



Victorian Certificate of Education
Trial Examination

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER Letter

2023 PSYCHOLOGY

Written trial examination – Units 3/4

Reading time: (15 minutes)

Writing time: (2 hours 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	7	7	80
			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 book of 36 pages
- Answer sheet for multiple-choice questions
- Additional space is available at the end of the book 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 as printed on your answer sheet for multiple-choice questions are correct, and sign your name in the space provided to verify this.
- 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.

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STUDENT NUMBER Letter

Datasheet for multiple-choice questions

Question				
1	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
2	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
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5	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
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Datasheet for multiple-choice questions

Question				
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27	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
28	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
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37	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
38	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
39	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
40	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D

Signed: _____

SECTION A – Multiple-choice questions

Instructions for Section A

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1; an incorrect answer scores 0.

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

No marks will be given if more than one answer is completed for any question.

Question 1

Which of the following is correct regarding the subdivisions of the autonomic nervous system?

- A. The parasympathetic and sympathetic nervous systems are always active, but depending on the physiological requirements, one will usually dominate the other.
- B. During a highly aroused situation, the sympathetic nervous system will be activated, while the parasympathetic nervous system will not.
- C. The parasympathetic nervous system is responsible for increasing digestion while the sympathetic nervous system is responsible for increasing salivation.
- D. While at rest, the parasympathetic nervous system and sympathetic nervous system are activated at the same level.

Questions 2 – 6 refer to the following information.

Professor Schnitzler is wishing to conduct an experiment on a new drug which is designed to mimic the effect of melatonin. To do this, he employs a research assistant, Mr Singhe, who will be working closely with the participants. Ten participants selected from a local university have been divided into two groups. Group A will be required to take the melatonin drug, while Group B will unknowingly be given a placebo. Prior to the investigation taking place, all participants will complete a survey indicating their level of drowsiness on a scale of 1-10 (where 10 is most drowsy). Once the drug or placebo has been consumed, participants will be asked to complete the same survey and the results of the two surveys will be compared.

Question 2

Professor Schnitzler wants to ensure that his investigation has external validity. Which of the following would **not** improve external validity for Professor Schnitzler's investigation?

- A. using a sampling procedure that creates a representative sample
- B. using a large sample size
- C. having a broad range of people, from a variety of different cultures in the sample
- D. ensuring that Group A consists of male participants and group B consists of female participants

Question 3

Once the results from the survey have been collated and analysed, Professor Schnitzler discovered that all participants in Group B (placebo group) had consumed coffee prior to the investigation, therefore consumption of coffee would be considered

- A. an extraneous variable.
- B. a confounding variable.
- C. the participant effect.
- D. a situational error.

Question 4

Which of the following is true regarding the placebo effect as it relates to Professor Schnitzler's investigation?

- A. Participants in Group A would experience the placebo effect as they have taken the real drug.
- B. Participants in Group B would experience the placebo effect as they have taken the placebo.
- C. There would be no placebo effect.
- D. Professor Schnitzler and Mr Singhe would experience the placebo effect.

Question 5

Professor Schnitzler would like to employ a single blind procedure for his investigation. Which of the following correctly identifies how this would be achieved?

- A. Both Professor Schnitzler and Mr Singhe would know which participants were in the control and experimental groups, however, the participants would be unaware.
- B. Professor Schnitzler would know which participants were in the control and experimental groups, however, Mr Singhe and the participants would be unaware.
- C. Mr Singhe would know which participants were in the control and experimental groups, however, Professor Schnitzler and the participants would be unaware.
- D. Professor Schnitzler and Mr Singhe would not know which participants were in the control and experimental groups, however, the participants would know.

Question 6

Professor Schnitzler wants to ensure that he adheres to the ethical guideline of debriefing. Which of the following is **not** necessary?

- A. Professor Schnitzler should answer participants' questions at the conclusion of the study.
- B. Professor Schnitzler should provide support to the participants to address any harm that was caused due to the study.
- C. Professor Schnitzler must inform participants if any deception has occurred.
- D. Professor Schnitzler only needs to conduct debriefing if deception has occurred.

Questions 7 and 8 refer to the following information.

Mrs Sidhu is a Psychology teacher who is interested in the quality and quantity of sleep Year 12 students in her class experience during a given week. To do this, she asks the students to record the number of hours of sleep they experience and then rate the quality of their sleep on a scale of 1-10.

Question 7

Mrs Sidhu is a Psychology teacher who is interested in the quality of sleep Year 12 students in her class experience during a given week. To do this, she asks the students to complete a sleep diary in which they are asked to record the quality of their sleep on a scale of 1-10.

- A. Primary data that is objective
- B. Secondary data that is subjective
- C. Primary data that is subjective
- D. Secondary data that is objective

Question 8

Which of the following is an advantage of this method of data collection?

- A. It enables the researcher to collect data relating to the quality of sleep the participants are experiencing where this cannot be collected via other methods such as an EEG.
- B. Participants are not likely to forget to record the information as it is collected each day for a 7-day period.
- C. Participants will be less likely to lie as Mrs Sidhu is an experienced Year 12 Psychology teacher who is respected by her students.
- D. A person's opinion is always a more accurate representation of the amount of sleep they have received compared to other methods of data collection.

Question 9

Isabella and Jennifer are discussing the differences between the functions of the somatic and autonomic nervous systems. Which of the following provides the best summary of their different functions?

- A. The somatic nervous system is responsible for voluntary movements, whereas the autonomic nervous system is responsible for involuntary muscular movements.
- B. The somatic nervous system is responsible for involuntary movements, whereas the autonomic nervous system is responsible for voluntary muscular movements.
- C. The somatic nervous system includes both the afferent and efferent tracts, whereas the autonomic nervous system consists of interneurons only.
- D. The somatic nervous system plays a role in the spinal reflex, whereas the autonomic nervous system assists with involuntary responses such as heart rate and breathing rate.

Question 10

Which of the following best describes the difference between GABA and Dopamine?

	GABA	Dopamine
A.	An inhibitory neurotransmitter that decreases the likelihood of the postsynaptic neuron firing	A neuromodulator that can have excitatory or inhibitory effects on the postsynaptic neuron
B.	An excitatory neurotransmitter that increases the likelihood of the postsynaptic neuron firing	A neuromodulator that plays an important role in coordinating voluntary motor movement
C.	An inhibitory neuromodulator that decreases the likelihood of the postsynaptic neuron firing	A neuromodulator that plays an important role in reward-based learning
D.	An inhibitory neurotransmitter that decreases the likelihood of the postsynaptic neuron firing	A neuromodulator that plays an important role in mood regulation

Question 11

Myles is currently studying French. His French teacher, Mr Currie, encourages Myles to practise regularly as this will assist him to learn the language at a faster rate. In terms of long-term potentiation, why would Mr Currie encourage Myles to practise regularly?

- A.** Regularly practising will increase the number of receptor sites on the dendrites of the presynaptic neuron.
- B.** Long-term potentiation will cause reorganisation to occur whereby dendrites will become bushier on the postsynaptic neuron.
- C.** There will be an increased number of synaptic connections between neurons due to sprouting.
- D.** There will be an increase in the release of glutamate from the presynaptic to post synaptic neuron which, will aid in pruning, making the neural connection more efficient.

Questions 12 and 13 refer to the following information.

Oscar recently won a large sum of money while playing the lotto. Oscar was surprised to discover that although this was something he had always dreamed of, winning the lotto created significant stress in his life.

Question 12

Which of the following is true for Oscar?

- A. Winning the lotto was an external stressor, which was considered a form of eustress and exceeded his resources to cope.
- B. Winning the lotto was an internal stressor, which was considered a form of distress and exceeded his resources to cope.
- C. Winning the lotto was a subjective stressor, which was considered a form of distress and did not exceed his resources to cope.
- D. Winning the lotto was an objective stressor, which was considered a form of eustress and did not exceed his resources to cope.

Question 13

When Oscar first discovered that he had won the money, he experienced the fight-flight-freeze response which caused his sympathetic nervous system to dominate. This would have caused which of the following physiological reactions?

- A. increased saliva production, increased breathing rate, pupil dilation
- B. decreased production of glucose, increased perspiration, increased heart rate
- C. pupil dilation, relaxation of bladder, decreased digestion
- D. increased digestion, increased salivation, pupil constriction

Question 14

Atharv has been suffering from depression for the past six months. Recently, he visited the doctor who diagnosed irritable bowel syndrome (IBS) in addition to Atharv's depression. Due to the gut-brain axis, it's possible that Atharv's depression has contributed towards his IBS. Which of the following is **incorrect** regarding the gut-brain axis?

- A. The gut-brain axis refers to the bidirectional relationship between the gut and the brain.
- B. The connection between the gut and the brain occurs through the enteric nervous system which is a subdivision of the somatic nervous system.
- C. The vagus nerve is the longest cranial nerve which allows the gut and the brain to communicate.
- D. Research has found that individuals who experience stress can negatively impact the composition of their gut microbiota.

Question 15

Alanah is a Year 12 Psychology student who wishes to replicate Pavlov’s original classical conditioning experiment on salivation in dogs. After successfully conditioning her dog to elicit a conditioned response after the presentation of the conditioned stimulus alone, what would occur if Alanah were to present the UCS alone?

- A. The dog would exhibit no response as it has now been conditioned to salivate to the conditioned stimulus only.
- B. The dog would salivate to the UCS only if it were presented multiple times.
- C. The dog would salivate to the UCS, but only if the NS were presented prior.
- D. The dog would salivate to the UCS, as salivation is a reflexive response.

Question 16

Which of the following correctly describes the difference between classical conditioning and operant conditioning?

	Classical Conditioning	Operant Conditioning
A.	A form of reflexive learning whereby the learner plays an active role and the association forms between the NS and the UCS	A form of voluntary learning whereby the learner plays a passive role, and the likelihood of the behaviour being repeated is determined by the consequence
B.	A form of involuntary learning whereby the learner plays a passive role	A form of voluntary learning whereby an individual learns vicariously
C.	A form of reflexive learning whereby the CS elicits the CR after conditioning has occurred	A form of learning whereby the learner plays an active role, and the behaviour occurs after the antecedent stimulus
D.	A form of reflexive learning which consists of a before, during and after phase	A form of involuntary learning which consists of an antecedent, behaviour and consequence

Question 17

Nicole has a two-year-old daughter. Every day, Nicole ties her daughter’s shoelaces before she leaves the house to play in the backyard. This is making Nicole quite frustrated, so she decides to teach her daughter this skill. However, despite several attempts of teaching this skill, Nicole’s daughter is still unable to tie her shoelaces. According to the five stages of observational learning, which stage is likely preventing Nicole’s daughter from acquiring this skill?

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

Question 18

Riley comes home to find that his son Ollie has not put the bins out, despite being told several times to do this chore. Riley decides to punish Ollie by getting him to vacuum the house. This form of punishment is an example of

- A. positive punishment, which is a form of operant conditioning.
- B. positive punishment, which is a form of observational learning.
- C. negative punishment, which is a form of operant conditioning.
- D. negative punishment, which is a form of observational learning.

Question 19

Learning for Aboriginal and Torres Strait Islander peoples is said to be embedded in relationships. Which of the following relationships is not relevant to learning for Aboriginal and Torres Strait Islander people?

- A. the learner and teacher
- B. different concepts
- C. individuals, families and communities
- D. Western and Eastern cultures

Question 20

An Aboriginal child mimics the behaviours of an animal while performing a dance. Which type of learning does this most closely resemble?

- A. operant conditioning
- B. observational learning
- C. classical conditioning
- D. conscious learning

Question 21

Jiya is attempting to learn the first 20 elements on the periodic table for her Chemistry class. Initially, she attempts to memorise the 20 elements by silently repeating them to herself. This doesn't appear to work, so her friend Sam suggests that she links them to concepts already stored in her long-term memory, therefore using elaborative rehearsal. In terms of the different types of long-term memory, which of the following is correct for semantic, episodic and procedural memory for Jiya?

	Semantic	Episodic	Procedural
A.	The memory that Hydrogen is the first element on the periodic table of the elements	The memory of information contained in Sam's explanation of how to perform elaborative rehearsal	The memory of all 20 elements from the periodic table
B.	The memory of all 20 elements from the periodic table	The memory of the personal experience of attempting to remember the 20 elements	Knowing how to perform elaborative rehearsal
C.	The memory of the personal experience of attempting to remember the 20 elements	The memory that Hydrogen is the first element on the periodic table of the elements	Knowing that repeating words was not a successful memory technique
D.	Knowing how to perform elaborative rehearsal	The memory of the personal experience of using elaborative rehearsal	Knowing that learning the first 20 elements is an important skill in Chemistry

Questions 22 and 23 refer to the following information.

Tristan recently visited his grandfather who is suffering from Alzheimer's disease. During the visit, Tristan realised that his grandfather was having difficulty remembering recent global events that have occurred since the onset of Alzheimer's, even though he had seen them on the news.

Question 22

Tristan's grandfather's inability to form memories of current events, due to his Alzheimer's disease, supports which of the following?

- A. The hippocampus is responsible for the storage of long term memories, particularly those relating to newly formed memories.
- B. The neocortex is responsible for the formation of emotionally charged memories, particularly those regarding new world events that may be distressing.
- C. The hippocampus is responsible for the formation of explicit memories, including semantic and episodic memories.
- D. The basal ganglia is responsible for the storage and retrieval of declarative memories.

Question 23

Which of the following is Tristan's grandfather, less likely to experience during the early stages of Alzheimer's disease?

- A. constructing possible imagined futures
- B. smooth coordinated muscle movements
- C. Gradual loss of speech
- D. changes in mood and emotion

Questions 24 and 25 refer to the following information.

Zoe is learning about sleep. She is taught that sleep is a psychological construct and that it is considered to be an altered state of consciousness.

Question 24

Why is sleep considered to be a psychological construct?

- A. It can be measured accurately via physiological devices such as an EEG, an EOG and an EMG, which assist in determining the psychological responses of an individual.
- B. It can be directly measured via sleep diaries and video monitoring to determine the psychological nature of a person's sleep patterns.
- C. Although we know it exists, it cannot be directly measured or observed.
- D. It can be indirectly measured and observed, and from these observations, it is inferred that a person is asleep.

Question 25

Which of the following correctly describes why sleep is an altered state of consciousness?

- A. An altered state of consciousness is any level of consciousness that deviates from normal waking consciousness.
- B. An altered state of consciousness occurs when a person has limited control, and because sleep is spontaneous, we have no control over when it occurs.
- C. An altered state of consciousness occurs when a person is aware of their internal thoughts and feelings but unaware of their external environment, such as during sleep.
- D. It is difficult to wake a person when they are experiencing deep sleep, which suggests an altered state of consciousness.

Question 26

Michael and Niru are attempting to stay up all night so they can experience the effects of sleep deprivation. They both manage to stay awake for an entire 24-hour period. According to studies on the relationship between sleep deprivation and blood alcohol concentration (BAC), Michael and Niru have an equivalent BAC of

- A. 0.01
- B. 0.05
- C. 0.10
- D. 0.50

Question 27

People often refer to the Australia and New Zealand Bank as the ANZ Bank. In this case, the use of the term “ANZ” is

- A. an acronym.
- B. an acrostic.
- C. a mnemonic device.
- D. none of the above.

Question 28

Which of the following is **incorrect** in relation to songlines as they are used by Aboriginal and Torres Strait Islander peoples?

- A. Songlines have been taught by elders for thousands of years.
- B. Songlines carry laws and stories that Aboriginal and Torres Strait Islander peoples live by.
- C. Songlines celebrate Aboriginal and Torres Strait Islander peoples' interconnectedness with country.
- D. Songlines use written words, dance and images to transmit information regarding survival while travelling through Country.

Question 29

Kiara has recently given birth to a son called Anakin. Shortly after giving birth, the doctor informed Kiara that Anakin's sleep patterns will change as he gets older. Which of the following changes is Anakin likely to experience?

- A. an increase in the total number of hours slept
- B. an increase in the proportion of REM sleep
- C. an increase in the proportion of NREM sleep
- D. an increase in the total amount of time spent in NREM sleep

Questions 30 and 31 refer to the following information.

Alex has recently commenced night shift work with a local road work company. His job involves directing traffic with a "slow and stop" sign. His boss warned Alex prior to accepting the job that he may suffer from several effects relating to the change in work hours.

Question 30

Which of the following is **not** an effect that Alex is likely to suffer?

- A. difficulty performing complex tasks such as directing busy traffic and making decisions relating to the safety of his fellow workers
- B. disruption to his body's circadian rhythm
- C. disruption to the quality and quantity of sleep
- D. insomnia

Question 31

Alex has researched the use of bright light therapy to assist with the effects he is experiencing as a result of his night shifts. Bright light therapy should be used by Alex

- A. when getting home from his shift to delay the release of melatonin.
- B. just prior to his shift to delay the release of melatonin.
- C. immediately after waking to advance the release of melatonin.
- D. at two hour intervals during the day to delay the release of melatonin.

Questions 32 and 33 refer to the following information.

Zach is a Year 12 student who is experiencing a high level of stress as his exams are approaching. Although he has worked hard this year, the recent pressure felt by Zach has resulted in him becoming withdrawn from his friends and he is finding it difficult to concentrate.

Question 32

According to the mental wellbeing continuum, Zach would be placed

- A. at high levels of mental wellbeing.
- B. in the middle of the continuum.
- C. at low levels of mental wellbeing.
- D. below low levels of functioning.

Question 33

Zach is most likely experiencing

- A. stress where the upcoming exams are the stressor.
- B. phobia as he is scared of exams.
- C. anxiety as the upcoming exams are a potential threat.
- D. social anxiety due to large numbers of people who sit an examination at any given time.

Questions 34 - 37 refer to the following information.

Ayla has feared spiders for as long as she can remember. Her mother believes that the fear first started when she was bitten once by a spider as a young child. Since then, Ayla refuses to go camping with her family, believing that she may encounter a spider.

Question 34

Ayla's experience with spiders is quite typical in that

- A. her phobia was perpetuated through classical conditioning and precipitated through operant conditioning.
- B. she has a memory bias whereby an event, such as going camping, is predicted to be much worse than it actually is.
- C. she has experienced long-term potentiation due to the strengthening of synaptic connections that are regularly coactivated.
- D. her phobia was precipitated through classical conditioning and perpetuated through operant conditioning.

Question 35

According to the biopsychosocial model, a biological factor that may have contributed towards Ayla's phobia could be

- A. GABA dysfunction.
- B. a specific environmental trigger.
- C. long-term depression.
- D. lack of sleep.

Question 36

For many years, Ayla understood that her phobia for spiders was affecting her everyday life. She refused to seek treatment as she was embarrassed and concerned about what other people may think. This is known as

- A. low self-esteem.
- B. low self-efficacy.
- C. lack of confidence.
- D. stigma.

Question 37

Finally, Ayla agrees to seek professional help to treat her phobia for spiders. The therapist teaches Ayla a technique known as breathing retraining. Which of the following best describes this technique?

- A. Breathing retraining is used by an individual when they are faced with the phobic stimulus.
- B. Breathing retraining requires the individual to slow their breathing to reduce the effects of the sympathetic nervous system and increase the dominance of the parasympathetic nervous system.
- C. Breathing retraining reduces the likelihood of hyperventilation by taking short, shallow breaths.
- D. Breathing retraining is a psychological intervention that helps to calm down a person by allowing them to focus on positive thoughts while breathing slowly.

Question 38

Sam is a therapist who has diagnosed one of his patients as suffering from a specific phobia for butterflies. Sam instructs his patient to identify the negative thoughts that he has regarding butterflies and replace these with more positive ones. In addition to this, he has prescribed the patient Valium which is a form of benzodiazepine. Sam has treated his patient with two different methods. Respectively these are

- A. cognitive behaviour therapy and psychoeducation.
- B. systematic desensitisation and cognitive behavioural strategies.
- C. cognitive behaviour therapy and GABA agonists.
- D. cognitive behavioural strategies and GABA agonists.

Question 39

Kyan has recently commenced studying at Melbourne University. He is aware that the workload will be high, and that the upcoming examination period will create a great deal of stress. Before the exams begin, Kyan would like to prevent the onset of stress. To do this, he would like to employ some biological protective factors. These factors might include

- A. adequate sleep and GABA agonists.
- B. adequate diet and sleep.
- C. long term potentiation and hydration.
- D. GABA agonists and adequate diet.

Question 40

Which of the following does **not** correctly describe self-determination in terms of Aboriginal and Torres Strait Islander peoples' maintenance of wellbeing?

- A. It refers to the rights of all people to freely pursue their economic, social and cultural development without outside interference.
- B. It requires that First Nations people be involved in every layer of decision making including the decisions that affect and impact their people.
- C. It can include constitutional recognition for Aboriginal and Torres Strait Islander peoples.
- D. It can include the passing down and active practise of cultural knowledge from generation to generation.

SECTION B

Instructions for Section B

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

Question 1 (11 marks)

Jesse is an apprentice carpenter. While creating the frames for a new house, he hits his thumb with a hammer. As soon as this happens, he immediately withdraws his hand and screams out in pain.

- a.** Name and describe the role of the response when Jesse withdraws his hand. 2 marks

- b.** Outline the process of neural transmission enabling this response to occur from the moment the hammer hit his hand to when he withdrew his hand. 3 marks

- c.** Outline the role of the autonomic nervous system as it relates to Jesse. 2 marks

- d.** Explain the different types of long term memory in this scenario in terms of the memory of the personal experience of hitting his thumb and the ability to use a hammer. Identify the brain regions responsible for the formation of these memories. 4 marks

Question 2 (12 marks)

Rishika and Kiera are twin sisters and have studied the topic of coping strategies, particularly the difference between approach and avoidance. The twins are competing in an upcoming basketball grand final which is causing both girls a considerable level of stress. They have decided to employ coping strategies. Rishika decides to use an approach strategy while Kiera will use an avoidance strategy.

- a.** Explain the difference between an approach and an avoidance coping strategy, providing an example of each that may be used by Rishika and Kiera in preparation for their upcoming basketball grand final. 4 marks

- b.** In terms of context specific effectiveness, explain why Rishika's strategy is likely to be more successful in reducing stress, than Kiera's strategy. 2 marks

- c.** Shortly after implementing her coping strategy, Rishika demonstrates coping flexibility. Explain what is meant by coping flexibility, why it is performed and what Rishika may have done to demonstrate that she has coping flexibility. 3 marks

- d.** After the grand final, Kiera decided to quit playing basketball. As a result, pruning occurred. Explain what the term pruning means and provide a reason as to why it occurs. In your answer, outline whether Kiera’s ability to play basketball will be impacted if she decides to return to the sport in future. 3 marks

Question 3 (16 marks)

Jason is 17 years old and is showing signs of delayed sleep phase syndrome (DSPS). This syndrome is affecting his Year 12 studies and causing him to experience tiredness during the day. His parents are concerned for his wellbeing and have him admitted to a sleep clinic.

- a.** Explain what is meant by delayed sleep phase syndrome (DSPS)? 1 mark
- _____
- _____
- _____
- b.** Compare the number of total hours of sleep Jason should receive each night with that of a neonate (newborn baby). Provide a reason for this difference between adolescents and neonates. 2 marks
- _____
- _____
- _____
- _____
- _____
- c.** How may exposure to blue light contribute to delayed sleep phase syndrome (DSPS) that Jason is experiencing? Justify why this may occur. 3 marks
- _____
- _____
- _____
- _____
- d.** Other than a reduction in exposure to blue light, provide **two** other sleep hygiene methods that Jason could implement to reduce the likelihood of delayed sleep phase syndrome occurring. 2 marks
- _____
- _____
- _____
- _____

- e. Whilst at the sleep centre, Jason is connected to an EEG, EOG and EMG. For each of these devices, identify the function and outline how the information gathered can be used to determine when Jason experiences REM sleep.

6 marks

- f. Unfortunately for Jason, he has not been able to find appropriate treatment for his disorder which is causing stress, resulting in an increase in cortisol levels. Outline **two** adaptive functions of cortisol that occur due to the stress response.

2 marks

Question 4 (13 marks)

Dahlia was given a puppy for her birthday. She is keen to teach the dog new tricks, particularly how to roll over. She enrolls her puppy in “puppy school” and she asks the dog trainer to demonstrate how to teach her dog to roll over.

- a. Explain, using the 3-phase model of operant conditioning, how the dog trainer could teach Dahlia’s dog to roll over.

3 marks

- b.** In terms of the first 3 stages of observational learning, explain how these stages contribute towards the likelihood of Dahlia being successful in learning how to teach her dog to roll over.

3 marks

- c.** Outline **two** similarities and **two** differences between operant conditioning and observational learning.

4 marks

- d.** Dahlia has noticed that her dog loves going for trips in the car. Her dog gets excited each time Dahlia picks up her car keys. Explain, using the 3-phase process of classical conditioning, why her dog is excited by the car keys.

3 marks

Question 5 (12 marks)

Professor Crosby wants to determine whether using the Method of Loci improves recall of information. To conduct his investigation, Professor Crosby uses 20 first year Psychology students from the university where he is a lecturer. All participants will first undertake Condition A, in which they are required to remember a list of 15 words that are flashed on to a screen for a duration of 2 minutes. Students are asked to silently repeat the words without making any links to long term memory. Students are then required to write down the words in the same order as they were presented on the screen. Students then participate in Condition B, in which they are first taught how to use the Method of Loci. Once all students are comfortable using this mnemonic device, a different list of 15 words is flashed onto a screen for 2 minutes. Students are instructed to use the Method of Loci to aid memory and to write down the words in the same order they were presented on the screen.

- a.** Explain what is meant by a mnemonic device. 1 mark

- b.** Name the experimental design used by Professor Crosby, and outline one strength and one limitation of this design. 3 marks

- c.** Name and explain a mnemonic device other than Method of Loci. Provide an explanation as to how this mnemonic device aids in the retrieval of information. 3 marks

- d.** Write a research hypothesis for Professor Crosby’s research. 3 marks

- e.** Describe **two** differences between the Method of Loci and Songlines as used by Aboriginal and Torres Strait Islander peoples. 2 marks

Question 6 (6 marks)

The social and emotional wellbeing (SEWB) framework for Aboriginal and Torres Strait Islander communities is said to be multidimensional and holistic.

- a.** What do the terms “multidimensional” and “holistic” mean in terms of the SEWB framework? 2 marks

- b.** Bayan is a 12-year-old Aboriginal boy. According to the SEWB framework, for Bayan to have a high level of social and emotional wellbeing, he should have several connections. These connections include: Connection to body and Connection to mind and emotions. Describe both of these connections, providing an example for each as to how it would contribute towards Bayan’s social and emotional wellbeing. 4 marks

Question 7 (10 marks) – *Extended Response Question*

Anthony and his wife have been married for 10 years. Unfortunately, they are currently going through a divorce which is causing Anthony to experience a high level of stress. He is worried that he will struggle to live by himself and may not be able to afford to pay the bills, including rent. As a result of the increased stress levels, Anthony is now finding it difficult to sleep and a doctor has recently informed Anthony that he is suffering from high blood pressure. Anthony is now experiencing the effects of sleep deprivation.

Provide information relating to the following:

- The role of the Lazarus and Folkman Transactional Model of Stress and Coping in terms of the possible primary and secondary appraisals that Anthony may have made.
- The three stages of the General Adaptation Syndrome Model in terms of Anthony’s physiological stress response.
- The affective, behavioural and cognitive effects of sleep deprivation that Anthony may be experiencing and how these can contribute towards his level of mental health.
