

YEAR 12 *Trial Exam Paper*

2020

PSYCHOLOGY

Written examination

Reading time: 15 minutes

Writing time: 2 hours 30 minutes

STUDENT NAME:

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 43 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 **name** in the space provided above on this page and on the multiple-choice answer sheet.
- 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.

This trial examination produced by Insight Publications is NOT an official VCAA paper for the 2020 Psychology written examination. Every effort has been made to gain permission to reproduce any images and texts herein; failure to do so is not intended to limit the rights of the owner. The Publishers assume no legal liability for the opinions, ideas or statements contained in this trial examination. This examination paper is licensed to be printed, photocopied or placed on the school intranet and used only within the confines of the purchasing school for examining their students. No trial examination or part thereof may be issued or passed on to any other party, including other schools, practising or non-practising teachers, tutors, parents, websites or publishing agencies, without the written consent of Insight Publications.

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.

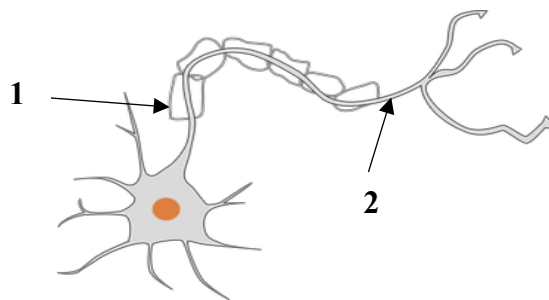
A correct answer scores 1; an incorrect answer scores 0.

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

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

Use the following information to answer Questions 1 and 2.

A diagram of a neuron is shown below.



Source: <https://pixabay.com/vectors/axon-brain-cell-dendrites-nerve-1294021/>

Question 1

If the part labelled 1 on the diagram of the neuron was damaged, how would the neuron's ability to transmit information in the nervous system be affected?

- A. The neuron would release fewer neurotransmitters, reducing its ability to transmit messages to post-synaptic neurons.
- B. Fewer messages would be received by receptor sites on neighbouring neurons.
- C. The post-synaptic neuron would be less likely to fire because fewer neurotransmitters would be released.
- D. Action potentials from other neurons would interfere with the transmission of information along the axon.

Question 2

When information is transmitted within a neuron, the role of the part of the diagram labelled 2 is to

- A. detect information from neighbouring neurons.
- B. carry information from the axon terminal to the dendrites.
- C. transmit information from the dendrites to the axon terminal.
- D. store neurotransmitters and release them into the synaptic gap.

Question 3

In a spinal reflex, the role of interneurons in the spinal cord is to

- A.** initiate an adaptive motor response and relay this to motor neurons in the peripheral nervous system.
- B.** initiate an adaptive motor response and relay this to sensory neurons in the peripheral nervous system.
- C.** carry sensory information from the body to the brain and motor information from the brain to the body.
- D.** carry sensory information from the brain to the body and motor information from the body to the brain.

Use the following information to answer Questions 4–9.

Layal is training to run a half-marathon in a few months. During the week she has been completing two short runs, and on weekends she goes for a longer run. Layal has also been gradually increasing the distance that she covers each week. However, she is worried that if her work becomes busier, she will not be able to fit in three training runs each week, and that may prevent her from being able to complete the 21 km distance on race day. Layal is feeling overwhelmed and anxious about fitting everything into her busy schedule.

Question 4

Which of the following best represents Layal's biological and psychological responses to the stressor of running a half-marathon?

	Biological	Psychological
A.	sympathetic nervous system activation, including increased heart rate	eustress
B.	parasympathetic nervous system activation, including decreased digestion rate	distress
C.	parasympathetic nervous system activation, including dilated pupils	eustress
D.	sympathetic nervous system activation, including increased sweat production	distress

Question 5

After another month of training, Layal is feeling more overwhelmed. Her responsibilities at work have increased, meaning that she must work longer hours. This has made it difficult for her to fit in her weekly training. In addition, her dog fell ill and had to have surgery. Since then, Layal has been feeling sad, tired and run down.

Which of the following most accurately identifies the stage of Selye's General Adaptation Syndrome that Layal is in after her dog falls ill and the justification that supports this stage?

	Stage	Justification
A.	alarm reaction	Layal's dog is ill and she is feeling sad, tired and run down.
B.	resistance	Layal's ability to deal with the stressor of the half-marathon is above normal levels and she is coping well.
C.	exhaustion	Layal's energy resources are depleted and her ability to deal with the stressor of the half-marathon has dropped well below normal levels.
D.	resistance	Layal is beginning to show signs of wear and tear and is finding it difficult to deal with the additional stressor of having a very sick dog.

Question 6

What would be one advantage and one disadvantage of a prolonged release of cortisol for Layal?

	Advantage	Disadvantage
A.	increased energy to deal with the stressor more efficiently	impaired immune system functioning, which would increase vulnerability to illness
B.	inhibited digestion to divert energy to other parts of the body to help deal with the stressor	decreased energy as a result of less glucose being available
C.	enhanced immune system functioning, which would decrease vulnerability to illness	inhibited digestion to divert energy to other parts of the body to help deal with the stressor
D.	inhibited thyroid functioning, including decreased metabolism	blood glucose imbalances

Question 7

A limitation of Selye's General Adaptation Syndrome with reference to Layal's stress response is that it

- A.** does not recognise that her stress is directly linked to an increased risk of illness or disease.
- B.** does not account for her individual interpretation of the situation and the psychological aspects of her stress response.
- C.** is unable to be researched experimentally because Layal may experience the stages simultaneously.
- D.** does not recognise that many of Layal's biological responses are the same, despite differences in the types of stressors she is exposed to.

Question 8

In terms of sources of stress, Layal running the half-marathon and having her dog fall ill and requiring surgery would

- A.** be daily hassles.
- B.** be a major stressor and a life event, respectively.
- C.** be a life event and a major stressor, respectively.
- D.** be major stressors.

Question 9

During winter, Layal is worried about running outdoors because she hates the cold.

Which one of the following coping strategies would show high context-specific effectiveness for Layal?

- A. continuing to do her training runs outside but going on shorter runs
- B. using an app to predict the weather and running on the treadmill at the gym if needed
- C. avoiding going for training runs and hoping that the training she has done so far will be sufficient
- D. studying good running techniques online and hoping that this will allow her to finish the race, despite not doing all of her training runs

Question 10

Which one of the following best describes the final step in the lock-and-key process in relation to gamma-amino butyric acid (GABA)?

- A. GABA is released from the axon terminal of the pre-synaptic neuron and travels towards the dendrites on the post-synaptic neuron.
- B. GABA binds to its complementary-shaped receptor site on the dendrites of the post-synaptic neuron, making the post-synaptic neuron less likely to fire.
- C. GABA binds to receptor sites on the dendrites of the post-synaptic neuron that have the same molecular shape, making the post-synaptic neuron less likely to fire.
- D. GABA binds to its complementary-shaped receptor site on the dendrites of the post-synaptic neuron, making the post-synaptic neuron more likely to fire.

Use the following information to answer Questions 11–15.

Alicia works part-time at a childcare centre while she is studying psychology at university. She recently learnt about the ‘Little Albert’ experiment and thought she might set up a similar experiment with one of the infants at her childcare centre. Alicia plans to use classical conditioning techniques to teach the infant to fear her dog, Fido, by introducing a loud noise by banging a saucepan with a spoon.

Question 11

For Alicia to successfully condition an infant to fear her dog, she would need to pair

- A. the loud noise (unconditioned stimulus) with the fear of the dog (unconditioned response).
- B. the dog (unconditioned stimulus) with the fear of the dog (conditioned response).
- C. the loud noise (unconditioned stimulus) with the fear of the loud noise (unconditioned response).
- D. the loud noise (unconditioned stimulus) with the dog (neural stimulus).

Question 12

If, after successfully conditioning the infant to fear her dog, the infant also fears cats, foxes and rabbits, then the infant is demonstrating

- A. spontaneous recovery.
- B. stimulus discrimination.
- C. stimulus generalisation.
- D. acquisition.

Question 13

Which one of the following ethical implications would most likely result in Alicia being told she could not run this experiment?

- A. The infant would be unable to provide informed consent before the experiment.
- B. The infant would experience distress as a result of being exposed to loud noises and having fear responses.
- C. The infant would not be able to use withdrawal rights during the experiment.
- D. The infant would be deceived about the true purpose of the experiment.

Question 14

A classically conditioned fear response, such as the infant's fear of the dog that Alicia is attempting to demonstrate in her experiment, would be consolidated in the

- A. hippocampus because it is a type of explicit memory.
- B. amygdala because it is a type of implicit memory.
- C. amygdala because it is a type of explicit memory.
- D. cerebral cortex because it is a type of implicit memory.

Question 15

Alicia planned to extinguish the infant's fear of dogs after her experiment. This would involve Alicia presenting her dog without the loud noise multiple times until the infant no longer produces a fear response towards it. It is likely that the infant would experience long-term depression as a result of this process.

This would involve connections in the infant's brain between the dog and the

- A. loud noise being weakened due to a lack of stimulation over time.
- B. fear response being weakened due to a lack of stimulation over time.
- C. fear response being weakened due to low-level stimulation of the dog being presented without the loud noise.
- D. loud noise being weakened due to low-level stimulation of the dog being presented without the loud noise.

Use the following information to answer Questions 16–20.

A researcher wanted to investigate the effect of a full night of sleep deprivation on arousal in university students. Fifty first-year psychology students responded to an advertisement asking for volunteers. After 24 hours without sleep, the participants were asked to complete two tests to measure their arousal levels.

The first test involved participants sitting at a computer and clicking a mouse as fast as they could when the colour on the screen changed from green to red. Each participant completed ten trials and their average response time in seconds was calculated.

The second test involved participants reading a passage and identifying grammar and spelling mistakes. Mistakes that were not identified were counted and each participant received a score out of 20. The higher the score, the fewer mistakes they correctly identified.

The participants were asked to complete the same tests the following day after having had a full night of sleep.

The results were as follows.

Effects of 24 hours of sleep deprivation

	24 hours of sleep deprivation	No sleep deprivation
Average response time (in seconds)	2.36	1.28
Average number of unidentified mistakes (out of 20)	7.54	4.12

Question 16

Which of the following best describes the types of measures in the two tests conducted by the researcher?

	Average response time (seconds)	Average number of unidentified mistakes (out of 20)
A.	accuracy	speed
B.	speed	accuracy
C.	controlled processes	automatic processes
D.	automatic processes	controlled processes

Question 17

The experimental design used in this study was

- A.** repeated measures.
- B.** independent groups.
- C.** self-report.
- D.** matched participants.

Question 18

The researcher concluded that the results supported the hypothesis.

Which one of the following most closely resembles the researcher's original hypothesis?

- A. The speed and accuracy of university students will be impaired when they are sleep deprived compared with when they are not sleep deprived.
- B. The speed and accuracy of first-year psychology students will be impaired when they are sleep deprived compared with when they are not sleep deprived.
- C. The speed and accuracy of university students will be improved when they are sleep deprived compared with when they are not sleep deprived.
- D. The speed and accuracy of first-year psychology students will be improved when they are sleep deprived compared with when they are not sleep deprived.

Question 19

Which of the following identifies the sampling method used and best describes one of its advantages?

	Sampling method	Advantage
A.	random	The sample is unlikely to be biased and likely to be representative of the population.
B.	convenience	The study will not be time-consuming to conduct because not every member of the population is given an equal chance of being in the sample.
C.	convenience	The sample is likely to be representative because every member of the population is given an equal chance of being in the sample.
D.	stratified	The sample is likely to be representative because each stratum within the population is represented in equal proportions.

Question 20

If the participants were connected to an electromyograph (EMG) and electroencephalograph (EEG) in addition to the other two tests, what would these machines have likely shown?

After 24-hours' sleep deprivation		After a full night of sleep (no sleep deprivation)	
EMG	EEG	EMG	EEG
A. decreased electrical activity	decreased frequency and amplitude of brain waves	increased electrical activity	increased frequency and amplitude of brain waves
B. decreased electrical activity	increased frequency and amplitude of brain waves	increased electrical activity	decreased frequency and amplitude of brain waves
C. increased electrical activity	increased frequency and decreased amplitude of brain waves	decreased electrical activity	decreased frequency and increased amplitude of brain waves
D. decreased electrical activity	decreased frequency and increased amplitude of brain waves	increased electrical activity	increased frequency and decreased amplitude of brain waves

Use the following information to answer Questions 21–24.

Yannick went to Japan with his parents for two weeks during the school holidays. They travelled to a few different cities while they were there. Yannick enjoyed looking at the cherry blossoms that were blooming and he loved all the different foods he ate.

Question 21

Which neurotransmitter would have helped Yannick to form memories of the places he visited in Japan?

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

Question 22

Yannick's memories of the places he visited in Japan would be consolidated in his

- A. cerebral cortex.
- B. amygdala.
- C. cerebellum.
- D. hippocampus.

Question 23

Yannick struggled to remember a lot of the places he visited. He relied on the photos on his phone to recall the names of the cities he went to so he could tell his friends about them.

Using photos as retrieval cues is an example of

- A. free recall.
- B. cued recall.
- C. relearning.
- D. recognition.

Question 24

If Yannick were to suffer from anterograde amnesia after returning from Japan, which one of the following symptoms would he be most likely to experience?

- A. He would not be able to recognise his mum and dad.
- B. He would not be able to recall the names of the cities he visited in Japan.
- C. He would not be able to remember what he ate for breakfast that morning.
- D. He would not be able to remember how to hold a knife and fork correctly when eating.

Question 25

Which one of the following is an example of maintenance rehearsal?

- A. using flashcards to learn key concepts by reading them silently in your head
- B. using self-referencing to link new concepts to your own personal experiences
- C. creating a narrative involving key concepts
- D. linking concepts in a summary or mind map

Question 26

In Loftus's research on eyewitness testimony and the effect of leading questions, the independent variable was

- A. the estimate of the average speed of the vehicles.
- B. the average number of participants who reported broken glass in the crash.
- C. the verb that was used in the question asked after watching the clip, such as 'smashed', 'collided', 'hit' or 'bumped'.
- D. whether or not a leading question was asked.

SECTION A – continued
TURN OVER

Use the following information to answer Questions 27–29.

Simon has been training his dog, Rex, to sit. He says the word ‘sit’. When Rex sits, Simon gives him a treat.

Question 27

In terms of the three-phase model of operant conditioning, the antecedent in this scenario would be

- A. the increased likelihood of Rex sitting.
- B. Simon saying ‘sit’.
- C. Simon giving Rex the treat.
- D. Rex sitting.

Question 28

Which one of the following best describes Rex demonstrating spontaneous recovery?

- A. After multiple trials of sitting and receiving treats, Simon punishes Rex by yelling at him and Rex stops sitting.
- B. Simon says ‘sit’ and Rex sits, anticipating a treat.
- C. After multiple trials of Simon saying ‘sit’ but not giving any treats, Rex stops sitting. The next day when Simon says ‘sit’, Rex sits.
- D. Simon holds out a bone and Rex sits.

Question 29

Which one of the following best explains why Simon would not be able to use classical conditioning to train Rex to sit?

- A. Sitting is an involuntary reflexive response for Rex.
- B. Rex sitting involves the association between two stimuli: Simon saying ‘sit’ and the treat.
- C. Sitting is a passive response for Rex.
- D. Sitting is a voluntary response for Rex.

Question 30

Which of the following best identifies the function and duration of short-term memory in the Atkinson-Shiffrin multi-store model of memory?

	Function	Duration
A.	to store information for retrieval	relatively permanent
B.	to temporarily store information so that it can be consciously manipulated	5–9 seconds
C.	to temporarily store long-term memories and sensory stimuli from the environment to consciously work with them	18–30 seconds
D.	to temporarily store sensory stimuli from the environment	18–30 seconds

Question 31

Sleep is an altered state of consciousness because

- A.** it is a naturally occurring circadian rhythm controlled by the amount of light in the environment.
- B.** our content limitations are lowered and our time orientation is less accurate.
- C.** our awareness of external stimuli and our self-control both increase.
- D.** it can be induced, such as when sleeping tablets are taken to encourage sleep.

Question 32

How do the ultradian rhythms of REM and NREM sleep change throughout the course of a night?

- A.** The proportion of REM increases, while the proportion of NREM decreases.
- B.** The proportions of REM and NREM both increase.
- C.** The proportion of REM decreases, while the proportion of NREM increases.
- D.** The proportions of REM and NREM both decrease.

Question 33

In which stage of NREM sleep do we spend the most time during a normal night's sleep?

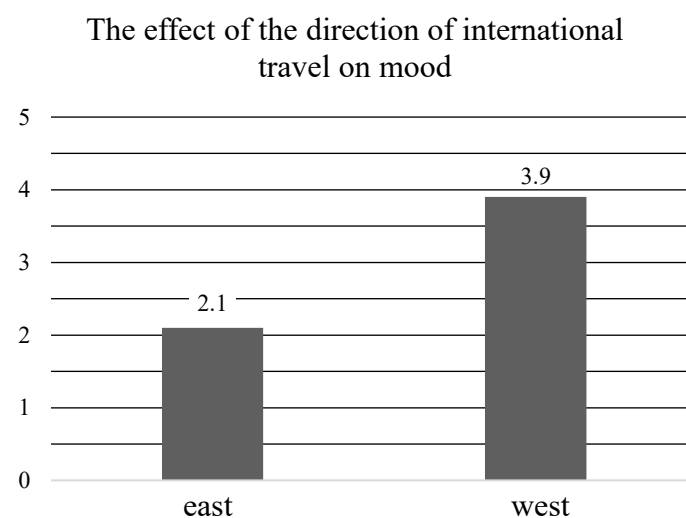
- A.** NREM 1
- B.** NREM 2
- C.** NREM 3
- D.** NREM 4

Use the following information to answer Questions 34–37.

A psychologist is employed by an airline to investigate the effects of jet lag on its employees' moods. Forty flight attendants volunteer to participate in the study: 20 men and 20 women. Half of the flight attendants regularly work on flights from Australia to South America, which involves travelling in a westerly direction. The other flight attendants regularly work on flights from Australia to Canada, which involves travelling in an easterly direction. After arriving at their destinations, the flight attendants were asked to rate their mood on a scale from 5 (very good) to 1 (very poor).

The flight attendants were asked to complete the same mood scale when they returned to Australia, travelling in the opposite direction of their original flight. The responses of the flight attendants were then collated to see if the direction of travel (east or west) affected average mood ratings.

The graph below represents the results



Question 34

Which one of the following is the most appropriate label for the vertical axis in the graph above?

- A. direction of travel
- B. average mood rating out of 5
- C. travelling to South America or Canada
- D. mood rating of participants

Question 35

In terms of jet lag symptoms, the results in the graph support the idea that

- A. travelling east and west are both bad because they involve travelling across many time zones.
- B. travelling west is worse than travelling east because the day is lengthened and this goes against our natural circadian rhythm.
- C. travelling west is better than travelling east because the day is lengthened and this suits our natural circadian rhythm.
- D. travelling east is better than travelling west because the day is lengthened and this suits our natural circadian rhythm.

Question 36

Which of the following identifies the procedure used when the flight attendants were asked to complete the mood scale after their flight from Australia and then after they returned to Australia in the opposite direction, and the potential confounding variable this procedure minimises?

	Procedure	Potential confounding variable
A.	counterbalancing	order effects
B.	repeated measures	counterbalancing
C.	counterbalancing	experimenter effect
D.	double-blind	order effects

Question 37

If bright light therapy is used to reduce the symptoms of jet lag experienced by the flight attendants, it would be most effective when presented

- A.** first thing in the morning according to the time in Australia.
- B.** in the evening at their destination.
- C.** first thing in the morning at their destination.
- D.** in the evening according to the time in Australia.

Question 38

Which of the following correctly identifies a difference between a phobia and anxiety?

	Phobia	Anxiety
A.	can be considered normal	not considered normal
B.	can be adaptive and helpful	not considered adaptive and helpful
C.	is a diagnosable mental disorder	can develop into a mental disorder if not managed properly
D.	usually occurs in response to a wide variety of stimuli	usually occurs in response to a specific stimulus

Use the following information to answer Questions 39–44.

Richard was recently diagnosed with a phobia of birds. His phobia developed after he was repeatedly swooped by a magpie in primary school. On one occasion, he was injured by the magpie.

Question 39

Classical conditioning would have played a role in

- A. perpetuating Richard's phobia by associating birds (conditioned stimulus) with being swooped by the magpie (unconditioned stimulus).
- B. precipitating Richard's phobia by associating birds (conditioned stimulus) with being swooped by the magpie (unconditioned stimulus).
- C. perpetuating Richard's phobia by associating being swooped by the magpie (conditioned stimulus) with pain and fear (unconditioned response).
- D. precipitating Richard's phobia by associating being swooped by the magpie (conditioned stimulus) with pain and fear (unconditioned response).

Question 40

As a result of classical conditioning, Richard's conditioned response would be

- A. experiencing fear in response to birds.
- B. experiencing fear in response to being swooped by a magpie.
- C. feeling pain in response to being swooped by a magpie.
- D. avoiding birds.

Question 41

Richard started seeing a psychologist to manage his phobia. The psychologist said that he was experiencing a memory bias.

Which one of the following could be a memory bias that Richard has about birds?

- A. Richard believes that if he goes outside, birds will kill him.
- B. Richard remembers the good times he had with his pet parrot, as well as being swooped by the magpie.
- C. Richard only remembers the times when he got swooped by the magpie and the pain he experienced rather than other pleasant bird memories he may have.
- D. Richard believes that the odds of being attacked by a bird when he leaves the house are higher than they really are.

Question 42

For Richard, this memory bias would be a

- A. social perpetuating factor.
- B. cognitive precipitating factor.
- C. cognitive perpetuating factor.
- D. social precipitating factor.

Question 43

Richard's psychologist said that, in addition to his memory bias, he was experiencing irrational thoughts about birds, such as 'all birds will kill me' and 'if I leave the house I will get attacked by birds'. The psychologist began using cognitive behavioural therapy with him.

The cognitive component of this therapy would involve

- A. modifying unhelpful avoidance behaviours, such as not leaving his house.
- B. relaxation training, such as meditation to reduce Richard's anxiety levels.
- C. modifying unhelpful thoughts by challenging them with statistics about the likelihood of being attacked by birds.
- D. using systematic desensitisation and gradually exposing Richard to bird-related stimuli.

Question 44

In addition to the cognitive behavioural therapy, Richard's doctor prescribes him with a benzodiazepine (GABA agonist).

This type of medication works by

- A. exciting pre-synaptic neurons and making them more likely to fire.
- B. inhibiting pre-synaptic neurons and making them more likely to fire.
- C. inhibiting post-synaptic neurons and making them less likely to fire.
- D. exciting post-synaptic neurons and making them less likely to fire.

Question 45

Which of the following correctly identifies the neurotransmitter and the brain area affected by Parkinson's disease?

	Neurotransmitter	Brain area
A.	dopamine	substantia nigra
B.	acetylcholine	medial temporal lobe
C.	GABA	substantia nigra
D.	dopamine	medial temporal lobe

Question 46

A key difference between neurohormones and neurotransmitters is that

- A. neurohormones are released from the pre-synaptic neuron while neurotransmitters are released from the post-synaptic neuron.
- B. neurohormones have an immediate effect on the body while neurotransmitters take more time to have an effect.
- C. neurohormones are released into the synaptic gap while neurotransmitters are not.
- D. neurohormones can travel throughout the body while neurotransmitters are unlikely to travel throughout the body.

Question 47

Which one of the following would involve collating primary and quantitative data?

- A. A teacher asks her students to complete a rating scale that measures their attitude towards a lesson she taught.
- B. A university student gathers statistics on conformity from previous studies.
- C. A research assistant interviews ten new mothers about their sleeping behaviour since their baby was born.
- D. A doctor finds case studies online to help her diagnose a patient who has a strange combination of symptoms.

Use the following information to answer Questions 48–50.

Fran was recently diagnosed with Alzheimer's disease. Her daughter is concerned because Fran lives alone and has struggled with mental health issues in the past.

Question 48

Which one of the following correctly describes the physiological changes that would be occurring in Fran's brain in the early stages of the disease?

- A. Cortical shrinkage would be occurring in the cerebellum.
- B. Amyloid plaques would be developing in the synaptic gap.
- C. Neurofibrillary tangles would be forming both inside and outside of the neurons.
- D. Acetylcholine levels in the brain would be increasing.

Question 49

Although Fran's daughter cannot slow down the progression of Fran's condition, she would like to find ways to maintain Fran's currently healthy mental state.

Which of the following correctly identifies mental health protective factors?

	Social	Psychological	Biological
A.	joining a support group	cognitive behavioural strategies	taking medication
B.	seeing a psychologist	experiencing stress	adequate diet
C.	joining a support group	cognitive behavioural strategies	adequate sleep
D.	seeing a psychologist	joining a support group	adequate diet

Question 50

A new medication to slow the progression of Alzheimer's disease is being trialled. Fran's doctor believes that Fran would be a suitable candidate for the study.

The best way for Fran's doctor to obtain consent for her involvement in the study would be to

- A. wait for Fran's condition to progress and then get consent from her legal guardian.
- B. wait for Fran's condition to progress and then have her involuntarily admitted into hospital.
- C. obtain consent from Fran during a period of time when she is thinking clearly and her memory is functioning properly.
- D. sign the consent form on Fran's behalf.

**END OF SECTION A
TURN OVER**

SECTION B**Instructions for Section B**

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

Question 1 (10 marks)

Ariella has been learning to play the flute for nearly one year. To perform in an upcoming school concert, she has been practicing the song 'Für Elise' by Beethoven. When Ariella first learned the song one month ago, she struggled to place her fingers in the correct positions for some of the notes, but now she is confidently able to play all of the notes without looking at her sheet music. However, she is still nervous about playing in the concert because she is worried about making a mistake and embarrassing herself in front of her family and friends.

- a.** Identify the neurotransmitter predominantly involved in Ariella learning to play the song 'Für Elise' and explain the involvement of the neurotransmitter in the process of long-term potentiation when Ariella was learning to play the song without looking at her sheet music.

4 marks

- b.** With reference to Lazarus and Folkman's Transactional Model of Stress and Coping, explain Ariella's primary appraisal of performing at the school concert.

2 marks

- c.** Suggest an approach strategy that Ariella could use to help reduce the stress she is experiencing and provide one advantage of this strategy.

2 marks

- d.** Explain how Ariella could demonstrate high coping flexibility in this situation.

2 marks

Question 2 (10 marks)

Jemima, a Year 12 psychology student, wanted to investigate the effectiveness of different methods of retrieval of information from long-term memory. She loves watching comedy routines with her friends, so she decided to test their memory of a five-minute comedy routine that included ten short jokes.

Participants

Nine 18-year-old students from Jemima's psychology class who volunteered to participate.

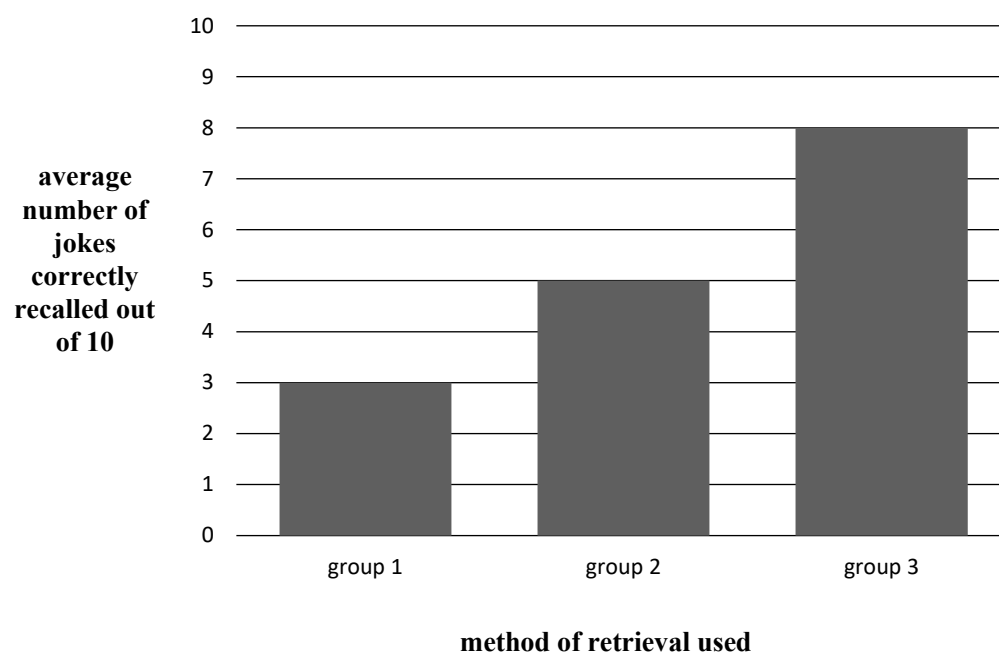
Procedure

Jemima put the students' names into a hat and randomly allocated them into one of three groups.

Group	Procedure
1	Participants were asked to write down as many of the ten jokes from the comedy routine as possible on a blank sheet of paper.
2	Participants were provided with the beginning of each of the ten jokes from the comedy routine on a sheet of paper and asked to write down as many of the ends of the jokes as possible.
3	Participants were provided with a sheet of paper with all ten jokes used in the comedy routine as well as ten jokes not used in the routine. They were then asked to identify the ten jokes used in the routine.

Results

Jemima recorded the average number of jokes correctly recalled for each group, as shown in the graph below.



- a.** Using your understanding of the methods of retrieval, suggest a conclusion about Jemima's results.

4 marks

- b.** Jemima decided to test an additional group of students from her class. They were asked to recall the ten jokes immediately after the comedy routine finished.

With reference to the serial position effect, predict the likely results of this test.

3 marks

- c. Suggest a possible extraneous variable in Jemima's original study and explain the impact it may have had on the validity of the results.

3 marks

CONTINUES OVER PAGE

Question 3 (11 marks)

Karl is a 32-year-old nurse who works the night shift. He is believed to be suffering from shift work disorder. To confirm this diagnosis, Karl's sleep specialist asked him to sleep in a sleep laboratory for one week. Karl was expected to complete a sleep diary each day in the laboratory, and an electrooculograph (EOG), electroencephalograph (EEG) and an electromyograph (EMG) were used to measure his sleeping patterns each night. The sleep specialist's analysis of Karl's results confirmed that he was suffering from shift work disorder.

The results obtained are summarised in the tables below.

Laboratory results (using EEG, EOG and EMG)

average time slept each night (hours)	5.2
average time taken to fall asleep (minutes)	92.5
percentage of REM sleep recorded	29
percentage of NREM sleep recorded	71

Recordings in sleep diary

average sleep quality (1 = low, 5 = high)	1.8
average daytime sleepiness (1 = low levels of sleepiness, 5 = high levels of sleepiness)	4.3

- a. Describe what the electrooculograph (EOG) recording would show when Karl was in REM sleep.

1 mark

- b.** Explain why the sleep specialist confirmed that Karl had a circadian phase disorder by referring to two pieces of evidence gathered in the sleep study.

3 marks

- c.** Why would Karl's sleep diary be subjective in nature and of limited use as a measure of consciousness?

2 marks

- d.** Identify one psychological effect of sleep deprivation and explain why it could be dangerous when Karl is at work.

2 marks

- e. Karl's sleep specialist suggests trying bright light therapy at home to improve the quality and quantity of his sleep.

Describe when Karl should expose himself to the bright light and explain why this would help to improve Karl's sleep during the day.

3 marks

Question 4 (7 marks)

David is busy typing an English essay on his laptop, which is a conscious response. He is looking at his previous essay draft and adding quotes that his teacher advised him to use. David is focused and relaxed and feels confident he will get a good mark based on the feedback he received from his teacher.

- a.** Identify two different divisions or subdivisions of the nervous system and outline how they would interact to enable David to consciously type his essay.

5 marks

- b.** Provide two reasons why David writing an essay would be a conscious response rather than an unconscious response.

2 marks

Question 5 (7 marks)**Behaviour Modification Techniques**

by Amy Morin

Behaviour modification is based on the idea that good behaviour should lead to positive consequences and bad behaviour should lead to negative consequences.

You cannot force a child to change their behaviour, but you can change the environment in such a way that they will be more motivated to change. Behaviour modification is about modifying the environment in a way that gives your child more incentive to follow the rules.

Consistency is the key to making behaviour modification more effective. If you praise your child for doing their chores, use praise every time they do their chores until it becomes a habit. Then you can gradually phase out your praise over time.

Negative consequences should also be consistent. If your child only gets sent to timeout once out of every five times they hit someone, your consequences will not be effective. The child needs to go to timeout every time they hit someone.

Some examples of effective consequences that could be used include:

- giving a child an extra chore for lying when asked if they cleaned their room
- placing a child in timeout so they do not receive any positive attention and actively ignoring them when they have a temper tantrum
- saying, 'Great job for putting your dish away before I even asked you to'
- nagging your child to do their chores; they do their chores to make the nagging stop.

Source: This source has been altered with permission.

Adapted from Amy Morin, <https://www.verywellfamily.com/what-is-behavior-modification-1094788>

- a. Identify the type of consequence used when placing a child in timeout and ignoring them when they have a temper tantrum, and explain the desired effect it would have on the child's behaviour in the future.

2 marks

Type of consequence _____

Effect on future behaviour _____

- b.** With reference to the role of consistency in behaviour modification, explain why it is essential for parents to use stimulus generalisation to their advantage, particularly when trying to modify their child's temper tantrums in different contexts such as shopping at the supermarket.

2 marks

- c.** In terms of observational learning, explain how praise would play a role in the stages of motivation and reinforcement when parents are teaching their children to put their dishes away.

3 marks

Question 6 (6 marks)

Adam and Toby went to their friend's 18th birthday party and drank a lot of beer. When they took a taxi home to Toby's house at around 3 am, they still felt very drunk. At Toby's house, they decided to blow into his portable breathalyser for fun, just to see what their blood alcohol concentrations (BACs) were. Adam blew a BAC of 0.10, while Toby's was 0.20. They did not drink any more alcohol but stayed up all night playing games on Toby's console. At 9 am, Adam had a cup of coffee and drove home after being awake for nearly 24 hours.

- a.** Using your understanding of the effects of one full night of sleep deprivation on cognition, explain why Adam would be advised not to drive home at 9 am.

2 marks

- b.** In terms of psychological changes, explain how both Adam's and Toby's content limitations and self-control would differ from their normal waking consciousness when they arrived home at 3 am.

4 marks

Content limitations _____

Self-control _____

Question 7 (9 marks)

May broke up with her partner of three years a couple of weeks ago. Since then, she has been feeling sad and has not socialised as much as she used to. However, May is still managing at work and regularly takes her dog for walks to help her relax. She also has a good friend who recently went through a divorce, and May finds it easy to chat to her about the situation.

- a.** Is May likely to be suffering from a mental health problem or a mental disorder? Justify your response by considering key characteristics of mental health problems and mental disorders in relation to May's situation.

3 marks

- b.** Identify one internal and one external factor that could influence May's position on the mental health continuum over time.

2 marks

Internal factor _____

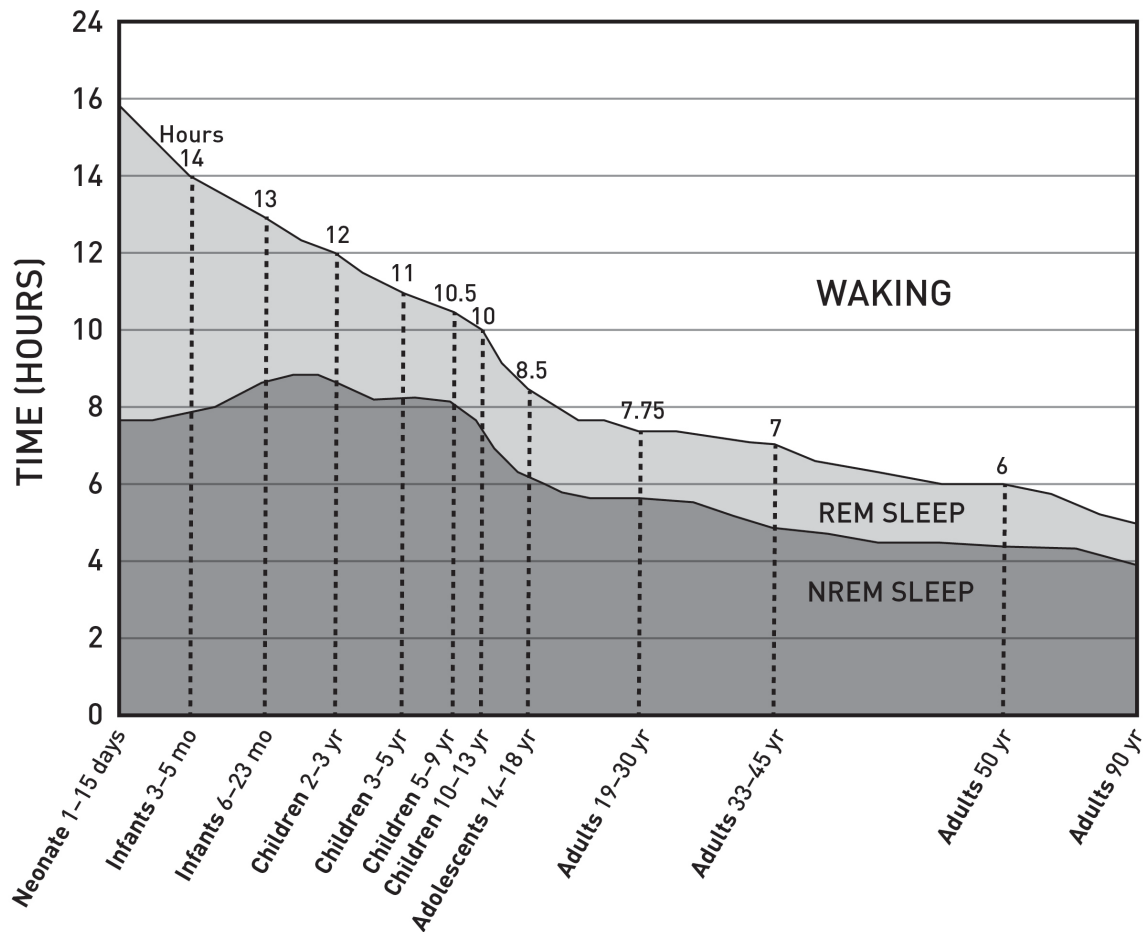
External factor _____

- c.** Explain why having a high level of resilience could help May deal with her relationship breakdown.

2 marks

- d.** Provide two reasons why May finds exercise, in the form of walking her dog, beneficial to reduce the stress associated with her break-up.

2 marks

Question 8 (10 marks)**Typical pattern of sleep across the lifespan**

Source: Adapted from http://www.habitot.org/hab/newsletter/sleep/sleep_over_the_lifespan_nrem_rem_ratio.html

There are several theories of the purpose and function of sleep. Two of these theories are the restoration theory and the evolutionary theory.

With reference to the graph above, evaluate how the restoration and evolutionary theories and their associated evidence could be used to explain the changes in human sleep patterns that occur across the lifespan. In your response, ensure that you refer to the changes that occur in relation to total sleep time and the proportion of time spent in REM and NREM sleep.

[illegible]

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

Copyright © Insight Publications 2020

Clearly number all responses in this space.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]