



# **PSYCHOLOGY**

## **ATAR course sample examination one**

### **Marking key**

Marking keys are an explicit statement about what the examining panel expect of candidates when they respond to particular examination items. They help ensure a consistent interpretation of the criteria that guide the awarding of marks.

## Section One: Short Answer

70% (123 Marks)

## Question 1

(31 marks)

- (a) Describe the key difference between sensation and perception. (2 marks)

Description	Marks
sensation is a physiological/physical process	1
perception is a psychological process	1
<b>Total</b>	<b>2</b>

- (b) Perceiving a sensation is a six stage process. Complete the table below outlining the **six** stages Greu experienced when viewing the artwork. (11 marks)

Description			Marks
Process	Definition	Application to Greu	
Reception	Sensory receptors detect presence of a stimulus	Eyes detect/receive light from painting	1–2
Transduction	Sensory receptors convert stimulus energy into electrochemical energy	Light from the painting is converted to an electrochemical message/neural impulse	1–3
Transmission	Neural impulses leave sensory organs and travel to the brain	Electrochemical message of light stimulus is sent to the brain	0
Selection	Feature detectors filter the stimuli by responding to specific features of a stimulus and ignoring the rest	Greu's brain chooses which parts of the stimuli to pay attention to (e.g. Greu focuses on the art and not the wall)	1–2
Organisation	Organise the features of sensory stimuli in a meaningful manner	Greu's brain recognises familiar shapes/objects for interpretation – tree, square shape of painting	1–2
Interpretation	Give meaning to sensory stimuli	Brain 'translates' stimuli into an image Greu understands – recognises stimuli as a painting of a tree	1–2
<b>Total</b>			<b>11</b>

- (c) Using your understanding of the role of attention in memory, name and outline the **two** types of attention Colin experiences. (4 marks)

Description	Marks
selective attention	1
selective attention involves focusing on one stimulus and blocking out all other stimuli	1
divided attention	1
divided attention involves focusing on two or more stimuli at the same time	1
<b>Total</b>	<b>4</b>

- (d) Using your understanding of the 'Cocktail party effect' and the example of Colin from part (c), describe what element of this scenario demonstrates the 'Cocktail party effect'. (2 marks)

Description	Marks
Colin did not notice the language change (from English to Farsi) by the couple next to him	1
Colin was focused on his conversation with Mwarga/did not hear what Mwarga was saying when he noticed the other couple's conversation	1
<b>Total</b>	<b>2</b>

- (e) Define convenience sampling and random sampling and state **one** strength **or one** limitation for each type of sampling. (4 marks)

Description	Marks
<b>Definition of convenience sampling</b>	
researcher selects sample based on accessibility/availability	1
<b>Strength/limitation of convenience sampling (any one of)</b>	
Strength <ul style="list-style-type: none"> <li>• accessible/readily available sample</li> <li>• allows immediacy in data collection.</li> <li>• useful when a population has very specific criteria for selection</li> </ul> Limitation <ul style="list-style-type: none"> <li>• sample bias, not representative of a population</li> <li>• low external validity due to bias in sample</li> </ul>	1
<b>Definition of random sampling</b>	
each member of a population has an equal chance of being selected	1
<b>Strength/limitation of random sampling (any one of)</b>	
Strength <ul style="list-style-type: none"> <li>• can minimise bias in sample</li> </ul> Limitation <ul style="list-style-type: none"> <li>• not everyone who is selected will agree to participate which can skew the sample</li> <li>• sampling error – random selection may not represent the population</li> </ul>	1
<b>Total</b>	<b>4</b>
Accept other relevant answers.	

## Question 1 (continued)

- (f) (i) Identify the independent variable for this experiment. (1 mark)

Description	Marks
type of attention (selective or divided)	1
<b>Total</b>	<b>1</b>

- (ii) Propose a directional hypothesis for the teacher's experiment. (4 marks)

Description	Marks
Population – Year 12 students	1
IV – selective or divided attention	1
DV – number of correct responses on the memory recall test	1
Direction – Group 1 (selective attention) will score higher on the test	1
<b>Total</b>	<b>4</b>
Example of a directional hypothesis:  Year 12 students in the selective attention group (Group 1) will score a higher number of correct responses on the memory recall test, compared to students in Group 2 who experienced the divided attention condition.	
Accept other relevant answers.	

- (g) Propose **one** participant related extraneous variable that may affect the results and describe how it could affect the results of the experiment. (3 marks)

Description	Marks
hearing impairment/sound sensitivity	1
if participants have a hearing impairment, it would make it more difficult to focus	1
which would result in lower scores/unreliable data	1
<b>Total</b>	<b>3</b>
Accept other relevant answers. Note: responses must be participant related.	

## Question 2

(20 marks)

- (a) Identify the type of study performed with patient HM and describe this type of research design. (3 marks)

Description	Marks
case study	1
in-depth investigation of a single person (group or event)	1
<b>Total</b>	<b>3</b>

- (b) Complete the table below stating **two** strengths and **two** limitations of the type of research design identified in part (a). (4 marks)

Description	Marks
<b>Strengths (any two of)</b>	
<ul style="list-style-type: none"> <li>allows detailed research to be collected on topics that could be deemed impractical or unethical to experiment on</li> <li>allows for investigation into exceptional or rare situations where large samples of data are unavailable</li> <li>can stimulate new research</li> <li>provides detailed and in-depth information</li> </ul>	1–2
<b>Limitations (any two of)</b>	
<ul style="list-style-type: none"> <li>researcher bias can occur</li> <li>difficult to replicate</li> <li>unable to generalise to a wider population</li> <li>large amounts of data can make it difficult and time consuming to collate</li> <li>can lack scientific rigor</li> </ul>	1–2
<b>Total</b>	<b>4</b>
Accept other relevant answers.	

- (c) Explain the findings from the study of patient HM in regards to the role of the hippocampus in the formation of memories. (3 marks)

Description	Marks
hippocampus forms new memories	1
hippocampus plays a role in forming declarative/explicit memory only	1
hippocampus does not form (or store) procedural memories	1
<b>Total</b>	<b>3</b>

## Question 2 (continued)

- (d) State **three** pieces of information needed in order for informed consent to be given. (3 marks)

Description	Marks
Any three of:	
<ul style="list-style-type: none"> <li>• explain the nature and purpose of the intended research</li> <li>• must use language readily understandable by the participant</li> <li>• explain what participation will involve (procedures/time required/presence of other participants)</li> <li>• informed of their participant rights (e.g. confidentiality, privacy, withdrawal rights, deception, voluntary participation, informed consent)</li> <li>• informed of any possible risks/harm/benefits associated with participation</li> <li>• information about who is organising and funding the research</li> <li>• information about the complaints process</li> </ul>	1–3
<b>Total</b>	<b>3</b>
Accept other relevant answers.	

- (e) Apply the ethical guideline of 'withdrawal rights' to HM and the studies he participated in. (3 marks)

Description	Marks
free to remove himself from any study at any point	1
without repercussion or penalty	1
including removal of data	1
<b>Total</b>	<b>3</b>

- (f) Summarise why damage to Darius's hippocampus will cause issues in his chosen occupation. (4 marks)

Description	Marks
hippocampus contains spatial memories	1
damage can cause inability to remember directions	1
inability to remember familiar locations	1
disorientation	1
<b>Total</b>	<b>4</b>

## Question 3

(26 marks)

- (a) Define the terms 'recall', 'recognition' and 're-learning' in the context of memory. (3 marks)

Description	Marks
recall – accessing information from long-term memory	1
recognition – identifying the correct information from a number of alternatives	1
re-learning – when learning something a second time, it takes less time	1
<b>Total</b>	<b>3</b>

- (b) State **one** similarity between recall, recognition and re-learning in memory. (1 mark)

Description	Marks
all are about retrieving memories from long-term memory to working memory/short-term memory	1
<b>Total</b>	<b>1</b>

- (c) Calculate the median for the serial and free recall groups, record your answers in the table above. (2 marks)

Description	Marks
Serial recall – 4	1
Free recall – 9	1
<b>Total</b>	<b>2</b>

- (d) State why it can be useful to use the median as a measure of central tendency instead of the mean. (1 mark)

Description	Marks
not impacted by outliers	1
<b>Total</b>	<b>1</b>

**Question 3** (continued)

- (e) Construct an appropriate graph using the median scores from the completed table on page 12. (5 marks)

Description	Marks
Column graph	1
Title – appropriate and descriptive	1
Axes – horizontal and vertical axis correctly labelled	1
Scale – must be even	1
Plotting – each groups median correctly plotted	1
<b>Total</b>	<b>5</b>

  

Median number of words correctly recalled in three recall conditions

Group recall type	Median No. of correct words recalled
Serial	4
Free	9
Cued	15

Note: title accepted above or below graph

- (f) Using your psychological knowledge and understanding of recall, propose why the cued recall group median is higher than the serial recall group median in the table on page 12. (3 marks)

Description	Marks
cued recall group are given hints/prompts	1
serial recall have to remember without cues in order of presentation	1
<b>Total</b>	<b>3</b>

- (g) Name and outline the **two** forms of deep processing. (4 marks)

Description	Marks
semantic	1
semantic processing involves encoding the meaning of a word and relating it to similar words with similar meaning	1
elaboration	1
elaboration involves linking new knowledge with existing knowledge/giving new meaning	1
<b>Total</b>	<b>4</b>



- (h) Recall **one** example of a question used in the method for each of the three levels of processing by Craik and Tulving (1975). (3 marks)

Description	Marks
Shallow (structural) – provides an answer that discusses the word's structure. e.g. Was the word capital or lower case?	1
Shallow (phonemic) – provides an answer that discusses the sound of the word. e.g. Does the word rhyme with another word?	1
Deep – provides an answer requiring understanding of the word. e.g. Does the word fit into the following sentence?	1
<b>Total</b>	<b>3</b>
Accept other relevant answers.	

- (i) Describe **two** limitations or criticisms of Craik and Tulving's (1975) study regarding depth of processing. (4 marks)

Description	Marks
Deeper processing is more time consuming (1), the time taken to process information requires more effort which could be the cause of better recall rather than the level of processing (1).	1–2
The concept of depth is ambiguous and covert (1), therefore it is difficult to objectively measure (1).	1–2
<b>Total</b>	<b>4</b>
Accept other relevant answers.	

## Question 4

(17 marks)

- (a) Using the above scenario, identify **two** deficiency needs from Maslow's Hierarchy of Needs (1954), one from before she moved, and one from after she moved, and outline how each effected Jane's motivation. (4 marks)

		Description	Marks
	Need	How it affected Jane's motivation	
<b>Before</b>	Esteem Needs	Any one of: <ul style="list-style-type: none"> <li>Jane is motivated because she had achieved recognition through her art</li> <li>Jane is motivated because she was proud of her accomplishments</li> </ul>	1–2
<b>After</b>	Physiological Needs	Jane became unmotivated because she was unable to eat at times due to forgetting her lunch box.	1–2
<b>Total</b>			<b>4</b>

- (b) With reference to the scenario, suggest why Jane began to engage in dangerous activities such as jumping a fence. (2 marks)

Description	Marks
When a person is failing to meet their physiological needs they may disregard higher-level needs such as safety needs in order to remove the deficiency.	1
Jane is struggling to meet her physiological need for food and so she sacrifices her safety engaging in dangerous activities in order to meet it.	1
<b>Total</b>	<b>2</b>

- (c) Describe what is meant by 'self-actualisation'. (2 marks)

Description	Marks
reaching one's full potential	1
experiencing a state of mind demonstrating an appreciation for life/realisation of ones abilities/with acceptance and understanding	1
<b>Total</b>	<b>2</b>
Accept other relevant answers.	

- (d) List **four** characteristics of a person who has reached self-actualisation according to Maslow (1954). (4 marks)

Description	Marks
Any four of	
<p>For copyright reasons this text cannot be included here, but may be viewed at <a href="https://simplypsychology.org/maslow.html">https://simplypsychology.org/maslow.html</a>, see 'Characteristics of self-actualizers'.</p>	1-4
<b>Total</b>	<b>4</b>
Accept other relevant answers.	

- (e) Demonstrate the position of cognitive needs in the hierarchy by stating the needs directly above and below it on Maslow’s hierarchy. (2 marks)

Description	Marks
above – aesthetic	1
below – esteem needs	1
<b>Total</b>	<b>2</b>

- (f) Summarise **three** characteristics of an individual who has met their cognitive needs. (3 marks)

Description	Marks
demonstrates a need to learn/explore/discover/create	1
experiences a need for predictability and meaning	1
experiences a need to increase their intelligence and chase knowledge	1
<b>Total</b>	<b>3</b>
Accept other relevant answers.	

**Question 5**

**(29 marks)**

- (a) Identify **one** participant variable that was controlled in this study. (1 mark)

Description	Marks
Any one of	
<ul style="list-style-type: none"> <li>• self reported medical conditions (depression/schizophrenia/metabolic disease/cardiovascular disease/chronic or recurrent respiratory conditions/active cancer/neurological disorders)</li> <li>• self-reported sleep disorders (obstructive sleep apnea-hypopnea/restless leg syndrome/rapid eye-movement sleep disorders)</li> <li>• use of medications/devices/hypnotics to assist sleep</li> <li>• excessive caffeine/alcohol use</li> <li>• shift workers/operators of heavy equipment/work requiring long distance driving</li> <li>• pregnancy/lactation/perimenopausal state with irregular menses</li> </ul>	1
<b>Total</b>	<b>1</b>

- (b) (i) State whether the data collection method is qualitative or quantitative and provide reasoning for your answer. (2 marks)

Description	Marks
quantitative	1
can be statistically analysed	1
<b>Total</b>	<b>2</b>

- (ii) Outline the difference between subjective and objective data, and state what type of data the PANAS collects. (3 marks)

Description	Marks
objective data is measured directly/based on unbiased measurement	1
subjective data is based on an individual's perception/opinion	1
PANAS is subjective	1
<b>Total</b>	<b>3</b>

- (iii) State **one** limitation of using a scale such as the PANAS. (1 mark)

Description	Marks
open to bias	1
<b>Total</b>	<b>1</b>
Accept other relevant answers.	

- (c) (i) State what NREM stands for in the sleep cycle. (1 mark)

Description	Marks
non-rapid eye movement	1
<b>Total</b>	<b>1</b>

- (ii) Complete the table below identifying **four** stages of sleep and their characteristics. (8 marks)

Description				Marks
Sleep	Heart Rate	Sleep state	Muscle Tension	
NREM 1	normal	dozing off	relaxing of muscles, may twitch	1–2
NREM 2	slowed	light sleep	relaxed	1
NREM 3	slowest	deep sleep	very relaxed, hard to wake	1
REM	faster, close to wake	light sleep	voluntary muscles inhibited, body immobile	1–4
<b>Total</b>				<b>8</b>
Accept other relevant answers.				

- (d) List **two** psychological and **two** physiological effects both girls may have been experienced from partial sleep deprivation. (4 marks)

Description		Marks
Psychological effect	Physiological effect	
<ul style="list-style-type: none"> <li>mood</li> <li>attention</li> </ul>	<ul style="list-style-type: none"> <li>reflex speed</li> <li>vision</li> </ul>	1–4
<b>Total</b>		<b>4</b>
Accept other relevant answers.		

- (e) State **three** possible impacts on Habiba if she does not change her sleep behaviour and develops chronic sleep deprivation. (3 marks)

Description	Marks
Any three of	
<ul style="list-style-type: none"> <li>increased risk of heart disease</li> <li>obesity</li> <li>insomnia</li> <li>increased anxiety</li> </ul>	1–3
<b>Total</b>	<b>3</b>
Accept other relevant answers.	

- (f) Describe **three** techniques Jillian could utilise to improve her sleep hygiene. (6 marks)

Description	Marks
consistent sleep patterns – ensuring she goes to bed at a similar time each evening and wakes at a similar time	1–2
management of electronic devices – puts her electronic devices down and in another room at least 30 minutes prior to bed giving time for melatonin levels to rise	1–2
creation of a healthy sleep environment – has a dedicated sleep space that is clean, comfortable and free from distractions, technology	1–2
<b>Total</b>	<b>6</b>
Accept other relevant answers.	

## Section Two: Extended answer

30% (56 Marks)

## Part A

10% (23 marks)

## Question 6

(23 marks)

Write an extended answer that demonstrates Science inquiry and Psychological knowledge and understanding related to applications of psychology to health.

In your answer you must:

- define stress as identified by Selye (1936) and identify **two** types of stressors that police officers experience in their work (4 marks)
- refer to the General Adaptation Syndrome model (Selye, 1936,1983) to list and describe the **three** stages of stress a police officer may experience during a situation where physical harm is likely to occur (9 marks)
- the university's Internal Review Board is an example of an ethics committee. Describe the role of an ethics committee and outline **two** ethical guidelines that this committee would monitor during the study, stating how this would occur (6 marks)
- based on the data illustrated in Figure 1 on page 24, comment on the relationship between stress and depressive symptoms. (4 marks)

Description	Marks
Define stress as defined by Selye (1936) and identify two stressors that police officers experience in their work.	
Definition – non-specific response of the body (1) to any demand for change (1)	1–2
Police officers reported experiencing psychological (1) and social (1) stressors.	1–2
<b>Subtotal</b>	<b>4</b>
Refer to the General Adaptation Syndrome model (Selye, 1936,1983) to list and describe the three stages of stress a police officer may experience during a situation where physical harm is likely to occur.	
Alarm	1
The sympathetic branch of the autonomic nervous system is activated to (1) prepare for a fight or flight (or freeze) response (1).	1–2
Resistance	1
The body tries to adapt to the new situation/stress (1) as the parasympathetic nervous system returns the body to its normal state/homeostasis (1).	1–2
Exhaustion	1
After a prolonged period of stress the body has depleted its energy resources (1) and a person's body is no longer equipped to fight stress (1).	1–2
<b>Subtotal</b>	<b>9</b>

Describe the role of an ethics committee and outline two ethical guidelines that this committee would monitor during the study, stating how this would occur.	
Ethics committees evaluate proposed research to ensure that it is ethical	1
Ethics committees monitor the conduct of research	1
Any two of (2 x 2 marks)	
<ul style="list-style-type: none"> <li>• protection from harm (physical and psychological (1) police participants must not be harmed in any way (psychological/social) in the conduct of the study (1)</li> <li>• informed consent (1) must provide information about the aim, nature/procedure and risks associated with participation in the study (1)</li> <li>• withdrawal rights (1) officers must have the right to withdraw without negative consequence at any time during the study (1)</li> <li>• confidentiality (1) officers must have their personal information/data protected from publication (in any form)/kept in a secure location only accessible to researchers (1)</li> <li>• privacy (1) the researchers must only gather data that is relevant to this study (1)</li> <li>• voluntary participation (1) officers must agree to participate of their own free will (1)</li> </ul>	1-4
Note: no evidence of deception in the scenario – do not accept deception/debrief.	
<b>Subtotal</b>	<b>6</b>
Based on the data illustrated in Figure 1 on page 24, comment on the relationship between stress and depressive symptoms.	
there is a positive correlation	1
between the level of stress and depression (must identify both variables)	1
officers with a higher score on the Total Stress Index are more likely to score high on the CES-D score/officers with higher levels of stress, are more likely to score high on a depression scale	1
high stress level is associated with depression but stress does not cause depression	1
<b>Subtotal</b>	<b>4</b>
<b>Total</b>	<b>23</b>
Accept other relevant answers.	

## Part B

20% (33 marks)

## Question 7

(33 marks)

Write an extended answer that demonstrates Science inquiry and Psychological knowledge and understanding in relation to the scenario above.

In your answer you must:

- discuss how the children will remember the dance sequence by applying Atkinson and Shiffrin's (1968) model for explaining memory (12 marks)
- state why interference occurs and explain how it may have contributed to the children forgetting the steps (4 marks)
- outline decay theory and state how decay could explain why the children forgot the steps (2 marks)
- identify the aim of Ms Kelly's research and develop a research question that would apply to her aim (2 marks)
- comment on how demand characteristics may have influenced the children's response to whether the clapping strategy improved their memory (5 marks)
- referring to the generalisability of the sample to the population, evaluate whether Ms Kelly should advise all dance teachers to use her strategy (5 marks)
- use of appropriate psychological terminology. (3 marks)

Description	Marks
Discuss how the children will remember the dance sequence by applying Atkinson and Shiffrin's (1968) model for explaining memory.	
sensory register (1) – information received from the senses (1) is paid attention to (1)	1–3
short term memory (1) retains 4 to 7 pieces of information (1) for 0 to 30 seconds (1)	1–3
rehearsal used to transfer information to long-term memory(1) which has unlimited capacity (1) and stores information indefinitely (1)	1–3
children pay attention to the sound of Ms Kelly's voice/clapping/sight of her teaching the steps (1) rehearse the steps/each step (1) which is stored for future retrieval (1)	1–3
<b>Subtotal</b>	<b>12</b>
State why interference occurs and explain how it may have contributed to the children forgetting the steps.	
interference occurs when other competing or similar information stored in memory affects the ability to retrieve information	1
proactive interference (1) – previously learned information could interfere with the retrieval of the new steps (1)	1–2
the children have learned previous dances with Ms Kelly that could interfere with their recall of the new steps	1
<b>Subtotal</b>	<b>4</b>
Outline decay theory and state how decay could explain why the children forgot the steps.	
decay theory proposes that memory fades with the passage of time	1
the children forget the dance steps as time passed	1
<b>Subtotal</b>	<b>2</b>
Identify the aim of Ms Kelly's research and develop a research question that would apply to her aim.	
aim is to find out if clapping strategy improves children's memory of a dance sequence	1
does the inclusion of a clapping strategy improve students memory of a dance sequence?	1
<b>Subtotal</b>	<b>2</b>
Note: question must relate directly to aim and is not a hypothesis.	



Comment on how demand characteristics may have influenced the children's response to whether the clapping strategy improved their memory.	
demand characteristics occur when participants alter their behaviour in response to their perception of the experimenter's expectations/desires	1-2
the children could predict that Ms Kelly wants the clapping strategy to improve their memory	1
they could concentrate more fully than they would normally (accept any relevant example)	1
that could lead to bias in the results of her study	1
<b>Subtotal</b>	<b>5</b>
Referring to the generalisability of the sample to the population, evaluate whether Ms Kelly should advise all dance teachers to use her strategy.	
the population of this study is Ms Kelly's dance students	1
she has three classes and uses them all	1
therefore, she can generalise her results to her students	1
she cannot use the results from her sample to advise other teachers	1
because the population of students in other dance schools is likely to be different	1
<b>Subtotal</b>	<b>5</b>
Use of appropriate psychological terminology.	
Accurately uses a variety of appropriate psychological terminology relevant to theories, studies, models and concepts fluently and in a clear and logical way.	3
Accurately uses some appropriate psychological terminology relevant to theories, studies, models and concepts in a clear and logical way.	2
Uses everyday language with limited relevance to theories, studies, models and concepts.	1
<b>Subtotal</b>	<b>3</b>
<b>Total</b>	<b>33</b>
Note: The use of appropriate well-labelled diagrams/drawings are acceptable, but must be accompanied with an explanation.	

## Question 8

(33 marks)

Write an extended answer that demonstrates Science inquiry and Psychological knowledge and understanding in relation to the scenario above.

In your answer you must:

- define the process observational learning and describe **two** key processes necessary for observational learning to occur (5 marks)
- state the hypothesis for the 'Bobo doll' study conducted by Bandura, Ross and Ross (1961) and describe **two** key findings from this research (6 marks)
- compare the number of imitative behaviours in Mr Harrold's study for males observing a male role model to males observing a female role model (3 marks)
- outline the role of positive and negative reinforcers in operant conditioning (4 marks)
- propose how vicarious reinforcement could be used to increase the incidence of helping behaviours for all students (3 marks)
- state what a token economy is and evaluate the application of this method from the Principal by referring to **one** advantage and **one** disadvantage of its use (5 marks)
- describe how a token economy could be applied by the Principal to improve kind behaviour (4 marks)
- use of appropriate psychological terminology. (3 marks)

Description	Marks
Define the process of observational learning and describe two key processes necessary for observational learning to occur.	
observational learning is learning by watching/observing others and choosing whether to imitate them	1
Any two of (2 x 2 marks)	
<ul style="list-style-type: none"> <li>• attention (1) – observers must pay attention to the task/skill for learning to occur (1)</li> <li>• retention (1) – observers must have the capacity (education/maturity etc.) to retain the information received (1)</li> <li>• reproduction (1) – observers must have the skills/capacity to reproduce the behaviour (1)</li> <li>• motivation (1) – observers must have a reason to learn what is being observed (1)</li> <li>• reinforcement (1) – if a learner observes the model being rewarded they are more likely to imitate the behaviour (1)</li> </ul>	1–4
<b>Subtotal</b>	<b>5</b>
State the hypothesis for the 'Bobo doll' study conducted by Bandura, Ross and Ross (1961) and describe two key findings from this research.	
Bandura, Ross and Ross (1961) hypothesised that the observation of aggression in others (1) would increase the likelihood of aggression in the observer (1)	1–2
Any two of (2 x 2 marks)	
<ul style="list-style-type: none"> <li>• children who observed the aggressive model were more likely to imitate (1) the aggressive behaviour than children who observed the non-aggressive model (1)</li> <li>• boys were more likely (1) to imitate same-sex models than girls (1)</li> <li>• boys imitated more (1) physically aggressive acts than girls (1)</li> <li>• there was little difference (1) between the level of verbal aggression between boys and girls (1)</li> <li>• girls exposed to the aggressive model were more likely to imitate physical aggressive responses if the model was male (1)</li> <li>• girls exposed to the aggressive model were more likely to imitate verbal aggressive responses (1) if the model was female (1)</li> </ul>	1–4
<b>Subtotal</b>	<b>6</b>

Compare the number of imitative behaviours in Mr Harrold’s study for males observing a male role model to males observing a female role model.	
males who observe a male role model imitated the helping behaviours 24 times	1
males who observe a female role model imitated the helping behaviours 6 times	1
there was a difference of 18 between the male and female role models	1
<b>Subtotal</b>	<b>3</b>
Outline the role of positive and negative reinforcers in operant conditioning.	
positive reinforcement involves the strengthening of a response (1) due to the addition of a consequence the child deems as favourable (1)	1–2
negative reinforcement involves the strengthening of a response (1) due to the removal of an adverse consequence (1)	1–2
<b>Subtotal</b>	<b>4</b>
Propose how vicarious reinforcement could be used to increase the incidence helping behaviours for all students.	
vicarious reinforcement involves learning through observing the consequences of the behaviour of the people	1
students who witness the adult role model being rewarded for engaging in helping behaviours by the Principal/school leaders	1
are more likely to model the behaviour due to the positive consequence of the reward	1
<b>Subtotal</b>	<b>3</b>
State what a token economy is and evaluate the application of this method from the Principal by referring to one advantage and one disadvantage of its use.	
token economies are a (effective) method for behaviour modification	1
Advantages: any one of (1 x 2 marks) <ul style="list-style-type: none"> <li>• tokens are given immediately (1) so desired behaviour is rewarded as soon as it is exhibited (1)</li> <li>• system of reward can be adapted (1) to suit the ability/age/needs of the target group (1)</li> <li>• once the token economy system is established (1), it can be adapted/flexible (1)</li> </ul>	1–2
Disadvantages: any one of (1 x 2 marks) <ul style="list-style-type: none"> <li>• tokens must be desirable (1) and not all children in the school will have the same desires (1)</li> <li>• if a child believes the tokens are too hard to earn (1), they will lose motivation (1)</li> <li>• if other rewards are available (1), children may not be interested in the effort required for the additional reward (1)</li> <li>• keeping track of tokens and rewards (1) can be time consuming for the principal/teachers (1)</li> </ul>	1–2
<b>Subtotal</b>	<b>5</b>
Describe how a token economy could be applied by the Principal to improve kind behaviour.	
token economy uses operant conditioning/positive reinforcement to strengthen desired behaviour	1
the principal would reinforce/strengthen kind behaviour that was observable and measurable	1
tokens are tangible symbols given immediately to the individual when they exhibit the desired behaviour	1
tokens are exchanged for secondary reinforcers/rewards (such as games, toys etc.)	1
<b>Subtotal</b>	<b>4</b>
Use of appropriate psychological terminology.	
Accurately uses a variety of appropriate psychological terminology relevant to theories, studies, models and concepts fluently and in a clear and logical way.	3
Accurately uses some appropriate psychological terminology relevant to theories, studies, models and concepts in a clear and logical way.	2
Uses everyday language with limited relevance to theories, studies, models and concepts.	1
<b>Subtotal</b>	<b>3</b>
<b>Total</b>	<b>33</b>
Note: The use of appropriate well-labelled diagrams/drawings are acceptable, but must be accompanied with an explanation.	

## ACKNOWLEDGEMENTS

- Question 3(h)** Information from: Craik, F. I. M., & Tulving, E. (1975). Depth of Processing and the Retention of Words in Episodic Memory. *Journal of Experimental Psychology: General*, 104(3), pp. 268–294. Retrieved March, 2023, [https://www.researchgate.net/publication/232487566\\_Depth\\_of\\_Processing\\_and\\_the\\_Retention\\_of\\_Words\\_in\\_Episodic\\_Memory](https://www.researchgate.net/publication/232487566_Depth_of_Processing_and_the_Retention_of_Words_in_Episodic_Memory)
- Question 3(i)** First point information from: Psychologist World. (n.d.). *Craik & Tulving (1975) Levels of Processing*. Retrieved March, 2023, from <https://www.psychologistworld.com/memory/levels-processing>
- Question 5(a)** Adapted from: He, J., Tu, Z., Xiao, L., et al. (2020, February). Effect of Restricting Bedtime Mobile Phone use on Sleep, Arousal, Mood, and Working Memory: A Randomized Pilot Trial. *PLoS One*, 15(2). Retrieved February, 2023, from <https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0228756>  
Used under Creative Commons Attribution 4.0 International licence.
- Question 6** Text under “Based on the data...” information from: Allison, P., Mnatsakanova, A., McCanlies, E., et al. (2019, November). Police Stress and Depressive Symptoms: Role of Coping and Hardiness. *Policing*, 43(2), pp. 247–261. Retrieved February, 2023, from <https://pubmed.ncbi.nlm.nih.gov/32714068/>
- Question 8** Text under “State the hypothesis...” information from: Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of Aggression Through Imitation of Aggressive Models. *Journal of Abnormal and Social Psychology*, 63(3), 575–582. Retrieved February, 2023, from <https://psychclassics.yorku.ca/Bandura/bobo.htm>

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