



Victorian Certificate of Education 2012

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Letter

Figures										
Words										

PSYCHOLOGY

Written examination 2

Monday 5 November 2012

Reading time: 3.00 pm to 3.15 pm (15 minutes)

Writing time: 3.15 pm to 4.45 pm (1 hour 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	45	45	45
B	13	11	35
C	1	1	10
			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 24 pages.
- Answer sheet for multiple-choice questions.
- Additional space is available at the end of the book if you need extra paper to complete an answer.

Instructions

- Write your **student number** in the space provided above on this page.
- 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 unauthorised electronic devices into the examination room.

SECTION A – Multiple-choice questions**Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.
Choose the response that is **correct** or that **best answers** the question.
A correct answer scores 1, an incorrect answer scores 0.
Marks will **not** be deducted for incorrect answers.
No marks will be given if more than one answer is completed for any question.

Question 1

During learning, the role of neurotransmitters is to

- A. transmit electrical impulses along the axon of a neuron.
- B. receive chemical messages from the synaptic gap between neurons.
- C. transmit chemical messages across the synaptic gap between neurons.
- D. inhibit transmission of electro-chemical impulses across the synapse between neurons.

Question 2

As a result of learning and new experiences, the brain modifies its neural pathways by

- A. increasing the number of neurons.
- B. decreasing the number of neurons.
- C. changing the structure of the axons within neurons.
- D. changing the strength of the synaptic connections between neurons.

Question 3

John Watson classically conditioned the emotional response of fear in the 11-month-old child 'Little Albert'.

With regard to current ethical standards, a major ethical concern regarding the 'Little Albert' research would be that

- A. there was no control condition in the study.
- B. 'Little Albert' was too young to give informed consent.
- C. 'Little Albert' was deceived about the nature of the research.
- D. 'Little Albert' demonstrated severe distress and Watson made no attempt to end the experiment.

Question 4

The brain's ability to reorganise neural pathways in response to new experiences is known as

- A. adaptive plasticity, which occurs only in people with head injuries.
- B. adaptive plasticity, which occurs throughout a person's life.
- C. adaptive plasticity, which occurs only in early childhood.
- D. developmental plasticity, which occurs only in early childhood.

NO WRITING ALLOWED IN THIS AREA

Use the following information to answer Questions 5–8.

Danny's older brothers like to pop balloons near him. The sudden loud noise frightens him.

Now, every time Danny sees balloons he becomes fearful. He cries and runs away so that he can avoid the balloons.

Danny also cries when he sees beach balls.

Question 5

In this scenario, the neutral stimulus and the unconditioned stimulus respectively are

- A. the loud noise and the balloons.
- B. the balloons and the loud noise.
- C. the balloons and the beach balls.
- D. the loud noise and the beach balls.

Question 6

Which of the following best describes Danny's fear response to the beach balls after the conditioning?

- A. reflexive response
- B. spontaneous recovery
- C. stimulus generalisation
- D. stimulus discrimination

Question 7

Which of the following classical conditioning techniques would be the most effective to relieve Danny of his fear of balloons and beach balls?

- A. shaping
- B. aversion therapy
- C. graduated exposure
- D. trial-and-error learning

Question 8

Elements of operant and classical conditioning may occur in the same situation.

In the case of Danny, which one of the following responses is evidence of operant conditioning?

- A. running away to avoid balloons
- B. showing fear and trembling when balloons are presented
- C. being very passive before the conditioning process began
- D. being very sad and clinging to adults at the conclusion of the conditioning

Use the following information to answer Questions 9–12.

Four-year-old Mary always kicked and screamed when her mother dressed her. One morning, Mary's mother gave her a lollipop and was then relieved to be able to finish dressing Mary in peace and quiet.

Question 9

In terms of the three-phase model of operant conditioning, if the antecedent stimulus in this scenario is considered to be the mother dressing Mary, then the response would be

- A. Mary eating the lollipop.
- B. Mary kicking and screaming.
- C. Mary quietly dressing herself.
- D. Mary stopping the kicking and screaming.

Question 10

In many situations, parents and children can reinforce each other.

So if the antecedent stimulus is now considered to be Mary kicking and screaming, then the operant response would be the

- A. mother giving Mary a lollipop.
- B. mother continuing to dress Mary.
- C. mother being relieved that Mary is quiet.
- D. mother asking Mary to be calm and quiet.

Question 11

In terms of operant conditioning, the relief experienced by Mary's mother when Mary stops kicking and screaming after she has received the lollipop is an example of

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

Question 12

Mary's mother continued to give Mary a lollipop each morning when getting her dressed. However, Mary's mother was worried that eating a lollipop every day would give Mary tooth decay, so she tried to do something different. Mary's mother gave her a star chart. She explained that Mary would get a star each time she got dressed quietly and, when Mary had three stars, she would get a lolly of her choice.

What is this new system called and what is the schedule of reinforcement that is being used in the system?

- A. shaping/fixed ratio
- B. shaping/fixed interval
- C. token economy/fixed ratio
- D. token economy/fixed interval

NO WRITING ALLOWED IN THIS AREA

Use the following information to answer Questions 13 and 14.

Buzz is a very clever and sensitive dog. When he was a puppy, he learned that lightning is followed by loud and frightening thunder. Now, when there is a flash of lightning, Buzz begins to tremble even before he hears the thunder. Buzz has also learned that when he sees the lightning he can then run through the dog door into the house, where he feels safer.

Question 13

Buzz's response of trembling when there is a flash of lightning and his response of running indoors are, respectively, examples of

- A. classical conditioning/operant conditioning.
- B. operant conditioning/classical conditioning.
- C. operant conditioning/trial-and-error learning.
- D. trial-and-error learning/classical conditioning.

Question 14

In this scenario, a distinction can be made between the types of learning because Buzz's trembling at the lightning

- A. is a voluntary response, whereas running indoors is a reflexive response.
- B. is an involuntary response, whereas running indoors is a voluntary response.
- C. indicates an active participant, whereas running indoors indicates a passive participant.
- D. reflects the process of stimulus generalisation, whereas running indoors reflects the process of stimulus discrimination.

Use the following information to answer Questions 15 and 16.

Susan was helping her mother to make sandwiches for a school event. Her mother had promised to pay her \$1 for every five sandwiches that she made. However, many people came in to talk to Susan's mother and her mother could not keep count of the number of sandwiches that Susan made. In the end, Susan's mother paid her \$1 for every five minutes that Susan spent making sandwiches.

Question 15

Which schedule of reinforcement would the actual payment of \$1 for every five minutes of sandwich-making represent?

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

Question 16

Which schedule of reinforcement would have resulted in Susan making sandwiches at the fastest rate?

- A. fixed ratio
- B. fixed interval
- C. both fixed ratio and fixed interval
- D. it is not possible to compare the response rate for different schedules of reinforcement

Question 17

With reference to Bandura's research in which children watched an adult model interact aggressively with a Bobo doll, which statement is most correct?

- A. Children never imitated the adult model's behaviour.
- B. Boys and girls were equally aggressive to the Bobo doll in all conditions.
- C. Children who watched the adult model being punished were less likely to imitate aggressive behaviour.
- D. Girls always imitated the adult model's behaviour, whereas boys did not imitate the adult model's behaviour.

Question 18

Erin recently saw her young daughter, Kathy, hit her doll violently with a spoon. Erin wants to reduce Kathy's aggressive behaviour towards her doll.

In terms of observational learning, Erin should

- A. remove the doll and spoon from Kathy.
- B. smack Kathy every time Kathy hits her doll.
- C. speak kindly and behave in a caring way towards Kathy's doll.
- D. provide negative reinforcement for Kathy whenever Kathy hits her doll.

Question 19

Mike had never cooked before, although in the past he had spent time in the kitchen with his mother when she was cooking.

The first night he tried, Mike was able to cook spaghetti even though he had never cooked it before and did not have a recipe.

In terms of observational learning, which of the following elements enabled Mike to be able to cook spaghetti?

- A. attention, reproduction
- B. motivation, incubation
- C. cognition, 'ah ha' experience
- D. cognitive representation, stimulus generalisation

Question 20

Tom had many pieces of furniture to fit into his new bedroom. He had tried a number of ways to fit all of the furniture into the room but he was unsuccessful. He left his room in frustration.

Later, Tom returned to his new room and quickly found a solution for fitting all of the furniture into the room.

Tom finding a way to fit the furniture into his room is most likely an example of

- A. latent learning.
- B. insight learning.
- C. classical conditioning.
- D. observational learning.

NO WRITING ALLOWED IN THIS AREA

Question 21

The dimensional approach to classifying mental disorders

- A. involves the use of objective physiological measures.
- B. views people suffering from mental illness as 'abnormal'.
- C. allows for the diagnostic labelling and categorisation of mental disorders.
- D. views the symptoms of mental disorders as part of a range of human feelings and emotions.

Use the following information to answer Questions 22 and 23.

After she was bitten by a dog, Trinh developed a phobia of dogs.

Question 22

Now, whenever Trinh sees a dog

- A. she experiences eustress.
- B. her fight-flight response is activated.
- C. her adrenaline and noradrenaline are inhibited.
- D. her parasympathetic nervous system is activated.

Question 23

According to a behavioural model, it is likely that Trinh's phobia of dogs has its origin in

- A. classical conditioning and is maintained by operant conditioning.
- B. operant conditioning and is maintained by latent learning.
- C. latent learning and is maintained by observational learning.
- D. observational learning and is maintained by classical conditioning.

Use the following information to answer Questions 24 and 25.

The night before a university examination, Terri realised that there was an entire topic that she had not studied. She burst into tears and was unable to sleep that night.

Question 24

According to Lazarus and Folkman's Transactional Model of Stress and Coping, it would be most likely that Terri's appraisal of this experience was

- A. a threat.
- B. eustress.
- C. irrelevant.
- D. a challenge.

Question 25

After the examination, Terri continued to be very stressed about her performance. She sought the advice of an academic advisor, who helped her with time management and study techniques.

The support Terri received was

- A. biological.
- B. sociocultural.
- C. physiological.
- D. environmental.

Question 26

Aversion therapy is a form of classical conditioning that is most often used to

- A. increase desirable behaviour by associating it with an unpleasant stimulus.
- B. decrease undesirable behaviour by associating it with an unpleasant stimulus.
- C. increase desirable behaviour by associating it with the removal of an unpleasant stimulus.
- D. decrease undesirable behaviour by associating it with the removal of an unpleasant stimulus.

Question 27

A psychologist treated a patient who suffered a phobia of flying. During the therapy the psychologist helped the patient to identify his unhelpful thoughts about flying, and to identify other helpful and more rational thoughts about flying.

The therapy that the psychologist used was

- A. cognitive behavioural therapy (CBT).
- B. systematic desensitisation.
- C. biofeedback.
- D. flooding.

Question 28

You are most likely to experience eustress when you are experiencing a stressful situation that is

- A. harmful.
- B. harmless.
- C. irrelevant.
- D. challenging.

Question 29

The fight-flight response is typically an example of

- A. a long-term physiological response to stress.
- B. a short-term physiological response to stress.
- C. a response activated by the parasympathetic nervous system.
- D. an environmental factor that increases a person's level of stress.

Question 30

When the body is required to respond to a stressor over an extended period of time, which of the following physiological responses is likely to occur?

- A. Allostatic load will decrease.
- B. Stress hormones will be secreted.
- C. The immune system will be strengthened.
- D. The body's capacity to respond to the stressor will be enhanced.

Question 31

In the exhaustion stage of Selye's General Adaptation Syndrome (GAS), people are more likely to

- A. build up tolerance to threatening situations.
- B. suffer from chronic stress and physical illness.
- C. be able to regulate the body's response to stress.
- D. maintain stability by adapting to changes caused by stressors.

Question 32

An advantage of Lazarus and Folkman's Transactional Model of Stress and Coping is that

- A. it is easy to test through experimental research.
- B. human subjects were used in the development of the model.
- C. its emphasis is on a person's physiological response to stress.
- D. it does not consider interaction with the environment in the stress response.

Question 33

Anxiety disorders can be managed with a group of drugs known as benzodiazepines. Benzodiazepines imitate the activity of the neurotransmitter, gamma-aminobutyric acid (GABA).

Benzodiazepines work by

- A. activating post-synaptic neurons in the brain to calm the body and reduce arousal.
- B. activating post-synaptic neurons in the brain to activate the body and increase arousal.
- C. inhibiting post-synaptic neurons in the brain to calm the body and reduce arousal.
- D. inhibiting post-synaptic neurons in the brain to activate the body and increase arousal.

Question 34

According to the psychodynamic model, phobias occur

- A. due to anger towards unresolved physiological trauma.
- B. because our thoughts and feelings are always changing over time.
- C. due to unresolved conflicts with parents/carers that occurred during childhood.
- D. because they involve classical conditioning, in which the person is passive and has no control over the situation.

Question 35

In which of the following situations would biofeedback be an effective strategy for the management of stress?

- A. repair of stress fractures experienced by people playing sport
- B. control of psychosis in people with mental health problems, such as schizophrenia
- C. control of autonomic responses, such as the dilation of the pupil of the eye or inhibition of digestion
- D. management of conditions related to muscle tension and blood flow, such as headaches and high blood pressure

Question 36

Ron, who is 12 years old, has observed his father's fearful response to spiders. Now, Ron is also fearful of spiders. Which type of factor is most likely to be responsible for Ron's fear of spiders?

- A. maturational
- B. sociocultural
- C. physiological
- D. psychodynamic

Question 37

Continual activation of a person's fight-flight response is most likely to

- A. increase allostatic load.
- B. result in allostasis being experienced.
- C. quickly return the body to homeostasis.
- D. reduce the level of adrenaline and noradrenaline in the bloodstream.

Use the following information to answer Questions 38–41.

Charlie has just started secondary school. In History, he was required to give a talk in front of the class. Charlie was very anxious about speaking in front of the class. He stayed home on the day that he had to give his talk and felt relieved.

Question 38

When Charlie was anxious, he may have experienced short-term physiological responses, including

- A. increased heart rate, increased blood pressure and dilation of pupils.
- B. difficulty sleeping, change in eating habits and decreased heart rate.
- C. inhibition of adrenaline and noradrenaline, dilation of pupils and difficulty sleeping.
- D. release of adrenaline and noradrenaline, increased heart rate and constriction of pupils.

Question 39

The next time that Charlie is required to give a talk in front of the class, it is most likely that he will

- A. stay home again, as his behaviour is being punished.
- B. attend school, as his behaviour is being positively reinforced.
- C. stay home again, as his behaviour is being negatively reinforced.
- D. stay home again, as his behaviour is being maintained by classical conditioning.

Question 40

Charlie's teachers were concerned and referred him to the school psychologist for some help. The school psychologist told Charlie that he had developed a phobia of public speaking.

Charlie's phobia of public speaking is best explained by using

- A. the cognitive model and psychotherapies.
- B. the behavioural model and operant conditioning.
- C. the psychodynamic model and biological approach.
- D. the psychodynamic model and classical conditioning.

NO WRITING ALLOWED IN THIS AREA

Question 41

The psychologist treated Charlie's fear of public speaking by first getting him to give speeches in front of the mirror at home. When Charlie was comfortable, the psychologist told him to give speeches to his family and then to a group of friends. Finally, when Charlie felt comfortable, the psychologist had him speak at the school assembly.

The treatment used by the psychologist was an example of

- A. flooding.
- B. aversion therapy.
- C. systematic desensitisation.
- D. cognitive behavioural therapy (CBT).

Use the following information to answer Questions 42 and 43.

In his experiments investigating the salivation response in dogs, Pavlov varied the timing between the sounding of a bell and the presentation of food.

Question 42

In this experiment, the independent variable (IV) and dependent variable (DV) respectively were

- A. IV – presentation of food; DV – sounding of a bell.
- B. IV – sounding of a bell; DV – presentation of food.
- C. IV – amount of saliva; DV – time between sounding of a bell and presentation of food.
- D. IV – time between sounding of a bell and presentation of food; DV – amount of saliva.

Question 43

In Pavlov's experiments, the unconditioned stimulus (UCS) and the conditioned stimulus (CS) respectively were

- A. UCS – food; CS – bell.
- B. UCS – bell; CS – food.
- C. UCS – saliva; CS – food.
- D. UCS – food; CS – saliva.

Question 44

The results of an experiment support a hypothesis with a level of statistical significance of $p < .05$.

This suggests that

- A. the results are not statistically significant.
- B. the probability that the results have occurred by chance is less than 5%.
- C. the probability of these results being obtained by chance is more than 5%.
- D. if the same experiment were conducted 100 times, the same results would be obtained for 95 of the experiments.

Question 45

One-trial learning is similar to but not the same as

- A. fixed action patterns.
- B. operant conditioning.
- C. classical conditioning.
- D. observational learning.

**END OF SECTION A
TURN OVER**

SECTION B – Short answer questions

Instructions for Section B

Answer the questions in the spaces provided. Write using black or blue pen.

Question 1

Use an example to explain a reflex action.

3 marks

Question 2

Marco breeds birds and his favourite bird is Polly the parrot. Marco watched when Polly broke through her eggshell and hatched. Polly is now an adult bird. When Marco comes in to feed her, Polly gets very excited and screeches loudly when she hears the door of the birdcage open. Marco now wants to try to teach Polly to say some words.

a. Identify one of Polly’s behaviours in this scenario that is not due to learning.

1 mark

b. Identify one of Polly’s behaviours that indicates classical conditioning has occurred.

1 mark

c. Identify one learning technique that Marco could use to teach Polly to say some words. Explain how Marco would use the elements of this technique to train Polly.

3 marks

NO WRITING ALLOWED IN THIS AREA

Question 3

Functional magnetic resonance imaging (fMRI) is a neuroimaging technique that may be used to identify changes in the brain during learning.

Describe an advantage of using fMRI when a person is undertaking a learning task.

2 marks

Question 4

Maddie, a university student, became stressed when she lost her part-time job.

- a. With reference to Lazarus and Folkman's Transactional Model of Stress and Coping, describe **two** different primary appraisals that Maddie might have made when she became stressed.

2 marks

- b. Describe **two** emotion-focused coping strategies that Maddie could use to reduce her stress.

2 marks

SECTION B – continued
TURN OVER

NO WRITING ALLOWED IN THIS AREA

Question 5

Jim is unhappy with some of his son’s behaviours. Jim wants his son to swear less. Jim also wants his son to do more homework.

- a. Indicate whether Jim should choose **negative reinforcement** or **punishment** to modify each of his son’s behaviours.

swearing less _____

doing more homework _____

2 marks

- b. Briefly explain how Jim could implement the conditioning techniques you chose in **part a.** to change each behaviour.

swearing less _____

doing more homework _____

2 marks

Question 6

What is the key difference between trial-and-error learning, as informed by Thorndike’s puzzle-box experiment, and insight learning, as informed by Köhler?

2 marks

NO WRITING ALLOWED IN THIS AREA

Question 7

Provide **two** reasons why psychologists and psychiatrists use a classification system of mental conditions and disorders.

2 marks

Question 8

Describe **two** strengths of dimensional approaches to the classification of mental disorders.

2 marks

Question 9

Explain one difference between distress and eustress.

2 marks

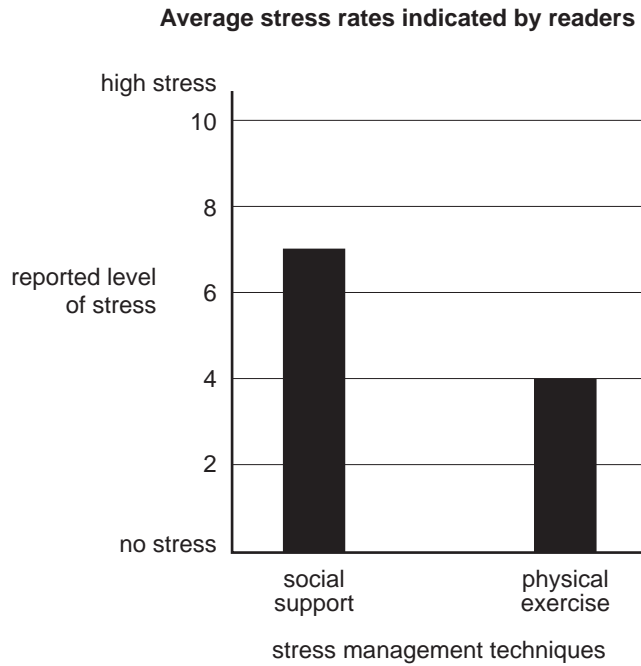
SECTION B – continued
TURN OVER

NO WRITING ALLOWED IN THIS AREA

Question 10

Arijana, a Psychology PhD student, wanted to examine the effectiveness of physical exercise or social support on a person’s stress response. Arijana advertised her study in the local newspaper and invited readers to complete a questionnaire online.

The results of her study are graphed below.



a. Outline one weakness of the sampling technique that Arijana used.

1 mark

b. Based on these results, can a conclusion be drawn for this study? Justify your answer.

2 marks

NO WRITING ALLOWED IN THIS AREA

Answer **one** of the following questions. Tick (✓) the box next to the question you are answering.

Question 11 (Mood disorder: major depression) **or**

Question 12 (Addictive disorder: gambling) **or**

Question 13 (Psychotic disorder: schizophrenia)

Question 11 – Mood disorder: major depression

- a. Identify and explain one sociocultural factor that is believed to contribute to the development of major depression.

2 marks

- b. Explain how antidepressant medication and cognitive behavioural therapy (CBT) can be used in the treatment of some individuals with major depression.

4 marks

OR

**SECTION B – continued
TURN OVER**

NO WRITING ALLOWED IN THIS AREA

Question 12 – Addictive disorder: gambling

- a. Identify and explain one sociocultural factor that is believed to contribute to the development of addictive gambling behaviour.

2 marks

- b. Explain how the dopamine reward system and cognitive behavioural therapy (CBT) can be used in the treatment of some individuals with addictive gambling behaviour.

4 marks

OR

NO WRITING ALLOWED IN THIS AREA

Question 13 – Psychotic disorder: schizophrenia

- a. Identify and explain one biological factor that is believed to contribute to the development of the psychotic disorder, schizophrenia.

2 marks

- b. Explain how antipsychotic medication and cognitive remediation therapy can be used in the treatment of some individuals with the psychotic disorder, schizophrenia.

4 marks

NO WRITING ALLOWED IN THIS AREA**END OF SECTION B
TURN OVER**

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

Answer the question in the space provided. Write using black or blue pen.
Your response may include diagrams, charts and tables.

Dr Theo works as a research psychologist. He conducted a study to test the effectiveness of systematic desensitisation as a treatment for the simple phobia of snakes.

Twenty otherwise healthy adults with a phobia of snakes were selected for the study. Prior to taking part, each participant was assessed to ensure they fulfilled the DSM-IV criteria for the simple phobia of snakes.

Dr Theo used an independent groups design.

Half of the participants received the treatment of systematic desensitisation; the other half did not receive any treatment at all.

At the end of the research, the participants were again assessed on the DSM-IV criteria for the simple phobia of snakes.

The results are printed in the table below.

Table 1. Results of treatment for the simple phobia of snakes

Condition	Number of participants with simple phobia of snakes	
	Pre-treatment	Post-treatment
condition 1: systematic desensitisation	10	4
condition 2: no treatment	10	10

Statistical analysis revealed a significant difference between the results of the two groups.

You are required to write the components of a psychological report on this research.

Your response should include

- a research hypothesis
- identification of operationalised variables
- advantages and disadvantages of using an independent groups design for this research
- a discussion of at least one ethical consideration
- a conclusion and possible generalisation.

NO WRITING ALLOWED IN THIS AREA

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**SECTION C – continued
TURN OVER**

Extra space for responses

Clearly number all responses in this space.

TURN OVER

NO WRITING ALLOWED IN THIS AREA

NO WRITING ALLOWED IN THIS AREA