

2014 Trial Examination

STUDENT NUMBER

Letter

Figures

Words

PSYCHOLOGY

Units 3 & 4 – Written examination

Reading time: 15 minutes

Writing time: 2 hours 30 minutes

QUESTION AND ANSWER BOOK

Structure of book

Section	Section	Number of questions	Number of questions to be answered	Number of marks
A	Multiple Choice	65	65	65
B	Short Answer	19	19	60
C	Research Investigation	5	5	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 permitted in this examination.

Materials supplied

- Question and answer book of 25 pages.

Instructions

- Print your name in the space provided at the top of this page.
- All written responses must be in English.

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

SECTION A - Multiple-choice questions

Instructions for Section A

Answer all questions.

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

Which of the following factors can be used to indicate if we are in a state of normal waking consciousness or an altered state of consciousness?

- A. level of awareness, content limitations, controlled and automatic processing, perceptual and cognitive distortions, emotional awareness, self control, time orientation
- B. level of awareness, content limitations, tiredness, controlled and automatic processing, perceptual and cognitive distortions, emotional control, self control, time orientation
- C. daydreaming, content limitations, controlled and automatic processing, perceptual and cognitive distortions, emotional control, self control, time orientation
- D. level of awareness, content limitations, controlled and automatic processing, perceptual and cognitive distortions, alcohol consumption, self control, time orientation

Question 2

Which of the following represents the continuum of awareness from total awareness through to complete lack of awareness?

- A. focused selective attention, divided attention, daydreaming, anaesthetised, sleep, coma
- B. divided attention, focused selective attention, daydreaming, sleep, anaesthetised, coma
- C. focused selective attention, divided attention, daydreaming, sleep, anaesthetised, coma
- D. focused selective attention, divided attention, daydreaming, NWC, sleep, anaesthetised, coma

Question 3

Level of awareness relates to

- A. whether your perception of time is accurate.
- B. how conscious/aware you are of internal and/or external events.
- C. whether you have self control of emotions.
- D. having logical and organised thoughts.

Question 4

Content limitations relate to

- A. whether your perception of time is accurate.
- B. how conscious/aware you are of internal and/or external events.
- C. whether you have self control of emotions.
- D. having logical and organised thoughts.

SECTION A – continued

Question 5

Selective attention allows us to

- A. attend to two things at once.
- B. limit the content of information entering our consciousness.
- C. be influenced by perceptual distortions.
- D. focus on one stimulus whilst ignoring all others.

Question 6

Deep NREM sleep is characterised by EEG patterns with

- A. low amplitude and high frequency.
- B. high amplitude and low frequency.
- C. high amplitude and high frequency.
- D. low amplitude and low frequency.

Question 7

Lucy was taking a long train journey. Although she wanted to look at the scenery during the journey, she found she was drifting off to sleep for one or two minutes at a time and then waking again with a jerk. Lucy was most likely to be in

- A. REM sleep.
- B. a hypnagogic state.
- C. stage 2 sleep.
- D. stage 4 sleep.

Question 8

A typical night's sleep for an adult includes four to five sleep cycles. Which of the following patterns best describes a typical sleep cycle from early in the night?

- A. awake, NREM stage 4, NREM stage 3, NREM stage 2, NREM stage 1, REM, NREM stage 4, NREM stage 3, NREM stage 2, NREM stage 1
- B. awake, NREM stage 1, NREM stage 2, NREM stage 3, NREM stage 4, REM, NREM stage 1, NREM stage 2, NREM stage 3, NREM stage 4
- C. awake, REM, NREM stage 4, NREM stage 3, NREM stage 2, NREM stage 1, NREM stage 2, NREM stage 3, NREM stage 4, REM
- D. awake, NREM stage 1, NREM stage 2, NREM stage 3, NREM stage 4, NREM stage 3, NREM stage 2, REM

Question 9

In a normal night's sleep an adult will go through one cycle, from stage one to stage 4 and through the first REM period, in approximately how many minutes?

- A. 200
- B. 90
- C. 50
- D. 120

**SECTION A – continued
TURN OVER**

Question 10

For most people, Broca's area is located in the

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

Question 11

The structure that enables communication between the hemispheres of the brain is called the

- A. corpus callosum.
- B. motor cortex.
- C. cerebral cortex.
- D. cortical lobe.

Question 12

The primary somatosensory cortex is located in the

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

Question 13

The neurons that take information away from the Central Nervous System are called

- A. somatosensory neurons.
- B. afferent neurons.
- C. motor neurons.
- D. sensory neurons.

Question 14

Localisation of brain function refers to

- A. the ability to transfer information between the hemispheres of the cerebral cortex.
- B. the fact that specific areas of the brain are responsible for specific functions.
- C. the fact that verbal functioning occurs in the right hemisphere only.
- D. the fact that auditory information is processed in the temporal lobe only.

Question 15

Which one of the following nervous systems stimulates the digestive system in the body?

- A. somatic
- B. sympathetic
- C. parasympathetic
- D. cerebral

SECTION A - continued

Use the following information to answer questions 16 and 17

Maxine is suddenly awoken by a loud noise in the middle of the night. She immediately jumps out of bed.

Question 16

The nervous system that immediately activates Maxine's internal muscles, organs and glands is the

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

Question 17

Maxine then thinks that the noise is just her household heating system and begins to relax. The nervous system that is involved in calming her down is the

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

Question 18

James liked to complete mathematical puzzles but also enjoyed painting and drawing. When doing puzzles James's _____ hemisphere would be most active and when painting and drawing it is likely that his _____ hemisphere would be most active.

- A. right, left
- B. right, right
- C. left, left
- D. left, right

Question 19

In what part of the brain does memory consolidation take place?

- A. the reticular formation
- B. the cerebral cortex
- C. the hippocampus
- D. the corpus callosum

Question 20

As we age, our memory abilities can be adversely affected. Which of the following tasks would most likely impact on memory test scores as we age?

- A. identifying correct words from a list of alternatives using recognition
- B. remembering how to ride a bike
- C. recalling the names of prime ministers in alphabetical order
- D. remembering how to poach an egg

**SECTION A - continued
TURN OVER**

Question 21

If material is unrehearsed, it usually fades from short term memory after

- A. approximately 3–4 seconds.
- B. approximately 7 (+ or –)seconds.
- C. approximately 18 seconds.
- D. approximately 30 seconds.

Question 22

The amygdala is involved with the processing of which type of memories?

- A. iconic memories
- B. short term memories
- C. long term memories
- D. emotional memories

Question 23

Which of the following statements regarding semantic network theory is **false**?

- A. Each concept that is remembered is referred to as a node.
- B. The longer the link between nodes, the stronger the connection is.
- C. Activation of one node often stimulates related nodes.
- D. The more links that are activated, the quicker the retrieval of information.

Question 24

Which theory regarding forgetting supports the notion that a memory trace fades over time due to disuse?

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

Question 25

Trying to memorise the order of items on a shopping list by creating a story in which each item is included is an example of

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

Question 26

Emily is in Geography class and her teacher asks her what the capital city of New Zealand is. She is sure that she knows the answer and even remembers it starts with the letter 'W' but she can't remember the city's name. Emily is suffering from

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

SECTION A - continued

Question 27

According to the forgetting curve, approximately 40% of information learnt is forgotten within

- A. 10 minutes.
- B. 20 minutes.
- C. 30 minutes.
- D. 1 hour.

Question 28

Which of the following is the most sensitive type of recall?

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

Question 29

At what age are episodic memories thought to start to decline?

- A. from birth
- B. 15–20 years of age
- C. 30–50 years of age
- D. 70–90 years of age

Question 30

Which of the following is **not** a technique used for improving memory?

- A. using repression to aid memory
- B. improving the quality of encoding
- C. using the narrative chaining
- D. utilising state dependent cues

Question 31

Which of the following statements is most accurate in regards to memory decline over the lifespan?

- A. Memory capabilities always decline as people get older.
- B. Elderly people perform worse on all memory tasks compared to younger people.
- C. Elderly people perform just as well on tasks involving episodic memory as younger people.
- D. Elderly people perform just as well on recognition tasks as younger people.

Question 32

Using the expression ‘Every Good Boy Deserves Fruit’ to remember the order of the music notes EGBDF is an example of

- A. narrative chaining.
- B. an acronym.
- C. an acrostic.
- D. maintenance rehearsal.

**SECTION A - continued
TURN OVER**

Question 33

Loss of memory only for information or events occurring after a trauma that caused amnesia is known as

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

Use the following information to answer questions 34 – 36

A dog learns to roll over when a trainer blows a high-pitched whistle. The dog is given a bone after it completes the roll.

Question 34

Based on the three-phase model of operant conditioning, the discriminative stimulus is the

- A. roll over.
- B. bone.
- C. sight of the trainer.
- D. sound of the whistle.

Question 35

The consequence in the above scenario is the

- A. roll over.
- B. bone.
- C. sight of the trainer.
- D. sound of the whistle.

Question 36

The operant response in the above scenario is the

- A. roll over.
- B. bone.
- C. sight of the trainer.
- D. sound of the whistle.

SECTION A - continued

Use the following information to answer question 37

Maryanne worked hard with her kindergarten class to teach them to say 'please' and 'thank you'. Maryanne rewarded the students by saying 'well done' each time they said 'please' or 'thank you' at an appropriate time. After a week, Maryanne decided the class knew how to use these words correctly and stopped saying 'well done'. After a couple of weeks, she noticed that the students no longer said 'please' and 'thank you'.

Question 37

This is most likely because

- A. Maryanne did not punish the students.
- B. a learned response will become extinct if it is not reinforced.
- C. the students discriminated between saying 'please' and 'thank you' and getting a reward.
- D. Maryanne used a fixed-ratio schedule of reinforcement which is not as effective as a fixed-interval schedule.

Question 38

The main conclusion to be drawn from Bandura's Bo-Bo doll experiments with observational learning in children is that learning

- A. is not dependent on operant conditioning.
- B. occurs through a process of trial and error.
- C. can occur in the absence of direct reinforcement or punishment.
- D. involves the positive transfer of learning from the model to the observer.

Question 39

It is not generally possible to 'teach' a baby to crawl earlier than normal because

- A. crawling is a complex behaviour.
- B. a baby cannot respond to reinforcement.
- C. a baby is unable to comprehend complex instructions.
- D. crawling is due to maturation.

Question 40

'Plasticity of the brain' refers to

- A. changes in the folds and creases that are seen on the cerebral cortex.
- B. the way humans adapt to the world by learning reflex responses to threats.
- C. white matter and grey matter, which are forms of soft tissue in the brain.
- D. the changes to connections between neurons that occur in response to environmental stimuli.

Question 41

Which of the following statements concerning plasticity of the brain is accurate?

- A. Children's brains show developmental plasticity only.
- B. Only older, healthy, adult brains show adaptive plasticity.
- C. Children's brains show developmental plasticity and adaptive plasticity.
- D. Older, healthy, adult brains show developmental plasticity and adaptive plasticity.

**SECTION A - continued
TURN OVER**

Question 42

Some of the key areas of the brain which are involved in learning include the

- A. hippocampus, amygdala and the cerebral cortex.
- B. hippocampus, amygdala and the corpus callosum.
- C. corpus callosum, amygdala and the cerebral cortex.
- D. corpus callosum, amygdala and the cerebellum.

Question 43

A key neurotransmitter important in the mechanism of learning is

- A. adrenaline.
- B. glutamate.
- C. melatonin.
- D. noradrenaline.

Question 44

In classical conditioning, learning is said to have occurred when

- A. the conditioned stimulus and unconditioned stimulus have had several pairings.
- B. the neutral stimulus produces the unconditioned response on every occasion it is presented.
- C. the conditioned stimulus produces the conditioned response in the absence of the unconditioned stimulus.
- D. the unconditioned stimulus becomes the conditioned stimulus and consistently produces the conditioned response.

Question 45

A fixed-action pattern is a useful behaviour because it

- A. is species specific.
- B. prevents cross-mating of species.
- C. does not depend on a reflex response.
- D. ensures the animal has the capacity to meet a survival need.

Question 46

What are Bandura's 5 stages of observational learning?

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

Question 47

Which of the following is an example of 'learned' behaviour?

- A. A child crying in fear at a strange noise.
- B. A child answering the phone when it rings.
- C. The pet dog burying a bone in the backyard.
- D. A child running for the first time.

SECTION A - continued

Question 48

Watson's experiment on 'Little Albert' was considered unethical because it failed to _____ at the conclusion of the experiment.

- A. provide withdrawal rights
- B. extinguish the conditioned response
- C. obtain informed consent
- D. adhere to the principles of voluntary participation

Question 49

Jerome's dad Tom bought him some golf clubs for his tenth birthday. Tom tried to teach his son how to hit a chip shot by demonstrating how to grip the golf club, and how to complete the backswing and follow-through. When it was Jerome's turn he was unable to get the ball off the ground, mainly due to his lack of strength and the fact that his clubs were a bit too big for him. Jerome's inability to hit the ball could **best** be explained by failure at the _____ stage of observational learning.

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

Question 50

Instrumental learning refers to

- A. a learned association between the UCS and the CS.
- B. a learned association between behaviour and consequences.
- C. successful reproduction of behaviour following observation.
- D. maturation.

Question 51

Health is a state of complete

- A. cultural well-being.
- B. spiritual well-being.
- C. physical, mental and social well-being.
- D. environmental well-being.

Question 52

In some countries polygamy (being married to more than one person) is acceptable. In Australia, this practice would be defined as abnormal in the _____ approach to normality.

- A. sociocultural
- B. statistical
- C. situational
- D. functional

SECTION A - continued
TURN OVER

Question 53

Tom, a transvestite, arrived at an interview for a physical education teacher role in elaborate facial make up. This may be considered abnormal according to which approach?

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

Question 54

Thoughts, feelings or behaviour are considered _____ if they interfere with a person's ability to carry out their usual activities in an effective way.

- A. distressing
- B. deviant
- C. dysfunctional
- D. diagnosable

Question 55

The ICD-10 and DSM-IV-TR are classified as a/an _____ approach to mental illness.

- A. dimensional
- B. categorical
- C. transitional
- D. graded

Question 56

A dimensional approach to classification of mental conditions and disorders

- A. recognises that symptoms may be graded in terms of severity.
- B. acknowledges that the distinction between normal and abnormal is not always clear.
- C. provides a greater accuracy than the categorical approach when describing a symptom of mental illness.
- D. All of the above.

Question 57

A new version of the DSM has recently been published. This version is the

- A. DSM-VII.
- B. DSM-VI.
- C. DSM-V.
- D. DSM-IV-TR2.

Question 58

Which of the following is an advantage of the dimensional approach to classification of mental conditions and disorders?

- A. it uses discrete categories
- B. it is based on clear diagnostic guidelines
- C. it avoids labelling
- D. it can be used by any mental health professional

SECTION A - continued

Question 59

Mental illness as a result of chemical imbalances in the brain refers to which part of the biopsychosocial model?

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

Use the following information to answer questions 60 - 62

Dr Rogers gathers a sample of VCE Psychology students who have reported feeling stressed due to their forthcoming examinations. In order to reduce stress levels he has half the participants carry out 4 hours of exercise a week, whilst the other half practice deep relaxation techniques for 4 hours a week. He assesses their stress level via responses to a questionnaire at the end of the week.

Question 60

What is the independent variable in this study?

- A. the students' responses to the questionnaire at the end of the week
- B. whether students exercise for 4 hours a week or practice relaxation techniques for 4 hours a week
- C. students' stress levels at the end of the week
- D. aerobics lessons or muscle relaxation

Question 61

What is the dependent variable?

- A. the students who have reported feeling stressed
- B. whether students exercise for 4 hours a week or practice relaxation techniques for 4 hours a week
- C. students stress levels at the end of the week
- D. aerobics lessons or muscle relaxation

Question 62

What kind of experimental design is used in this study?

- A. repeated groups design
- B. matched pairs design
- C. independent groups design
- D. random allocation

Question 63

In terms of Holmes and Rahe's life event scale, which life event is rated as having 100 LCU's?

- A. divorce
- B. jail term
- C. pregnancy
- D. death of a spouse

**SECTION A - continued
TURN OVER**

Question 64

What did Lazarus mean by 'emotional forecasting'?

- A. predicting what feelings a given situation will produce
- B. experiencing distress
- C. experiencing eustress
- D. a primary appraisal

Question 65

Which of the following represents symptoms of stress in the order: physical, cognitive, emotional, behavioural?

- A. rapid heart rate, poor concentration, anxiety, nervous mannerisms (nail biting)
- B. increased blood pressure, increased heart rate, anxiety, sleep disturbances
- C. feeling overwhelmed, high blood pressure, panic, emotional outbursts
- D. difficulty making decisions, chest pain, difficulty breathing, change in eating habits

END OF SECTION A

SECTION B – Short answer questions

Instructions for Section B

Answer **all** questions in the spaces provided.

Question 1 (2 marks)

The _____ cortex is in the _____ lobe. The function of this cortex is to direct body movements.

Question 2 (1 mark)

In terms of the primary somatosensory cortex, what is meant by the term ‘homunculus’?

Question 3 (2 marks)

In what ways may the DSM classification of mental disorder be preferable among mental health professionals compared to the ICD system?

Question 4 (2 marks)

Louise has started to teach her daughter Jenny, aged 5, to handwrite. Describe how Louise might use the shaping principle of operant conditioning to teach her daughter.

SECTION B - continued
TURN OVER

Question 5 (5 marks)

Complete the table below:

	Key differences between classical and operant conditioning	
	Classical Conditioning	Operant conditioning
Role of the learner		Active – the participant must make a response before the consequence
	Conditioned stimulus should be presented shortly before the UCS.	
Nature of the response		

Question 6 (4 marks)

- a.** In terms of operant conditioning, list the two schedules of reinforcement that are most resistant to extinction and provide an example for each schedule. 2 marks

- b.** Provide a reason as to why the two schedules listed are so resistant to extinction. 2 marks

SECTION B - continued

Use the following information to answer questions 7 & 8

When Katy gets home from work each evening, she always takes her dog Sam for a walk. When Sam hears the car engine pulling into the driveway, he becomes very excited and barks. He does not do this at the sound of any other car pulling into the driveway.

Question 7 (4 marks)

a. In this scenario identify the following details:

2 marks

Conditioned stimulus:

Unconditioned response:

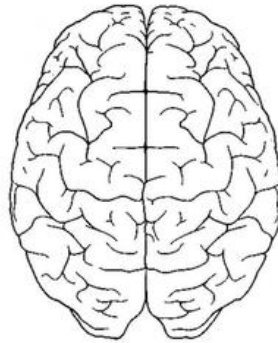
b. Explain why Sam does not respond in this way to other cars that enter the driveway.

2 marks

SECTION B - continued
TURN OVER

Question 8 (3 marks)

Eyes



- a.** The diagram above shows the right and left hemispheres. Identify the brain structure that: 2 marks

Separates the two hemispheres:

Allows communication between the two hemispheres:

- b.** Identify one dominant function of the left hemisphere: 1 mark

Question 9 (4 marks)

- a.** In terms of the physiological response to stress, explain the difference between homeostasis and allostasis. 2 marks

SECTION B - continued

- b. In terms of the psychological response to stress, distinguish between emotion focused and problem focused coping strategies. Refer to examples in your explanation. 2 marks

Question 10 (3 marks)

Mrs. Steele notices that her students are not alert and appear sleepy in her afternoon class. She decides that the class should have EEG and GSR readings taken. These will show whether the students are alert or sleepy.

- a. Explain what the GSR measures. 1 mark

- b. How can the EEG be used to determine if a person is in an alert state? 2 marks

Use the following information to answer question 11

Sarah is a police officer who has been working the night shift. When she gets home the following morning after her night shift she has to care for her 4 year old daughter Emma. She then attends work again the following evening for another night shift having not slept.

Question 11 (6 marks)

- a. Name one psychological and one physiological effect Sarah is likely to be experiencing due to prolonged sleep deprivation. 2 marks

SECTION B - Question 11 - continued
TURN OVER

- b. At work the following evening Sarah had brief moments of microsleep. Explain two characteristics of a microsleep.

2 marks

- c. Discuss the likely sleep recovery pattern Sarah is likely to have when she is able to have a normal night's sleep.

2 marks

Question 12 (2 marks)

Distinguish between the likely sleep cycle of a neonate and elderly person.

Question 13 (4 marks)

Ian is cooking a surprise lavish meal for his wife as it is their first wedding anniversary. He accidentally burns his hand on one of the metal bars in the oven, which is extremely hot. Explain the neurological reflexive response of Ian pulling his hand away.

SECTION B - continued

Question 14 (3 marks)

Lynda, a science teacher believes her students will recall material more effectively if it has been deeply processed. Using the key terminology from Craik and Lockhart's levels of processing theory, provide an example of the kind of question she may ask about key chemical substances to encourage structural, phonetic and semantic processing.

Question 15 (6 marks)

a. Complete the table below:

3 marks

	Capacity	Duration	Encoding
Short Term Memory			Acoustic, visual
Long Term Memory		Unlimited	Semantic

b. Using an example, explain one way in which the capacity of STM might be expanded. 3 marks

Question 16 (2 marks)

Explain one neurological change involved in the onset of Alzheimer's disease.

SECTION B - continued
TURN OVER

Question 17 (2 marks)

Differentiate between mental health and mental illness.

Question 18 (3 marks)

Discuss the biopsychosocial model in terms of the potential contributing factors to the onset of stress.

Question 19 (2 marks)

Outline one type of social support that may be offered to an individual experiencing stress.

END OF SECTION B

SECTION C – Extended response question**Instructions for Section C**

Answer the questions in the spaces provided.

Mr. Brown is interested in the effects of different mnemonic devices on recall. He is particularly interested in the difference in recall rates when using acronyms or acrostics. He suspects that acronyms may be more effective for enhancing recall than acrostics.

To investigate this he approaches his own Year 12 Sociology groups and asks students if they will participate. All students are given information about the study and if they are under eighteen their parents are required to sign a consent form in order for them to participate.

Thirty students gave their informed consent and all students were then allocated to one of two groups depending on whether they used acrostics or acronyms to learn a list of 20 key terms in sociology. There were 15 students in each group.

The groups results are found in the table below.

	Acrostics	Acronyms
No of words recalled	16	18
No of word not recalled	4	2

Mr. Brown determined that the results would be significant if the p-value obtained was less than 0.05.

Statistical tests were conducted to determine whether the means between the groups were significant and it was found that there was a difference at $p=0.08$

Question 1 (2 marks)

What experimental design was used in this experiment and what is one disadvantage of using this design?

Question 2 (2 marks)

If this study was to be conducted again, how could the disadvantage in Question 1 be eliminated?

SECTION C - continued
TURN OVER

Question 3 (1 mark)

Name the sampling method used by Mr. Brown.

Question 4 (5 +5 = 10 marks)

Construct part of an introduction and discussion for this research, ensuring you include the following:

Introduction:

- Information about mnemonic devices
- An aim
- The independent and dependent variables

Discussion:

- A conclusion
- A comment about the generalisability of the research findings

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SECTION C - continued

Page 25 of 25