

STUDENT NUMBER Letter

PSYCHOLOGY

Written examination

Monday 31 October 2022

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 11.45 am (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	50	50	50
B	8	8	70
			Total 120

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 32 pages
- Answer sheet for multiple-choice questions
- Additional space is available at the end of the book if you need extra space 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.

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 somatic nervous system

- A. regulates visceral muscle responses.
- B. enables deliberate movement by the body.
- C. controls the ‘fight-flight-freeze’ response.
- D. initiates the response of peripheral muscles.

Question 2

Which of the following paired options describes roles of the parasympathetic and sympathetic nervous systems?

	Parasympathetic nervous system	Sympathetic nervous system
A.	inhibits the release of bile from the pancreas for digestion	initiates the release of adrenaline and noradrenaline from the adrenal glands
B.	constricts blood vessels and relaxes the bladder	maintains intestinal movement and stimulates the salivary glands
C.	regulates heart function and respiration	redirects blood flow from internal organs to extremities
D.	balances visceral muscles, organs and glands	decreases the secretion of glucose from the liver

Question 3

Tinkabelle, a 12-week-old kitten, met her family’s dog for the first time. Tinkabelle hissed, spat and momentarily stood still.

This occurred because

- A. Tinkabelle’s spinal reflex was initiated.
- B. the dog was detected by the autonomic nervous system.
- C. Tinkabelle’s ‘fight-flight-freeze’ response was activated by the spinal cord.
- D. Tinkabelle’s parasympathetic and sympathetic nervous systems were activated.

Question 4

The role of an axon during transmission is to

- A. produce and release neurotransmitters.
- B. provide a barrier to other electrical impulses.
- C. carry nerve impulses away from a cell's body.
- D. speed up electrochemical transmissions to adjoining neurons.

Question 5

Communication between neurons can be described as a lock-and-key process.

This is because the

- A. key is the receptor site on the post-synaptic neuron and the lock is the neurotransmitter.
- B. pre-synaptic neuron has a complementary shape that fits into the post-synaptic neuron's receptor site.
- C. neurotransmitter released from the pre-synaptic neuron will only be accepted by the complementary receptor site on the dendrite.
- D. neurotransmitter released into the gap must have the same molecular shape as the corresponding receptor site on the post-synaptic neuron.

Question 6

Which one of the following is true of Parkinson's disease?

- A. The death of neural cells that secrete dopamine causes tremors.
- B. Parkinson's disease is caused by the loss of neurons in the cerebellum.
- C. Motor symptoms develop from an oversupply of gamma-amino butyric acid (GABA) in the brain stem.
- D. Rigidity and difficulty walking result from degeneration in the hippocampus.

Use the following information to answer Questions 7 and 8.

Denver is an aspiring classical musician and their audition with the Melbourne Symphony Orchestra is scheduled for today. Denver is feeling anxious even though they have practised for many weeks.

Question 7

During the weeks of practice, which of the following neural changes occurred in Denver's brain?

- A. Dendrites became increasingly myelinated.
- B. New pathways became more efficient when Denver made errors.
- C. Structural changes occurred in the axon when Denver made fewer mistakes.
- D. Unnecessary pathways were pruned as Denver developed their playing technique.

Question 8

Which one of the following best describes the functioning of Denver's nervous system as they performed at the audition?

- A. Denver's hand actions were coordinated by the peripheral nervous system.
- B. The increase in Denver's heart rate was modified by the somatic nervous system.
- C. Denver's finger movements were regulated by the sympathetic nervous system.
- D. Denver's voluntary movements were controlled by the parasympathetic nervous system.

DO NOT WRITE IN THIS AREA

Question 9

Shanvi has worked for many years as a doctor in a busy emergency ward. She has been working long, stressful shifts. Recently, her own doctor diagnosed her with a digestive illness.

At the time of the diagnosis, what stage of Selye's General Adaptation Syndrome was Shanvi most likely in and why?

- A. shock stage, because her ability to deal with the stress of the diagnosis has fallen below normal
- B. resistance stage, because her body is continuously producing cortisol, which is suppressing her immune system
- C. alarm reaction stage, because the diagnosis of a chronic illness has caused the 'fight-flight-freeze' response
- D. exhaustion stage, because her body can no longer cope with her job and she has developed a serious illness

Question 10

An avoidance strategy

- A. is the healthiest way to reduce stress in the long-term.
- B. is always maladaptive because it does not deal with the problem.
- C. can reduce stress when nothing can be done to address the stressor.
- D. is inappropriate when an immediate confrontation will lead to an argument.

Use the following information to answer Questions 11–14.

While she was making her first short film, Justine learnt an editing technique called Technique A. However, Technique A did not achieve the effect she wanted, so she had to learn another editing technique, Technique B, which was very different.

Question 11

Long-term potentiation of Technique B would require

- A. long-term depression and decreased signal transmission of Technique A.
- B. replacement of the memory of Technique A with the memory of Technique B.
- C. the release of adrenaline to increase signal transmission associated with both techniques.
- D. an increase in the release of glutamate and signal transmission associated with Technique B.

Question 12

Justine was more likely to choose Technique B when she wanted a close-up of a face.

According to operant conditioning, which one of the following correctly identifies phases and associated components of the learning process?

	Phase		Associated component	
A.	antecedent	Technique B	consequence	the close-up of a face
B.	behaviour	using Technique B	consequence	the desired result
C.	behaviour	evaluating the result	consequence	happiness with the result
D.	antecedent	deciding on a technique	behaviour	using Technique B

Question 13

An example of stimulus discrimination while using Technique B would be

- A. using Technique B rather than Technique A.
- B. recognising the visual cues that are the same.
- C. knowing that a particular editing technique is not working.
- D. recognising the visual cues that would best suit Technique B.

Question 14

Justine did a work placement with an experienced editor when she was learning the editing techniques.

A necessary element in Justine's successful observational learning of editing processes was

- A. committing the processes to memory.
- B. putting her newly developed skills into practice.
- C. receiving recognition from the editor for her achievements.
- D. writing down what the editor said as the editor demonstrated the processes.

Question 15

After being stung by a swarm of bees, Barnaby became terrified of bees and now experiences a panic attack even when he sees a picture of a bee.

In this scenario, the

- A. neutral stimulus is the fear of bees.
- B. unconditioned stimulus is the panic attack.
- C. conditioned stimulus is seeing a picture of a bee.
- D. conditioned response is the pain from the bee stings.

Question 16

Mario was delighted when he received a phone call telling him that he had won a poetry competition.

In which of the following areas of the brain would the memory of the phone call and the memory of the feeling that Mario experienced in response to the phone call most likely be permanently stored?

	Memory of the phone call	Memory of the feeling
A.	cerebellum	amygdala
B.	hippocampus	amygdala
C.	hippocampus	hippocampus
D.	cerebral cortex	cerebral cortex

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 17–20.

Dr Juc was investigating the impact of speed of delivery on the serial position effect using two groups. Group 1 was presented with a list of 30 words at a slow pace (one word every 5 seconds). Group 2 had the same list of words presented at a fast pace (one word every 0.5 seconds).

Immediately following the presentation of the list, both groups completed a mathematical task for two minutes. Then, participants were instructed to type the words they remembered into a computer. The computer recorded the time taken by each participant to recall each word (called ‘lapsed time’).

Question 17

Which of the following results would Dr Juc expect?

- A. a primacy effect and a recency effect in both groups
- B. a primacy effect in Group 1 and a recency effect in Group 2
- C. a primacy effect with a lower lapsed time for words remembered from the middle of the list in both groups
- D. any words remembered from the middle and end of the list have a higher lapsed time than words remembered from the beginning of the list in both groups

Question 18

Dr Juc also recorded lower lapsed time on average for all the words Group 1 remembered compared to all the words Group 2 remembered.

This is likely a result of

- A. the mathematical task interfering with Group 2’s ability to rehearse the words presented at the end of the list.
- B. the groups using different types of rehearsal, which has an impact on the capacity of short-term memory.
- C. Group 1 being more likely to use maintenance rehearsal to process the most recently presented word.
- D. Group 2 being more likely to use elaborative rehearsal to process the most recently presented word.

Question 19

To minimise the effect of confounding variables in the experiment, Dr Juc should ensure

- A. stratified sampling is used to reduce individual differences between the groups.
- B. counterbalancing is used to minimise the effects of practice on participants.
- C. random allocation is used to ensure participant variables are less likely to differ by group assignment.
- D. single blind procedures are used so she is not aware of the participants’ allocated conditions, in order to control the placebo effect.

Question 20

How long will each word remain in Dr Juc’s participants’ sensory memory?

- A. 0.2–4 seconds
- B. 5–9 seconds
- C. 15–30 seconds
- D. potentially indefinitely

Question 21

According to Loftus's research, inaccurate eyewitness testimony is more likely to occur if the eyewitness to a crime is asked

- A. questions in the room where the crime occurred.
- B. about the colour of the jacket worn by the perpetrator.
- C. to identify the tattoo they reported seeing at the crime scene from a number of tattoos.
- D. to identify the perpetrator from photographs of people who were present when the crime was committed.

Question 22

One year ago, River suffered a brain injury during an accident, which resulted in anterograde amnesia.

Which one of the following is a symptom that River would likely be experiencing that also supports the Atkinson-Shiffrin multi-store model of memory?

- A. River can only hold small pieces of information in their short-term memory for 40 seconds.
- B. River cannot remember what they had for lunch but can recall in detail their 50th birthday party held 10 years ago.
- C. River cannot remember their grandchild's birth five years ago but can name the doctor who treated them after their accident.
- D. River cannot remember what day it is today because they cannot pay attention to incoming information.

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 23–25.

Lucinda read that a dog's breed influences the effectiveness of a reward in the training process. To investigate this, she conducted an experiment using two breeds: beagles and poodles.

In the first part of the experiment, Lucinda compared how many sessions of training were needed to get one group of beagles and poodles to sit in a designated spot for 30 seconds, using a dog biscuit as a reward. In the second part of the experiment, Lucinda compared how many sessions of training were needed to get a different group of beagles and poodles to sit in a designated spot for 30 seconds, using a dog toy as a reward.

Question 23

Which experimental research design did Lucinda use?

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

Question 24

Which one of the following is a possible conclusion for this experiment?

- A. The dog biscuit will be more effective when training poodles than beagles.
- B. Poodles will be more likely to respond to the dog biscuit than the dog toy.
- C. Beagles sit for longer than poodles in a designated spot when no reward is given.
- D. Beagles require fewer training sessions than poodles when rewarded with a dog biscuit rather than a dog toy.

Question 25

If Lucinda used the same beagles and poodles for both parts of the experiment, would she need to counterbalance the experiment?

- A. No, because she used different treats in the two conditions.
- B. Yes, because the order of the treats might affect the results.
- C. No, because the length of time remained the same between conditions.
- D. Yes, because the training order of the breeds of dogs might affect the results.

Question 26

Which one of the following results in an induced altered state of consciousness?

- A. daydreaming when bored
- B. fainting after suffering a cut
- C. high blood alcohol concentration (BAC)
- D. consuming a caffeinated energy drink

Question 27

Mavis is using controlled processing to listen to the pre-game instructions of her netball coach while a noisy game is being played in the background.

While her coach is speaking, Mavis would

- A. be easily distracted by the noise from the game in the background.
- B. be unable to register any noise from the game in the background.
- C. register when a goal is scored in the game in the background while processing the details of her coach's instructions.
- D. be aware of a game being played in the background but would attend to the details of her coach's instructions.

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 28–32.

Sunil is a young university student who has been experiencing disrupted sleep for several months. After extensive investigation and testing, a sleep therapist diagnosed Sunil with a condition known as nightmare disorder. This disorder results in Sunil experiencing the same terrifying dream as soon as he enters REM sleep and, as a consequence, waking up five or six times per night.

Question 28

Which type of sleep disorder is Sunil experiencing and why is it this type?

- A. parasomnia, because it affects the pattern of Sunil's sleep
- B. dyssomnia, because Sunil is having trouble staying asleep
- C. dyssomnia, because of increased brain activity during sleep
- D. parasomnia, because Sunil experiences abnormal sleep activity

Question 29

Which one of the following methods would be most effective at generating qualitative data about Sunil's sleep disorder?

- A. electroencephalograph, which indicates dream-like brain activity
- B. sleep diary, in which Sunil records his descriptions of the nightmares
- C. electro-oculograph, which provides a clear distinction between NREM and REM sleep
- D. video monitoring, which provides data about periods of movement during sleep

Question 30

Data from a sleep laboratory indicates that Sunil is experiencing an adequate amount of NREM sleep, but insufficient REM sleep.

According to the restorative theory of sleep, Sunil's lack of REM sleep would most likely result in

- A. reduced creativity due to inadequate cognitive recovery.
- B. heightened sensitivity of the sensory receptors in the skin.
- C. tiredness during the day because of less physical recovery.
- D. depletion of his immune system due to the stress of the nightmares.

Question 31

Sunil reported in a sleep diary that he has been more accident-prone since the onset of his nightmare disorder. He also reported that he is easily upset and frustrated.

Which of the following describes the type of data collected and the effect of sleep deprivation outlined in Sunil's diary?

	Type of data	Effect of sleep deprivation
A.	secondary	affective
B.	secondary	cognitive
C.	primary	cognitive
D.	primary	behavioural

Question 32

In comparison to other people his age, Sunil is more likely to experience a higher proportion of which of the following stage(s) of sleep?

- A. REM sleep
- B. NREM stages 1 and 2
- C. NREM stages 3 and 4
- D. both REM and NREM sleep

Question 33

Which of the following changes would be expected to occur in the brain activity of individuals who are consuming a depressant?

- A. increase in amplitude, increase in frequency
- B. increase in amplitude, decrease in frequency
- C. decrease in amplitude, decrease in frequency
- D. decrease in amplitude, increase in frequency

Question 34

A sleep researcher asked 50 shiftworkers to maintain a sleep diary for four nights. The researcher asked them to estimate the length of time it took them to fall asleep after completing a night shift.

Which one of the following statistical methods would best reveal the effect of outliers?

- A. mean
- B. median
- C. percentage
- D. standard deviation

Question 35

The table below shows the number of hours since four individuals, W, X, Y and Z, last slept and their BAC.

	Hours since last sleep	BAC
Individual W	36 hours	0.00
Individual X	15 hours	0.05
Individual Y	9 hours	0.05
Individual Z	1 hour	0.10

Data was also collected via self-reporting measures.

Which individual is likely to have higher irritability and stress scores according to their self-report?

- A. Individual W
- B. Individual X
- C. Individual Y
- D. Individual Z

Question 36

Zachary and Zoe are teenagers. Zachary has been asleep for 20 minutes and Zoe has been asleep for 50 minutes. Which of the following options indicates the stage of sleep that each teenager is most likely to be in?

	Zachary	Zoe
A.	REM sleep	NREM stage 3
B.	NREM stage 2	NREM stage 4
C.	NREM stage 1	REM sleep
D.	NREM stage 4	NREM stage 2

Question 37

Conclusions drawn from qualitative data are commonly not generalised because

- A.** qualitative research methods are not reliable.
- B.** the qualitative research method cannot be analysed.
- C.** qualitative studies focus on a particular area and context.
- D.** the populations associated with qualitative data are not defined.

Question 38

Nareesh has recently moved to Australia and is struggling to deal with cultural differences and separation from his family. Nareesh has barely slept over the past two days, thinking about an upcoming job interview, and he has been depending on coffee to feel alert. He visits a new friend to get some help.

What are the likely biopsychosocial factors contributing to Nareesh's mental health?

	Biological	Psychological	Social
A.	substance use – precipitating	stress – precipitating	disorganised attachment – protective
B.	stress – perpetuating	substance use – perpetuating	loss of significant relationships – perpetuating
C.	poor sleep – perpetuating	poor self-efficacy – perpetuating	support of a friend – precipitating
D.	poor sleep – precipitating	acculturative stress – precipitating	support of a friend – protective

Use the following information to answer Questions 39–41.

Since finishing secondary school four weeks ago, Ben has been working on a farm. Ben had never lived away from home before and, while he was initially excited, he is now missing his friends and family. Ben has been finding it difficult to sleep at night. He has often come close to crying after speaking to his parents or friends and has sometimes even avoided answering the phone. He has been able to complete his farm work but is worried he is not doing it well enough.

Question 39

Ben's doctor has suggested that he has a mental health problem.

Which of the following characteristics is likely to have contributed to the doctor's assessment of Ben?

- A. feelings of unhappiness and difficulty sleeping
- B. disorganised attachment to his friends and family
- C. unwillingness to adjust to the changes in his lifestyle
- D. ability to complete his farm work and seek the help of others

Question 40

Ben does not want to talk to his new employer or family about his difficulty adapting to his new lifestyle. He does not want to appear vulnerable.

Which type of risk factor is Ben exhibiting when he does not want to appear vulnerable and why?

	Type of risk factor	Why
A.	psychological	stigma, as he does not want to be labelled
B.	biological	not sleeping for several weeks makes him unable to view his situation clearly
C.	social	he fears he will be seen as not coping because of his mental health problem
D.	cumulative	he is cutting himself off from family and friends so they are not aware of his problem

Question 41

A few weeks later, Ben has started to settle into life on the farm and is feeling much happier. He now believes that he is doing a good job and has even asked to learn new skills.

Ben now demonstrates

- A. self-efficacy.
- B. protective factors.
- C. good family support.
- D. cognitive behavioural strategies.

DO NOT WRITE IN THIS AREA

Question 42

Which of the following identifies the type of neurotransmitter contributing to anxiety, its level in the nervous system and its primary effect?

	Type of neurotransmitter	Level in nervous system	Primary effect of neurotransmitter
A.	GABA	low	inhibitory
B.	glutamate	high	inhibitory
C.	GABA	high	excitatory
D.	glutamate	low	excitatory

Use the following information to answer Questions 43–45.

As Vanessa walked to school one morning, she was swooped by a magpie. The magpie caused an injury to her head, which required stitches. Since the injury, Vanessa ducks her head and looks around regularly for a swooping bird. Vanessa refuses to walk to school even when swooping season ends.

Question 43

Vanessa's response is an example of

- A. a learned behaviour.
- B. a conscious reaction.
- C. a reflexive and voluntary response.
- D. an adaptive response to a feared stimulus.

Question 44

Typically, Vanessa experiences a racing heart and sweaty palms even at the thought of walking to school. She finally insists that a parent drive her.

Vanessa's racing heart and sweaty palms are typical of which type of learning?

- A. classical conditioning, because the bird attack was the antecedent
- B. classical conditioning, because walking to school is linked to the bird attack
- C. operant conditioning, because the thought of walking to school acts as a negative stimulus
- D. operant conditioning, because her stress response has been strengthened by a parent driving her to school

Question 45

Which of the following thoughts, feelings or behaviours demonstrate that Vanessa is experiencing a specific phobia rather than anxiety alone?

- A. Vanessa has a racing heart and sweaty palms.
- B. Vanessa will not walk to school after swooping season ends.
- C. Vanessa often thinks about swooping birds during swooping season.
- D. Vanessa is experiencing feelings of apprehension about swooping birds.

Use the following information to answer Questions 46 and 47.

For the past year, Indi and Jovi have been drinking soft drinks with lunch every day. Over the past week, Indi has talked to Jovi about the negative health effects of consuming soft drinks. Indi makes the decision to drink a soft drink only once a week from the start of the next month; Jovi, however, has no plans to reduce her consumption of soft drinks.

Question 46

Which of the following best describes Indi's and Jovi's current stages according to the transtheoretical model of behaviour change?

	Indi	Jovi
A.	action	contemplation
B.	preparation	pre-contemplation
C.	contemplation	pre-contemplation
D.	preparation	contemplation

Question 47

Indi keeps thinking about the negative health effects of soft drinks and finds herself not wanting to drink them at all. Which one of the following best describes Indi's thought process?

- A. anxiety
- B. rumination
- C. impaired reasoning
- D. catastrophic thinking

Question 48

A researcher wants to conduct an experiment with primary school students.

Which of the following describes the most appropriate ethical approach for the researcher to take?

	Informed consent procedure	Debriefing procedure available	Withdrawal rights procedure
A.	written consent from teacher and student	disclosure of deception before student takes part	student can withdraw or parent/guardian can withdraw student anytime
B.	verbal consent from parent/guardian only	counselling offered at conclusion	teacher can withdraw student anytime
C.	written consent from parent/guardian and student	information about findings provided at end of experiment	student can withdraw or parent/guardian can withdraw student anytime
D.	verbal consent from parent/guardian and student	counselling options outlined before experiment begins	student can withdraw anytime

Question 49

Which one of the following best describes the process of systematic desensitisation?

- A. learning to breathe regularly and relax when exposed to fear-inducing stimuli
- B. learning a relaxation technique, followed by exposure to stimuli from least fear-inducing to most fear-inducing
- C. using a learned relaxation technique while being exposed to stimuli from least fear-inducing to most fear-inducing
- D. being placed in a room with a fear-evoking stimulus to trigger an intense fear response that gradually reduces over time

Question 50

A research experiment was conducted on two classes: Class A and Class B. Both classes, with an equal number of participants, completed a multiple-choice test with 10 questions. Both classes had a mean of 5. Class A had a standard deviation of 0.5 compared to 1.5 in Class B.

Based on these results, which one of the following is most likely?

- A. Class B had more varied scores than Class A.
- B. Class B had lower scores overall than Class A.
- C. Class A had lower scores overall than Class B.
- D. Class A had fewer scores clustered around the mean than Class B.

SECTION B**Instructions for Section B**

Answer **all** questions in the spaces provided.

Question 1 (8 marks)

Watson and Rayner classically conditioned 11-month-old 'Little Albert' to produce an emotional response to a white rat by pairing a loud noise with the presentation of a white rat.

During conditioning, Little Albert's response to the white rat was to startle and breathe heavily. After conditioning, he trembled and cried in fear every time he saw a white rat and, later, in response to other white, furry objects.

- a. Outline the processes required during conditioning for the acquisition of Little Albert's emotional responses. 3 marks

- b. In relation to Watson and Rayner's conditioning of Little Albert's emotional responses, outline the application of **one** ethical principle that could have been used to prevent possible long-term distress for Little Albert. 2 marks

- c. Outline the role of a neurotransmitter involved in the conditioning of Little Albert's response. 3 marks

DO NOT WRITE IN THIS AREA

Question 2 (8 marks)

For his student-led investigation, Brendan wanted to find out how watching different types of movies affected a person's level of stress. He recorded the heart rates of participants in Group 1 and Group 2 both prior to and after each group watched a different genre of movie. Their mean heart rates are recorded in the table below. A normal heart rate ranges from 60–80 beats per minute (bpm).

	Heart rate before	Heart rate after
Group 1 (horror)	65 bpm	130 bpm
Group 2 (romantic comedy)	60 bpm	70 bpm

- a. Write a possible research hypothesis for Brendan's investigation.

3 marks

- b. Referring to physiological responses, explain the differences between the heart rates of the groups before and after watching the movies.

2 marks

DO NOT WRITE IN THIS AREA

c. Interpret the results of each group with reference to Selye's General Adaptation Syndrome.

3 marks

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

Question 3 (11 marks)

Are headaches affected by life events and daily pressures?

By M Maple

A study investigated headaches in relation to two types of stressors experienced by participants: life events and daily pressures. Participants were asked to rate the severity of any issue they had experienced from a list of 100 different daily pressures and life events. The greater the score on a four-point scale, the more severe the daily pressure and the more stressful the life event were perceived. Participants were also asked how often they experienced headaches.

The results revealed that headache frequency was greater for participants with a higher average daily pressure score than participants with a higher average life event score. It was not the number of pressures, but the perceived severity of these pressures that best predicted headache frequency.

- a. Outline the difference between ‘daily pressures’ and ‘life events’, providing **one** example of a daily pressure and of a life event. 2 marks

- b. Why did the researchers use a rating scale and what might be a limitation of this type of measure in relation to this study? 2 marks

- c. Suggest **one** possible confounding variable in this study and how this variable could affect the results. 2 marks

DO NOT WRITE IN THIS AREA

- d. According to Lazarus and Folkman's Transactional Model of Stress and Coping, how might the results that link daily pressures with the frequency of headaches be explained? In your response, explain both types of appraisal.

5 marks

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

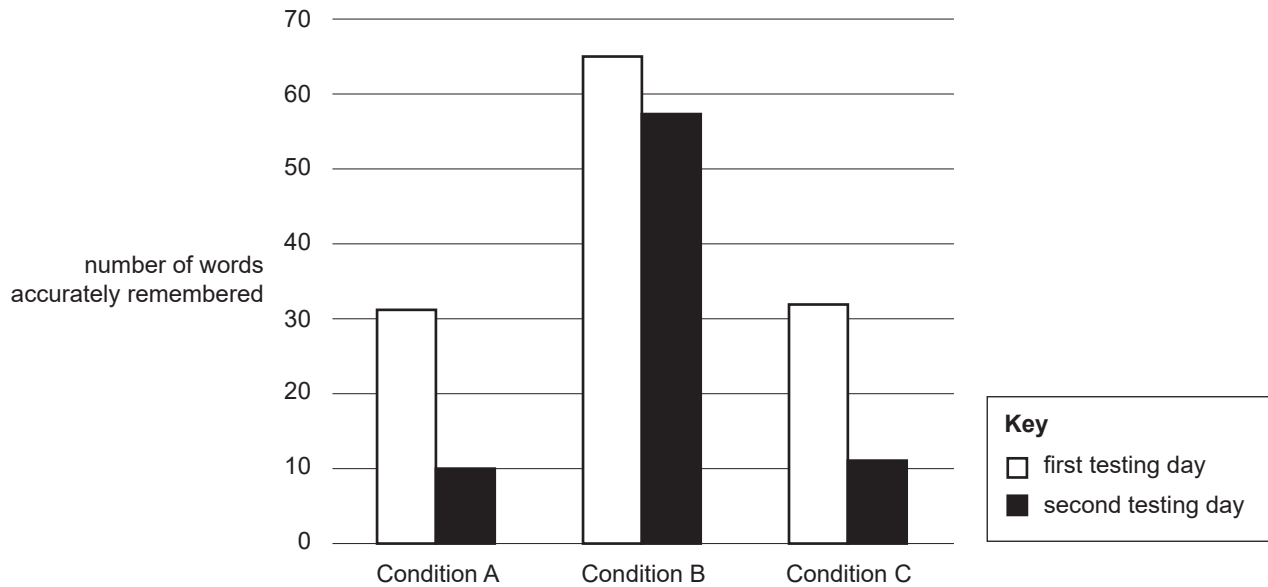
Question 4 (10 marks)

An experiment was conducted to explore if music affects memory. The investigation was undertaken over two days. Participants were randomly assigned to one of the three conditions given in the table below. In each condition, participants were asked to study a list of 80 words over a two-hour period.

On day one, after participants had studied the 80 words, participants were provided with another list of 200 words. This list included the words that were on the original list mixed together with other words. Participants were instructed to circle the words that were on the original list.

On day two, no additional information was provided, and participants were instructed to remember and write down as many of the words from the original list as possible.

Condition	While learning words	While remembering words on both testing days
Condition A	no music playing	no music playing
Condition B	music playing	music playing
Condition C	music playing	no music playing



DO NOT WRITE IN THIS AREA

- a. With reference to the Atkinson-Shiffrin multi-store model of memory, outline **three** processes that occur as the memory of the words on the list transfers from sensory to long-term memory. 3 marks

- b. Explain the different results achieved by the two methods of retrieval adopted in this experiment on day one and day two of the testing. 3 marks

- c. Why is Condition C included in this experiment? 2 marks

- d. Using psychological terminology, explain why participants in Condition B recalled more words on both testing days. 2 marks

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

Question 5 (7 marks)

Conscious sedation, which induces an altered state of consciousness, is a technique used to suppress pain during dental treatment. If deemed the most appropriate form of pain management, a central nervous system depressant or sedative is administered to healthy patients by endorsed dentists. Conscious sedation allows the patient to respond to verbal cues and tactile stimuli throughout the period of sedation so that the dentist can receive real-time feedback about the patient’s state of consciousness.

- a. Why do dentists need to use an external cue(s) to determine if a patient is in an altered state of consciousness? 1 mark

- b. Using conscious sedation, a dentist can still determine a patient’s psychological state by communicating with them. 4 marks
Identify four indicators of change in the patient’s psychological state and outline how the dentist might use these to determine that the patient is in an altered state of consciousness.

Indicator 1 _____

Indicator 2 _____

Indicator 3 _____

Indicator 4 _____

DO NOT WRITE IN THIS AREA

- c. Research into the use of conscious sedation was undertaken in a university's dental outpatients' hospital.

Outline how researchers could use one physiological measure to determine whether a dental patient has reached an altered state of consciousness after the administration of the depressant or sedative. 2 marks

Physiological measure _____

Outline _____

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

Question 6 (6 marks)

When Annabelle started to get a reduced number of shifts at her retail job, she felt quite stressed. She often called her colleague to complain about what she considered to be unfair treatment. Finally, realising she could not change the situation, she did some research on how to improve her employability. She managed to convince a potential employer to give her a trial and, during the trial, proved to the employer that her customer service skills made her worth employing. Annabelle was also studying part time. Her final assignment clashed with a major family commitment that involved travel to another state, so she contacted her teacher and asked for more time to complete the assignment.

- a. Identify three typical characteristics of a mentally healthy person and describe how Annabelle demonstrates each one. 3 marks

Characteristic 1 _____

Description _____

Characteristic 2 _____

Description _____

Characteristic 3 _____

Description _____

- b. Explain how Annabelle used a strategy with context-specific effectiveness to manage **one** external factor that affected her mental health. 3 marks

DO NOT WRITE IN THIS AREA

Question 7 (10 marks)

Eloise is a five-year-old girl who developed a mouse phobia after one crawled on her and woke her from her sleep six months ago. Now, she cannot tolerate being anywhere near a mouse and refuses to enter her bedroom.

- a. Using the language of operant conditioning, outline how Eloise's phobia was perpetuated. 2 marks

- b. Explain how a specific environmental trigger contributed to the development of Eloise's phobia. 2 marks

- c. Explain how **one** evidence-based social intervention could be used to improve Eloise's resilience when dealing with her specific phobia. 3 marks

- d. Explain how **one** biological factor may act as both a risk factor and a protective factor in the development of Eloise's phobia. 3 marks

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

Question 8 (10 marks)

Stanford Medicine News Center published the findings of a study investigating possible treatments for the sleep-wake shift in teenagers. The study investigated bright light therapy on its own, and bright light therapy and cognitive behavioural therapy (CBT) combined. A fake light therapy, too brief to be effective, was used as a control treatment. The study was conducted in two four-week parts, using different participants in each part.

In Part 1, participants were exposed to either bright light therapy or fake light therapy.

- Participants who received the bright light therapy alone felt tired earlier compared to those who received the fake light therapy.
- Participants who received the bright light therapy alone did not go to bed earlier or increase the amount of time they slept.

In Part 2, participants were treated with CBT and either the bright light therapy or the fake light therapy.

- Participants treated with both the bright light therapy and CBT slept for 43 minutes more each night and went to bed 50 minutes earlier than participants who received CBT and the fake light therapy.
- Participants who received both CBT and the bright light therapy were six times more successful at maintaining consistent bedtimes than those receiving CBT and the fake light therapy.

The authors noted that prior studies had demonstrated that CBT alone could help teenagers go to sleep 10 to 15 minutes sooner, on average.

Source: adapted from E Digitale, 'Teens sleep 43 more minutes per night after combo of two treatments', Stanford Medicine News Center, 25 September 2019, <<https://med.stanford.edu/news/all-news/2019/09/teens-sleep-43-more-minutes-per-night-after-combo-of-two-treatme.html>>

Evaluate the contribution of bright light therapy and CBT to the improved sleeping habits of the teenage participants in this study. As part of your evaluation, explain the sleep-wake shift that can occur in adolescence and discuss how bright light therapy and CBT can reduce the impact of this sleep-wake shift in adolescence. Evaluation of the study's methodology and method is not required.

DO NOT WRITE IN THIS AREA

