



VCE PSYCHOLOGY 2007 YEAR 12 TRIAL EXAM UNIT 4

CONDITION OF SALE

© Limited Copyright: The materials on this disk remain the property of Lisachem Materials. These materials may be accessed on the intranet for the exclusive use of the schools that have purchased the materials.

They may not be copied electronically or otherwise for use outside of that school.

Time allowed: 90 minutes
Total marks: 90

44 Multiple Choice Questions
21 Extended Response Questions

An Answer sheet is provided for section A.
Answer all questions in Section B in the space provided.

Lisachem Materials
PO Box 2018, Hampton East, Victoria, 3188
Ph: (03) 9598 4564 Fax: (03) 8677 1725
Email: orders@lisachem.com.au

Student Name.....

VCE Psychology 2007 Year 12 Exam Unit 4

Student Answer Sheet

Instructions for completing test. Use only an HB pencil. If you make a mistake erase and enter the correct answer. Marks will not be deducted for incorrect answers.

Write your answers to the Short Answer Section in the space provided directly below the question. There are 44 Multiple Choice questions (1 mark each) to be answered by circling the correct letter in the table below.

<i>Question 1</i>	A	B	C	D	<i>Question 23</i>	A	B	C	D
<i>Question 2</i>	A	B	C	D	<i>Question 24</i>	A	B	C	D
<i>Question 3</i>	A	B	C	D	<i>Question 25</i>	A	B	C	D
<i>Question 4</i>	A	B	C	D	<i>Question 26</i>	A	B	C	D
<i>Question 5</i>	A	B	C	D	<i>Question 27</i>	A	B	C	D
<i>Question 6</i>	A	B	C	D	<i>Question 28</i>	A	B	C	D
<i>Question 7</i>	A	B	C	D	<i>Question 29</i>	A	B	C	D
<i>Question 8</i>	A	B	C	D	<i>Question 30</i>	A	B	C	D
<i>Question 9</i>	A	B	C	D	<i>Question 31</i>	A	B	C	D
<i>Question 10</i>	A	B	C	D	<i>Question 32</i>	A	B	C	D
<i>Question 11</i>	A	B	C	D	<i>Question 33</i>	A	B	C	D
<i>Question 12</i>	A	B	C	D	<i>Question 34</i>	A	B	C	D
<i>Question 13</i>	A	B	C	D	<i>Question 35</i>	A	B	C	D
<i>Question 14</i>	A	B	C	D	<i>Question 36</i>	A	B	C	D
<i>Question 15</i>	A	B	C	D	<i>Question 37</i>	A	B	C	D
<i>Question 16</i>	A	B	C	D	<i>Question 38</i>	A	B	C	D
<i>Question 17</i>	A	B	C	D	<i>Question 39</i>	A	B	C	D
<i>Question 18</i>	A	B	C	D	<i>Question 40</i>	A	B	C	D
<i>Question 19</i>	A	B	C	D	<i>Question 41</i>	A	B	C	D
<i>Question 20</i>	A	B	C	D	<i>Question 42</i>	A	B	C	D
<i>Question 21</i>	A	B	C	D	<i>Question 43</i>	A	B	C	D
<i>Question 22</i>	A	B	C	D	<i>Question 44</i>	A	B	C	D

VCE Psychology 2007 Year 12 Trial Exam Unit 4

MULTIPLE CHOICE SECTION:

Area of study 1 – Memory

Question 1

The process of encoding is where:

- A. information is transferred from STM into LTM;
- B. information is converted into a form that the brain can recognize;
- C. memories are retrieved from LTM and sent to STM;
- D. memories are located and recovered from LTM.

Question 2

Semantic encoding:

- A. represents a stimulus according to the sound of its name;
- B. represents a stimulus as an image;
- C. represents a stimulus according to its meaning;
- D. represents the memory you have in consciousness at any given moment.

Question 3

Which of the following is **incorrect** regarding selective attention?

- A. It selects our response to specific cues within the environment.
- B. It is an automatic process.
- C. It filters information entering our memory system.
- D. It controls what information moves on for further processing.

Question 4

Martin is putting together a shopping list. His brother Alex asks him to repeat the items on the list. Martin correctly identifies all the items, but they are not in the original order. Martin is using:

- A. serial Recall;
- B. cued Recall;
- C. free Recall;
- D. list Recall



Question 5

Recall is often referred to as the “least sensitive measure” of memory. This means that:

- A. it is the most successful measure of memory to use;
- B. the amount of information stored is very high;
- C. it is the most difficult form of memory retrieval;
- D. the retention of information over time is high.

Question 6

Byron was at Chadstone Shopping Centre and noticed a particular brand of electric shaver that he wished to purchase. Six months later, he was talking to a friend and couldn't recall the name. His friend provided him with a list of the most popular shavers and Byron was able to remember the name from the list provided. Byron was using the measure of memory referred to as:

- A. recognition;
- B. recall;
- C. selective Memory;
- D. relearning.

Question 7

If it takes you one hour to initially learn a poem, then nine months later you relearn it in 30 minutes, your savings score would be:

- A. 50
- B. $\frac{30}{60} \times \frac{100}{1}$
- C. $\frac{60}{30} \times \frac{100}{1}$
- D. 50%

Question 8

The "multi-store" model of memory is best represented by:

- A. Iconic Memory, Echoic Memory, Sensory Memory;
- B. Sensory Memory, Short Term Memory, Long Term Memory;
- C. Articulatory Control System, Phonological Store, Visuospatial Sketchpad;
- D. Procedural Memory, Declarative Memory, Semantic Memory.

Question 9

Which of the following is **not** true regarding iconic memory?

- A. It holds an exact replica of visual information.
- B. Information is stored for approximately $\frac{1}{3}$ – $\frac{1}{2}$ a second.
- C. It has very limited capacity.
- D. Storage time is temporary.

Question 10

Echoic memory remains as an echo for up to 3 or 4 seconds. The main reason for this extended duration of stored sounds is that:

- A. sounds are pleasing to the ear, so this gives us more time to appreciate them;
- B. our listening skills are poor, therefore we need more time;
- C. this is long enough for the sound to be encoded and selected for interpretation;
- D. it can be confusing to interpret the echoes, so we need more time.

Question 11

Raoul goes to see the James Bond film Casino Royale. He sees the film as a continuous picture rather than a sequence of quick moving picture frames. This is due to:

- A. sensory memory;
- B. echoic memory;
- C. short term memory;
- D. iconic memory.



Question 12

Maintenance rehearsal is a technique used to increase the storage capacity of:

- A. sensory memory;
- B. short term memory;
- C. long term memory;
- D. iconic memory.

Question 13

Of the following, which is the most effective way of processing information being held in short term memory for permanent storage in long term memory?

- A. Maintenance Rehearsal.
- B. Chunking.
- C. Elaborative Rehearsal.
- D. Iconic Encoding.

Question 14

_____ allows information to be organized into large, meaningful bits, so that the storage capacity of short term memory is increased.

- A. Chunking.
- B. Consolidation.
- C. Elaborative Rehearsal.
- D. Maintenance Rehearsal.

Question 15

Which of the following is **not** true regarding the workings of the central executive?

- A. The central executive only deals with information from the eyes and ears.
- B. It plays a major role in attention, deciding which information should be ignored.
- C. It coordinates information from the phonological loop and visuospatial sketchpad.
- D. The central executive is an area within working memory.

Question 16

Eamon is a normal 20 year old man. When he was 12, both his parents were killed in a car accident, which Eamon survived. Eamon has no memory of what happened as he was traumatized by the event. This memory failure is an example of:

- A. memory trace theory;
- B. decay theory;
- C. encoding failure theory;
- D. motivated forgetting theory.

Question 17, 18 and 19 refer to the following information

Professor P.N. Bedd was to conduct a study into how memory can be enhanced by eating at least 100 grams of green vegetables per day. He used his third year university Psychology students. Those who volunteered all had to sign a consent form after the research was explained to them. He randomly allocated the class into two groups. Group A ate meals that they would normally have on a daily basis, while group B had at least 100 grams of green vegetables per day. He then tested each group on a series of memory tests. The results indicated a p value of 0.02.

Question 17

Which of the following ethical principles was strongly adhered to?

- A. Confidentiality.
- B. Informed consent.
- C. Debriefing.
- D. Withdrawal rights.

Question 18

The best definition of a p value would be:

- A. a decision or judgement about the meaningfulness of research results.
- B. a numerical value assigned to the performance or behaviour of a population.
- C. the probability that an observed difference is due to chance alone.
- D. whether the research design measures consistently what it is supposed to measure.

Question 19

The p value of 0.02 indicates that:

- A. the research is not statistically significant;
- B. the research is statistically significant;
- C. two people within the research voluntarily withdrew;
- D. that there is a 2 percent chance that the difference in results is not due to chance alone.

Question 20

Which of the following statements best describes consolidation theory?

- A. Some time is required for information to be transferred from STM to LTM.
- B. Transference of information happens instantaneously from STM to LTM.
- C. The transference of information from STM to LTM is an automatic process.
- D. Consolidation is almost identical to elaboration.

Question 21

Mark is a heavy drinker, and often hides bottles of alcohol so his partner will not find out. According to the theory of state-dependent forgetting, Mark will:

- A. not find his bottle until he is sober;
- B. not find his bottle until he is near where he hid it;
- C. not find his bottle until he is drunk again;
- D. find his bottle when he really needs it.

Question 22

The term “encoding failure” refers to:

- A. information lost due to anterograde amnesia;
- B. information lost due to retroactive interference;
- C. information that was never encoded into LTM, therefore it cannot be retrieved;
- D. the information was never processed in sensory memory.

Area of study 2 – Learning

Question 23

A baby's ability to be able to crawl is due to _____, while a salmon swimming upstream to spawn is due to _____.

- A. A reflex action, maturation.
- B. Maturation, a fixed action pattern.
- C. Maturation, a reflex action.
- D. A fixed action pattern, a reflex action.



Question 24

“Any event that increases the likelihood that a response or behaviour will occur again”, is referred to as:

- A. a response;
- B. reinforcement;
- C. an antecedent;
- D. classical conditioning.

Question 25

When Joanne's son Ryan is with her shopping, he often throws tantrums when he doesn't get what he wants. Joanne has reached the stage where she ignores Ryan's tantrums, but lets him watch his favourite DVD when he is acting appropriately at home. Joanne is using _____ conditioning to alter Ryan's behaviour, while letting him watch the DVD is an example of _____ reinforcement.

- A. Classical, negative.
- B. Classical, positive.
- C. Operant, negative.
- D. Operant, positive.

Question 26

When Allison wants to go to a party with her friends, she waits until her father is in a good mood before she asks. Allison's behaviour is an example of:

- A. stimulus discrimination;
- B. stimulus generalization;
- C. the acquisition stage;
- D. shaping.

Question 27

An unconditioned response is a/an _____ action, while a conditioned response is a/an _____ action.

- A. Non-learned, learned.
- B. Learned, non-learned.
- C. Learned, neutral.
- D. Neutral, non-learned.

Question 28

Richard has been classically conditioned to blink when he hears a doorbell ring. After approximately 4 weeks, he no longer blinks when the doorbell rings. This is an example of:

- A. acquisition phase;
- B. extinction;
- C. stimulus generalization;
- D. stimulus discrimination.

Question 29

Which statement is **not** correct in relation to one-trial learning?

- A. It only takes one pairing of a neutral stimulus.
- B. It occurs as a result of operant conditioning.
- C. It often creates a lasting association.
- D. The learned response is often difficult to extinguish.

Question 30

Macey was extremely sick after eating some oysters on her holiday to Bali. She now feels nauseous every time she sees or thinks about oysters. Macey is suffering from taste aversion, which is a form of:

- A. negative reinforcement;
- B. operant conditioning;
- C. acquisition failure;
- D. one-trial learning.

Question 31

Every time someone flushes a toilet in a block of units, the shower becomes very hot and causes a person showering in another unit to jump back. Over time, the person in the shower begins to jump back automatically after hearing the flush, before the water temperature changes. This is an example of _____ conditioning, and the UCS is the _____.

- A. Operant, hot water.
- B. Operant, jumping back.
- C. Classical, hot water.
- D. Classical, jumping back.

Question 32

A tiger in a circus is taught to stand on a chair and jump through a burning hoop to receive a food treat. This is an example of _____ conditioning, and the food treat is referred to as _____.

- A. Classical, the conditioned stimulus.
- B. Classical, the conditioned response.
- C. Operant, negative reinforcement.
- D. Operant, positive reinforcement.

Question 33

What is the procedure called in which reinforcement is used to guide a response closer and closer to the desired response?

- A. Stimulus discrimination.
- B. Stimulus generalization.
- C. Spontaneous recovery.
- D. Shaping.

Question 34

Negative reinforcement:

- A. increases the rate of behaviour;
- B. involves following a behaviour with negative consequences;
- C. is a form of punishment;
- D. is a form of one-trial learning.

Question 35

Jade edits manuscripts for a publisher and is paid \$25 for every five pages she edits. Jade is reinforced on a _____ schedule.

- A. Fixed interval.
- B. Fixed ratio.
- C. Variable interval.
- D. Variable ratio

**Question 36**

Reinforcement is to operant conditioning as _____ is to observational learning.

- A. Pro-social behaviour.
- B. Punishment.
- C. Modelling.
- D. Respondent behaviour.

Questions 37 and 38 refer to the following information

A rat is placed in a skinner box, within a laboratory. The temperature is extremely cold and the rat is suffering. When the rat pushes a bar within the box hot air is pumped in for 5 minutes. Continued pressing of the bar has no effect.

Question 37

As the rat continues to press the bar, the heat being pumped in is:

- A. negative Reinforcement;
- B. positive Reinforcement.
- C. punishment;
- D. response cost.

Question 38

The reinforcement schedule being applied in this situation is:

- A. continuous reinforcement;
- B. partial reinforcement;
- C. fixed interval.
- D. fixed ratio.

Questions 39, 40 and 41 refer to the following information:

Thorndike placed a hungry cat into a puzzle cage and placed a fish outside of the cage. The cat was required to press a bar to open the door to the cage, escape and get the fish. Thorndike noticed that the cat took much less time to escape after each subsequent trial.

Question 39

Thorndike called the above scenario _____ learning.

- A. Trial and error.
- B. Positive response.
- C. Operant.
- D. Motivational.



Question 40

In the experiment the fish is the _____ and pushing the bar is the _____.

- A. Reward, motivation.
- B. Response, motivation.
- C. Reinforcement, reward.
- D. Reinforcement, response.

Question 41

Thorndike called this principle that he observed:

- A. law of response;
- B. law of Effect;
- C. Thorndike's law;
- D. motivational principle.

Question 42

In Bandura's experiments in observational learning, which of the following was **not** an important finding?

- A. That attention is a vital part of modeling the observed behaviour.
- B. Memory was important otherwise the modeling could not be remembered and therefore not acted upon.
- C. That the person modeling the behaviour had to be able to physically perform it.
- D. That small levels of motivation are only required to model a behaviour correctly.

Question 43

Harry Harlow used the term _____ to describe how monkeys could use their experiences of previous tasks to complete a new task.

- A. Insight.
- B. Motivation formation.
- C. Repetition.
- D. Learning set.

Question 44

Bob gained his car driver's licence when he was 18 and has been driving for 20 years. At the age of 38 Bob is required to attain a 22 seat bus licence. Bob found it very easy to adapt to driving a bus from his experience of driving his car. The ability of Bob to use his previous car driving experience to successfully be able to drive a bus is referred to as:

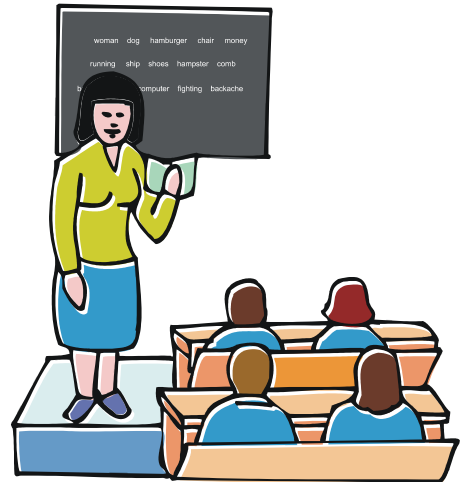
- A. negative transfer;
- B. operant conditioning;
- C. positive transfer;
- D. learning transfer.

SHORT ANSWER SECTION:

Area of Study 1 – Memory

Question 1

Professor Chung is investigating the relative sensitivity of recall and recognition. Twenty subjects are asked to memorise a list of 15 common words. Half the subjects will be tested for recall and the other half in recognition. Briefly explain how Professor Chung would test for recall and recognition.



Recall:

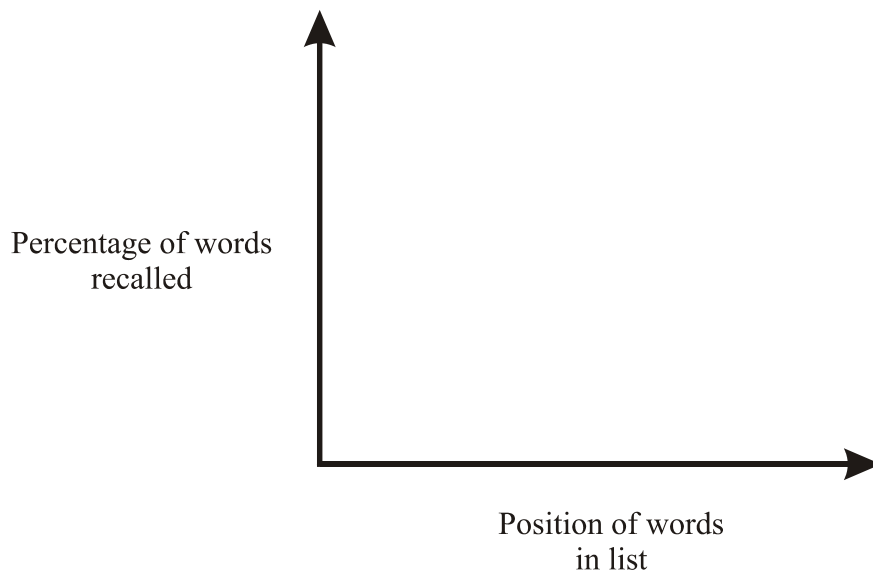
Recognition:

2 marks

Question 2

- a. On the axes below draw a graph of what you would expect the results to indicate for the serial position effect.

2 marks



- b. Define the term “serial position effect”.

2 marks

Question 3

David and Alex are both riding their Malvern star gold pedal series 2 deluxe bikes. As they are riding, they are talking about what they expect to get for their VCE results. Due to their lack of concentration they fail to see the gum tree ahead of them and collide with the tree, hitting their heads.

- a. David has difficulty in remembering events that occur **after** the accident. What term refers to this memory loss?

1 mark

- b. Alex has difficulty in remembering events that occur **before** the accident. What term refers to this memory loss?

1 mark

Question 4

Junger is in class and is asked by the teacher to name the current captain of the Australian cricket team. Junger hesitates but indicates to his teacher that given more time he would remember it. Explain Junger’s hesitation in terms of semantic network theory

2 marks

2 marks

Question 5

- a. Being able to remember that Paris is the capital city of France, even though you have never visited the city is an example of _____ memory. **1 mark**
- b. Being able to remember how to ride a bike, even though you have not ridden one in ten years, is an example of _____ memory. **1 mark**



Eiffel Tower in Paris

Question 6

Define the term chunking.

1 mark

Question 7

In terms of chunking, using numbers, give an example of what a list of items would look like “before” and “after” chunking.

2 marks

Area of Study 2 – Learning

Question 8

Using an example, explain the differences between a reflex action, a fixed action pattern and maturation.

3 marks

Question 9

What part does reinforcement play in classical conditioning?

2 marks

Question 10

Identify the NS, UCR, UCS, CS and CR in the following example:

As a child playing in the backyard, you come across a spider sitting on a log. Your mother, who is terrified of spiders, screams and snatches you into her arms and runs inside. Her behaviour causes you to get upset and as a result you develop a fear of spiders. When you see a spider, you begin to feel scared.

NS: _____

UCR: _____

UCS: _____

CS: _____

CR: _____

5 marks

Question 11

One afternoon Woody went into the backyard and mowed the lawn for his parents. After seeing what Woody had done, they thanked him and gave him \$10. From that moment on, once a week Woody would go out to the backyard and mow the lawn for his parents. After a few weeks of this Woody's parents would come out to the backyard, inspect the lawn and return to the house without making comment or giving him any money. Woody's parents noticed that he soon stopped mowing the lawn. Using conditioning principles explain why Woody stopped mowing the lawn for his parents.

2 marks

Question 12

Brislow forgets to do his homework and is told off by his teacher. The next time Brislow forgets his homework he does not go to class. Brislow's behaviour is a form of _____.

1 mark

Question 13

Name and explain **two** of the four elements required for observational learning to occur.

2 marks

Area of Study 3 – Research Investigation

Questions 14 - 19 refer to the following research investigation:

Dr Who Ping and Dr Coff are investigating how children’s exposure to mathematical problems prior to starting Primary School effect the choices of whether a student will pick Further Mathematics, Mathematical Methods or Specialist Mathematics in their VCE years. Advertising in their local “Leader” newspaper, 80 parents of pre-school children responded. After screening, 60 children were chosen and the doctors randomly allocated 30 children into two separate groups. The children in Group A were given mathematical problems everyday until they began Primary School. This included parents helping their children, the children doing mathematical quests on computer and through early learning text books. The children in Group B were allowed their normal upbringing until entering Primary School. Thirteen years later all participants were contacted to find out what stream of mathematics they had completed, if any, in their VCE.

Question 14

The doctors “randomly allocated” the participants into two separate groups. Define random allocation and why it is necessary.

2 marks

Question 15

Define the terms experimental group and control group.

2 marks

Question 16

Using an example from the above research, define the terms independent and dependent variable.

2 marks

Question 17

Using an example, explain one extraneous variable that may affect the above research.

2 marks

Question 18

Define the term extraneous variable.

1 mark

Question 19

Construct an operational research hypothesis for the above study.

2 marks

Question 20

Give two advantages and two disadvantages of using a repeated measures design.

4 marks

Question 21

Using an example, define a negative correlation.

1 mark

Suggested Answers VCE Psychology Year 12 Exam Unit 4

Multiple Choice Answers:

1. B 2.C 3.A 4.C 5.C 6.A 7.D 8.B 9.C 10.C 11.D
12.B 13.C 14.A 15.A 16.D 17.B 18.C 19.B 20.A 21.C 22.C
23.B 24.B 25.D 26.A 27.A 28.B 29.B 30.D 31.C 32.D 33.D
34.A 35.B 36.C 37.B 38.C 39.A 40.D 41.B 42.D 43.D 44.C

Area of Study 1 – Memory

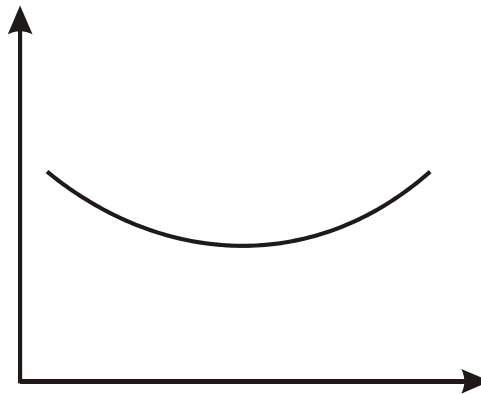
Question 1

Recall: Ask subject to write down all the names they can remember. **1 mark**

Recognition: Present subjects with a list of words and ask them to identify the learned names on the list. **1 mark**

Question 2

- a. Students need to indicate that there is a dip in the middle, and that the rise at the end of the graph is slightly more than at the beginning of the graph, indicating the recency effect. **2 marks**



- 2b The serial position effect is defined as “a pattern of recall for list items where recall is superior for the last items, and then for items at the beginning, than it is for items in the middle of the list”. **2 marks**

Question 3

- a. Anterograde amnesia. **1 mark**
b. Retrograde amnesia. **1 mark**

Question 4

Information is stored in semantic networks that are accessed by cues. **1 mark** Junger is searching for the cue that will help him access that part of the network where the name is stored. **1 mark**

Question 5

- a. Declarative. **1 mark**
b. Procedural. **1 mark**

Question 6

Chunking involves organizing bits of information into larger groups in a meaningful way so that they can be fitted into STM. **1 mark**

Question 7

Before chunking: Students would need to show a long list of numbers for example:

1,2,3,4,5,6,7,8. **1 mark**

After Chunking: Students would need to show that the numbers have been grouped into some form for example: 1234 and 5678. **1 mark**

Area of Study 2 – Learning

Question 8:

A reflex action is a relatively automatic and involuntary (non-learned) behaviour or response to a stimulus. For example, withdrawing your hand from a hot plate. **1 mark** (for explanation and example)

A fixed action pattern is a series of movements or behaviours that occur in almost all members of a species. For example, salmon swimming upstream to spawn. **1 mark** (for explanation and example)

Maturation is the physical growth of the body, brain and nervous system. For example, being able to crawl. **1 mark** (for explanation and example)

Question 9

Merely repeating a response will not necessarily produce a learning outcome. Reinforcement is the key to learning. It is any event that increases the likelihood that a response or behaviour will be repeated. It plays a major role as it teaches an organism that positive, desired behaviour needs to be repeated. **2 marks** (for a similar explanation)

Question 10

NS: Spider

UCR: Feeling of fear

UCS: Mother's scream

CS: Presence of spider

CR: Feeling fearful

1 mark (for each correct response)

Question 11

Reinforcement in the form of positive comments and money ceased, so Woody's behaviour in mowing the lawn stopped. **1 mark** (for mentioning reinforcement) **1 mark** (for stating that positive comments and money are a form of reinforcement)

Question 12

Negative Reinforcement. **1 mark**

Question 13

Any two of the following. **1 mark** (each)

Attention: The learner must pay attention to the model to understand the behaviour.

Retention: The act of remembering the behaviour of the model

Reproduction: Behaving in a way that copies the model's behaviour

Motivation: The desire to repeat a task.

Area of Study 3 – Research

Question 14

Random allocation is a procedure for assigning participants to various groups in an experiment ensuring that all participants have an equal chance of being allocated to either group. This ensures that the participants in the experimental group are as similar as possible to participants in the control group in terms of personality characteristics of interest. **1 mark** (for definition). **1 mark** (for explanation as to why it is necessary)

Question 15

Control Group: In a controlled experiment, the group of participants exposed to all conditions or variables except the Independent Variable, or treatment. **1 mark** (for definition)

Experimental Group: In a controlled experiment, the group of participants exposed to the independent variable, or experimental condition. **1 mark** (for definition)

Question 16

The independent variable is a condition that an experimenter systematically manipulates, changes or varies in order to gauge its effect on another variable. In the above research it is Group A's exposure to mathematical problems everyday prior to Primary School. **1 mark** (for definition and example)

The dependent variable in an experiment is the condition that is affected by changes or variations in the independent variable. In the above research it would be the results of how many students chose a particular mathematical subject. **1 mark** (for definition and example)

Question 17

For two marks students need to give an example and actually explain how it could affect the research. For example, parents ability in mathematics. Depending on parents ability, they may or may not help the participants to a greater extent in addition to the mathematical problems given to the experimental group. In the control group the parents mathematical ability could also have an effect even though the children aren't getting mathematical problems on a daily basis. **2 marks**

Question 18

In an experiment, a variable other than the IV that might cause changes in the dependent variable. **1 mark**

Question 19

It is predicted that children of pre-school age given mathematical problems to solve everyday prior to school, from either text books, parental involvement or through computer programs, will choose higher level mathematical subjects in their VCE years ie specialist mathematics, than children who do not experience mathematical problem solving prior to schooling.

2 marks (for a similar operational hypothesis)

Question 20

Advantages include:

- Using the same number of participants is more time efficient
- It is cheaper
- Helps to eliminate extraneous variables
- There are minimal differences in personality characteristics between experimental and control groups
- Participant variables are controlled

2 marks (for similar responses)

Disadvantages include:

- Order effect
- Participants performance ie performance may be impaired due to boredom or fatigue from previous experience of the task

2 marks (for similar responses)

Question 21

A negative correlation is the statistical relationship between variables in which increases in one measure are matched by decreases in the other, and vice versa. For example, as a person travels higher in the atmosphere (increase), the amount of oxygen is less (decrease). **1 mark** (for a similar example and explanation)