



# Victorian Certificate of Education 2002

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

## STUDENT NUMBER

Letter

Figures

Words

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## PSYCHOLOGY

### Written examination 2

Thursday 7 November 2002

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 10.45 am (1 hour 30 minutes)

## QUESTION AND ANSWER BOOK

### Structure of book

| Section | Number of questions | Number of questions to be answered | Number of marks |
|---------|---------------------|------------------------------------|-----------------|
| A       | 45                  | 45                                 | 45              |
| B       | 18                  | 18                                 | 45              |
|         |                     |                                    | Total 90        |

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

### Materials supplied

- Question and answer book of 23 pages.
- Answer sheet for multiple-choice questions.

### Instructions

- Write your **student number** on this book.
- Check that your **name** and **student number** as printed 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 electronic communication devices into the examination room.**

**SECTION A****Instructions for Section A**

There are **15** questions for each of the three areas of study.

Answer **all** questions on the answer sheet provided for multiple-choice questions.

A correct answer scores 1, an incorrect answer scores 0. Marks will not be deducted for incorrect answers. No mark will be given if more than one answer is completed for any question.

**AREA OF STUDY 1 – MEMORY****Question 1**

The process involved in answering multiple-choice questions on an exam requires

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

**Question 2**

Research has shown that people perform better on a test that requires \_\_\_\_\_ rather than \_\_\_\_\_.

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

**Question 3**

The information that our senses first receive is stored initially in

- A. episodic memory.
- B. sensory memory.
- C. long-term memory.
- D. short-term memory.

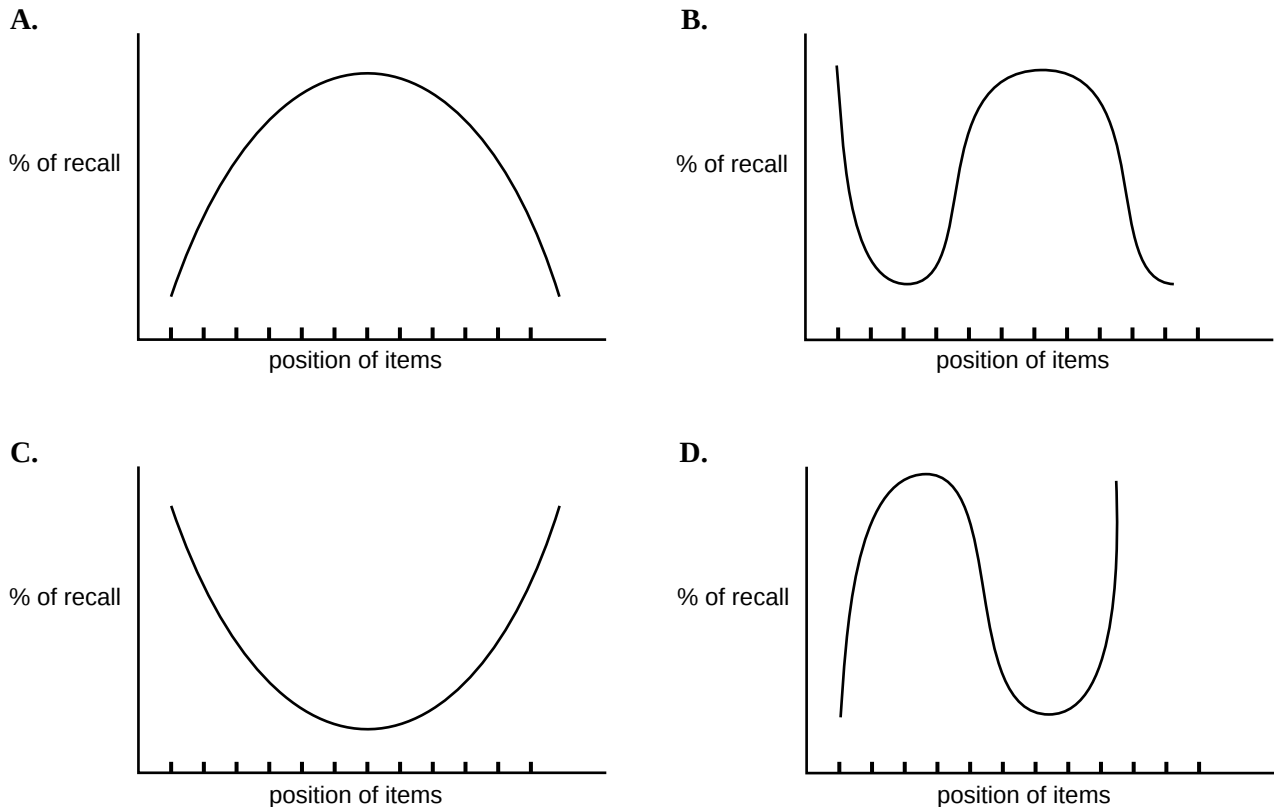
**Question 4**

While Lisa was reading a book, her mother asked her a question. Lisa thought she hadn't heard what was said. When she was about to ask her mother to repeat the question, Lisa was able to 'hear' what her mother had asked. This effect is due to

- A. boredom.
- B. echoic memory.
- C. iconic memory.
- D. short-term memory.

**Question 5**

Which one of the following graphs **best** represents the serial position effect?



**Figure 1**

**Question 6**

A researcher conducted an experiment in which there were two groups of 20 people. One group was given a list of **nonsense** syllables to remember, whereas the second group was asked to remember a group of **real** words. The results showed that the people who were presented with the list of **real** words recalled **more** because they were able to group individual items together on the basis of some shared characteristic.

This finding provides support for the importance of

- A. rehearsing information over and over to ensure it has been learnt properly.
- B. organisation of information during encoding to help with later retrieval.
- C. chunking information to retain it in short-term memory.
- D. the serial position effect.

**Question 7**

Anwar was knocked unconscious in an accident. He could not tell the doctors what had happened because he could not remember anything that had occurred up to 30 minutes before he had the accident.

This type of memory loss provides evidence in support of the idea of

- A. the serial position effect.
- B. semantic network theory.
- C. elaborative rehearsal.
- D. consolidation theory.

**Question 8**

The decay of information in long-term memory suggests that forgetting occurs because

- A. memories fade because of disuse over time.
- B. the person is no longer in the same state they were when they formed the memory.
- C. the person is no longer in the same place they were when they formed the memory.
- D. as people get older, their memory fades.

**Question 9**

The rate and amount of information lost from memory over time is called

- A. the forgetting curve.
- B. the serial position effect.
- C. retrograde amnesia.
- D. anterograde amnesia.

**Question 10**

Organic causes of forgetting are due to

- A. interference.
- B. retrieval failure.
- C. brain damage.
- D. decay.

**Question 11**

Studies of memory ability over the lifespan are used to compare the abilities of young and elderly people on recall and recognition tasks. Results of these studies show that

- A. young people perform better on both recall and recognition tasks than elderly people.
- B. young people perform better on recognition tasks; however, elderly people perform just as well as young people on recall tasks.
- C. young people perform just as well as elderly people on both recall and recognition tasks.
- D. young people perform better on recall tasks; however, elderly people perform just as well as young people on recognition tasks.

**Question 12**

Participants in a study were asked to memorise a list of names. When they had memorised the list they were asked to memorise another list of names. Participants found it difficult to recall the names from the second list because they kept thinking of names from the first list.

Difficulty in recalling the names from the second list may be explained by

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

**Question 13**

Police investigators sometimes take witnesses back to the scene of the crime. It is thought that witnesses have better memory recall at the scene of the crime because of

- A. state-dependent cues
- B. mnemonic devices
- C. narrative chaining
- D. context cues

**Question 14**

The words RAAF and NATO are examples of which mnemonic?

- A. peg-word method
- B. method of loci
- C. acronym
- D. acrostics

**Question 15**

\_\_\_\_\_ affects memory for information experienced **before** the person sustains brain damage; whereas \_\_\_\_\_ affects memory for information experienced **after** the person sustains damage to the brain.

- A. Retrograde amnesia; anterograde amnesia
- B. Anterograde amnesia; retrograde amnesia
- C. Anterograde amnesia; retroactive interference
- D. Retroactive interference; proactive interference

## AREA OF STUDY 2 – LEARNING

### Question 16

A spider constructing a web is displaying a **behaviour** known as

- A. observational learning.
- B. a fixed action pattern.
- C. a reflex action.
- D. insight learning.

### Question 17

In classical conditioning, an organism develops an **association** between the

- A. conditioned stimulus and the conditioned response.
- B. neutral stimulus and the conditioned stimulus.
- C. conditioned stimulus and the unconditioned stimulus.
- D. neutral stimulus and the unconditioned response.

### Question 18

Mary's cat runs to the back door when the microwave bell sounds as this usually signals that her dinner is about to be served. The cat also runs to the back door when Mary's doorbell rings.

Mary's cat is demonstrating an example of

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

### Question 19

After a meal of seafood, George became ill, suffering from nausea and vomiting. Now George feels nauseated at the sight of seafood and can no longer eat it.

George has experienced

- A. a conditioned reflex.
- B. a phobia.
- C. stimulus discrimination.
- D. taste aversion.

*Questions 20, 21 and 22 refer to the following scenario*

Natasha's dog, Tess, annoys the neighbours with her continual barking. To prevent Tess from barking, Natasha obtained a special collar which sprays an unpleasant but harmless vapour onto Tess' nose whenever she barks. Once the collar was fitted, Tess barked three times and then did not bark again. Soon after the collar was removed, Tess began barking again.

**Question 20**

In this scenario, the **unpleasant vapour** sprayed onto Tess' nose is a \_\_\_\_\_ because it has the effect of \_\_\_\_\_.

- A. punishment; decreasing the response rate
- B. negative reinforcer; increasing the response rate
- C. negative reinforcer; decreasing the response rate
- D. punishment; increasing the response rate

**Question 21**

The **process** which caused Tess to **stop barking** after the collar was fitted is called

- A. classical conditioning.
- B. observational learning.
- C. operant conditioning.
- D. one trial learning.

**Question 22**

Once the collar was removed, Tess soon **began barking again** due to a **process** known as

- A. stimulus discrimination.
- B. association.
- C. stimulus generalisation.
- D. extinction.

**Question 23**

Suki enrolled in typing classes to learn to 'touch type'. During the first lesson the teacher made the class practise typing the letters g, h, f, j, d and k without looking at the keys. The teacher praised Suki for typing the letters correctly. In the second lesson, Suki typed these letters together with the letters e, r, i and o and was again praised for her performance. During the third lesson, another four letters were added to those previously learnt.

The **learning process** used by Suki in learning to type was

- A. observational learning.
- B. shaping.
- C. classical conditioning.
- D. fixed action pattern.

**Question 24**

Louisa's parents are trying to encourage her to keep her room tidy. At the end of each week, if her room is tidy, they give Louisa \$5 pocket money.

Louisa's parents are applying a **schedule of reinforcement** known as

- A. fixed interval.
- B. fixed ratio.
- C. variable interval.
- D. variable ratio.

**Question 25**

Joe's parents also want him to keep his room tidy but are using a different method of encouragement. Whenever his room is untidy, Joe is **not** permitted to watch television until he tidies it.

Joe's parent are using \_\_\_\_\_ to modify his behaviour.

- A. positive reinforcement
- B. modelling
- C. negative reinforcement
- D. shaping

**Question 26**

Which one of the following statements is **true** about the effectiveness of reinforcement when using operant conditioning to train animals?

- A. The reinforcer must provide a pleasurable consequence for the animal.
- B. The reinforcement must be presented before the desired response.
- C. The reinforcer must be presented within 24 hours after the response.
- D. The reinforcer must be presented every time the desired response occurs.

**Question 27**

During **operant conditioning**, the learner is \_\_\_\_\_ ; whereas during **classical conditioning** the learner is \_\_\_\_\_ .

- A. passive; active
- B. reinforced; not reinforced
- C. active; passive
- D. not reinforced; reinforced

**Question 28**

In an investigation of aggression in children, three groups of children were exposed to different conditions.

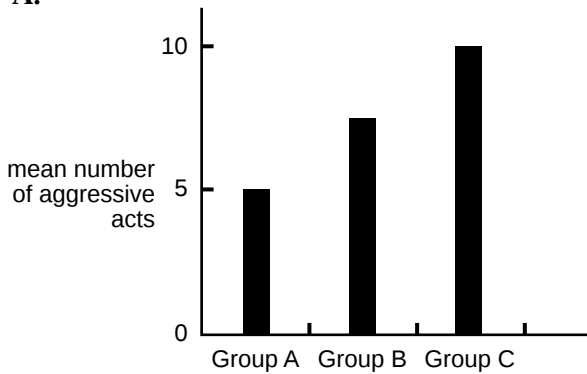
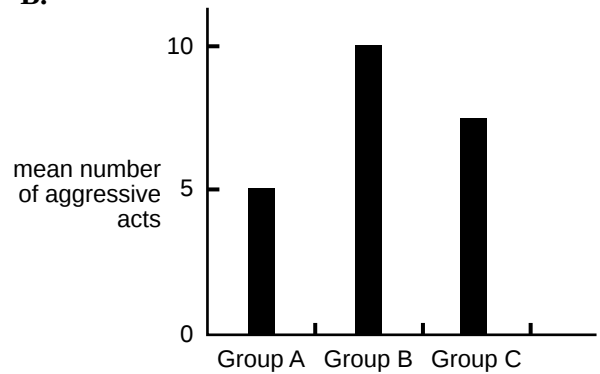
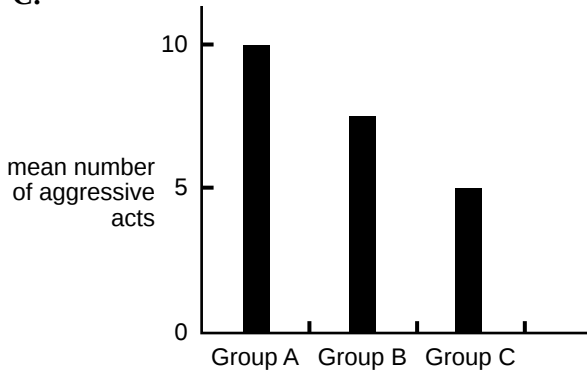
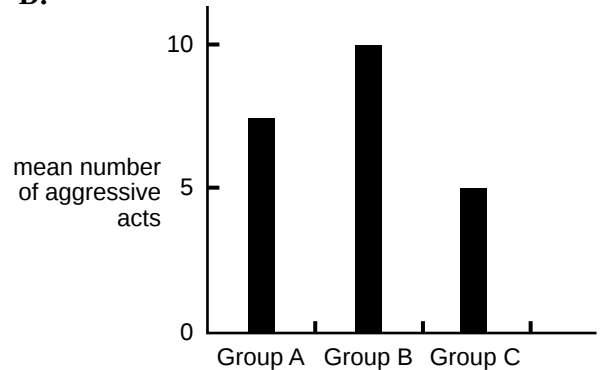
The first group of children (Group A) observed adults, who were unknown to them, behaving aggressively toward some toys.

The second group of children (Group B) observed adults, who were well known sports stars, behaving aggressively toward some toys.

The third group (Group C) was a control group who observed adults playing with some toys in a non-aggressive manner.

The children were then left to play with the toys themselves, while they were observed for the number of aggressive acts they committed.

Which one of the following graphs **most likely** depicts the results of this investigation?

**A.****B.****C.****D.**

**Figure 2**

**Question 29**

A primary school teacher was trying to encourage her students to read more. She decided to reward them by placing a star on a chart for each book they read. When the students had achieved ten stars they were allowed to play games on the class computer for 20 minutes.

The teacher was using \_\_\_\_\_ to encourage her students to read.

- A. a token economy
- B. partial reinforcement
- C. a learning set
- D. shaping

**Question 30**

Yasemin was trying to rearrange her bedroom furniture to make room for her new computer desk but was unable to make it all fit. After trying various arrangements, Yasemin decided to take a break and have a cup of tea. Just as she finished her tea, Yasemin thought of a new arrangement for her furniture. She went back to her room and moved her furniture according to this new idea and it fitted perfectly.

The period of time during which Yasemin had a cup of tea could be called the stage of \_\_\_\_\_ and the period of time when she successfully rearranged her furniture could be called the stage of \_\_\_\_\_.

- A. preparation; the 'ah-ha' experience
- B. incubation; verification
- C. the 'ah-ha' experience; verification
- D. incubation; the 'ah-ha' experience

### AREA OF STUDY 3 – RESEARCH METHODS

Questions 31 and 32 refer to the following information

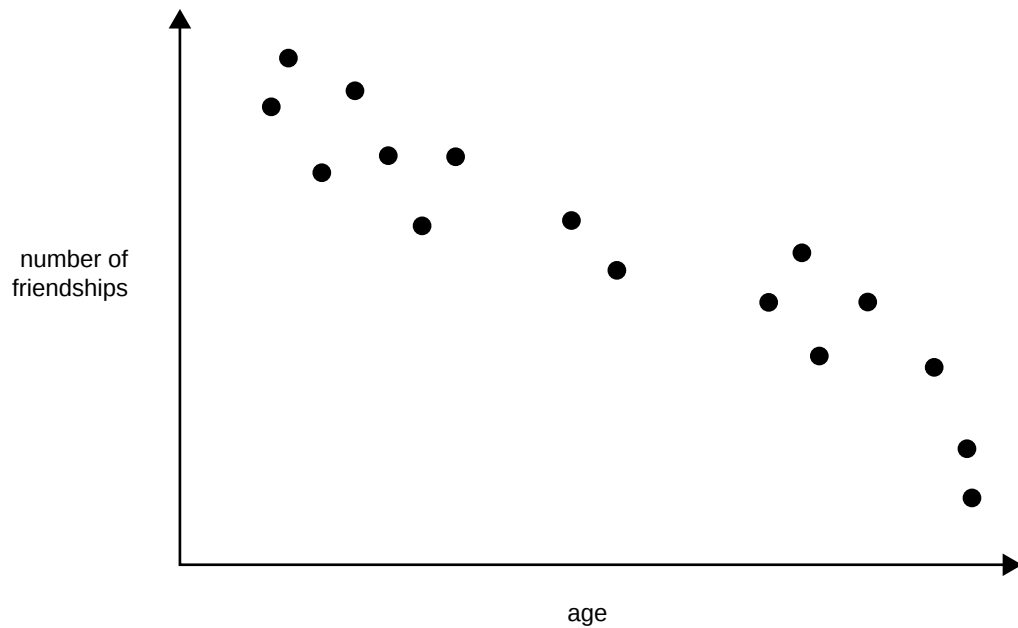


Figure 3

#### Question 31

The scattergram in **Figure 3** shows that

- A. there is a weak negative relationship between a person's age and the number of friendships they have.
- B. there is a strong positive relationship between a person's age and the number of friendships they have.
- C. there is a strong negative relationship between a person's age and the number of friendships they have.
- D. there is a weak positive relationship between a person's age and the number of friendships they have.

#### Question 32

Which one of the following correlation coefficients **most likely** corresponds to the data in Figure 3?

- A. .8
- B. −.8
- C. −.3
- D. .3

**Question 33**

An **operational hypothesis** is a statement which describes

- A. the size of the study's sample.
- B. the methods which are used to address the research questions.
- C. how the participants in the study will be recruited.
- D. how the study will be statistically analysed.

**Question 34**

In an experiment on the most efficient methods to teach reading, which one of the following  $p$ -values indicates that the difference between the groups is **least** likely to be due to chance?

- A.  $p < .001$
- B.  $p < .05$
- C.  $p < .01$
- D.  $p < .5$

**Question 35**

In an experiment the **double-blind** procedure controls for

- A. the placebo effect only.
- B. the experimenter effect only.
- C. the placebo effect and the experimenter effect.
- D. confounding variables.

**Question 36**

Which of the following is a **feature** of confidentiality?

- A. Participants are aware of the purpose of the study.
- B. There will be no lasting harm as result of participating in a study.
- C. Participants will have the right to withdraw from the study at any time.
- D. No identifying information will be revealed about the participant in a study.

**Question 37**

Psychologists use **inferential statistics** to

- A. carry out multiple experiments.
- B. randomly assign participants.
- C. organise and describe data.
- D. draw conclusions based on research findings.

*Questions 38, 39, 40, and 41 refer to following information*

Brigit had a theory that people who listened to music while studying for exams spent more time studying than people who don't listen to music while studying for their exams.

Brigit decided to test her theory by asking two teachers to gather information from their Year 12 students. Teacher 1 asked her students to listen to music while studying and record the number of hours they spent studying. Teacher 2 asked his students to not listen to music while studying and record the number of hours they spent studying.

**Table 1**

| Class             | listen to music while studying | average time spent studying |
|-------------------|--------------------------------|-----------------------------|
| Teacher 1, N = 18 | yes                            | 15 hours                    |
| Teacher 2, N = 22 | no                             | 4 hours                     |

When Brigit analysed her data with statistics, she found a significant difference in the length of time spent studying between people who listened to music and people who didn't listen to music while studying ( $p < .01$ ). Brigit concluded that students who listen to music while studying will study for longer periods of time.

**Question 38**

The **independent variable** in Brigit's study was

- A. the length of time spent studying.
- B. listening to music while studying.
- C. the year level of the students.
- D. whether or not the teacher is female or male.

**Question 39**

The **dependent variable** in Brigit's study was

- A. the length of time spent studying.
- B. listening to music while studying.
- C. the year level of the students.
- D. whether or not the teacher is female or male.

**Question 40**

What was a major **limitation** of Brigit's experimental design?

- A. She did not know what marks the students actually got for the exam.
- B. She should have used only males or only female students.
- C. She did not record the age of her participants.
- D. The students were not randomly allocated.

**Question 41**

Was Brigit's conclusion a **valid** one?

- A. No, because she cannot determine cause from her experimental design.
- B. No, because the real cause is whether the student is male or female.
- C. Yes, because her results are statistically significant.
- D. Yes, because her data supports her theory.

**Question 42**

Which one of the following would be the **best** choice of participants for a matched participants design?

- A. two people selected at random from the general population
- B. a brother and sister who were adopted into different families
- C. identical twins who grew up in the same family
- D. a brother and sister of different ages

**Question 43**

Which of the following best describes a **stratified** sample?

- A. a sample that is made up of people from different cultures
- B. a sample of people who are selected for certain characteristics
- C. a sample that equally represents all members of a population
- D. a sample that includes both an experimental and a control group

**Question 44**

Following an experiment that involved **deception**, participants were counselled by an expert. This is known as

- A. informed consent.
- B. voluntary participation.
- C. debriefing.
- D. confidentiality.

**Question 45**

A correlation of .2 indicates

- A. a strong relationship between two variables; one of which increases while the other decreases.
- B. a weak relationship between two variables; one of which increases while the other also increases.
- C. a weak relationship between two variables; one of which increases while the other decreases.
- D. a strong relationship between two variables; one of which decreases while the other also decreases.

**SECTION B****Instructions for Section B**

There are **6** questions for each of the three areas of study.  
Answer **all** questions.

**AREA OF STUDY 1 – MEMORY****Question 1**

What is the difference between **encoding** of information and **retrieval** of information in memory?

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2 marks

**Question 2**

Describe the relationship between **sensory** memory, **short-term** memory and **long-term** memory when learning new information. Your answer should include differences between capacity and duration for each level of memory.

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3 marks

**Question 3**

- i. What is the term given to the process of linking new information in a meaningful way with information already stored in memory to aid its storage and retrieval from long-term memory?

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1 mark

- ii. What is the term given to the process of simple, rote repetition of information to retain it in short-term memory?

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1 mark

**Question 4**

- i. Outline **two** key features of how information is stored according to the **semantic network theory** of memory.

Feature 1

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Feature 2

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2 marks

- ii. According to the **semantic network theory**, how is information retrieved from long-term memory?

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1 mark

**Question 5**

Define **procedural** memory. Give **an example** to illustrate your answer.

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2 marks

**Question 6**

- i. Compare the difference between **acrostics** and **narrative chaining** mnemonic devices to assist memory.

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2 marks

- ii. Sam was going shopping and had to buy some eggs, coffee, ham, apples and sugar. Provide an example to show how Sam could use the acrostic mnemonic device to assist his recall of shopping items.

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1 mark

## AREA OF STUDY 2 – LEARNING

### Question 7

Watson's experiment with 'Little Albert' is considered to be unethical by today's standard.

Describe **two aspects** of Watson's experiment which are considered **unethical**.

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_

2 marks

### Question 8

Sally liked playing with dogs until she was bitten by one. Now she runs away in fear whenever a dog approaches her.

**Explain** Sally's behaviour in terms of the type of conditioning. In your answer, **identify** the conditioned stimulus and the conditioned response.

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3 marks

**Question 9**

- i. What is meant by the term **phobia**?

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1 mark

- ii. Define the term **stimulus generalisation**.

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1 mark

**Question 10**

Mr Jones was having difficulty keeping order in his Year 9 Maths class. He was giving more frequent and longer detentions to misbehaving students and found he was spending most of his lunchtimes supervising detention. However, the behaviour of his students was not improving; in fact, some students seemed to be amused at being given detention.

- i. Identify the **type of consequence** applied by Mr Jones.

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1 mark

- ii. Provide **two** explanations why this type of consequence was ineffective in changing the students' behaviour.

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2 marks

**Question 11**

- i. Give an example of a **learning set**.

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1 mark

- ii. What is meant by a **fixed ratio schedule of reinforcement**?

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1 mark

**Question 12**

Before Alex had moved out of home, he'd never had to cook for himself. He was keen to show that he could cope on his own and was pleasantly surprised to discover that he actually knew how to cook quite well. He then remembered that he often used to spend time in the kitchen watching his mother while she was cooking.

- i. What **type of learning** was used by Alex?

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1 mark

- ii. Identify **two key elements** of this type of learning and **explain** how they helped Alex learn to cook.

1.

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2.

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2 marks

## AREA OF STUDY 3 – RESEARCH METHODS

### Question 13

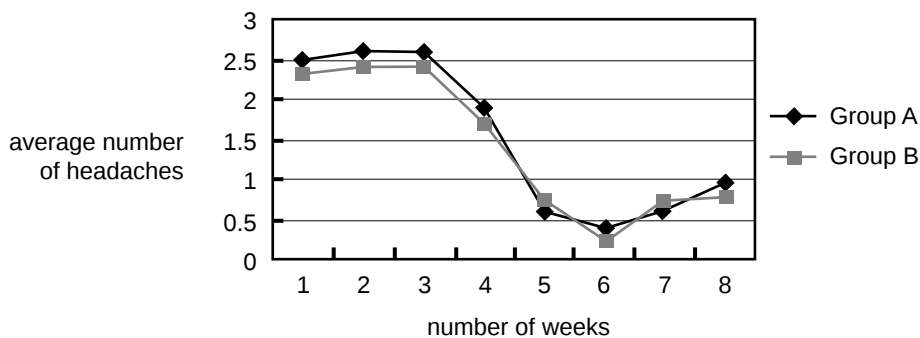
Describe two features of an **independent groups design**.

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_

2 marks

### Question 14

A researcher is interested in the effectiveness of a new drug to reduce the frequency of headaches. Participants in the drug trial reported frequency of headaches over an eight week period. For the first four weeks, participants were not given anything. At the end of Week 4, participants were randomly allocated to either Group A or Group B. From Week 5 to Week 8, participants in Group A were given the headache drug and Group B were given a sugar pill. The results of the trial are shown in Figure 4.



**Figure 4**

- i. What is the name of the research design used in the drug trial?

\_\_\_\_\_

1 mark

- ii. What conclusions can the researcher draw about the effectiveness of the new drug? **Explain** your answer.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2 marks

Questions 15 and 16 refer to the following information

Dr Brodsky was interested in whether the speed at which people drive is related to the tempo of the music they listen to while driving. The tempo of music is its quickness. This is measured by the number of beats per minute (bpm). He conducted an experiment with 28 students who drove in a driving simulator under four conditions:

- condition one involved students driving without listening to music
- condition two involved students driving to music at 40–70 beats per minute (bpm)
- condition three involved students driving to music at 85–110 bpm
- condition four involved students driving to music at 120–140 bpm

The results of Dr Brodsky's experiment are illustrated in Figure 5. When he tested his hypothesis, Dr Brodsky found that his results were statistically significant ( $p < .01$ ).

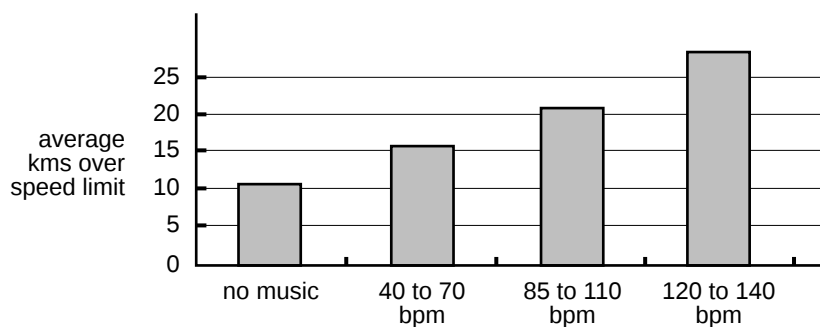


Figure 5

#### Question 15

- i. What is the name of the design that Dr Brodsky used in his experiment?

\_\_\_\_\_ 1 mark

- ii. What did Dr Brodsky use as a measure of his dependent variable?

\_\_\_\_\_ 1 mark

#### Question 16

- i. What would be Dr Brodsky's conclusion based on the results of his experiment?

\_\_\_\_\_  
 \_\_\_\_\_ 1 mark

- ii. Identify **two** reasons why the results of the experiment cannot be generalised to all drivers.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2 marks

**Question 17**

The following hypothesis was supported with a level of statistical significance of  $p < .05$ . 'People who are treated by behaviour modification therapy to quit smoking are more likely to be successful than people who are not.'

**Explain** what  $p < .05$  means and how it applies to this hypothesis.

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2 marks

**Question 18**

How is a single-blind procedure **similar** to a double-blind procedure? How is a single-blind procedure **different** from a double-blind procedure? In your answer explain why **one** of these procedures may be more **advantageous** than the other.

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3 marks