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YEAR 12 *Trial Exam Paper*

2015

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	65	65	65
B	16	16	60
C	4	4	15
			Total 140

- Students are permitted to bring the following items: pens, pencils, highlighters, erasers, sharpeners and rulers into the examination.
- Students are NOT permitted to bring sheets of paper or white-out liquid/tape into the examination.
- Calculators are not permitted in this examination.

Materials provided

- The question and answer book of 39 pages.
- An answer sheet for the multiple-choice questions.
- Additional writing space is provided at the end of this book.

Instructions

- Write your **name** in the box provided and on the multiple-choice answer sheet.
- You must answer the questions in English.

At the end of the examination

- Place the answer sheet for the multiple-choice questions inside the front cover of this book.

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

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SECTION A – Multiple-choice questions**Instructions for Section A**

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

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 response is given for any question.

Question 1

Soraya heard the school bell while studying in the library and noted that she needed to finish the task she was working on and head off to class. In terms of levels of awareness, Soraya was experiencing

- A. daydreaming.
- B. selective attention.
- C. normal waking consciousness.
- D. an altered state of consciousness.

Question 2

An electroencephalograph reading taken from a person who is daydreaming would be likely to show

- A. beta waves.
- B. alpha waves.
- C. theta waves.
- D. delta waves.

Question 3

Which of the following statements is true of the quality of encoding in the retention of information in long-term memory?

- A. Context-dependent cues are more reliable than state-dependent cues when trying to retrieve previously learned information.
- B. Emotionally charged experiences are harder to recall than events experienced when in a calm state.
- C. Using elaborative rehearsal will result in better recall of information than using maintenance rehearsal to encode and store information.
- D. Chunking increases both the capacity of, and length of retention of memories in, long-term memory.

SECTION A – continued
TURN OVER

Question 4

DSM-5 and the ICD-10 are effective tools in the diagnosis of mental disorders because

- A. both can be used to diagnose mental illness using a reliable set of categorical descriptors.
- B. both were specifically designed for the diagnosis of mental disorders, not physical illnesses.
- C. both accurately determine the causes of mental disorders.
- D. both rely on objective data so are extremely reliable.

Use the following information to answer Questions 5–9.

Margaret suffers from paranoia and anxiety and she often experiences very disturbed sleep and has significant sleep deprivation. Margaret's doctor referred her to a sleep specialist who measured various physiological responses in a sleep laboratory while Margaret slept. Initially, the observation and data collection process was successful, but when Margaret awoke after two hours, she became very disoriented, distressed and anxious. The doctor decided to end the observation process.

Question 5

The doctor most likely chose to end the observation process because

- A. controlled observational studies are unreliable due to lack of accuracy in measurements.
- B. it had the potential to breach the primary ethical principle of doing no harm to the patient.
- C. self-report is a more reliable means of collecting data.
- D. sleep studies always work best in the home environment.

Question 6

Measurements of the electrical activity in Margaret's eye muscles were taken in the early phase of the observation process. This data would be collected using an

- A. electroencephalograph.
- B. electromyograph.
- C. electrocardiograph.
- D. electro-oculargraph.

Question 7

By the time Margaret awoke (after two hours), she had most likely already experienced

- A. one period of REM sleep.
- B. two periods of REM sleep.
- C. two complete sleep cycles.
- D. less than one complete sleep cycle.

Question 8

The EEG data showed that Margaret was in Stage 2 of sleep just prior to awakening. This stage would be evidenced by

- A. sawtooth waves.
- B. beta waves and K complexes.
- C. theta waves and sleep spindles.
- D. delta waves and sleep spindles.

Question 9

If Margaret were to experience a good night's sleep after a significant period of sleep deprivation, it is likely that as she slept

- A. she would experience multiple microsleeps.
- B. she would spend more time in NREM sleep than usual.
- C. she would have fewer intense dreams than usual.
- D. she would spend more time in REM sleep than usual.

Question 10

According to the biopsychosocial approach to assessing mental health, a biological risk factor for developing a mental illness is

- A. brain injury.
- B. personality.
- C. work stress.
- D. family dysfunction.

SECTION A – continued
TURN OVER

Question 11

The primary structures of the central nervous system are

- A. the brain and the hippocampus.
- B. the frontal, parietal, temporal and occipital lobes.
- C. the brain and the spinal cord.
- D. the spinal cord and the hippocampus.

Question 12

Lara was studying for her biology exam and used an acrostic to help her remember key information. Which of the following is the best explanation of this process?

- A. Linking the material to be learned with information already stored in long-term memory.
- B. Linking the information to be learned by creating a story using all of the key words.
- C. Using the first letter of each of the key terms to create a pronounceable word.
- D. Creating a sentence with words that use the first letter of each of the key terms as the first letter of each word in the sentence.

Question 13

When Lara was locating the words in memory to create the acrostic and applying these to the material she wanted to remember, the lobes of Lara's brain that would be most active would be

- A. the association areas of the frontal lobes.
- B. the right parietal lobe.
- C. the primary auditory cortices.
- D. Broca's area.

Question 14

The structure within Lara's brain that will be most active in the consolidation of the memory for the acrostic will be

- A. the temporal lobe.
- B. the amygdala.
- C. the hypothalamus.
- D. the hippocampus.

Use the following information to answer Questions 15–17.

Kayla was studying for her final psychology exam. She was reviewing information on research methods, an area she found quite difficult at the beginning of the year. She was very anxious about this area of study because she could remember very little of it when she began her revision.

Question 15

Although Kayla initially found research methods difficult, in terms of measures of retention it is likely that she would recall the information relatively easily as she revised it because

- A. revisiting previously learned information strengthens the neural pathways for that information.
- B. she could use recognition to help her find the correct pieces of information.
- C. relearning previously learned material is easier than learning something for the first time.
- D. provided she revises the topics in the order she originally learned them, recall will be easier.

Question 16

In terms of neurotransmitters involved in learning, it is likely that as Kayla studies

- A. glutamate and dopamine release will be increased.
- B. glutamate and dopamine release will be inhibited.
- C. glutamate release will be increased while dopamine release will be inhibited.
- D. glutamate release will be inhibited while dopamine release will be increased.

Question 17

Kayla usually studies in her bedroom but sometimes finds that if she imagines she is in the classroom at school listening to her teacher explain the material, she can learn more effectively. This is best explained in terms of

- A. episodic memory.
- B. a context-dependent cue that aids recall.
- C. a state-dependent cue that aids recall.
- D. elaborative rehearsal.

Question 18

The primary motor cortex and the primary visual cortex are respectively located in the

- A. occipital and temporal lobes.
- B. frontal and occipital lobes.
- C. frontal and temporal lobes.
- D. parietal and occipital lobes.

SECTION A – continued
TURN OVER

Use the following information to answer Questions 19–22.

Researchers in the US have concluded that prolonged use of cannabis (marijuana) results in brain damage. This research used brain-imaging techniques to assess the impact on brain tissue of long-term cannabis abuse. The findings indicated that cannabis use shrinks brain tissue but that in the short term the brain creates new neural connections to compensate for the reduced brain area. However, this compensatory neural activity is short-lived because continued cannabis use results in further brain shrinkage and degradation. Eventually the brain is unable to compensate for the damage.

The study also found that older long-term cannabis users had less overall brain area than younger users. The negative effects tend to be mostly in reduced cognitive processing, resulting in impaired decision-making and planning capacity.

Question 19

The independent variable in this study would likely be

- A. the degree of brain shrinkage.
- B. the extent of abnormal neural connectivity.
- C. the age of the cannabis user.
- D. the length of time that cannabis has been used.

Question 20

An appropriate control group for this study would be

- A. a younger group of cannabis users.
- B. older non-cannabis users.
- C. non-cannabis users.
- D. people who have never used drugs.

Question 21

The compensatory action that resulted in increased neural connectivity in the long-term cannabis users is best described as evidence of

- A. brain plasticity.
- B. adaptive plasticity.
- C. developmental plasticity.
- D. proliferation.

Question 22

The reduced decision-making and planning capacity of the long-term cannabis users suggests damage to the

- A. frontal lobes.
- B. parietal lobes.
- C. primary motor cortex.
- D. primary auditory cortex.

Use the following information to answer Questions 23–26.

Andrew was involved in an accident while riding his bike to work. He was hit by an oncoming car as he rode through an intersection. When Andrew fell, he struck his head very hard on the pavement. This resulted in a serious brain injury.

Question 23

Following this accident, Andrew found it difficult to form new memories. This phenomenon is known as

- A. retroactive interference.
- B. retrograde amnesia.
- C. anterograde amnesia.
- D. proactive interference.

Question 24

Andrew's inability to form new memories after the accident suggests damage to

- A. the temporal lobe and the hippocampus.
- B. the temporal lobe and the amygdala.
- C. the frontal lobe and the hippocampus.
- D. the frontal lobe and the amygdala.

Question 25

Later, Andrew could remember leaving home on the morning of the accident but he had no recollection of the events immediately preceding his collision. This is best explained in terms of

- A. divided attention; Andrew wasn't paying attention to where he was going.
- B. consolidation theory; the accident interrupted the consolidation phase of memory formation for events just prior to the collision.
- C. retrieval failure theory; Andrew did not use the right memory cue.
- D. motivated forgetting; Andrew has repressed the memory.

Question 26

Following the accident, Andrew could no longer accurately perceive three-dimensional designs and shapes and he tended to ignore objects in his left visual field. This suggests there was also damage to the

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

SECTION A – continued
TURN OVER

Question 27

If a post-synaptic neuron has been stimulated to produce new growth of dendritic spines, there will be

- A. increased likelihood of firing when stimulated by neighbouring post-synaptic neurons.
- B. decreased release of dopamine in the synaptic gap.
- C. structural changes in the dendrites and more efficient retrieval of the learned behaviour associated with this neural connection.
- D. decreased likelihood of firing when stimulated by neighbouring pre-synaptic neurons.

Use the following information to answer Questions 28–32.

Connor, a seven-year-old boy, was being taught to build bookshelves by his grandfather. He was impressed that his grandfather was able to remember how to do everything without using any instructions. Connor's grandfather seemed to go through the process automatically, without forgetting any aspect of it. This surprised Connor, especially as his grandfather sometimes forgot what Connor's name was.

Question 28

Connor's grandfather was unlikely to forget the process for building the shelves because

- A. this is a semantic memory that is very resistant to memory loss over the lifespan.
- B. this is an episodic memory which is unlikely to decline in old age.
- C. this is a procedural memory that is very resistant to memory loss over the lifespan.
- D. this is a declarative memory which is unlikely to decline in old age.

Question 29

Connor really wanted to learn how to build his own furniture so he watched his grandfather carefully. In terms of the process of observational learning, Connor was demonstrating

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

Question 30

When his grandfather wasn't looking, Connor tried to do some work on the shelves by himself but he accidentally broke the saw. Connor's grandfather said that Connor wasn't allowed to work with him anymore and sent him out of the workshop. In terms of operant conditioning, being sent out of the workshop is an example of

- A. negative reinforcement.
- B. aversion therapy.
- C. extinction.
- D. response cost.

Question 31

Connor was very upset and told his mother when he went inside that he believed his grandfather wouldn't love him anymore. In terms of Lazarus and Folkman's transactional model, this response is an example of

- A. a primary cognitive appraisal in which Connor viewed the situation as a challenge.
- B. a secondary cognitive appraisal in which Connor viewed the situation as benign.
- C. a primary cognitive appraisal in which Connor viewed the situation as a threat.
- D. a secondary cognitive appraisal in which Connor viewed the situation as benign.

Question 32

Connor's grandfather's tendency to forget Connor's name from time to time could possibly be explained in terms of

- A. spatial neglect.
- B. Broca's aphasia.
- C. early indications of Alzheimer's disease.
- D. behaviours due to maturation.

Question 33

Harriet was frightened by a sudden loud thunderclap. Initially, her heart started to race and her breathing rate increased. After a short time, however, as the fright subsided, she began to feel her heart and respiratory rates return to normal.

The increased physiological arousal following the thunderclap was the direct result of

- A. the actions of the parasympathetic nervous system.
- B. an increase of cortisol into the bloodstream.
- C. a conscious decision by Harriet to increase her physiological arousal.
- D. an increase of epinephrine and norepinephrine that stimulated cell receptor sites throughout the body.

Question 34

The calming response that occurred after the threat had passed can best be described as

- A. the activation of the sympathetic nervous system, returning the body to a state of homeostasis.
- B. the activation of the parasympathetic nervous system, returning the body to a state of homeostasis.
- C. the activation of the sympathetic nervous system, preparing the body to respond to the threat.
- D. the activation of the parasympathetic nervous system, returning the body to a state of allostasis.

Question 35

Which of the following is an emotion-focused way of coping with a distressing situation?

- A. meditating
- B. finding out more about the situation to better assess the problem
- C. taking control
- D. obsessing on the causes of the problem

Question 36

Frankie suffered a brain injury and as a result was unable to understand spoken language. The part of Frankie's brain that was most likely damaged was

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

Use the following information to answer Questions 37–38.

The location of the language areas of the brain (Broca's area and Wernicke's area) was initially determined using post-mortem examinations.

Question 37

These post-mortem examinations are examples of

- A. experimental investigations.
- B. observational studies.
- C. longitudinal studies.
- D. case studies.

Question 38

The main disadvantage of this form of study is

- A. findings cannot be generalised unless supported by further experimental research.
- B. the data relies on subjectivity by the researcher.
- C. the data is biased because the participant may wish to present themselves in a particular way.
- D. the lack of the ability to control the independent variable.

Question 39

In the famous study by John B Watson and R Rayner, using the participant 'Little Albert', the learning was the result of applying the principles of

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

Question 40

In Pavlov's experiments with dogs, the unconditioned response was

- A. the food.
- B. the salivation when food was presented.
- C. the salivation at the sound of the bell.
- D. the bell.

Question 41

In the later phases of Pavlov's experiments, the presence of the laboratory technician alone became

- A. the conditioned stimulus.
- B. the conditioned response.
- C. the unconditioned response.
- D. the unconditioned stimulus.

Question 42

Janus saw his art teacher, Mr Bower, when he was at the local shopping centre. Janus was going to say hello but could only remember that his teacher's name started with B.

This is best described as an example of

- A. retroactive interference.
- B. tip-of-the-tongue phenomenon.
- C. motivated forgetting.
- D. retrieval failure theory.

Question 43

According to the Forgetting Curve created by Ebbinghaus, the most rapid forgetting occurs

- A. within the first day of learning.
- B. within the first hour of learning.
- C. within the first 20 minutes of learning.
- D. within the first week of learning.

Question 44

Which of the following is a correct statement about the galvanic skin response (GSR)?

- A. A high temperature is consistent with a low GSR.
- B. A high level of perspiration is likely to reduce the GSR.
- C. The GSR measures the capacity of the skin to produce electricity.
- D. The GSR will be higher if perspiration is higher.

Question 45

Michael was suffering from anxiety and panic attacks. His GP prescribed medication and then referred him to a psychologist for counselling. In terms of the biopsychosocial model, these treatments respectively were

- A. biological and social.
- B. psychological and social.
- C. biological and psychological.
- D. psychological and biological.

Question 46

The psychologist determined that Michael's panic attacks were related to a phobia of spiders. The psychologist helped Michael to relax while gradually exposing him to images of spiders over several sessions, and then to actual spiders until Michael could see a spider without the fear response occurring.

This form of therapy is known as

- A. flooding.
- B. shaping.
- C. aversion therapy.
- D. systematic desensitisation.

Question 47

The therapy used to reduce Michael's fear of spiders uses the principles of

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

Question 48

Deni is a healthy 17-year-old boy. He generally sleeps for about six hours on school nights, but for longer on the weekends.

Deni's sleep pattern is

- A. likely to mean he is not sleep deprived.
- B. likely to result in a sleep debt by the end of the week.
- C. unusually long for a 17-year-old boy.
- D. within the normal range for a 17-year-old boy.

Question 49

According to the Atkinson–Shiffrin model of memory

- A. iconic memories last longer than echoic.
- B. the capacity of short-term memory is infinite.
- C. short-term memory uses information from both sensory and long-term memory.
- D. the capacity of sensory memory is limited.

Question 50

Laurie's mother verbally gave him a long list of items to collect from the shop but it took him a few minutes to find some paper to write down the items. It is likely that by the time Laurie started writing

- A. he would remember more of the items from the start of the list than the end of the list.
- B. he would remember fewer items from the start but more from the end of the list.
- C. he would remember the items in the middle and end of the list equally.
- D. he would remember all of the items in the list.

Question 51

Trevor met a group of new people at his university orientation day and wanted to remember their names. He decided to mentally link each name to an item of their clothing to help him remember (e.g. Jack is wearing jeans).

This would be effective because

- A. maintenance rehearsal is more effective than elaborative rehearsal in storing memories in long-term memory.
- B. mentally giving greater meaning to each of the names means that maintenance rehearsal would be more effective.
- C. elaborative rehearsal improves the organisation of information in long-term memory.
- D. the information would be held in iconic memory for longer.

Question 52

Clarissa is an 85-year-old woman. In her youth she suffered from epilepsy and had split-brain surgery to reduce the seizures. The likely result of this surgery is

- A. an inability to verbally identify objects that are flashed to the right visual field.
- B. difficulty with speech production.
- C. reduced communication between the two cerebral hemispheres.
- D. damage to the hippocampus.

Question 53

It would be expected that if an object were flashed to Clarissa's left visual field while she stared at a dot on a blank screen, she would be able to

- A. identify the object if she touched it with her left hand but not name the object.
- B. verbally name the object but not be able to identify it by touch.
- C. identify the object if she touched it with her right hand.
- D. draw the object with her right hand.

Question 54

Classical and operant conditioning have some aspects in common. One of these is

- A. the learner is passive in both operant and classical conditioning.
- B. the response is reflexive in both operant and classical conditioning.
- C. the learner is active in both operant and classical conditioning.
- D. the response can be extinguished in both operant and classical conditioning.

Question 55

In classical conditioning, spontaneous recovery occurs

- A. when the response has not been reinforced after multiple presentations of the discriminative stimulus.
- B. when the conditioned response has been extinguished and, after a time delay, presentation of the conditioned stimulus elicits the conditioned response.
- C. when the conditioned response has been extinguished and, after a time delay, presentation of the conditioned response elicits the conditioned stimulus.
- D. when the observed behaviour has not been reproduced without reinforcement, but is performed after a time delay when the observer is again motivated to reproduce the behaviour.

Question 56

If a finger is placed on the palm in the early period after birth, a neonate will automatically close its hand and grasp the finger. This response is best described as

- A. a learned response.
- B. a conditioned response.
- C. a reflex action.
- D. a fixed action pattern.

Use the following information to answer Questions 57–60.

Dr Matthews was studying the value of counselling in reducing the negative effects of trauma. She divided her trauma patients into two groups. Group A received counselling while Group B did not. The trial was conducted over a five-month period. Participants completed a standardised questionnaire as well as a structured interview at the beginning and end of the trial. She compared the measurements from the beginning of the trial with those at the end of the five-month period to determine if there were any changes in symptoms of distress. Her results were presented in terms of differences in the mean symptom measurements from the beginning and the end of the trial, and the statistical significance of any differences, using a p value of < 0.05 .

Question 57

Dr Matthews conducted this study and collected data through the use of

- A. a case study and an observational study.
- B. a repeated-measures design and an observational study.
- C. a matched-participants design, a case study and self-report.
- D. an independent-groups design, an observational study and self-report.

Question 58

By calculating the mean, Dr Matthews is using _____ statistics.

- A. descriptive
- B. inferential
- C. quantitative
- D. qualitative

Question 59

When using a p value of < 0.05 , Dr Matthews was

- A. testing to determine if any changes in reported symptoms of distress were due to the counselling or the lack of counselling in five per cent of cases.
- B. analysing the data to determine if any changes in reported symptoms of distress were due to chance or to the counselling.
- C. interpreting the data to form a conclusion.
- D. analysing the data to determine if five per cent of the participants noted a change in symptoms.

Question 60

The main disadvantage of the experimental design used by Dr Matthews is that

- A. counterbalancing is necessary.
- B. matching the participants is time consuming and costly.
- C. the placebo effect is more likely.
- D. the procedure requires a large number of participants to reduce the likelihood of participant-related variables confounding the result.

Question 61

Anna and Greta both received an ATAR of 95. Anna was excited because this meant she could comfortably assume a place in her preferred university course. Greta was upset because her score was below the clearly-in score needed for her preferred course.

Which of the following best describes the respective autonomic response for Anna and Greta?

- A. Anna will experience autonomic arousal and Greta will not.
- B. Both girls will experience a stress response and autonomic arousal.
- C. Both girls will experience distress.
- D. Anna will experience distress and Greta will experience eustress.

Question 62

Year 12 had been a very stressful year for Greta because she had been ill for some of the time and she had broken up with her boyfriend. The ATAR score disappointment added to her problems. Then, when her car ran out of petrol on her way to work she became very upset and cried uncontrollably.

Greta's current situation can best be described as:

- A. An increase in her allostatic load has reduced her coping skills.
- B. The cumulative result of stress means her body has reached a point of allostatic overload.
- C. Her fight-flight response has not been activated, thus limiting her ability to cope.
- D. Her body has adapted successfully to the allostatic load and has achieved allostasis.

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Question 63

The semantic network theory suggests that

- A. long-term memory has a limited capacity.
- B. without the correct retrieval cue, memories will not be accessible.
- C. long-term memory is hierarchical in structure.
- D. only semantic memories are stored hierarchically.

Question 64

Liam had always wanted to surf. When he was seven, his mother bought him a surfboard. Initially Liam fell off each time he attempted to stand up on the board but eventually he managed to remain standing long enough to ride a wave.

The type of learning Liam displayed when attempting to surf is best described as

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

Question 65

Liam's ability to coordinate all of the voluntary muscular movements required to surf were controlled by the interaction between the

- A. sympathetic nervous system and parasympathetic nervous system.
- B. central nervous system and autonomic nervous system.
- C. autonomic nervous system and somatic nervous system.
- D. central nervous system and the somatic nervous system.

**END OF SECTION A
TURN OVER**

SECTION B – Short-answer questions

Instructions for Section A
Write **all** responses in the spaces provided, using a blue or black pen.

Question 1 (4 marks)

Hermione attended her end of VCE class celebrations and drank an excessive amount of alcohol. The following day she was distressed when told that she had taken part in a prank that resulted in another student being hurt, an event of which Hermione had no recollection.

Explain Hermione’s situation in terms of **two** characteristics of altered states of consciousness.

Question 2 (2 marks)

The purposes of sleep are categorised as being for adaptive or evolutionary reasons, and also in terms of restore-and-recovery reasons.

For each of these theories, outline one piece of evidence used to explain the theory.

Adaptive: _____

Restorative: _____

Question 3 (3 marks)

Conditions such as depression, anxiety and paranoia are now assessed not just in terms of the presence or absence of symptoms, but also according to how severe the symptoms are.

- a. Name the approach to classifying mental illness that this describes.

1 mark

- b. Describe one criticism of the DSM-V system of classification of mental conditions.

2 marks

Question 4 (4 marks)

The Watson experiment using Little Albert would be in breach of multiple ethical considerations today. Apart from the psychological harm caused to Little Albert, identify **two** other ethical considerations apparently not followed in this study and outline how they would need to be implemented today.

Ethical consideration 1: _____

Ethical consideration 2: _____

SECTION B – continued
TURN OVER

Question 5 (6 marks)

Malia and her friend Uma were planning a party. Initially they were texting back and forth, but then Malia decided it was easier to call Uma to discuss the arrangements.

In terms of the Baddeley and Hitch model of working memory, when Malia is texting and then speaking on the phone, explain the actions of the central executive and other components of working memory.

Question 6 (5 marks)

Ingrid wanted to teach her dog, Java, to complete a circuit in the back yard – jumping through a hoop, over a garden bed and running around a tree – before sitting back at her feet.

- a.** Using the language of operant conditioning, explain how this could be achieved.

4 marks

- b.** Identify the discriminative stimulus in the above process.

1 mark

SECTION B – continued
TURN OVER

Question 7 (4 marks)

- a. Explain **two** limitations of short-term memory as outlined in the Atkinson–Shiffrin model of memory.

2 marks

- b. Identify **two** ways in which short-term memory can be made more effective as a memory store.

2 marks

Question 8 (2 marks)

Describe **one** strength and **one** weakness of the Lazarus and Folkman Transactional Model of Stress and Coping.

Strength: _____

Weakness: _____

Question 9 (5 marks)

A marketing firm wanted to investigate the value of reward schemes in encouraging customer loyalty for their client, a major retail chain. They introduced a three-month trial where existing customers of the retail chain were advised of the reward points that they had accrued each time they made a purchase. The marketing firm then measured how many times the customer returned to the store within the three-month period and compared this data to their buying habits over the three months before the trial started.

- a. Identify the schedule of reinforcement that the retail chain is using.

1 mark

- b. Describe the pattern of customer behaviour that you would expect this form of reinforcement to achieve, both during and after the trial.

2 marks

- c. What was the purpose of comparing the customer behaviour during the trial to the three months prior to the trial?

2 marks

SECTION B – continued
TURN OVER

Question 10 (4 marks)

Gavin has a fear response to butterflies and moths. As a child, Gavin was on a school excursion to the Melbourne Zoo where he was the victim of a very nasty bullying incident involving a group of boys in his class. It took place in the butterfly house. His fear response has been present since that time.

- a. Explain the role of the amygdala in the formation of Gavin’s fear response.

1 mark

- b. Complete the table below to explain the acquisition of this fear response in terms of classical conditioning.

Use the information in the completed cells as a model to help you fill in the missing pieces of information.

3 marks

Classical conditioning element	Stimulus / Response
Neutral stimulus	Butterflies
	Bullying incident
Unconditioned response	
Conditioned response	
Conditioned stimulus	Butterflies

Question 11 (3 marks)

Suzette is a 12-year-old girl who immigrated to Australia with her parents from a war-torn country where there were limited life opportunities. Her parents expected that Suzette would have a much brighter future here.

- a.** In terms of the biopsychosocial model, identify a social factor that could promote resilience and sound mental health for Suzette.

1 mark

Social factor: _____

- b.** Explain how the social factor identified in **part a.** can promote resilience.

2 marks

SECTION B – continued
TURN OVER

Question 12 (4 marks)

Alicia is a five-year-old girl who suffered extreme anxiety when she began school in Year Prep. As she approached the school, she experienced severe autonomic arousal.

a. What is the term used to describe this response?

1 mark

b. Explain this response in terms of the HPA axis.

3 marks

Question 13 (3 marks)

Dr Ungar is an organisational psychologist. She conducted a matched-participants design in a large work environment to select possible candidates for promotion to a new division of the company. Her study employed the double-blind procedure.

- a.** What is **one** benefit of using a matched-participants design?

1 mark

- b.** What are the benefits of using a double-blind procedure?

2 marks

SECTION B – continued
TURN OVER

Question 14 (3 marks)

Lorena was born with a physical disability and has never been able to walk. However, Lorena is very talented in verbal skills and is multi-lingual, speaking five different foreign languages as well as English.

In terms of brain plasticity, explain how development would most likely have proceeded in Lorena’s brain.

Question 15 (4 marks)

Motivated forgetting can be discussed in terms of suppression or repression.

Define each of these **two** forms of forgetting, clearly outlining the difference between them.

Question 16 (4 marks)

Describe the location and organisation of the somatosensory cortices in the brain.

**END OF SECTION B
TURN OVER**

SECTION C – Research scenario

Instructions for Section C

Answer the question in the space provided, using a blue or black pen.
Your response may include diagrams, charts and tables.

Dr Henley is a researcher interested in the development and progression of Alzheimer’s disease. He wanted to test the findings of a study examining the role of aspirin in preventing an increase of dementia symptoms to see if this finding applied to Alzheimer’s patients.

Dr Henley recruited 50 Alzheimer’s sufferers from his caseload. He achieved this by approaching each patient and informing them of his research and its ultimate aims. He also provided information relevant to the method and how it would affect the participants. Those in the early stages of the disease who chose to take part then signed a consent form.

Dr Henley randomly assigned the participants to one of two groups. Group 1 was administered 100 mg of aspirin per day for a period of six months. Group 2 was administered a placebo for the same period.

All participants underwent extensive cognitive testing at the beginning of the trial and again at the end. Patients also underwent brain imaging to determine the extent of structural damage before and after the study. Symptoms of Alzheimer’s were recorded on each occasion. At the end of the trial the results from the beginning and the end for each group were compared.

Some differences between the mean scores for the groups were noted. Dr Henley conducted a statistical test to determine whether the difference between the means for the two groups was significant and found that $p = 0.04$. He had set a p value of < 0.01 when designing the study.

Question 1 (3 marks)

Write a possible research hypothesis for this study.

Question 2 (1 mark)

What type of sampling procedure did Dr Henley use?

Question 3 (1 mark)

Dr Henley noted that some individual patients in Group 2 experienced a decrease in Alzheimer's symptoms although they had been administered the placebo. He attributed this to the placebo effect.

Explain the meaning of the term 'placebo effect'.

SECTION C – continued
TURN OVER

Question 4 (10 marks)

Write a discussion for this study that includes a conclusion based on the research hypothesis. Your response should include:

- any limitations within the study (which could include sampling and allocation methods, the appropriateness of the research design) and how they could be improved
- possible extraneous variables.
