge of the Lazarus and Folkman’s Transactional Model of Stress and Coping, compare Lucy and Mark’s primary and secondary appraisals. (4 marks)

Question 2 (11 marks)

Tina is a 20-year-old University student. She has been getting 3 hours of sleep each night and as a result she is extremely sleep deprived. There are several things she does before bed including: using her phone, eating, exercise and using her bed to study.

a. Define sleep hygiene, analyse Tina’s current sleep behaviours. Make two suggestions for Tina to improve her sleep hygiene. (4 marks)

- b. Explain the difference between partial and full sleep deprivation. (2 marks)

- c. Identify one affective, one behavioural and one cognitive effect that Tina may be experiencing due to her sleep deprivation. (3 marks)

- d. Compare the similarity between blood alcohol concentration (BAC) and sleep deprivation of someone who has been sleep deprived for 17 and 24 hours. (2 marks)

Question 3 (2 marks)

Maria was doing an exam when suddenly she heard loud noise coming from outside. With reference to one component of the Atkinson-Shiffrin multi-store model of memory, explain how this information was processed.

TURN OVER

Question 5 (2 marks)

Define any two physiological measures of sleep and identify what would occur in REM for each of these measures.

Question 6 (5 marks)

- a. State the difference between a circadian and ultradian rhythm. (2 marks)

TURN OVER

- b. Explain bright light therapy, and outline how it would be used for someone who has Advanced Sleep Phase Disorder (ASPD) and someone who has Delayed Sleep Phase Syndrome (DSPS). *(3 marks)*

Question 7 *(4 marks)*

Identify and explain the four steps involved in systematic desensitisation with reference to someone who has a phobia of heights.

Question 8 (4 marks)

Tom was outside and stepped on a nail. He immediately flinched and then realised afterwards what occurred. With reference to divisions of the nervous system, identify the steps of the response that has occurred.

TURN OVER

Question 10 (7 marks)

You are starting at a new sports club and your coach who also happens to be a famous basketball player wants to teach you how to throw and catch a ball.

- a. Using the steps of observational learning, explain how you will learn this skill (5 marks)

- b. Explain, with reference to the scenario, why you would be more motivated and willing to learn the skill of throwing and catching a ball from this coach. (2 marks)

TURN OVER

Question 11 (5 marks)

The Social and Emotional Wellbeing Framework consists of multiple domains. Identify and define any five domains of this framework.

Question 12 (10 marks)

a. Differentiate between the independent variable and dependent variable. (2 marks)
