Neap:

Trial Examination 2014

VCE Psychology Units 3&4

Written Examination

Question and Answer Booklet

Reading time: 15 minutes
Writing: 2 hours 30 minutes

Student's Name: _____

Teacher's Name: _____

Structure of Booklet

Section	Number of questions	Number of questions to be answered	Marks
A Multiple-choice	65	65	65
B Short-answer	22	22	60
C Research scenario	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 white out liquid/tape. No calculator is allowed in this examination.

Materials supplied

Question and answer booklet of 31 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

Please ensure that you write your name and your teacher's name in the space provided on this booklet and in the space provided on the answer sheet for multiple-choice questions.

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 booklet.

Students are NOT permitted to bring mobile phones and/or any other electronic communication 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

Gemma had to use _____ attention when she first learned how to play the guitar because she had to concentrate on locating her fingers correctly on the strings, which in this case was a _____ process.

A.   divided; controlled

B.   divided; automatic

C.   selective; controlled

D.   selective; automatic

Question 2

Which of the following descriptions most accurately explains the survival theory of sleep?

A.   All animals that sleep longer have a higher chance of survival.

B.   All animals that sleep fewer hours per day will have a higher chance of survival.

C.   The proportion of sleep for animals is related to maximising their chances for survival.

D.   Large animals sleep more than small animals due to their higher metabolic rates which are associated with their large body mass.

Question 3

Delta brain waves appear during

A.   NREM stage 1.

B.   NREM stage 2.

C.   NREM stage 3.

D.   REM sleep.

Question 4

The use of a self-report in sleep research will provide

A.   qualitative data only.

B.   quantitative data only.

C.   either qualitative or quantitative data, but not both.

D.   qualitative and/or quantitative data.

Question 5

After driving all night during a 'schoolies' trip to Cairns, 18-year-old Hannah finally goes to bed after being awake for 36 hours.

In terms of experiencing REM rebound, it would be expected that approximately ____% of Hannah's sleep would be REM.

A. 0

B. 20

C. 40

D. 80

Question 6

While sitting in a lengthy VCE information session, Pete starts to daydream.

His EEG patterns would resemble those of

A. REM sleep.

B. a light sleep.

C. slow-wave sleep.

D. focused attention.

Question 7

On the first day of term Charlotte was irritable. Her close friends blamed this on her lack of sleep from the night before; she had taken a plane trip from Europe and been unable to sleep during the flight.

Charlotte's irritability can be best explained by her lack of

A. REM sleep.

B. light sleep.

C. slow-wave sleep.

D. sleep spindles.

Question 8

The left cerebral hemisphere is dominant for

A. daydreaming.

B. planning and organising.

C. object recognition.

D. detection of emotions of others (e.g. reading body language).

Question 9

The autonomic nervous system regulates the activity of the _____ muscles and is mainly concerned with the body's _____ environment.

A. skeletal; external

B. skeletal; internal

C. non-skeletal; external

D. non-skeletal; internal

Question 10

After suffering from the effects of a car accident, Zoe finds she is less able to control her emotions as a result of the damage to her _____ lobe.

A.   temporal

B.   occipital

C.   frontal

D.   temporal

Question 11

The _____ in the _____ lobe is/are responsible for visual attention, i.e. the ability to attend to visual stimuli.

A.   association areas; parietal

B.   primary cortex; parietal

C.   association areas; occipital

D.   primary cortex; occipital

Question 12

A spatial neglect patient is typically unable to _____ environmental stimuli on the _____ side of their environment.

A.   visualise; right

B.   visualise; left

C.   attend to; right

D.   attend to; left

Use the following information to answer Questions 13–16.

In 2009, Sarah Scott, an 18-year-old high school student, suffered a stroke which resulted in her suffering from Broca's aphasia. Over the last five years her condition has gradually improved as a result of regular speech therapy. Her case has provided contemporary data on the impact of Broca's aphasia and the recovery patterns for a young person.

Question 13

The method of data collection used is this case was a/an

A.   case study.

B.   experiment.

C.   survey.

D.   interview.

Question 14

The area of Sarah's brain affected by the stroke is the left _____ lobe adjacent to the _____.

A.   temporal; auditory

B.   temporal; primary motor cortex

C.   frontal; primary motor cortex

D.   frontal; auditory

Question 15

Sarah's rehabilitation has resulted in _____ of the neurons, which is a feature of _____ plasticity.

A.   sprouting; developmental

B.   sprouting; adaptive

C.   synaptogenesis; developmental

D.   synaptogenesis; adaptive

Question 16

Sarah is most likely _____ of her condition, and shortly after her stroke her sentences would have typically lacked _____.

A.   aware; verbs and nouns

B.   unaware; verbs and nouns

C.   unaware; conjunctions

D.   aware; conjunctions

Question 17

Which of the following is primarily a storage system for the Baddeley and Hitch model of working memory?

A.   central executive

B.   visuo-spatial sketchpad

C.   episodic buffer

D.   semantic memory

Question 18

Which of the following brain structures is/are involved in the formation of episodic memories?

A.   the hippocampus only

B.   the amygdala only

C.   both the hippocampus and the amygdala

D.   the left medial temporal lobe only

Question 19

According to Ebbinghaus, the rate of forgetting is affected by

A.   the complexity of the material learned.

B.   the regularity with which the material to be remembered is studied.

C.   the intelligence of the learner.

D.   the age of the learner.

Question 20

Suppression of information is controlled by which division of Baddeley and Hitch's model of working memory?

A.   central executive

B.   episodic buffer

C.   visuo-spatial sketchpad

D.   phonological loop

Question 21

When trying to remember the words to the school song, Zahara looks at the words and subvocalises them in her head in a rhythmical way, with added emphasis on the rhyming words.

Zahara is using _____ processing.

A.   structural

B.   phonemic

C.   semantic

D.   shallow

Question 22

Grandpa is a healthy 80-year-old.

His _____ memory would be the least affected by age.

A.   implicit

B.   explicit

C.   episodic

D.   semantic

Question 23

We are consciously aware of stimuli that enter our _____ memory.

A.   implicit

B.   echoic

C.   short-term

D.   long-term

Question 24

Darcy is experiencing retrieval failure during the Psychology exam.

This means she is unable to activate the appropriate node in her _____ in order to utilise the information in her _____ which will enable her to respond to the question.

A.   short-term memory; short-term memory

B.   short-term memory; long-term memory

C.   long-term memory; short-term memory

D.   long-term memory; long-term memory

Question 25

A failure to encode information can explain a limitation of which of the following forgetting theories?

A.   retrieval failure

B.   motivated forgetting

C.   decay theory

D.   state-dependent cues

Question 26

Alzheimer's disease is caused by _____ plaques _____ neurons.

A.   amyloid; between

B.   amyloid; within

C.   neurofibrillary; between

D.   neurofibrillary; within

Use the following information to answer Questions 27–31.

Dr Aitken is conducting research on the memory decline of victims of Alzheimer's disease at various stages of the condition. Patients included in the study were first diagnosed with the disease from two to eight years ago.

Question 27

Alzheimer's disease results in a _____ decline in memory and tends to affect people _____.

A.   rapid; identically

B.   rapid; differently

C.   gradual; identically

D.   gradual; differently

Question 28

Tests would typically indicate that procedural memory would be

A.   more affected than declarative memory.

B.   unaffected.

C.   eventually affected (in the advanced stages of the disease).

D.   affected at the same time that declarative memory was affected.

Question 29

In order to test the effects of the disease on memory, _____ sampling would be the most effective means of controlling the diversity of the stages of patients' conditions.

A.   random

B.   convenience

C.   stratified

D.   repeated-measures

Question 30

Which research design would be the most effective for controlling participant-related variables when testing the working memory of the patients who were first diagnosed with the disease two years ago?

A.   independent groups

B.   matched participants

C.   repeated measures

D.   stratified random sampling

Question 31

The presence of participant-related extraneous variables in experiments with Alzheimer's disease patients means that

A.   no valid conclusions or generalisations can be made.

B.   a valid conclusion can be made, but generalisations are less likely.

C.   a generalisation can made, but valid conclusions are less likely.

D.   valid conclusions and generalisations can generally be made.

Question 32

_____ is a feature of developmental plasticity which refers to the explosion of new synaptic configurations in response to environmental stimuli.

A.   Pruning

B.   Sprouting

C.   Rerouting

D.   Synaptogenesis

Question 33

Which neuronal structure conveys chemical messages away from the cell body as a result of an action potential?

A.   dendrites

B.   axon

C.   synapse

D.   myelin sheath

Question 34

Godden and Baddeley (1975) conducted an experiment in which a group of divers had to learn a list of words either on land or six metres underwater.

Their recall of these words was later tested on either land or underwater in order to demonstrate that _____-dependent cues enhance the retrieval of information when there is a match between the _____ environment in which information is encoded and when it is subsequentially retrieved.

A.   state; internal

B.   context; external

C.   state; external

D.   context; internal

Question 35

Jack's iPhone password is Mazza3, which are the first five letters of his surname and the number of children he has. He now needs to change his password.

In order to remember his new password and prevent _____ interference, he should choose a password such as _____.

A.   proactive; 3Mazza

B.   proactive; French (his family origin)

C.   retroactive; 3Mazza

D.   retroactive; French (his family origin)

Question 36

Which of the following is an example of an implicit memory?

A.   knowing how to ride a bike

B.   recalling the highlights of a concert

C.   the rules of chess

D.   the formula for area of a circle

Question 37

According to the restorative theory of sleep, explicit memories are consolidated during
_____.

A. REM sleep

B. stage 2 sleep

C. slow-wave sleep

D. microsleeps

Question 38

Case studies that investigate suppression can be carried out on

A. the population.

B. large groups only.

C. small groups only.

D. either individuals or groups.

Question 39

The 'law of effect' relates to which learning theory?

A. classical conditioning

B. maturation

C. trial and error learning

D. social learning theory

Question 40

Which behavioural modification technique would be most suitable for overcoming Ahmed's addiction
to cigarettes?

A. flooding

B. graduated exposure

C. aversion therapy

D. token economies

Use the following information to answer Questions 41–46.

- Dr Bianco conducted an experiment on the effectiveness of token economies for toilet training children. An advertisement was placed in a form of social media calling for parents of three-year-olds to participate in a ninety-day trial.

- The parents of fifty-four children gave consent to participate. The participants were then randomly allocated to either the token economy group or the non-token economy group.

- With both the child and parent present, each child was provided with a token chart that had ten spots for tokens on it and a picture of a basket of lollies at the bottom of the chart.

- The parents were given ten tokens and it was explained to the child that they had to have an 'accident-free day' in order to receive a token. If successful, the token was placed on the chart by the child, and once the chart was filled with all ten tokens the child would receive a basket of lollies.

- For both groups the number of accident-free days was calculated in order to determine the effectiveness of the use of token economies.

- Dr Bianco determined that the level of significance required for the *p*-value was less than 0.05.

- A statistical test was conducted to determine the significance of the results based on the difference in accident-free days between the token economies and non-token economies participants, which generated a *p*-value of $p = 0.081$.

Question 41

The operationalised dependent variable was the

A.   use of token economies.

B.   use of token economies versus the non-use of token economies.

C.   number of 'accident-free days'.

D.   effectiveness of token economies.

Question 42

The experimental design used in this case was

A.   independent groups.

B.   matched participants.

C.   repeated measures.

D.   stratified sampling.

Question 43

The sampling technique used in this case was

A.   stratified.

B.   stratified random.

C.   random.

D.   convenience.

Question 44

The schedule of reinforcement used to obtain a token in this case was

A.   continuous.

B.   fixed-ratio.

C.   fixed-interval.

D.   variable-interval.

Question 45

The schedule of reinforcement used to obtain the basket of lollies in this case was

A.   continuous.

B.   fixed-ratio.

C.   fixed-interval.

D.   variable-interval.

Question 46

Which of the following would be an appropriate conclusion?

A.   No conclusion could be made due to the presence of participant-related variables.

B.   No conclusion could be made due to the lack of appropriate statistics.

C.   Token economies can be effectively used to assist toilet training for young children.

D.   Token economies have not significantly assisted toilet training of the young children who participated in this experiment.

Question 47

In comparison to infancy, adults have _____ reflexes than during their infancy as a result of _____ plasticity.

A.   fewer; adaptive

B.   more; developmental

C.   fewer; developmental

D.   more; adaptive

Question 48

Developmental plasticity

A.   finishes during childhood.

B.   finishes during early adulthood.

C.   is maintained throughout the lifespan.

D.   occurs throughout the lifespan, but is less efficient during old age.

Use the following information to answer Questions 49 and 50.

During a junior tennis match Roger deliberately hit the ball over the fence in frustration at missing an easy volley. The match umpire then disqualified Roger from the rest of the match and he was banned from playing tournament tennis for one month.

Question 49

In terms of the three-phase model of operant conditioning, the antecedent condition was

A. missing an easy volley.

B. deliberately hitting the ball over the fence.

C. being disqualified from the match.

D. being banned from playing tournament tennis for one month.

Question 50

Roger's ban from tournament tennis was an example of

A. negative reinforcement.

B. positive punishment.

C. response cost.

D. shaping.

Question 51

All of the following are applications of both classical conditioning and operant condition, except

A. shaping.

B. extinction.

C. acquisition.

D. stimulus discrimination.

Question 52

The desire for Ally to learn how to perform a complex dive demonstrated by her diving coach will initially affect which stage of observational learning?

A. attention

B. retention

C. motivation

D. reinforcement

Question 53

The DSM-5

A. is a dimensional approach to the classification of a mental disorder.

B. adopts a graded and transitional approach to the classification of a mental disorder.

C. is a discrete categorical approach to the classification of a disorder.

D. has low inter-rater reliability.

Question 54

Cortisol is a stress hormone released by the adrenal gland that can best be described as

A. harmful in the short-term to the body.

B. helpful in the long-term for dealing with stressors.

C. helpful, but slow to take effect in dealing with stressors.

D. helpful in the short-term for dealing with stressors, but harmful to the body if high levels are maintained in the long-term.

Question 55

Which component of the HPA axis releases the stress hormone noradrenaline when the body is under threat?

A. hypothalamus

B. pituitary gland

C. adrenal gland

D. all three of the above

Use the following information to answer Questions 56 and 57.

After awakening to the sound of what seemed like an attempted break-in, Hannah sprang out of bed to turn the outside lights on and check for intruders. She peered out the window to see that the noise was caused by a possum fight in a tree near the front door. Hannah then calmed down and went back to sleep.

Question 56

Hannah's heart rate would have _____ accelerated when she was first woken and then _____ returned to normal once she realised that she was no longer under threat.

A.   rapidly; rapidly

B.   rapidly; gradually

C.   gradually; rapidly

D.   gradually; gradually

Question 57

Which of the following physiological responses would have been suppressed by the activation of Hannah's fight-flight response when she thought she was under threat?

A.   digestion

B.   respiration rate

C.   glucose release

D.   sweat gland secretions

Question 58

Physical exercise _____ beta endorphins which _____ pain sensations.

A.   releases; increase

B.   releases; reduce

C.   suppresses; increase

D.   suppresses; reduce

Question 59

Allostasis can be described as a process of achieving _____ through behavioural and physiological _____.

A.   variability; consistency

B.   variability; change

C.   stability; consistency

D.   stability; change

Use the following information to answer Questions 60–63.

Drew was working when he received an emergency call from a hospital informing him that his wife Trish had a brain aneurysm. Drew became anxious and had to act quickly to get someone to pick up his four young children from school and take care of them while he went to the hospital to support his wife. Drew's wife was in a critical condition for several days and Drew maintained a bedside vigil during this time, receiving only minimal sleep during the ordeal.

After a week Trish's condition improved, but the medical staff were not sure how Trish would recover in terms of possible impaired functionality resulting from brain damage. However, Drew was able to relax with the knowledge that Trish's life was no longer in danger and that she would be coming home soon.

Question 60

Drew's anxiety was an example of _____, which is a _____ response to a stressor.

A. eustress; positive psychological

B. distress; negative psychological

C. eustress; positive physiological

D. distress; negative physiological

Question 61

In this case, Drew's allostatic response would have been activated and then switched off by his _____ nervous system.

A. autonomic

B. somatic

C. sympathetic

D. parasympathetic

Question 62

According to the Lazarus and Folkman Transactional Model of Stress and Coping, which of the following would have been an example of emotion-based coping that Drew could have used when Trish came home?

A. defining the problem in terms of the severity of Trish's condition

B. meditating

C. generating and evaluating alternative solutions for managing Trish's impaired functionality at home

D. learning new skills to help manage Trish's medical condition from a carer's point of view

Question 63

According to the Lazarus and Folkman Transactional Model of Stress and Coping, a possible secondary appraisal made by Drew could have been an evaluation of the

A. harm done to Trish's health.

B. coping options for managing the stressor.

C. threats to Trish's day-to-day existence.

D. challenges that will exist in the future.

Question 64

Which of the following forms of classification of a mental condition is least likely to lead to labelling or stigmatising of a patient?

A.   a discrete approach

B.   ICD-10

C.   a dimensional approach

D.   DSM-5

Question 65

A third party that helps an individual understand a stressor and gives them coping strategies is providing

A.   tangible assistance.

B.   emotional support.

C.   information support.

D.   appraisal support.

SECTION B: SHORT ANSWER QUESTIONS

> **Instructions for Section B**
>
> Answer **all** questions in the spaces provided. Write using black or blue pen.

Question 1 (2 marks)

Using examples relating to primary school students, distinguish between controlled processes and automatic processes.

_____

_____

_____

Question 2 (1 mark)

Tara experiences an alcohol-induced state on New Year's Eve.

Explain how her alcohol-induced state can lead to a cognitive distortion.

_____

_____

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Question 3 (4 marks)

Explain how galvanic skin response (GSR) and electromyograph (EMG) measurements can be used to distinguish REM from NREM sleep for patients in a sleep laboratory.

_____

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Question 4 (2 marks)

Walter is a 16-year-old school student who has recently been experiencing delayed sleep phase onset.

Explain what may have caused this condition.

_____

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Question 5 (3 marks)

Describe a test that researchers could use to determine which hemisphere is dominant for language in split-brain patients.

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Question 6 (2 marks)

After calculating the mean time taken to reach REM sleep for both the control and experimental groups of a sleep deprivation experiment, why is it also necessary to calculate the p-value?

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Question 7 (2 marks)

Compare the proportional cortical representation of the hands and elbows in the primary motor cortex.

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Question 8 (3 marks)

Using an example, describe how acrostics can be used to enhance memory.

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Question 9 (4 marks)

Ruby was attentive in class whilst her Psychology teacher wrote on the board and discussed some key examination tips for the end-of-year examination she would sit next month.

Discuss the role of each of the relevant components of the Atkinson–Schiffrin multi-store model of memory in both storing the memory of the exam tips and then recalling them during the exam.

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Question 10 (4 marks)

During the Christmas holidays in 2012, Georgia learns how to stream movies through her computer, but then claims to have forgotten how to do it during the Christmas holidays the following year.

a. Using the savings score formula, provide evidence that would indicate that Georgia has retained some of her original learning. 3 marks

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b. Why is relearning considered the most sensitive measure of retention? 1 mark

_____

_____

Question 11 (2 marks)

What is the function of dendrites? In your answer, explain how dendrites change in relation to memory formation.

_____

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Question 12 (3 marks)

Manisha attended a cricket match at the MCG and witnessed a fight that broke out in the crowd between an adolescent and a middle-aged man. Manisha was subsequently interviewed and asked, 'What happened after the adolescent threw the first punch?'.

Explain how this question could affect Manisha's memory according to the reconstructive nature of memory, as informed by Elizabeth Loftus.

_____

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Question 13 (3 marks)

Salmon swimming upstream is a well-known example of a fixed-action pattern.

a. Explain how this is a fixed-action pattern. 1 mark

_____

_____

b. Identify one difference between a fixed-action pattern and a reflex. 1 mark

_____

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c. Explain why humans do not have fixed-action patterns. 1 mark

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Question 14 (2 marks)

Explain how an order effect can be a confounding variable.

_____

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Question 15 (2 marks)

Distinguish between the role of the learner in classical conditioning and in operant conditioning.

_____

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Question 16 (4 marks)

Using the language of classical conditioning, explain how Pavlov's experiments demonstrated both extinction and spontaneous recovery.

_____

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Question 17 (2 marks)

In terms of the two types of learning, operant conditioning and observational learning,

a. explain a similarity.   1 mark

_____

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b. explain the difference.   1 mark

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Question 18 (4 marks)

Using examples, distinguish between critical periods and sensitive periods in terms of timing of experience.

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Question 19 (1 mark)

One reason that the Watson and Rayner 'Little Albert' experiment was considered to be unethical by today's standards was the failure to extinguish Albert's fear of white rats.

This is a feature of _____ at the conclusion of the experiment, in which experimenters are required to remove any possible negative consequences for participants.

Question 20 (3 marks)

Auntie June is a mental health clinician who suspects that her niece May is mentally ill.

a.   Explain how Auntie June could determine if May is mentally ill.   1 mark

_____

_____

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_____

b.   Explain how Auntie June could use a biopsychosocial framework as an approach to
           considering May's mental health.   2 marks

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Question 21 (5 marks)

Raj has been having difficulty coping with the stress of his marriage break-up for several months. It is affecting his relationship with his children along with his work performance.

a.   Raj is experiencing allostatic load.

Explain what is meant by allostatic load.   3 marks

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b.   Referring to the Lazarus and Folkman Transactional Model of Stress and Coping, identify and explain a possible primary appraisal that Raj could make.   2 marks

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Question 22 (2 marks)

Explain the purpose of using biofeedback as a strategy for coping with stress.

_____

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SECTION C: RESEARCH SCENARIO

Instructions for Section C
Answer all questions in the spaces provided. Write using black or blue pen.

Context-dependent cues are external environmental cues, such as sights and sounds, that were present during the initial encoding of material and enhance retrieval of that information when they are present as the person is attempting to retrieve that information.

Dr J. Erving aims to investigate the impact that context-dependent cues have on exam performance for VCE students. He uses students from two Unit 1 Psychology classes (31 female and 14 male students, age range 15–17 years) whom his sister teaches at Waratah Secondary College. One of the classes has all their lessons in room V8 and the other class has all their lessons in S4. The Unit 1 mid-year examination will be held in room V8.

Question 1 (2 marks)

Identify the control group in this experiment and explain the purpose of having a control group.

_____

_____

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_____

Question 2 (2 marks)

Using an example from this scenario, explain what is meant by an extraneous variable.

_____

_____

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Question 3 (1 mark)

Why is it important for researchers to follow ethical principles when conducting psychological research?

_____

_____

Question 4 (10 marks)

Write a partial introduction and method for an experiment that aims to collect quantitative data on the impact of context-dependent cues for VCE students on examination performance. Use the appropriate APA conventions of psychology report writing.

In your response, include the following:

- research hypothesis

- operationalised IV and DV

- participants (including sampling and allocation procedures)

- procedure (including appropriate research design)

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END OF QUESTION AND ANSWER BOOKLET

Extra space for responses

Clearly number all responses in this space.

Extra space for responses

Clearly number all responses in this space.