insight™
innovative engaging evolving

YEAR 12 *Trial Exam Paper*

2016

PSYCHOLOGY

Written examination

Reading time: 15 minutes
Writing time: 2 hours 30 minutes

STUDENT NAME:

QUESTION AND ANSWER BOOK

Structure of book

Section	*Number of questions*	*Number of questions to be answered*	*Number of marks*
A	65	65	65
B	13	13	60
C	3	3	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.

THIS PAGE IS BLANK

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

Which of the following statements is true of the serial position effect?

A. The serial position effect demonstrates the usefulness of recognition as a measure of retention.

B. The serial position effect is best observed using lists of words that are similar in length and familiarity to the learner.

C. The serial position effect is typically shown in a graph displaying a higher level of recall for words at the beginning of a list than for words at the end of a list.

D. The serial position effect shows that words in the middle of a list are most likely to be recalled.

Question 2

When studying the serial position effect, if a test of recall is used five minutes after hearing the list of words, it is most likely that

A. the recency effect will be apparent because some words from the end of the list will still be in short-term memory.

B. recall will be equally low for items at the beginning, middle and end of the list.

C. no words from the list are likely to be recalled.

D. the primacy effect will be apparent because some words from the beginning of the list will have been transferred to long-term memory.

Question 3

The occipital lobes

A. are responsible for processing both visual and auditory information.

B. are adjacent to the pre-frontal cortex.

C. receive visual information from both the left and the right sides of the retina via the optic nerve.

D. contain the primary visual cortices, which are solely responsible for interpreting visual information.

Question 4

Maintenance rehearsal is best described as a way of

A. enhancing learning by linking newly learned information to information already stored in long-term memory.

B. increasing the amount of information that can be stored in short-term memory.

C. increasing the duration of long-term memory.

D. increasing the duration of short-term memory.

Question 5

Marissa used to enjoy playing soccer until her brother, David, criticised the way she runs. Marissa now avoids playing all sport because she is embarrassed that other people may also think she has an awkward way of running.

In terms of operant conditioning

A. Marissa's avoidance of sport is best described as a positive reinforcement of her playing sport.

B. Marissa relieves her embarrassment by avoiding sport, which negatively reinforces her avoidance of sport.

C. Marissa is punishing herself by avoiding sport.

D. Marissa's embarrassment is the discriminative stimulus.

Question 6

By stopping all sport, not just soccer, to avoid embarrassment, Marissa is demonstrating

A. generalisation.

B. discrimination.

C. extinction.

D. shaping.

Question 7

Marissa's mother heard David teasing Marissa and decided to ban him from playing computer games for a week to let him know that teasing his sister is unacceptable.

The best way to describe this removal of David's permission to play games is

A. punishment.

B. response cost.

C. negative reinforcement.

D. shaping.

Question 8

Jenna was a normal, healthy 16-year-old until she sustained a brain injury in an accident. She now has trouble remembering events from before the accident. This is an example of

A. a form of forgetting known as retrograde amnesia.
B. a form of forgetting known as anterograde amnesia.
C. forgetting due to decay of memory traces.
D. forgetting due to proactive interference.

Question 9

After a time, Jenna found that she could recall some memories that pre-dated the accident, but not the events immediately before the accident.

Which of the following best describes this situation?

A. Jenna's inability to recall the accident is most likely due to the decay of neural pathways associated with her previous memories.
B. Jenna could possibly regain her older memories but will not be able to recall the accident until the right retrieval cue is presented.
C. Jenna's brain was not able to consolidate the events immediately preceding the accident so the memory was not preserved in her long-term memory.
D. Jenna's older memories are creating interference that is preventing retrieval of the memory of the accident.

Question 10

Jenna's doctor was concerned that Jenna's injury may also result in an inability to form new memories. This would mean that

A. the axon terminals of the presynaptic neurons would no longer release glutamate to stimulate the creation of new connections with the dendrites of postsynaptic neurons.
B. Jenna is likely to experience retrograde amnesia.
C. Jenna is likely to have developed Alzheimer's disease.
D. Jenna's postsynaptic neurons would lose the ability to respond to glutamate released into the synaptic gap when new learning took place.

Question 11

Huong is a healthy 65-year-old male who is attending classes to learn to build a website.

When learning these skills in class, it is likely that Huong

A. is in an altered state of consciousness.
B. relies on automatic processes while learning to build a website within the class.
C. moves between divided attention and selective attention.
D. moves between an altered state of consciousness and normal waking consciousness.

Question 12

In this class, Huong has to learn information that requires logical analysis.

Which of the following best describes the likely brain activity in this type of learning?

A. The left hemisphere will be activated during this type of learning while the right hemisphere will remain inactive.

B. The right hemisphere will be dominant in processing the newly learned material.

C. The left hemisphere will be dominant and learning will be consolidated in the frontal lobes.

D. The left hemisphere will be dominant in processing the information, and glutamate release within the brain will be increased.

Question 13

The changes taking place in Huong's brain as he learns can best be described in terms of

A. observational learning.

B. adaptive plasticity resulting in the creation of new synapses.

C. developmental plasticity resulting in the creation of new synapses.

D. adaptive plasticity resulting in the proliferation of new brain cells.

Question 14

Huong was thinking about his learning as he took the train home after class but found that he could not quite recall the final set of instructions the teacher had given. He found that if he closed his eyes and pictured the classroom he was able to recall the information. Which of the following best describes this phenomenon?

A. Huong's mental image of the classroom acted as a state-dependent cue to help him remember.

B. Huong was able to use relearning when visualising the classroom, allowing him to retrieve the information more easily.

C. Huong was more easily able to recall the information when visualising the classroom because he was using recognition to aid recall, and recognition is a more effective measure of retention than recall.

D. Visualising the classroom acted as a context-dependent cue to help Huong to retrieve the information.

Question 15

The motor function of the somatic nervous system can be demonstrated by the

A. sensation of pain when stepping on a pin.

B. immediate pulling away of the foot after stepping on a pin.

C. slight increase in heart rate in response to the shock of stepping on a pin.

D. visual image of a pin transmitted to the brain.

Question 16

Florence enjoys taking a walk after dinner. As she was walking along her street, a possum scampered across the path in front of her. Florence experienced a sudden physiological response that left her feeling very shaken.

This response was triggered by the

A. sympathetic branch of the autonomic nervous system.
B. parasympathetic branch of the autonomic nervous system.
C. sympathetic branch of the somatic nervous system.
D. parasympathetic branch of the somatic nervous system.

Question 17

One physiological response triggered by the possum running across Florence's path is

A. an increase in saliva production and a sense of fear or alarm.
B. the homeostatic response that restricts the bronchi and returns respiration to a normal rate.
C. the release of adrenalin by the adrenal glands.
D. the reduction in heart rate as the arterioles are dilated.

Question 18

Flora is a healthy six-month-old baby. Her mother has been trying to encourage her to roll over, but Flora has not responded to her mother's encouragement. One day, Flora's mother left the room for a short time and was surprised when she came back to find that Flora had rolled over unaided.

Flora's original inability to roll over was most likely because

A. she did not have the appropriate environmental stimulus to perform the fixed action pattern.
B. her mother did not touch the right part of her body to initiate the reflex action.
C. she had not reached the required level of maturation at the time.
D. her mother did not use the right stimulus to encourage her to roll over.

Question 19

Flora soon learned that if she wanted to retrieve a toy she could roll over to take herself closer to the toy. This would mean that

A. the existing neural pathways in Flora's brain related to rolling would adapt to accommodate this new learning.
B. there would be increased cell migration as neurons in Flora's brain move towards their pre-determined locations.
C. there would be additional neural development in Flora's primary motor cortex in the parietal lobes as she learned to roll towards the toy.
D. there would be additional circuit formation in Flora's frontal lobes as she learned to roll more purposefully and control this movement.

Question 20

Margot is a healthy 74-year-old who was born in Scotland. Margot had not returned to her homeland since immigrating to Australia at the age of 15, and she was surprised to find that she was able to find her way around her old home town without any trouble when she recently visited Scotland.

This ability to remember her home town is best described as evidence of the stability of

A. long-term memories throughout the life span.
B. procedural memories throughout the life span.
C. episodic memories throughout the life span.
D. semantic memories throughout the life span.

Question 21

During Margot's visit, her family discussed people she had known in her youth, but Margot often found it difficult to remember each person until she was shown some old photographs. Margot then found that the memories came flooding back in surprising detail.

This method of triggering the retrieval of memories is best described as

A. recognition.
B. free recall.
C. using a context-dependent cue.
D. relearning.

Question 22

Margot did not sleep at all on the very long flight between Australia and Scotland, and did not manage a good night's sleep until her third night in Scotland.

It is likely that following this period of sleep deprivation, Margot would have

A. permanent cognitive impairment.
B. difficulty in completing simple repetitive tasks.
C. difficulty in completing complex tasks.
D. no apparent cognitive impairment.

Question 23

When Margot did sleep well on her third night in Scotland, it is likely that she would have experienced

A. multiple microsleeps.
B. a reduced amount of rapid eye movement (REM) sleep.
C. a greater amount of REM sleep.
D. a normal night's sleep.

Question 24

Which of the following best describes the sleep-wake shift that could be observed in the sleep pattern as a healthy child enters adolescence?

A. During adolescence, most young people need less sleep than they did previously.

B. During adolescence, most young people need more sleep than adults.

C. During adolescence, most young people tend to fall asleep earlier in the evening than they did previously and need to sleep for longer in the morning.

D. During adolescence, most young people tend to fall asleep later at night than they did previously and need to sleep for longer in the morning.

Use the scenario below to answer Questions 25 to 30

Richard once suffered from acute anxiety whenever he was in the vicinity of a dog. This was triggered by an experience he had as a small child when a dog unexpectedly barked very loudly in his face. Richard thought he had outgrown this fear because he had been able to tolerate the company of dogs for many years without the fear response occurring. Richard was very surprised one day when he experienced the fear response after he encountered a barking dog in his friend's backyard.

Question 25

The part of the brain that was responsible for consolidating the original learning of the fear response was the

A. hippocampus.

B. hypothalamus.

C. amygdala.

D. cerebral cortex.

Question 26

In terms of classical conditioning, when the barking dog first frightened Richard the loud barking was the

A. unconditioned stimulus.

B. conditioned stimulus.

C. unconditioned response.

D. conditioned response.

Question 27

In terms of classical conditioning, the initial fear generated by the barking dog was the

A. conditioned stimulus.

B. conditioned response.

C. unconditioned response.

D. unconditioned stimulus.

Question 28

In terms of classical conditioning, the renewed conditioned response can best be described as

A. spontaneous recovery.
B. extinction.
C. generalisation.
D. acute anxiety.

Question 29

In classical conditioning, the term used to describe the initial learning is

A. extinction.
B. acquisition.
C. stimulus generalisation.
D. reproduction.

Question 30

Which of the following is an **incorrect** statement about forgetting as described by Hermann Ebbinghaus?

A. Forgetting continues at a constant rate for several days after learning has occurred.
B. More than 50 per cent of material learned is forgotten within the first hour.
C. The rate of forgetting is gradual after the first 24 hours.
D. Nonsense syllables are used in testing for forgetting to control for prior knowledge affecting the amount of material that is retained.

Use the following information to answer Questions 31 to 33

Dr Young is researching the damage to speech and mobility caused by stroke. His research is based on the outcomes of stroke in one of his patients called Mona.

Question 31

Mona has suffered a stroke and is now experiencing difficulty in producing speech and also has mobility difficulties, particularly on the right side of her body.

Mona has most likely suffered damage to

A. Wernicke's area and part of the primary motor cortex in her left temporal lobe.
B. Wernicke's area in her right temporal lobe.
C. Broca's area and part of the primary motor cortex in her left frontal lobe.
D. Broca's area in her right frontal lobe.

Question 32

Dr Young cannot generalise his findings because the

A. probability of the difficulties experienced by Mona being due to the stroke is $p > 0.05$.
B. findings of a case study cannot be generalised to the population because they are specific to a particular participant.
C. information obtained from the study will not be detailed enough.
D. manipulation of the independent variable cannot be reliably linked to changes in the dependent variable.

Question 33

Dr Young explained to Mona that she had full withdrawal rights. This means that she

A. could withdraw herself and any data already collected about her from the study at any time.
B. was taking part on a purely voluntary basis.
C. would need to be debriefed only if she withdrew from the study.
D. would need to provide a good reason to withdraw but then it would be OK.

Question 34

Li Ming was having difficulty understanding spoken language and producing fluent sentences. A scan of Li Ming's brain is most likely to show damage to the

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

Question 35

The condition Li Ming is most likely to be suffering from is known as

A. Broca's aphasia.
B. Wernicke's aphasia.
C. spatial neglect.
D. the tip-of-the-tongue phenomenon.

Use the following information to answer Questions 36 to 39

Harley, a Year 12 student, was very upset when his girlfriend said she no longer liked him and had found a new boyfriend. Harley began to think constantly about how lonely he was, and he was convinced he would never find another girlfriend. He began to withdraw from his friends, avoiding social contact as much as possible. As his mental state deteriorated, Harley was diagnosed with depression. His doctor advised him to undertake some counselling and prescribed anti-depressant medication.

Question 36

In terms of the biopsychosocial model of mental health, in this case

A. both the counselling and the medication are biological interventions.
B. both the counselling and the medication are psychological interventions.
C. the counselling is a psychological intervention and the medication is a biological intervention.
D. the counselling is a psychological intervention while the medication is a social intervention.

Question 37

In terms of the Lazarus and Folkman transactional model of stress and coping, Harley's interpretation of his situation reflected

A. seeing the situation as a threat in the primary appraisal stage.
B. seeing the situation as a challenge in the primary appraisal stage.
C. problem-focused coping in the secondary appraisal stage.
D. a benign assessment in the secondary appraisal stage.

Question 38

Considering all that Harley had to cope with, it is likely that his allostatic load would have

A. decreased before undertaking counselling.
B. increased before undertaking counselling.
C. remained the same before and after undertaking counselling.
D. increased after undertaking counselling.

Question 39

Which of the following best describes the response of Harley's immune system to this situation?

A. Harley's immune system would have been compromised by the increased secretion of the neurotransmitter dopamine.

B. Harley's immune system would have been compromised by the increased and prolonged secretion of stress hormones such as cortisol and noradrenaline.

C. Harley's immune system would have responded positively to the stressors, helping him to cope better.

D. Harley's immune system would have been compromised in the short term but the stress hormones released into his bloodstream would have helped him to cope in the longer term.

Question 40

Which of the following is most likely to be experienced when in normal waking consciousness?

A. cognitive distortions

B. disorganised and illogical thinking

C. difficulty performing controlled processes

D. accurate time orientation

Use the following information to answer Questions 41 to 45

Dr Prato is a psychologist interested in the use of mnemonics to aid recall. She recruited 100 Victorian adults by placing an advertisement on social media. Each participant was given a shopping list with eight items and asked to read it through three times before a test of recall. The participants were then given a second eight-item list and asked to devise a story linking each of the items on the new list before a test of recall.

Question 41

The experimental design applied in this study is

A. matched participants.

B. matched pairs.

C. independent groups.

D. repeated measures.

Question 42

The independent variable and dependent variable, respectively, are the

A. type of shopping list and the number of items recalled.

B. method of memorising the items on the lists and the type of list.

C. method of memorising the items on the lists and the number of items correctly recalled.

D. type of items on the lists and the method of memorising the items.

Question 43

Which of the following is a possible weakness of the experimental design?

A. Practice effects can create a possible extraneous variable.
B. Counterbalancing may create a possible extraneous variable.
C. It is time-consuming and costly to match participants on the necessary characteristics.
D. Participant-related extraneous variables are not controlled for.

Question 44

Mnemonics tend to improve the likelihood of recalling information such as a shopping list because

A. the recency effect ensures that some of the information will still be in short-term memory.
B. the primacy effect ensures that some of the information will be transferred to long-term memory.
C. elaborative rehearsal is a more effective means of storing information in long-term memory because it links the information in a meaningful way.
D. elaborative rehearsal is a more effective means of storing information because the repetition keeps the information in long-term memory longer.

Question 45

The mnemonic described in this scenario is

A. narrative chaining.
B. elaborative rehearsal.
C. an acronym.
D. an acrostic.

Question 46

Dr Unley is helping a patient to lose weight. He has prescribed a tablet that makes the patient feel nauseated every time he eats fatty food. Dr Unley is applying

A. shaping.
B. flooding.
C. graduated exposure.
D. aversion therapy.

Use the following information to answer questions 47 to 49

Dr Habib is studying the effect of false information on an individual's recall of an event they have witnessed. He showed a short film to two groups of ten people he had randomly approached in a shopping centre. The film showed a group of young men playing football while another young man was rummaging in a sports bag beside the field. After a ten-minute delay, the members of each group were asked questions about what they saw in the film.

Both groups saw the same film, but were asked slightly different questions about what they saw.

Group 1 was asked to generally describe the scene with reference to how many people they saw and what they were doing.

Group 2 was asked specific questions about what the actors were doing. These included the intentionally misleading questions 'Did you see the man remove the wallet from the sports bag?' and 'What colour was the wallet?'

Question 47

From your knowledge of the work of Elizabeth Loftus, which do you think would be the most likely outcome of the questioning?

A. Group 1 and Group 2 would both report seeing the young man remove a wallet from the sports bag.

B. Group 1 would not be likely to mention the wallet, but Group 2 would say they saw it being removed from the sports bag.

C. Group 1 would be likely to report the wallet being removed from the sports bag, but Group 2 would not.

D. Neither group would be likely to say they saw the wallet being removed from the sports bag.

Question 48

Loftus' work showed that

A. misleading questions will always result in false testimony.

B. eyewitnesses are likely to lie when questioned about events.

C. eyewitnesses are likely to reliably recall information if shown photos of the event because recognition is a better measure of retention than free recall.

D. eyewitness recall is often likely to be unreliable, particularly if misleading questions are asked.

Question 49

This study is an example of

A. a case study with random sampling.

B. a longitudinal study with convenience sampling.

C. a repeated measures experiment with stratified sampling.

D. an independent groups design with convenience sampling.

Question 50

Helena looked up the phone number of her local mechanic and used chunking to help keep the number in her mind while she looked for a piece of paper to write it down. This means that she

A. remembered the number as several distinct groups of numbers so that she could extend the capacity of her short-term memory.

B. mentally repeated the number over and over to herself to extend the duration of the information in her short-term memory.

C. mentally applied a letter to each number and then made a memorable word out of the letters.

D. repeated the number aloud until she found a piece of paper.

Question 51

Which of the following is a **correct** statement about how the image of the number would be retained in Helena's memory?

A. The visual information would have been retained in echoic memory for around three seconds.

B. The visual information would have been retained in iconic memory for around 0.3 seconds.

C. The information would have been retained initially via the use of the visuo-spatial sketchpad in long-term memory.

D. The phone number would have been retained in echoic memory for 0.3 seconds.

Question 52

Which of the following is a **correct** statement about declarative memory?

A. Declarative memory involves memory of facts but not of events.

B. Declarative memory includes procedural memories, which are unintentionally formed.

C. Declarative memories are explicit and primarily formed in the hippocampus.

D. Declarative memories are implicit and intentionally formed.

Question 53

In the Baddeley and Hitch model of working memory, the central executive is responsible for

A. switching attention between tasks and selecting information to commit to long-term memory.

B. selecting information from long-term memory to link to information in working memory.

C. storing auditory information in working memory.

D. manipulating and working with information we are aware of at any time.

Question 54

A post-mortem analysis of the brain of an Alzheimer's disease patient would be likely to show

A. amyloid plaques and an increased hippocampal area.
B. deterioration of the parietal lobes, particularly the hippocampal area.
C. deterioration of the temporal lobes, particularly the pre-frontal area.
D. neurofibrillary tangles and a decreased hippocampal area.

Question 55

A split-brain patient who is presented with an image to the left eye would be

A. unable to name the image because it will be processed in the right hemisphere.
B. unable to process the image in the right occipital lobe.
C. able to verbally name the image.
D. unable to either process the image or to name it.

Use the following information to answer Questions 56 to 58

Matthew was preparing for a SAC and undertook a short-answer test before doing any other study. He was shocked to find that his score on the test was just 45% because he thought he knew the material fairly well. After reviewing the material, Matthew tested himself again with a different short-answer test and scored 70%.

Question 56

The initial short-answer task required Matthew to use

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

Question 57

In terms of the relative sensitivity of measures of retention, Matthew performed better on the second task because

A. the first task gave him some practice.
B. short-answer questions will usually generate a better score because they rely on recognition.
C. the second task used cued recall and he was more likely to remember the material.
D. the review of the material prior to completing the second task showed the greater sensitivity of relearning as a measure of retention.

Question 58

Which of the following shows the measures of retention in order from most sensitive to least sensitive?

A. relearning, recall, recognition
B. relearning, recognition, recall
C. recognition, recall, relearning
D. recall, recognition, relearning

Question 59

In a study where the *p* value was set at 0.05, a *p* value of 0.02 means

A. that two per cent of the participants were probably influenced by the placebo effect.
B. that two per cent of the participants withdrew from the study.
C. the result can be considered statistically significant.
D. the result is not statistically significant.

Question 60

The placebo effect will only be evident if the

A. dependent variable has been affected by a placebo.
B. dependent variable has been influenced by the behaviour of the experimenter conducting the study.
C. result has been influenced by the expectations of the participants rather than the dependent variable.
D. result is due to the expectations of the participants rather than the manipulation of the independent variable.

Question 61

The placebo and experimenter effects are controlled for by using

A. a matched participants design.
B. an independent groups design.
C. a double-blind design.
D. a single-blind design.

Question 62

Jamahl had been behaving very badly at preschool, so his teacher told him that she would give Jamahl a gold star every time he behaved appropriately. Jamahl immediately began to modify his behaviour so that he could earn a gold star. This form of behaviour modification technique is an example of

A. classical conditioning.
B. positive reinforcement to strengthen a desired response.
C. negative reinforcement to strengthen a desired response.
D. observational learning.

Question 63

Jamahl's teacher said that if Jamahl earned ten gold stars by the end of the week, he could have extra playtime. This is best described as

A. a response cost.
B. the method of successive approximations.
C. operant conditioning.
D. a token economy.

Question 64

In terms of the levels of processing theory described by Craik and Lockhart, words will be retrieved more easily if they are

A. structurally encoded, which relies on shallow processing.
B. semantically encoded, which relies on deep processing.
C. phonemically encoded, which relies on deep processing.
D. phonemically encoded, which relies on moderate processing.

Question 65

In operant conditioning, partial reinforcement is when only some correct responses are reinforced and learning is

A. slower but will take longer to extinguish.
B. slower and forgotten quickly.
C. very quick but also forgotten quickly.
D. quick but will take longer to be extinguished.

END OF SECTION A
TURN OVER

SECTION B – Short-answer questions

Instructions for Section B

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

Question 1 (6 marks)

Jacquie has a long scar on her leg from a serious accident she had as a child. Although she spent several days in hospital after the accident, she has no memory of either the accident or her hospital stay.

a. Explain **two** possible reasons for Jacquie's memory loss in terms of motivated forgetting.

4 marks

1. _____

_____

_____

2. _____

_____

_____

b. Identify and explain **one** other possible reason for Jacquie's forgetting of the accident.

2 marks

_____

_____

_____

Question 2 (5 marks)

Madu loves tennis and dreams of being a professional tennis player. As a treat, Madu's father took him to the Australian Open to see a centre-court match.

In terms of each of the processes of observational learning shown below, explain how going to the Australian Open could help improve Madu's tennis playing.

Attention _____

_____

Retention _____

_____

Reproduction _____

_____

Motivation _____

_____

Reinforcement _____

_____

Question 3 (2 marks)

Hettie is a nurse and has lately been working extra night shifts, as well as her usual day shifts, because the hospital she works in is understaffed. This has resulted in Hettie missing several nights of sleep over the past week.

Identify two physiological effects that Hettie may experience as a result of the extra night shifts.

1. _____

2. _____

Question 4 (6 marks)

a. Identify two distinctive features of the brain wave pattern evident in Stage 2 sleep.

2 marks

1. _____

2. _____

b. Which device is used to identify this brainwave pattern?

1 mark

_____

c. What would be the predominant brainwave pattern shown by this device in Stage 4 sleep?

1 mark

_____

d. Describe two other characteristics evident in Stage 4 sleep.

2 marks

_____

_____

_____

_____

Question 5 (2 marks)

In terms of brain plasticity, why is it possible for a visually impaired child to have a heightened sense of touch?

_____

_____

_____

_____

Question 6 (8 marks)

Dr Fung is researching the effects of an elevated blood alcohol level on the physiological and psychological functions of young adults. He recruited 36 first-year university students to take part in the study by placing an advertisement on the noticeboard in the university café. Participants were pre-tested using a driving simulator to measure driving ability (Condition 1). Then, after drinking three standard drinks within 90 minutes, participants were again tested using the driving simulator (Condition 2).

a. Can the sampling procedure used by Dr Fung be described as random? Explain.

3 marks

_____

_____

_____

b. What was the purpose of the pre-testing (Condition 1)?

1 mark

_____

_____

c. Describe two changes to driving ability that the participants are likely to experience after drinking the three alcoholic drinks.

2 marks

1. _____

_____

2. _____

_____

d. Why is this study an example of an experiment?

2 marks

_____

_____

_____

Question 7 (1 mark)

Coralynne was trying to remember a town she visited on her last holiday but could only remember that it started with a B.

What is the name of this phenomenon?

_____

Question 8 (4 marks)

Explain the difference between structural and phonemic encoding as described by the Craik and Lockhart theory on levels of processing.

Provide an example to illustrate each form of encoding.

_____

_____

_____

_____

Question 9 (7 marks)

Benjamin and Georgina were both hoping to get into undergraduate medicine after leaving school. When the ATARs were released, it was clear that Benjamin would not qualify. Benjamin was initially very upset and disappointed, but he then began to research alternative pathways into medicine.

a. Explain Benjamin's reaction to his failure to qualify for medicine in terms of the types of appraisal described in Lazarus and Folkman's Transactional Model of Stress and Coping.

4 marks

b. In terms of the Lazarus and Folkman's Transactional Model of Stress and Coping, what method of coping did Benjamin use when exploring alternative pathways?

1 mark

c. Both Georgina and Benjamin would find their respective situations stressful. Explain how their experiences of stress would differ.

2 marks

Question 10 (2 marks)

Explain a strength of the dimensional approach to classifying mental disorders.

_____

_____

_____

_____

_____

Question 11 (7 marks)

Roger Sperry and Michael Gazzaniga's studies of split-brain patients added to our understanding of hemispheric specialisation.

a. What is the name and role of the structure that is severed in split-brain patients?

2 marks

_____

_____

_____

Sperry and Gazzaniga found that when an image of an object was flashed to the left visual field of a split-brain patient, the person could identify the object by touch with the left hand but could not name it.

b. Why was the patient unable to name the object?

2 marks

_____

_____

_____

c. What was the main conclusion of these studies in relation to hemispheric specialistion?

2 marks

_____

_____

_____

d. Identify one limitation of generalising the results of the Sperry and Gazzaniga studies.

1 mark

_____

_____

_____

Question 12 (5 marks)

a. What is a neurotransmitter?

1 mark

_____

b. Explain the process of neurotransmission at the synapse.

4 marks

_____

_____

_____

_____

_____

_____

Question 13 (5 marks)

John B Watson studied classical conditioning, notoriously using a child known as Little Albert.

a. What was the aim of Watson's experiment?

1 mark

_____

_____

b. Identify and explain two ways in which this study was unethical according to the current ethical principles that govern psychological research.

4 marks

_____

_____

_____

_____

_____

_____

_____

_____

SECTION C – Research scenario

Instructions for Section C

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

Your responses may include diagrams, charts and tables.

Dr Illman is a research psychologist interested in the treatment of stress. She conducted a study into the effects of biofeedback on the relief of stress symptoms in fourth-year medical students.

Forty Victorian medical students were recruited in a variety of ways. Each fourth-year medical student in Victoria received a letter inviting them to take part. Posters were placed in various locations around each medical school and an advertisement was placed in a medical journal.

The students were tested for physiological symptoms of stress by being asked to imagine stressful situations in their life while having their heart rate, respiration rate and blood pressure measured. The students were also asked to rate their assessment of stressful situations, completing a questionnaire before the treatment and again afterwards. Dr Illmann also used blood tests to screen for levels of stress hormones in the blood before and after the treatment.

The participants were randomly allocated to one of two groups. Half the group received biofeedback training (Group 1) while the other half did not (Group 2).

The two groups were tested again for stress symptoms one week after those in Group 1 had received the training.

Statistical analysis revealed a difference ($p \leq 0.05$) between the changes in the average number of stress symptoms for the two groups. The results are shown in Table 1 and Table 2.

Table 1. Presence of stress symptoms pre-training

Pre-test result	Mean number of stress symptoms reported per participant
Group 1	8
Group 2	6

Table 2. Presence of stress symptoms post-training

Post-test result	Mean number of stress symptoms reported per participant
Group 1 (with biofeedback training)	3
Group 2 (without biofeedback training)	6

Question 1 (3 marks)

Construct a research hypothesis for this study.

_____

_____

_____

_____

_____

_____

Question 2 (2 marks)

How were inferential statistics applied in this study?

_____

_____

_____

_____

Question 3 (10 marks)

Write a discussion section for this experiment following the usual conventions.
In your response include the aim of the experiment and describe the results of the experiment in your own words, clearly explaining and identifying the effect of the independent variable on the dependent variable.

Interpret the results in relation to the theory being tested and discuss whether a conclusion can be reached.

Discuss the experimental design and comment on the suitability of this design. Consider any other potential limitations of the study and how these may have affected the results.

Suggest any future improvements to this study.

END OF SECTION C
TURN OVER

Extra space for responses

Clearly number all responses in this space.

END OF QUESTION AND ANSWER BOOK