

Victorian Certificate of Education
2016

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER Letter

PSYCHOLOGY
Written examination

Thursday 27 October 2016

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	65	65	65
B	14	14	60
C	4	4	15
			Total 140

- 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.

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 correct sequence in which information travels along a neural pathway is

- A. dendrite, synapse, neurotransmitter, axon.
- B. synapse, neurotransmitter, axon, dendrite.
- C. axon, dendrite, synapse, neurotransmitter.
- D. dendrite, axon, synapse, neurotransmitter.

Question 2

Which one of the following behaviours is an example of maturation?

- A. a toddler walking
- B. learning to write in Grade 1
- C. being taught to sing the national anthem
- D. a three-year-old imitating her older sister's dance move

Question 3

Dimo wants to teach his dog to roll over.

An effective strategy for Dimo to use would most likely be

- A. graduated exposure.
- B. aversion therapy.
- C. token economy.
- D. shaping.

Question 4

The left hemisphere of the brain is primarily responsible for processing information relating to

- A. writing, logic and science.
- B. listening, dancing and fantasy.
- C. maths, science and appreciation of art.
- D. speaking, maths and facial recognition.

DO NOT WRITE IN THIS AREA

Question 5

People with spatial neglect following a stroke or other brain injury commonly fail to attend to the

- A. left side of space.
- B. right side of space.
- C. lower area of space.
- D. both the right and left sides of space.

Question 6

What would a comparison of sleep between typical adolescents and children show?

- A. Children have later sleep onset than adolescents.
- B. Children spend proportionately less time in slow-wave sleep than adolescents.
- C. Adolescents spend proportionately more time in rapid eye movement (REM) sleep than children.
- D. The total amount of time spent in slow-wave sleep is relatively similar in children and adolescents.

Question 7

According to decay theory, why does forgetting occur?

- A. Newer physiological memory traces replace older physiological memory traces.
- B. Newer psychological memory traces replace older psychological memory traces.
- C. Physiological memory traces fade over time due to the memories no longer being accessed.
- D. Psychological memory traces fade over time due to the memories no longer being accessed.

Question 8

In terms of assessing and managing the mental health of an individual, the biopsychosocial model considers

- A. biological factors more important than psychological and social factors.
- B. psychological factors more important than biological and social factors.
- C. biological, psychological and social factors equally as important, and interacting to influence mental health.
- D. biological, psychological and social factors equally as important, but not interacting to influence mental health.

Question 9

Ebbinghaus's original forgetting curve using nonsense syllables indicates that

- A. three-quarters of all material learnt is forgotten after one day.
- B. a little over half of all material learnt is forgotten after one hour.
- C. more than two-thirds of all material learnt is forgotten after 20 minutes.
- D. approximately one-quarter of all material learnt is forgotten after one month.

Question 10

Which of the following indicates a typical night of sleep for an adult?

	Duration (minutes)	Number of complete sleep cycles
A.	30–40	1 or 2
B.	60–70	4 or 5
C.	10–15	4 or 5
D.	90–120	4 or 5

Question 11

After a few days of sleep deprivation, it is most likely that a person would experience

- A. no increase in the amount of sleep on the nights following the sleep deprivation.
- B. an increased amount of sleep on one or more nights.
- C. an increased amount of slow-wave sleep only.
- D. an increased amount of REM sleep only.

Question 12

The parasympathetic division of the autonomic nervous system is responsible for regulating

- A. anger and aggression.
- B. learning and memory.
- C. mood and arousal levels.
- D. sleep, eating and reproduction.

Use the following information to answer Questions 13–15.

Tricia took part in an experiment on memory. In Stage 1 of the experiment, she was shown 20 words presented at a rate of one word every two seconds. Immediately after the final word was presented, Tricia was given 30 seconds to write down as many words as she could in any order. In Stage 2 of the experiment, Tricia was shown 20 words, 10 of which she had seen in Stage 1 of the experiment. She was then asked to identify the words she had seen in Stage 1.

Question 13

What is the measure of retention used in Stage 1 of the experiment?

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

Question 14

What is the measure of retention used in Stage 2 of the experiment?

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

Question 15

The results of Stage 1 of the experiment revealed that Tricia remembered nine of the 20 words: the first three words, the last five words and the 12th word.

These results demonstrate a serial position effect, where the

- A. order of items on a list has no bearing on the rate at which the items are recalled.
- B. recall of items in the middle of a list is stronger than the recency and primacy effects.
- C. primacy effect is stronger than the recency effect, with poor recall of items in between.
- D. recency effect is stronger than the primacy effect, with poor recall of items in between.

Question 16

Mutiah moved into a new house and was given a group of keys that all looked the same to him. He was on his own when he tried to find the correct key to get into his shed.

In this situation, Mutiah most likely used the principles of

- A. operant conditioning.
- B. classical conditioning.
- C. observational learning.
- D. trial-and-error learning.

Question 17

Rylee decided to use the mean as a statistical measure to examine the effect of the consumption of energy drinks on the time taken to complete a jigsaw puzzle.

The use of the mean is suitable if the scores are

- A. clustered around the extreme values.
- B. clustered around a central score.
- C. unevenly distributed.
- D. widely spread.

Use the following information to answer Questions 18–20.

Abraham and Ben are actors who have played many roles on television over the last two years. Three months ago, Abraham obtained a new role in a television series that guaranteed him work for the next two years. Ben, however, has been out of work for the last three months. During this time, Ben auditioned for 15 roles in different shows, but has yet to secure any work.

Question 18

Which one of the following best describes Abraham's and Ben's allostatic loads over the last three months?

- A. high for both Abraham and Ben
- B. low for both Abraham and Ben
- C. higher for Ben than Abraham
- D. higher for Abraham than Ben

Question 19

Each time Ben prepares for an audition, it is likely that his

- A. pupils will constrict and his levels of stress hormones will increase.
- B. heart rate will increase and his levels of stress hormones will decrease.
- C. stomach contractions will decrease and his levels of stress hormones will increase.
- D. liver will decrease the release of glucose and his levels of stress hormones will increase.

Question 20

Ben decided to ask Abraham to help him practise his lines for an upcoming audition.

Being able to practise his lines with Abraham is an example of

- A. a social factor that will help to alleviate Ben's stress response.
- B. a physiological factor that will help to alleviate Ben's stress response.
- C. social support that will decrease Ben's ability to cope with his situation.
- D. a psychological factor that will help to exacerbate Ben's stress response.

Question 21

The most reliable way to discriminate between stage 1 and stage 2 of sleep using an electroencephalograph (EEG) would be to look for

- A. the presence of sleep spindles and K complexes to indicate stage 1 sleep.
- B. the presence of sleep spindles and K complexes to indicate stage 2 sleep.
- C. an increased proportion of delta waves to indicate stage 1 sleep.
- D. an increased proportion of delta waves to indicate stage 2 sleep.

Question 22

The most reliable measure of sleep would be a combination of

- A. video monitoring and self-reported sleep logs.
- B. physiological measures recorded in a sleep laboratory and self-reported sleep logs.
- C. physiological measures recorded in a sleep laboratory and video monitoring on the same night.
- D. physiological measures recorded in a sleep laboratory and video monitoring on a different night.

Use the following information to answer Questions 23 and 24.

John is a healthy 34-year-old man who witnessed a woman's handbag being stolen from a shopping trolley in a supermarket. John was shown a series of photographs of faces and asked if any of the faces matched that of the person who took the handbag.

Question 23

The lobe of John's brain that was most active when he tried to identify the person's face was his

- A. left parietal lobe.
- B. left temporal lobe.
- C. right occipital lobe.
- D. right temporal lobe.

Question 24

John is asked to give eyewitness testimony.

In this scenario, which one of the following is an example of a leading question?

- A. Where were you in the supermarket when the handbag was stolen?
- B. What colour was the handbag that the man stole from the trolley?
- C. What was the person who stole the handbag wearing?
- D. What time was it when the handbag was stolen?

Use the following information to answer Questions 25–27.

Simran's three-year-old child, Ava, regularly throws tantrums when she is not given what she asks for, such as when she asks for chocolate just before dinnertime. Simran sought advice from Ava's kindergarten teacher, who suggested that Simran ignore the tantrums, and when Ava is calm and behaving well, Simran should praise Ava and give her a treat.

Question 25

Which one of the following best describes the kindergarten teacher's suggested strategy of ignoring Ava's tantrums?

- A. operant conditioning that reinforces the response
- B. classical conditioning that reinforces the response
- C. operant conditioning that extinguishes the response
- D. classical conditioning that extinguishes the response

Question 26

If Simran were to give Ava chocolate when she throws a tantrum, Simran would be

- A. positively reinforcing the tantrum and increasing the likelihood of them occurring in the future.
- B. positively reinforcing the tantrum and decreasing the likelihood of them occurring in the future.
- C. negatively reinforcing the tantrum and increasing the likelihood of them occurring in the future.
- D. negatively reinforcing the tantrum and decreasing the likelihood of them occurring in the future.

Question 27

If Simran gave Ava chocolate just before dinnertime and Ava's tantrum subsequently stopped, Simran's behaviour would be

- A. positively reinforced, increasing the likelihood of her giving Ava chocolate the next time she throws a tantrum.
- B. positively reinforced, decreasing the likelihood of her giving Ava chocolate the next time she throws a tantrum.
- C. negatively reinforced, increasing the likelihood of her giving Ava chocolate the next time she throws a tantrum.
- D. negatively reinforced, decreasing the likelihood of her giving Ava chocolate the next time she throws a tantrum.

Question 28

Holly is monitoring her heart rate as a form of biofeedback to help her manage her stress at work.

A limitation of using biofeedback in this situation is that

- A. heart rate is not an effective physiological response to be used as part of biofeedback.
- B. it can be challenging for Holly to apply the principles of biofeedback while at work.
- C. Holly is passive in the process while the heart rate monitor is active.
- D. changes to heart rate cannot be made consciously.

DO NOT WRITE IN THIS AREA

Question 29

It is likely that a person given a high dose of alcohol compared to a low dose would show

- A. increased distortion in time orientation and dulled emotional awareness.
- B. decreased distortion in time orientation and dulled emotional awareness.
- C. increased distortion in time orientation and heightened emotional awareness.
- D. decreased distortion in time orientation and heightened emotional awareness.

Use the following information to answer Questions 30 and 31.

Vladimir took part in an experiment on working memory. He was briefly shown a block letter (pictured below) and then asked to count in his head the number of corners on the letter.

**Question 30**

As Vladimir performs this task, his

- A. phonological loop stores the number of corners that he counts, while his central executive stores the image of the block letter.
- B. phonological loop stores the number of corners that he counts, while his visuo-spatial sketchpad stores the image of the block letter.
- C. visuo-spatial sketchpad stores the number of corners that he counts, while his phonological loop stores the image of the block letter.
- D. central executive stores the number of corners that he counts, while his episodic buffer directs his attention to the corners of the block letter.

Question 31

What is the role of the central executive in this scenario?

- A. Hold the image of the letter while Vladimir is counting.
- B. Store information from long-term memory regarding the letters of the alphabet.
- C. Attend to identifying each corner and adding it to the number of corners counted.
- D. Integrate information from the visuo-spatial sketchpad and phonological loop while keeping count of the number of corners.

Use the following information to answer Questions 32–35.

Dr Williams wanted to perform a partial replication of JB Watson's 'Little Albert' experiment using a young monkey instead of a human infant. Similarly to Watson's experiment, an iron bar was struck behind the monkey's back each time a white rat was presented. Soon the monkey showed fear of the rat even when the bar was not struck.

Question 32

It is likely that Dr Williams used a young monkey instead of a human infant in the study because

- A. using a monkey is less likely to get approval from an ethics board than using a human infant.
- B. monkeys and humans have significantly different structures in their nervous systems.
- C. he wanted to find out if young monkeys and young humans learn in the same way.
- D. he wanted to explore other aspects of observational learning.

Question 33

Dr Williams decided that he would continue to present the white rat to the monkey without striking the bar. At the end of the first day, the monkey remained scared of the rat. After a night's sleep, when presented with the rat at the start of the next day, the monkey was still visibly scared.

Which one of the following is the most likely explanation for the monkey's fear of the rat the next day?

- A. unconditioned response
- B. spontaneous recovery
- C. conditioned response
- D. extinction

Question 34

Later in the research, Dr Williams struck the iron bar behind the monkey's back when the monkey was presented with a furry Santa Claus mask. Only after a number of pairings did the monkey show fear of the mask.

The monkey's fear of the mask is an example of

- A. a conditioned response.
- B. stimulus generalisation.
- C. stimulus discrimination.
- D. an unconditioned response.

Question 35

Dr Williams considered whether to use flooding or graduated exposure to treat the monkey's fear of the Santa Claus mask.

A similarity in these treatments is that they are both

- A. ethically justified in all cases.
- B. based on the principles of operant conditioning.
- C. based on the principles of classical conditioning.
- D. based on direct exposure to the fear-producing stimulus as the first step.

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 36 and 37.

Rose, who has no history of disease or injury to the brain, was asked to maintain her focus on a central fixation point while the following four stimuli were projected at random onto either the left side or right side of a screen:

- Stimulus 1 – the word ‘cat’ projected onto the left side of the screen
- Stimulus 2 – a picture of a banana projected onto the right side of the screen
- Stimulus 3 – the word ‘dog’ projected onto the right side of the screen
- Stimulus 4 – a picture of a hammer projected onto the left side of the screen

Rose was instructed to press the space bar on a keyboard as quickly as possible when she saw a picture. When she saw a word, she was instructed to say the word aloud as quickly as possible. The time taken for Rose to respond to each stimulus was recorded.

Question 36

Which two stimuli would have most likely produced the fastest response times?

- A. cat and banana
- B. dog and banana
- C. cat and hammer
- D. dog and hammer

Question 37

Which area of Rose’s brain enabled her to pronounce the words ‘cat’ and ‘dog’?

- A. Broca’s area in the frontal lobe
- B. Broca’s area in the temporal lobe
- C. Wernicke’s area in the frontal lobe
- D. Wernicke’s area in the temporal lobe

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 38 and 39.

When Amir was in Year 10, he organised a reunion of his Grade 6 class. Initially he could only recall the names of 12 classmates, even though he knew that there were more students in the class. He found an old photograph of the class, without any names, and was then able to recall the names of 22 of the 25 classmates.

Question 38

Amir's inability to initially recall the 10 additional names of his Grade 6 classmates was most likely due to

- A. decay.
- B. interference.
- C. retrieval failure.
- D. motivated forgetting.

Question 39

Amir knew that there was a boy missing from the photograph of his Grade 6 class as the boy had joined the class later in the year. Despite having the feeling that he knew the boy's name and that the boy's name started with 'G', Amir could not recall the boy's name.

This is known as

- A. decay theory.
- B. retrograde amnesia.
- C. proactive interference.
- D. tip-of-the-tongue phenomenon.

Question 40

Based on explanations of memory decline over the life span, older people tend to

- A. have poorer procedural memories than younger people.
- B. have less confidence in their memory than younger people.
- C. have more confidence in their memory than younger people.
- D. perform worse than younger people on tasks that rely on recognition.

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 41–45.

Oscar and Flynn started attending the same kindergarten at the same time. They had previously attended the same childcare centre together.

Initially, when starting kindergarten, Flynn displayed symptoms of separation anxiety when dropped off in the morning, including crying and clinging to his mother. His heart rate also increased and a rash appeared on his forehead. Once his mother left, however, he quickly settled and enjoyed the activities provided by his kindergarten teacher. After one month of attending kindergarten, Flynn no longer cried or clung to his mother when dropped off and he would quickly settle.

In contrast, when starting kindergarten, Oscar was very excited. He eagerly ran up to the front door of the kindergarten with great enthusiasm. He hesitantly waved goodbye to his mother, but took his kindergarten teacher's hand and settled quickly into the activities provided.

Question 41

When initially starting kindergarten, it is most likely that Flynn and Oscar were experiencing, respectively

- A. eustress, distress.
- B. distress, eustress.
- C. distress, no stress response.
- D. eustress, fight-flight response.

Question 42

Physiological characteristics of the stress response that Flynn displayed when initially starting kindergarten included

- A. eustress and crying.
- B. distress and increased heart rate.
- C. distress and clinging to his mother.
- D. rash on his forehead and increased heart rate.

Question 43

Which nervous system was most likely dominant when Oscar started kindergarten?

- A. somatic nervous system
- B. peripheral nervous system
- C. sympathetic nervous system
- D. parasympathetic nervous system

Question 44

Flynn's appraisal of kindergarten when he first started compared to his appraisal one month later is most likely to be, respectively

- A. stressful, a threat.
- B. irrelevant, stressful.
- C. stressful, benign/positive.
- D. benign/positive, stressful.

Question 45

When Flynn is upset, he goes to his teacher and asks for a cuddle.

What is Flynn's strategy an example of?

- A. meditation
- B. biofeedback
- C. physical exercise
- D. emotion-focused coping

Question 46

What is a typical change found in the brain of an Alzheimer's sufferer?

- A. a decrease in the size of the ventricles
- B. an abnormal increase in the levels of the neurotransmitter acetylcholine
- C. a build-up of both amyloid plaques and neurofibrillary tangles surrounding the neurons
- D. a decrease in amyloid plaques and an increase in neurofibrillary tangles surrounding the neurons

Question 47

Toula wanted to stop her dog barking at 6 am and decided to use a strategy involving punishment.

For punishment to be most effective, it should be administered

- A. two hours after the dog barks, every time.
- B. immediately after the dog barks, every time.
- C. two hours after the dog barks, some of the time.
- D. immediately after the dog barks, some of the time.

Question 48

A study was conducted where subjects were selectively prevented from entering REM sleep over a period of five days. On the sixth night, they were allowed to sleep normally.

The most likely response in terms of the proportion of REM sleep on the sixth night would be

- A. a decreased proportion of REM sleep.
- B. an increased proportion of REM sleep.
- C. an increased proportion of stage 2 sleep.
- D. an increased proportion of stages 3 and 4 sleep.

Question 49

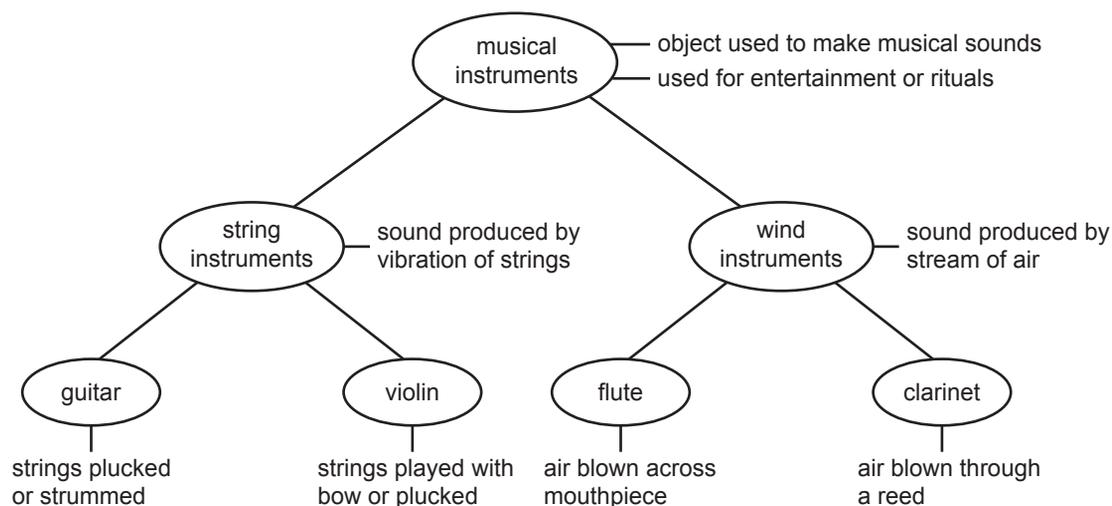
In operant conditioning, the nature of the response and the division of the nervous system that is most active are, respectively

- A. voluntary, the somatic nervous system.
- B. involuntary, the somatic nervous system.
- C. voluntary, the autonomic nervous system.
- D. involuntary, the autonomic nervous system.

DO NOT WRITE IN THIS AREA

Use the following information to answer Questions 50–52.

The diagram below shows a semantic network for musical instruments.



Question 50

According to semantic network theory, the nodes in this network represent

- A. links between musical instrument concepts in memory.
- B. a person's memories of hearing or playing musical instruments.
- C. knowledge of the properties and features of musical instruments in memory.
- D. pathways by which information about musical instruments can be retrieved in memory.

Question 51

According to semantic network theory, which one of the following statements should people be able to verify faster?

- A. A flute is an object used for entertainment.
- B. A clarinet requires air blown through a reed.
- C. A guitar is an object used to make musical sounds.
- D. A guitar produces sound through the vibration of strings.

Question 52

According to semantic network theory, when people have previously answered a question about flutes they will subsequently be

- A. slower to retrieve information about wind instruments than clarinets.
- B. faster to retrieve information about string instruments than violins.
- C. slower to retrieve information about clarinets than violins.
- D. faster to retrieve information about violins than clarinets.

Question 53

Phoebe is eight years old and loves playing cricket. She really admires the Australian female cricket captain, who has blonde hair, like Phoebe, and often hits balls over the fence for six runs. She tells her father, 'I'm going to be like her one day and play for Australia and be on TV like she is'.

The stage of observational learning that most applies to Phoebe choosing the female captain as the model for her behaviour is

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

Question 54

Gemma's canary, who was hatched and raised away from other canaries, sings a distinctive song every morning despite never hearing another canary sing. In the winter months, the canary stopped singing this distinctive song. On the first day of spring, Gemma heard the canary sing this song again.

This is an example of

- A. extinction.
- B. a fixed action pattern.
- C. spontaneous recovery.
- D. trial-and-error learning.

Question 55

Hayley has learnt to choose which parent she should ask to borrow the family car from depending on which parent is in a better mood.

What is Hayley's behaviour an example of?

- A. response cost
- B. stimulus generalisation
- C. negative reinforcement
- D. stimulus discrimination

Question 56

A patient with Wernicke's aphasia is

- A. unlikely to be aware of their condition, which involves difficulty with producing speech but an ability to comprehend the speech of others.
- B. likely to be aware of their condition, which involves difficulty with producing speech and difficulty speaking in a way that is meaningful to others.
- C. likely to be aware of their condition, which involves difficulty with comprehending speech and difficulty speaking in a way that is meaningful to others.
- D. unlikely to be aware of their condition, which involves difficulty with comprehending speech and difficulty speaking in a way that is meaningful to others.

DO NOT WRITE IN THIS AREA

Question 57

Edita is a healthy 29-year-old woman who has sustained a head injury. In hospital, although she is awake and alert, she is unable to remember the family holiday she went on last month.

Edita is likely to be suffering from

- A. retrograde amnesia.
- B. Alzheimer's disease.
- C. anterograde amnesia.
- D. proactive interference.

Question 58

What functional change occurs in neurons when memories are formed?

- A. a decrease in the release of the main inhibitory neurotransmitter glutamate
- B. an increase in the formation of dendritic spines to allow for easier communication between neurons
- C. more neurotransmitters being produced and released by post-synaptic neurons, which act on the receptor sites of pre-synaptic neurons
- D. more neurotransmitters being produced and released by pre-synaptic neurons, which act on the receptor sites of post-synaptic neurons

Question 59

A researcher noticed that after 24 hours of sleep deprivation, subjects began to show periods of very slow eye closure and lapses of attention while completing a driving task on a computer simulator.

The periods of very slow eye closure were most likely an indication of

- A. microsleep.
- B. REM sleep.
- C. stage 2 sleep.
- D. rebound slow-wave sleep.

Question 60

Takeshi is an accountant who has worked all week on his company's budget, which includes many four-digit numbers. At the end of the week, he went to an ATM/cash machine to withdraw money, but despite having known his four-digit pin number for 15 years, he suddenly found himself entering the wrong four-digit pin number into the ATM/cash machine.

What is the likely cause of Takeshi entering the wrong pin number?

- A. proactive interference
- B. motivated interference
- C. retroactive interference
- D. the serial position effect

Question 61

When investigating naturally occurring behaviour, an advantage of using observational studies as a data collection technique is that

- A. compared with experiments, observational studies do not require controlled variables.
- B. unlike self-report methods, standardised procedures are not required in observational studies.
- C. similarly to experiments, it is possible to control confounding variables in observational studies.
- D. compared with case studies, experimental and control groups are not needed in observational studies.

Question 62

Barbara was watching television when her mother walked in and said, 'Barbara, it's your turn to take the rubbish bins out tonight'.

Barbara was about to ask her mother to repeat what she had said, but did not need to because it had been held in her

- A. iconic memory, which has a duration of 3–4 seconds.
- B. echoic memory, which has a duration of 3–4 seconds.
- C. implicit memory, which has a duration of 0.2–0.4 seconds.
- D. phonological loop, which has a duration of 0.2–0.4 seconds.

Question 63

Dr Terrence is running an experiment to investigate the effect that room temperature has on the time taken for people to fall asleep.

In this experiment, the independent variable is

- A. room temperature.
- B. time taken for people to fall asleep.
- C. body temperature when people fall asleep.
- D. time taken by people to adapt to room temperature.

Question 64

Kelvin, Mary and Sonia were discussing events from their childhood. Kelvin and Mary mentioned the time at school when Sonia slipped in a puddle, which led to all of her classmates laughing at her and teasing her. When it happened, Sonia was distressed and, after, deliberately tried to avoid thinking about the incident.

According to Freud, Sonia is likely to have

- A. consciously repressed the memory of this incident.
- B. consciously suppressed the memory of this incident.
- C. unconsciously repressed the memory of this incident.
- D. unconsciously suppressed the memory of this incident.

DO NOT WRITE IN THIS AREA

Question 65

Dr Johnstone, a clinical psychologist, assesses her patient's symptoms on one or more scales at various intervals. She does this so that she can monitor changes in the patient's symptoms over time.

What approach to the classification of mental disorders is Dr Johnstone using?

- A. social
- B. biological
- C. categorical
- D. transitional

DO NOT WRITE IN THIS AREA

END OF SECTION A

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TURN OVER

SECTION B – Short-answer questions**Instructions for Section B**

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

Question 1 (2 marks)

Identify one similarity and one difference between operant conditioning and social learning theory.

Similarity _____

Difference _____

Question 2 (2 marks)

Rebecca was referred to a clinical psychologist. The psychologist considered the specific symptoms reported by Rebecca and those that were presented during the mental health assessment. The characteristic pattern of symptoms that Rebecca presented with led the psychologist to diagnose her with a mental disorder.

Name the classification approach that Rebecca's psychologist used and identify a disadvantage of using this classification approach.

Classification approach _____

Disadvantage _____

DO NOT WRITE IN THIS AREA

Question 3 (6 marks)

Researchers conducted an investigation into states of consciousness with two groups of healthy 30-year-old adults with no history of disease or injury to the brain. The recordings from the electroencephalograph (EEG) and electromyograph (EMG) for participants from each group are summarised in the table below.

Table 1. Summary of consciousness recordings

Group	EEG recording	EMG recording
1	fast, irregular, unsynchronised, low-amplitude waves	little or no muscle movement
2	slow, regular, synchronised, high-amplitude waves	limited and irregular muscle movement

- a. Identify the state of consciousness that the participants from each group were likely to be experiencing. Justify your response.

4 marks

Group 1 _____

Group 2 _____

- b. Describe what a typical electro-oculargraph (EOG) recording would show for each group.

2 marks

Group 1 _____

Group 2 _____

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

Question 4 (8 marks)

Mr Butler, a Psychology teacher, conducted a memory experiment on his Psychology class.

He wanted to investigate whether the use of narrative chaining, which is a mnemonic device, is a more effective method of remembering lists of unrelated words in the order in which they are presented, than not using any mnemonic device.

In the experiment, half of the class was given two minutes to study four lists of words. The students were told to try to remember the words from each list in the order in which they were presented. They were not given any other instructions.

The other half of the class was given two minutes to study the same four lists of words. The students were instructed to use narrative chaining to help them remember the words from each list in the order in which they were presented.

That day, after school, Mr Butler was supervising detention. He informed the students on detention that they were required to take part in the experiment he had conducted earlier that day. If the students participated, he would let them leave detention 10 minutes early, but if they did not participate, detention would be extended by 10 minutes.

- a. The following words are from List 1 of Mr Butler's experiment: 'sugar', 'chair', 'tree', 'car', 'television'.

Using these words, provide an example of narrative chaining.

1 mark

- b. Outline the purpose of the control group as it relates to this experiment.

1 mark

- c. Referring to psychological theory, describe the likely findings of this experiment.

2 marks

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d. Operationalise the dependent variable in this experiment.

2 marks

e. In terms of participants' rights, describe which specific ethical consideration Mr Butler breached with the students on detention.

2 marks

DO NOT WRITE IN THIS AREA

SECTION B – continued
TURN OVER

Question 5 (6 marks)

Emilia can still remember an emotional event from her childhood. When Emilia was young, she became separated from her mother in a large shopping centre. When her mother found her 10 minutes later, Emilia was visibly upset and crying.

- a. Identify the specific type of declarative memory that this event is for Emilia. Justify your response. 2 marks

- b. Identify the **two** specific areas of Emilia’s temporal lobe that were involved in the formation of her memory of being lost. Explain the role of each area in memory formation. 4 marks

DO NOT WRITE IN THIS AREA

Question 6 (4 marks)

Stan, who is three years old, and James, who is 33 years old, both sustained head injuries and suffered damage to the same area of their brain. As a result of this damage, both have difficulty speaking fluently and moving their right arm freely.

- a. Name the lobe and hemisphere of the brain that have most likely been damaged. 1 mark

- b. With reference to types of brain plasticity, explain why Stan is more likely to have a faster and more complete recovery than James. 3 marks

Question 7 (3 marks)

Zahra is a first-time mother. When her baby boy was eight weeks old, Zahra's mother, who lives overseas, came to stay for six weeks to help care for her new grandson and to help Zahra adjust to her new role as a parent. Zahra also started attending a group for new parents, run by a maternal and child health nurse through her local council, where she meets once a week with a group of five other first-time parents.

Explain how **one** source of social support identified in the scenario could help alleviate Zahra's stress response associated with caring for a newborn.

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Question 8 (5 marks)

Sperry and Gazzaniga conducted a series of studies with patients who had undergone split-brain surgery.

- a. With reference to Sperry and Gazzaniga’s studies, explain the most likely response when a patient who has undergone split-brain surgery is asked to verbalise an image of a toothbrush that has been projected to the left visual field. 3 marks

- b. The same patient has their left hand placed inside a bag containing a banana, a pen and a toothbrush. At the same time, an image of a toothbrush is projected to the left visual field. Describe how the patient could identify the image of the toothbrush. 2 marks

DO NOT WRITE IN THIS AREA

Question 9 (3 marks)

The Sunnydown Basketball League has 1500 players aged 12–18.

Explain how a researcher could design a random sampling procedure to investigate the effect of sports drinks on the performance of under-16 basketball players in the Sunnydown Basketball League.

Question 10 (3 marks)

Travis is currently undertaking his first year of university. He is feeling pressured by his family's expectation that he should score high marks. Travis also works part-time stacking frozen vegetables in the coolroom of his local supermarket to save money to go out with his new girlfriend, who he wants to impress.

Identify an environmental factor in the scenario above and describe how it may exacerbate Travis's physiological response to stress.

Factor _____

Description _____

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SECTION B – continued
TURN OVER

Question 11 (6 marks)

Tim was once fined for crossing the road at an intersection when the pedestrian signal was red. Now he always crosses legally, when the pedestrian signal is green.

- a. Using the three-phase model of operant conditioning, explain why Tim has now learnt not to cross the road when the pedestrian signal is red. 4 marks

- b. Tim gets frustrated when he has to wait at a pedestrian crossing and repeatedly presses the button at the crossing, thinking it will make the signal change faster. He is unaware that the signal follows a pre-programmed pattern to change every 90 seconds whenever the button is pressed at least once.

With reference to schedules of reinforcement, describe why Tim’s strategy will not result in the pedestrian signal changing to green faster. 2 marks

DO NOT WRITE IN THIS AREA

Question 14 (5 marks)

Katrina eats toast for breakfast every day. Three days in a row, the toast got stuck in the toaster and burned, setting off the smoke alarm. The smoke alarm made a high-pitched noise that caused her dog Buster to startle and then run away. Now, whenever Katrina uses the toaster, Buster runs outside and hides in the garden.

Using the terminology of classical conditioning, explain how Buster has come to fear the toaster.

DO NOT WRITE IN THIS AREA

SECTION C – Research scenario**Instructions for Section C**

Answer the questions in the spaces provided. Write using blue or black pen.
Your responses may include diagrams, charts and tables.

A researcher undertook a study to examine the stress response at key times during the wedding planning process. The participants were 300 brides-to-be recruited from a bridal exhibition that they attended in Melbourne, Victoria.

At the bridal exhibition, the participants were approached by the researcher's assistant and asked if they would like to voluntarily participate in a research study examining the effect of planning a wedding on a person's stress response. They were informed that they would be required to complete a questionnaire at three different times: twice during the planning of their wedding and once after their wedding.

Questionnaire design

A four-item questionnaire was developed by the researcher, which asked participants to consider different aspects of the wedding planning process. They were asked to rate the extent to which they felt stressed, **at this particular point in time**, about each of these aspects using a five-point scale (where 1 = not stressed and 5 = extremely stressed).

A consent form outlining the nature and purpose of the research was provided.

Questionnaire administration

Stage 1 – Participants at the bridal exhibition were given a copy of the questionnaire to complete by themselves. Once completed, the questionnaire was placed in a secure, locked box to maintain anonymity.

Stage 2 – Participants were mailed a second copy of the questionnaire with instructions to complete it anonymously one week prior to their wedding date. A stamped self-addressed envelope was included with the questionnaire.

Stage 3 – Participants were mailed a final copy of the questionnaire and asked to complete it anonymously one month after their wedding date. A stamped self-addressed envelope was included with the questionnaire.

The researcher calculated the overall mean response for each item at each stage. The results are shown in the table below.

Table 1. Mean response for each item at key stages before and after a wedding

Item	Stage 1 – At exhibition (out of 5) n = 300	Stage 2 – One week prior (out of 5) n = 210	Stage 3 – One month after (out of 5) n = 190	Mean response for each item (out of 5) n = 700
financial cost of wedding	4.0	4.8	4.1	4.3
involvement of parents in wedding planning	3.5	3.8	3.2	3.5
choosing wedding venue	4.5	2.5	0.8	2.6
deciding on seating plan	1.5	4.8	1.8	2.7
Overall response for each stage (out of 5)	3.4	4.0	2.5	

n = sample size

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Question 1 (1 mark)

Name the type of data collected in the questionnaire.

Question 2 (2 marks)

Name the sampling procedure used in the study and identify **one** advantage of using this sampling procedure.

Question 3 (2 marks)

Describe how debriefing may be undertaken for the data collection technique used in the study.

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