



Victorian Certificate of Education
2014



STUDENT NUMBER

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PSYCHOLOGY

Written examination

2014

Reading time: 15 minutes

Writing time: 2 hours 30 minutes

QUESTION AND ANSWER BOOK

Structure of book

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	65	65	65
B	9	9	60
C	4	4	15
			Total 140

- Students are permitted to bring into the assessment 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.
- Answer sheet for multiple-choice questions.
- Additional space is available at the end of the booklet if you need extra paper to complete an answer.

Instructions

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- All written responses must be in English.

At the end of the examination

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

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the assessment 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 score 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

Consciousness can be defined as

- A. a moral guide.
- B. awareness of internal behaviours.
- C. being interpersonal, selective, continuous and changing.
- D. awareness of both internal experiences and the external world.

Question 2

Which of the following is the most sensitive measure of retention?

- A. recognition
- B. relearning
- C. recall
- D. retrieval

Question 3

What is an issue with the repeated-measures design, and how can it be overcome?

- A. counterbalancing; order effects
- B. individual participant differences; counterbalancing
- C. order effects; counterbalancing
- D. sampling bias; random sampling

Question 4

Why is it easier for Tim to recognise a repeat episode of his favourite TV show than for him to list the plot lines of each of the episodes he has watched so far?

- A. recall provides more cues than recognition
- B. relearning provides more cues than recall
- C. recall provides more cues than retrieval
- D. recognition provides more cues than recall

Question 5

The recall of the names of high school classmates is typically more difficult for healthy elderly people, as they have not recently thought about the information, compared to healthy adolescents. Which theory of forgetting would best account for this?

- A. decay theory
- B. Alzheimer's disease
- C. dementia
- D. disruption to consolidation

Question 6

Your ability to blow out candles on a birthday cake would be considered to be

- A. implicit, semantic memory.
- B. implicit, procedural memory.
- C. explicit, procedural memory.
- D. explicit, semantic memory.

Question 7

What cause of forgetting would be most difficult to test empirically?

- A. proactive interference
- B. retroactive interference
- C. dementia
- D. motivated forgetting

Question 8

Ebbinghaus' forgetting curve suggests that

- A. 10% of memory is lost in an hour after initial learning.
- B. 30% of memory is lost in an hour after initial learning.
- C. 50% of memory is lost in an hour after initial learning.
- D. more than 50% of memory is lost in an hour after initial learning.

Use the following information to answer Questions 9-10.

Jim wants to learn how to make cupcakes just like his mum.

Question 9

After watching his mum make cupcakes on two occasions, Jim forms a mental representation of the process of making cupcakes. According to the processes of observational learning, he has fulfilled the step of

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

Question 10

On the third time that Jim watches his mum baking cupcakes, she accidentally burns herself on a hot baking tray. Jim no longer wants to make cupcakes.

Why would Jim's reluctance to make cupcakes be a product of observational learning, and not operant conditioning?

- A. Jim has received reinforcement, which can occur in observational learning, but not in operant conditioning
- B. Jim has received vicarious punishment, which can occur in observational learning, but not in operant conditioning
- C. Jim has been punished for initially wanting to make cupcakes, which can occur in observational learning, but not in operant conditioning
- D. Jim's mother has received vicarious punishment, which can occur in observational learning, but not in operant conditioning

Question 11

The role of axon terminals is to

- A. receive neurotransmitters released from the post-synaptic neuron.
- B. release neurotransmitters to be received by the post-synaptic neuron.
- C. release neurotransmitters to be received by the pre-synaptic neuron.
- D. receive neurotransmitters released from the pre-synaptic neuron.

Question 12

When completing a hedge maze, Sam makes numerous haphazard and failed attempts at finding the end point. When he finishes the maze, he is able to successfully navigate the hedge maze a second time by repeating the turns that led him to the end point, and avoiding the turns that led him to the wrong direction.

Which theory of learning can best account for Sam's conditioned response of successfully completing the maze the second time around?

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

Use the following information to answer Questions 13-14.

Emily often bites her nails. Her mum wants to get rid of this bad habit.

Question 13

Which of the following would be an example of the elements of aversion therapy to discourage Emily from biting her nails?

- A. *Discriminative stimulus:* Emily's nails
Behaviour: Emily biting her nails
Consequence: Emily's mum administering an aversive stimulus such as applying nauseating nail polish to her nails
- B. *Discriminative stimulus:* Emily's mum being away from Emily
Behaviour: Emily biting her nails
Consequence: Emily's mum administering an aversive stimulus such as feeding her vegetables Emily dislikes
- C. *Neutral stimulus:* Emily biting her nails
Unconditioned stimulus: nauseating nail-polish
Unconditioned response: feeling nauseous
Conditioned stimulus: Emily biting her nails
Conditioned response: Emily feeling nauseous when she bites her nails
- D. *Neutral stimulus:* Emily biting her nails
Unconditioned stimulus: being told off by her mum
Unconditioned response: listening to her mum
Conditioned stimulus: Emily biting her nails
Conditioned response: remembering what mum said about not biting her nails

Question 14

Once Emily's mum is satisfied that Emily no longer bites her nails, she stops conditioning her. Emily begins to bite her nails again. What has happened to Emily's learned behaviour?

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

Use the following information to answer Questions 15-18.

Brian has had his cerebral hemispheres separated due to his severe epilepsy.

Question 15

Which part of Brian's brain has been severed?

- A. the corpus callosum
- B. the cingulate cortex
- C. the cerebral cortex
- D. the cerebellum

Question 16

After Brian's operation, an epileptic seizure arising in his left cerebral hemisphere would

- A. affect both sides of his body.
- B. affect the left side of his body.
- C. affect the right side of his body.
- D. not affect his body at all.

Question 17

Brian is concurrently flashed an image of a cup in his left visual field, and an image of a pen in his right visual field. When asked to identify what Brian saw, he could:

- A. verbalise that he saw a cup, and select a pen from a range of objects out-of-sight with his right hand.
- B. verbalise that he saw a pen, and select a cup from a range of objects out-of-sight with his right hand.
- C. verbalise that he saw a pen, and select a cup from a range of objects out-of-sight with his left hand.
- D. only identify seeing a pen.

Question 18

What would Brian's results suggest about hemispheric specialisation?

- A. the left hemisphere of the brain is responsible for non-verbal processing, and the right hemisphere of the brain is responsible for verbal processing
- B. the right hemisphere of the brain is responsible for non-verbal processing, and the left hemisphere of the brain is responsible for verbal processing
- C. both hemispheres are equally responsible for verbal and non-verbal processing
- D. Brian's results cannot support hemispheric specialisation

Question 19

What type of data is collected by an electroencephalograph, electromyograph, and electro-oculargraph?

- A. psychological data
- B. inferential data
- C. qualitative data
- D. quantitative data

Question 20

In an alcohol-induced altered state of consciousness, which of the following is **not** inhibited?

- A. controlled processes
- B. automatic processes
- C. cognitive distortions
- D. emotional awareness

Question 21

Which of the following would be the most reliable indicator of sleep?

- A. Galvanic Skin Response (GSR)
- B. body temperature
- C. heart rate
- D. electroencephalograph (EEG) recordings

Question 22

Within a sleep lab, how could video monitoring be a useful indicator of NREM sleep, compared to REM sleep?

- A. video monitoring could indicate that people are in NREM sleep when they have some movement, and indicate REM sleep when they have little to no movement
- B. video monitoring could indicate that people are in NREM sleep when they are dreaming, and indicate REM sleep when they have some movement, such as yawning
- C. video monitoring could indicate that people are in NREM sleep when they are not dreaming, and indicate REM sleep when they are dreaming
- D. video monitoring would not be able to determine whether someone is in NREM or REM sleep

Question 23

Dr Keating found that images of participants' own beds triggered feelings of sleepiness and yawning. Given this finding, what is a limitation of studying sleep habits in a sleep laboratory?

- A. stimulus discrimination may occur; this would enable them to feel sleepy as they usually do when they see their own bed
- B. stimulus discrimination may not occur; this would enable them to feel sleepy as they usually do when they see their own bed
- C. stimulus generalisation may not occur; this would prevent them from feeling sleepy as they usually do when they see their own bed
- D. stimulus generalisation may occur; this would prevent them from feeling sleepy as they usually do when they see their own bed

Question 24

The loss of _____ will most likely deprive the body of psychological restoration.

- A. REM sleep
- B. stage 1 NREM sleep
- C. micro-sleeps
- D. slow wave sleep

Question 25

While apparently staying awake after 24 hours without sleep, which of the following is most likely to occur?

- A. microsleeps
- B. REM rebound
- C. hallucinations
- D. loss of memory

Question 26

Which of the following tasks would be the most difficult to sustain after 24 hours of sleep deprivation?

- A. devising creative responses to a complex problem
- B. sleep
- C. completing a difficult maths test
- D. paying attention to a boring lecture

Question 27

After many months of training, Andy has just completed an ultra-marathon, running 90 kilometres. For the two nights after the run, Andy is likely to experience

- A. more light (stages 1 and 2 NREM) sleep compared to REM sleep.
- B. more deep (stages 3 and 4 NREM) sleep compared to REM sleep.
- C. more REM sleep compared to light (stages 1 and 2 NREM) sleep.
- D. more REM sleep compared to deep (stages 3 and 4 NREM) sleep.

Question 28

Research shows that sleep has an important role in brain growth. Which of the following is the best support for this claim?

- A. the comparatively higher proportion of REM sleep that infants experience compared to adults
- B. the comparatively higher proportion of NREM sleep that infants experience compared to adults
- C. REM rebound
- D. increased NREM sleep after a tiring day

Question 29

The human nervous system can be divided into: the Central Nervous System (CNS) which consists of the brain and spinal cord, and the

- A. Parasympathetic Nervous System, which transmits sensory information from the body's muscles, organs and glands to the CNS, and motor information from the CNS to the body's muscles organs and glands.
- B. Parasympathetic Nervous System, which transmits motor information from the body's muscles, organs and glands to the CNS, and sensory information from the CNS to the body's muscles organs and glands.
- C. Peripheral Nervous System, which transmits sensory information from the body's muscles, organs and glands to the CNS, and motor information from the CNS to the body's muscles organs and glands.
- D. Peripheral Nervous System, which transmits motor information from the body's muscles, organs and glands to the CNS, and sensory information from the CNS to the body's muscles organs and glands.

Question 30

The fight-flight response is a direct function of

- A. the Automatic Nervous System.
- B. the Somatic Nervous System.
- C. the Parasympathetic Nervous System.
- D. the Sympathetic Nervous System.

Question 31

For optimal functioning, an adolescent requires

- A. more sleep than infants.
- B. more sleep than the elderly.
- C. approximately the same amount of sleep than the elderly.
- D. at least 12 hours each night.

Question 32

Damage to Jen's left parietal lobe due to stroke or brain injury could result in

- A. an inability to see anything on Jen's right side.
- B. an inability to see anything on Jen's left side.
- C. an inability to pay attention to anything on Jen's right side.
- D. an inability to pay attention to anything on Jen's left side.

Question 33

What is a neural pathway?

- A. connections between the dendrites of several neurons
- B. a mind map
- C. a chain of neurons that connect one part of the nervous system to another
- D. a chain of neurons that connect one concept to another

Question 34

Long term potentiation means that

- A. axons and dendrites become bushier.
- B. new synaptic connections form.
- C. more neurotransmitters are released.
- D. all of the above processes are involved.

Question 35

In which of the following scenarios is long term memory likely to form, according to consolidation theory?

- A. Tommy gets a severe hit to the head immediately following the learning of an opponent's name
- B. Johnny has had time to rehearse a new name that he's learnt without disruption, and his hippocampus has converted this information from short term memory to long term memory
- C. Ronny has processed a new name during conversation, but focuses on the conversation rather than the name
- D. Jimmy has had time to rehearse a new skill that he's learnt without disruption, and his hippocampus has converted this information from short term memory to long term memory

Question 36

When recognising the capitals of Australian states amongst distractors, it is likely that

- A. a healthy elderly person would perform just as well as a healthy adult on this task.
- B. a healthy elderly person would perform worse than a healthy adult on this task.
- C. a healthy elderly person would perform better than a healthy adult on this task.
- D. a healthy adult would perform worse on this task than a healthy infant.

Question 37

A person suffering from Alzheimer's disease is likely to experience

- A. an inability to encode and store new memories.
- B. a loss of memories stored before the development of Alzheimer's disease.
- C. both anterograde amnesia which refers to the loss of memories stored before the development of Alzheimer's disease; and retrograde amnesia, which refers to the inability to encode and store new memories.
- D. both anterograde amnesia which refers to the inability to encode and store new memories; and retrograde amnesia, which refers to the loss of memories stored before the development of Alzheimer's disease.

Question 38

Which of the following is most likely to develop first in Alzheimer's patients?

- A. impaired procedural memory
- B. impaired declarative memory
- C. impaired speech
- D. impaired recognition of family members

Question 39

What is the approximate capacity and duration of iconic memory?

- A. unlimited; 3-4 seconds
- B. 7 ± 2 pieces of information; 3-4 seconds
- C. 7 ± 2 pieces of information; 0.2-0.4 seconds
- D. unlimited; 0.2-0.4 seconds

Question 40

It is hypothesised that the recency effect occurs because

- A. the information at the end of a list is encoded into short term memory.
- B. the information at the end of a list is encoded into long term memory.
- C. the information at the beginning of a list is encoded into long term memory.
- D. the information at the beginning of a list is encoded into short term memory.

Question 41

Which of the following would be most effective for encoding long term memories?

- A. maintenance rehearsal
- B. elaborative rehearsal
- C. the primacy effect
- D. the recency effect

Question 42

According to Craik and Lockhart's Levels of Processing theory, the least effective method of encoding memories would be to

- A. memorise a list of words by observing their lower case or upper case structure.
- B. memorise a list of words by thinking about how the words can be used in a sentence.
- C. memorise a list of words by thinking about whether or not the words rhyme with another word.
- D. memorise a list of words by thinking about the meaning of the words.

Use the following information to answer Questions 43-45.

Woof, Sarah's dog, keeps barking. Sarah moves Woof outside.

Question 43

Because Woof loves the outdoors, he was happy to be moved outside. For him, this consequence is an example of

- A. positive reinforcement.
- B. negative punishment.
- C. positive punishment.
- D. response cost.

Question 44

Woof continues barking outside. To Sarah, this is an example of

- A. positive reinforcement.
- B. negative reinforcement.
- C. positive punishment.
- D. response cost.

Question 45

Why is this scenario considered to be a form of operant conditioning?

- A. both Woof and Sarah are active in the learning process
- B. both Woof and Sarah are passive in the learning process
- C. Woof's response was reflexive, whereas Sarah's response was voluntary
- D. Sarah's response was reflexive, whereas Woof's response was voluntary

Question 46

After _____ has occurred, _____ means that the conditioned response may reappear after apparent _____.

- A. extinction; spontaneous recovery; acquisition
- B. spontaneous recovery; acquisition; extinction
- C. spontaneous recovery; extinction; acquisition
- D. acquisition; spontaneous recovery; extinction

Question 47

Which of the following describes shaping?

- A. each approximate behaviour is successful, and is rewarded
- B. each successful behaviour is approximate, and is rewarded
- C. each successive behaviour that more closely approximates the desired response is rewarded
- D. each behaviour is successive and approximately shows the desired response

Question 48

The most fundamental ethical principle that was breached in the 'Little Albert' experiment was

- A. withdrawal rights.
- B. informed consent.
- C. the distress of the participant.
- D. the no harm principle.

Question 49

Being unable to maintain employment, hold relationships and live independently would be considered abnormal by the

- A. medical approach to normality.
- B. historical approach to normality.
- C. situational approach to normality.
- D. functional approach to normality.

Question 50

The primary purpose of a classification system such as the DSM or ICD is to

- A. identify the causes of mental illness.
- B. identify symptoms and diagnose mental illness.
- C. identify the treatments for mental illness.
- D. identify areas for future research.

Question 51

What is an advantage of using a biopsychosocial approach to the treatment of a mental illness?

- A. it encourages psychologists to involve the families and friends of the person suffering from mental illness
- B. it encourages psychologists to use drug therapies in the treatment of mental illness
- C. it allows psychologists to use non-drug therapies in the treatment of mental illness
- D. it allows for a more holistic consideration of the treatment of mental illness

Question 52

Which of the following is a psychological characteristic of a response to stress?

- A. the fight-flight response
- B. activation of the hypothalamic-pituitary-adrenocortical (HPA) axis
- C. eustress and distress
- D. sweaty palms

Question 53

Which of the following is not considered a limitation of Lazarus and Folkman's Transactional Model of Stress and Coping?

- A. the model considers the psychological processes that underpin an individual's stress response
- B. it is difficult to test experimentally
- C. it is difficult to completely separate the process of primary and secondary appraisal
- D. cognitive processes such as appraisal may not necessarily be required for stress to occur

Question 54

How are social factors that exacerbate the stress response different from cultural factors?

- A. social factors that exacerbate the stress response typically refer to negative interactions with others, whereas cultural factors refer to differences between shared values that could cause conflict
- B. social factors refer to positive interactions with others, whereas cultural factors refer to similarities between shared values that could cause conflict
- C. social factors and cultural factors can both include cognitive interpretations of various situations
- D. there is no difference between social factors and cultural factors

Question 55

Which of the following could be an example of a social factor that alleviates the stress response?

- A. will power
- B. reappraisal
- C. a cool breeze
- D. relationships

Question 56

Which of the following is true about allostasis?

- A. allostasis requires physiological stability
- B. allostasis involves adapting biological systems, which can be assisted by psychological and/or social strategies, to achieve physiological stability
- C. allostasis always prevents stress-related illnesses
- D. allostasis always leads to stress-related illnesses

Question 57

How is meditation different from relaxation?

- A. meditation is a relatively active strategy compared to relaxation
- B. mediation is a relatively passive strategy compared to relaxation
- C. both meditation and relaxation require equal amounts of effort
- D. both meditation and relaxation can result in reduced stress

Question 58

How is physical exercise different from social support?

- A. physical exercise is a psychological strategy to cope with stress, whereas social support is a physiological strategy
- B. physical exercise is a more effective strategy to cope with stress than seeking social support
- C. social support is a more effective strategy to cope with stress than physical exercise
- D. physical exercise may provide an avenue for people to expel built-up physiological tension, whereas social support may provide people with extra resources to cope with the stressor

Use the following information to answer Questions 59-62.

Professor Tam wanted to investigate whether meditation was more effective at reducing stress than physical exercise or no coping strategy at all.

She tested this by getting a sample of 90 participants from her classes and divided them evenly into three groups:

Group 1: 30 minutes of meditation every day for a week

Group 2: 30 minutes of running on a treadmill at 10km/h for a week

Group 3: no specific coping method administered over a week

Each day of the week, participants were given a stressful task involving answering a phone, scheduling a meeting of three managers with different availabilities, and making a cup of coffee. A shorter amount of time to complete this task was said to indicate a clearer mind and less stress.

Question 59

What is the operationalised independent variable?

- A. meditation for 30 minutes every day for a week
- B. meditation for 30 minutes every day for a week, or 30 minutes of running on a treadmill at 10km/h for a week, or not being given a specific coping strategy
- C. a stressful task involving answering a phone, scheduling a meeting of three managers with different availabilities, and making a cup of coffee
- D. the amount of time it took to complete a stressful task involving answering a phone, scheduling a meeting of three managers with different availabilities, and making a cup of coffee

Question 60

What would be the most effective strategy for Professor Tam to use in order to reduce experimenter effects?

- A. ensure the sample was representative of the population
- B. ensure that Professor Tam is as impartial as possible by not wanting to see particular results in the experiment
- C. ensure that all of the groups in the experiment were administered their conditions by an assistant
- D. ensure that all of the groups in the experiment were administered their conditions by separate assistants for each group

Question 61

The experimental group/s was/were

- A. group 1.
- B. group 2.
- C. group 3.
- D. groups 1 and 2.

Question 62

What other methods of data collection could Professor Tam use to collect qualitative information about participants' levels of stress?

- A. a case study
- B. an observational study using video monitoring of facial expressions during the stressful task
- C. questionnaires using a 5 point rating scale (strongly agree to strongly disagree) on statements such as 'I felt a lot of stress during the task'
- D. calculating the mean, median and modes of time taken to complete the stressful task

Question 63

Chloe saw Sam taking a couple of pens out of Gemma's pencil case while Gemma went to the bathroom. Gemma was very upset that someone had stolen her favourite pens. When Ms Defenestra finds out a week later and quizzes Chloe as a witness, which of the following questions would most likely lead to Chloe reporting a larger number of pens stolen?

- A. how many pens were taken?
- B. did Sam take Gemma's pens?
- C. how many pens did Sam take? 1? 2? 3?
- D. how many pens did Sam take? 1? 5? 10?

Question 64

Salmon swimming upstream to lay eggs would be an example of

- A. a reflex action.
- B. a conditioned response.
- C. a fixed action pattern.
- D. a behaviour due to maturation.

Question 65

Gemma is stressed about the Year 12 exams she has coming up. She decides to meditate to reduce her levels of stress. Meditation is an example of

- A. a problem-focused coping strategy.
- B. an emotion-focused coping strategy.
- C. a primary appraisal.
- D. a benign-positive appraisal.

Use the following information to answer Question 3.

Ms Muffet decides to run two separate experiments using the students in her two Units 3&4 Psychology classes. Students and their parents were informed of the aim and procedures of the experiment and signed a consent form, knowing that their participation would contribute to their SAC marks.

In one experiment with class 1, she tries to teach students to associate the ring of a bell with a blinking response.

- On Monday, she tests whether or not students blink when she rings a bell.
- On Tuesday, she rings a bell at the beginning of class, and blows a harmless puff of air into each of the students' eyes one hour later, at the end of the lesson.
- On Wednesday, Ms Muffet tests if the students blink when she rings a bell.

In a different experiment with class 2, she tries to teach students to say 'thank-you', every time she hands out a worksheet.

- On Monday, she tests whether or not students thank her when she hands out worksheets.
- On Tuesday, students are rewarded with a star stamp at the end of the period, provided that they said 'thank-you' after being given a worksheet at any time within the period. Ms Muffet tells students that five star stamps can be traded for a chocolate. She repeats this process in class on Wednesday.
- On Thursday, Ms Muffet then tests if students say 'thank-you' when she hands out a new worksheet.

All students were debriefed about their respective experiments, and the results were de-identified.

Question 3a. (6 marks)

Using the language of operant conditioning and classical conditioning, explain which theory of learning Ms Muffet tried to use in each class.

Ms Muffet summarised the results.

In class 1, she found that 100% of students did not blink when she rang the bell on Monday, and 95% of students did not blink when she rang the bell on Wednesday.

In class 2, she found that 30% of students thanked her when she handed out a worksheet on Monday, and 80% of her students thanked her when she handed out a new worksheet on Thursday.

Question 3b. (4 marks)

Why was Ms Muffet's conditioning of students more effective in class 2 compared to class 1? What could Ms Muffet do to improve the students' conditioning in both classes?

Question 3c. (2 marks)

The star stamp can be considered a _____, which has no value in itself, and was administered using a _____ schedule of reinforcement.

In class 2, Johnny, despite knowing that students are receiving stamps and chocolates for thanking Ms Muffet when she hands out worksheets, appears not to have learnt to thank Ms Muffet when she hands out worksheets.

Question 3d. (1 mark)

What could be an explanation for Johnny's reluctance to thank Ms Muffet?

Question 5 (3 marks)

Collins and Quillian's (1969) research showed that it took longer for someone to agree with the statement that 'a canary has skin', compared to the statement that 'a canary can sing'.

With a definition of semantic network theory, explain why this would occur.

Use the following information to answer Question 6.

Bobby is scared of bees, and actively tries to forget the moment he got stung when he was younger.

Whenever he sees a bee flying around, hears the buzzing of bees, or is unfortunate enough to have a bee land on him, he freezes until the bee flies away.

Question 6a. (1 mark)

Which area of Bobby's temporal lobe has been responsible for linking the fearful emotion to bees?

Question 6b. (4 marks)

Explain which sub-systems of the human nervous system are being activated when Bobby sees a bee, and when the bee flies away. List one effect that each system activates.

Question 6c. (4 marks)

Fill in the lobes and primary areas of Bobby’s brain in his identification and response to a bee.

Role	Lobe of the brain	Primary cortex
Identifies a bee by hearing it buzzing		
Identifies a bee by seeing it		
Identifies a bee landing on him through touch sensation		
Inhibits Bobby’s movement until the bee flies away		

Question 6d. (2 marks)

Describe the role of Bobby’s association areas in his parietal and temporal lobes in his identification of a bee.

Question 6e. (4 marks)

Dr Ong, Bobby's psychologist, tries to help Bobby overcome his fear of bees. What steps would need to occur if Dr Ong wanted to use graduated exposure and biofeedback to help Bobby overcome his fear of bees?

Question 6f. (3 marks)

What is flooding, and why might it be less helpful for Dr Ong to use flooding over graduated exposure?

Question 6g. (4 marks)

Identify the two functional components of Baddeley and Hitch's model of working memory, and explain the role of each of these components with respect to Bobby's graduated exposure therapy.

Question 6h. (2 marks)

Despite Bobby's best attempts to suppress his memory of being stung by a bee when he was younger, this traumatic memory is often retrieved.
With reference to state-dependent cues and context-dependent cues, describe two situations that may elicit Bobby's traumatic memory.

Question 7 (2 marks)

The sensitive period for learning spoken language is up to 12 years. Define sensitive periods, and with reference to the sensitive period for spoken language, discuss the implications of not detecting a hearing impairment in childhood.

Question 8a. (3 marks)

Jesse has difficulties with speaking. An example of his speech is: "B....b...bus s...s...st...stop"

Which language area of Jesse's brain is not functioning properly in this situation? Give two reasons for your answer.

Question 8b. (3 marks)

What other area of the brain is responsible for language processing? List two symptoms of damage to this area.

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.

Ms Holmes wanted to compare the effects of immediate free recall and delayed free recall on the serial position effect in the population of VCE Psychology students in 2014.

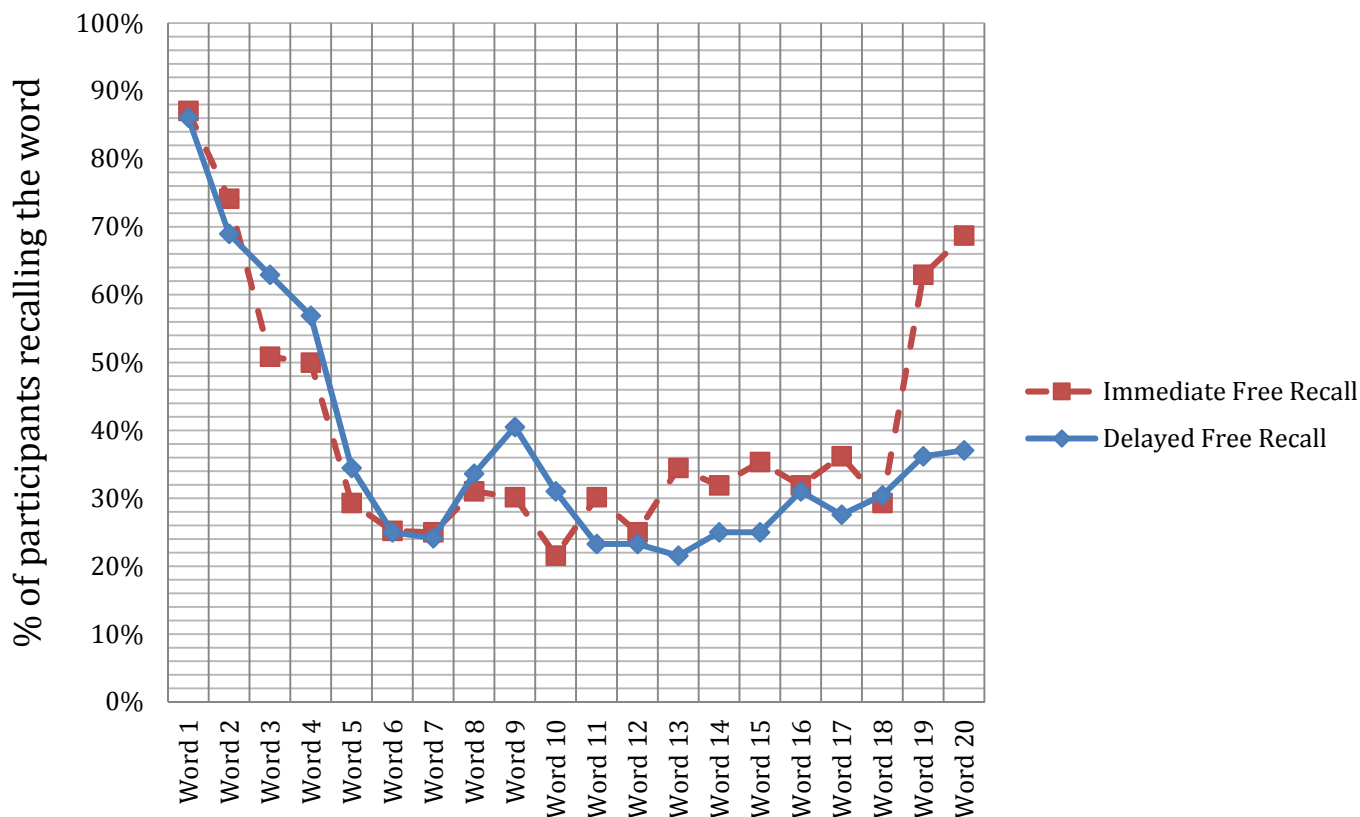
She generated a sample using a list of all 2014 VCE Psychology students’ names and a random-number generator on her computer. All 500 students selected were happy to take part in the study, as she offered them \$50 as an incentive. Informed consent documents were signed, and participants could withdraw at any time, without any consequence. Participants were randomly allocated into two separate groups.

In Group 1: Immediate Free Recall, the participants were required to memorise a list of 20 simple nouns, and then asked to write down as many words as they could remember, in any order.

In Group 2: Delayed Free Recall, the participants were required to memorise the same list of 20 simple nouns, asked to count backwards from 60 by twos, and then asked to write down as many words as they could remember, in any order.

Her results are shown in the graph below.

The difference between immediate versus delayed free recall



In this study, Ms Holmes used word 20, the final word in the list, to be a measure of the recency effect. Inferential statistics were calculated from the data on word 20, and Ms Holmes found a p value of $p = 0.03$. She deemed $p \leq 0.05$ as being statistically significant.

Participants were debriefed after the study, and all results were not traceable to individual participants.

Question 1 (2 marks)

Identify the sampling procedure used by Ms Holmes to collect data for this experiment. Explain your answer in relation to the scenario.

Question 2 (1 mark)

What is an advantage of using an independent-groups design compared to a counterbalanced repeated-measures design in Ms Holmes's study?

Question 3 (2 marks)

Was the ethical principle of voluntary participation upheld by Ms Holmes in this study? Justify your answer.



VCE PSYCHOLOGY
Written Examination
ANSWER SHEET – 2014

STUDENT
NAME:

Use a **PENCIL** for **ALL** entries. For each question, shade the box which indicates your answer.

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

NO MARK will be given if more than one answer is completed for any question.

If you make a mistake, **ERASE** the incorrect answer – **DO NOT** cross it out.

1	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	23	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	45	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
2	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	24	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	46	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
3	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	25	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	47	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
4	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	26	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	48	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
5	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	27	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	49	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
6	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	28	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	50	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
7	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	29	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	51	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
8	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	30	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	52	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
9	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	31	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	53	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
10	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	32	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	54	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
11	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	33	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	55	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
12	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	34	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	56	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
13	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	35	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	57	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
14	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	36	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	58	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
15	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	37	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	59	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
16	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	38	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	60	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
17	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	39	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	61	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
18	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	40	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	62	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
19	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	41	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	63	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
20	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	42	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	64	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
21	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	43	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	65	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
22	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	44	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D					