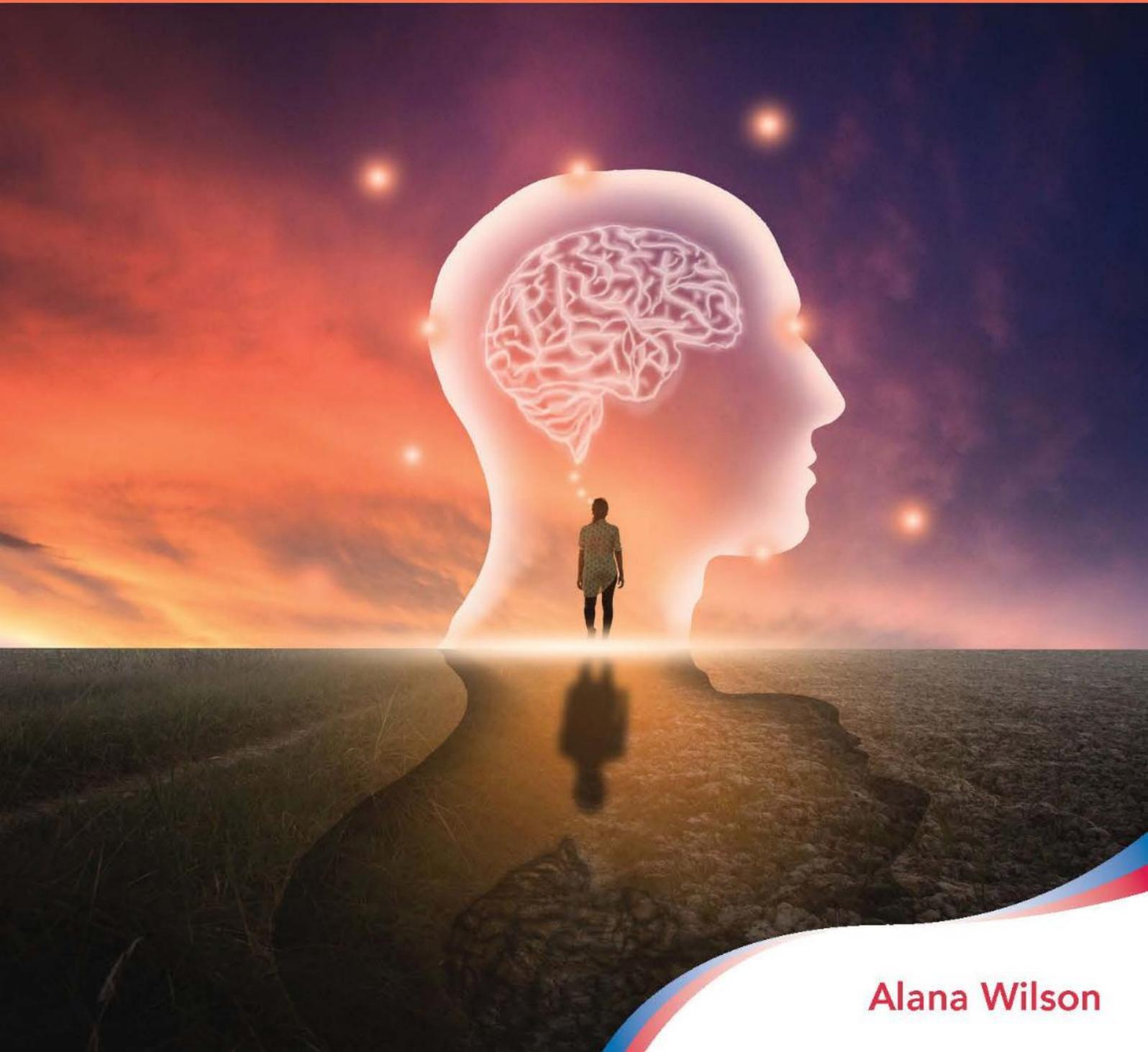


PSYCHOLOGY

YEAR 12 ATAR COURSE – UNITS 3 & 4

THIRD EDITION



Alana Wilson



WACE STUDY GUIDE

PSYCHOLOGY

YEAR 12 ATAR COURSE

Alana Wilson



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About the Author

Alana has been at the forefront of teaching Psychology in WA schools. Her passions for the subject has seen her develop and implement the syllabus at various schools. Alana is currently a lead teacher and actively involved in the education sector.

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TO THE STUDENT

WELCOME TO YEAR 12 PSYCHOLOGY

The purpose of this study guide is to assist you with your preparation for exams and tests. It consists of review questions and answers on the five topics: Science Inquiry, memory, learning, motivation and wellbeing, application of psychology to health. It also includes Trial Tests and Essays with detailed answers.

This study guide has been written in sections, in accordance with the syllabus. Each section relates to the topics Science Inquiry, memory, learning, motivation and wellbeing, application of psychology to health.

Review Questions and Answers

The review questions are split into Science Inquiry and Unit 3 Memory and Learning and Unit 4 motivation and wellbeing and application of psychology to health. These will provide you with all the required knowledge to assist you with the trial tests. They begin with a syllabus checklist and psychological terminology, which will help you answer exam questions more thoroughly. They are followed by numerous study questions related to the syllabus.

Trial Tests and Essays

This section follows the format of your final exam:

Section One: 70% Short answer questions from Unit 3 and 4 content including both psychological knowledge and understanding and science inquiry.

Section Two: 30% Extended answer, which require structured answers.

Every question has its own detailed answer, sometimes with more information than is required in an examination. It is imperative you are familiar with the terminology used in the syllabus and are able to apply your knowledge in your answers.

This study guide is designed to cover all areas of the syllabus. You can work through it at your own pace and in any order. Psychology is an interesting subject that examines how we think, feel and behave.

I wish you all the best with your studies.

Good luck!

Alana Wilson



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PSYCHOLOGY

UNIT 1





Syllabus Checkpoint

On completion of this chapter you should be able to understand:

Ethical guidelines and practices for psychological research

- the role of ethics/ethical guidelines in psychological research
 - the role of ethics committee approval and monitoring of conduct for all psychological research
- understand and apply ethical guidelines and practices related to human participants
 - protection from harm (physical and psychological)
 - informed consent
 - withdrawal rights
 - deception
 - confidentiality
 - privacy
 - voluntary participation
 - debriefing
- use of animals in research
 - replacement, reduction, refinement

Formulating research

- identify the aim/s of the research
- develop a research question based on the aim/s
- identify variables (independent, dependent, control, extraneous)
- construct/formulate a hypothesis or inquiry question
 - directional and non-directional hypothesis (quantitative)
 - inquiry questions (qualitative)

Methodology

- types of research designs – application, method, strength and limitations
 - experimental (control and experimental group) and non-experimental
 - observational
 - case study
 - correlational
 - longitudinal
 - cross-sectional
- selection of participants
 - identification of sample and population
 - methods to sample participants – application, method, strength and limitations
 - o convenience sampling
 - o snowballing
 - o random sampling
 - o stratified sampling
- allocation of participants – application, method, strength and limitations
 - random allocation
- variables
 - independent
 - dependent
 - control
 - extraneous – participant, environment, researcher
 - confounding
- sources and effects of extraneous variables and confounding variables
 - experimenter effect
 - demand characteristics
- minimise the effects of extraneous and confounding variables
 - random allocation of participants
 - single-blind procedures
 - standardisation of procedures and instructions

Data collection

- types of data
 - qualitative data
 - quantitative data
- methods of data collection – application, strength and limitations
 - qualitative
 - o interviews – focus group and individual; structured, semi-structured
 - o open-ended survey
 - quantitative
 - o objective physiological measures – heart rate, breathing rate, galvanic skin response (GSR)
 - o subjective measures – checklists and rating scales, such as Likert scales
 - mixed methods – data collection may be a combination of qualitative and quantitative data
- differences between subjective and objective data

Processing and analysing data

- construct and interpret data displays
 - graphs – scatterplot, bar, column, line, histogram
 - tables – summary, frequency
- calculate and interpret the mean and median as measures of central tendency
- interpret Pearson's correlation coefficient as a measure of strength and direction of linear relationships

Drawing conclusions

- evidence-based conclusions consistent with psychological evidence and relevance to the research question

Evaluation of research

- application and use of the concept of validity as a measure of evaluating research
- application and use of the concept of reliability as a measure of evaluating research
- generalisability of sample to the population
- suggest relevant improvements to address limitations of research
- ethical implications
- critical evaluation of information from a range of scientific sources

Communicating

- use appropriate psychological terminology
- acknowledge sources of information using appropriate referencing

Terminology



These are some of the terms from this section which you should know. Write the meaning of each term in the space provided.

(i) controlled variable

(ii) correlation

(iii) dependent variable

(iv) experimental

(v) hypothesis

(vi) independent variable

(vii) mean

(viii) median

(ix) non-experimental

(x) non-scientific

(xi) placebo

(xii) population

(xiii) privacy

(xiv) reliability

(xv) sample

(xvi) scientific

(xvii) validity

1.1 ETHICAL GUIDELINES AND PRACTICES FOR PSYCHOLOGICAL RESEARCH

Protection from Harm – physical and psychological

Researchers need to ensure they prevent any harm done to participants both physically and psychologically.

Use of animals in research

Replacement: Researchers must ensure they have exhausted all possibilities to undergo their experiment without laboratory animals. If they cannot they need to justify their research and need for use of animals.

Reduction: Researchers must try and reduce the number of animals used in the experiment and only use the absolute minimum of animals that is necessary to gain results.

Refinement: Researchers must ensure they minimise harm and any suffering of the animal, they must minimise the risk and ensure animal welfare is the utmost importance.

Ethics are moral principles that all psychologists must comply with. A Code of Ethics was developed by the Australian Psychological Society to assist psychologists with their research.

Ethical Considerations include:

Informed Consent

Psychologists are to fully inform participants of the events they are participating in. This includes informing them of any risks that may be involved, how information will be collected and distributed. The psychologist must obtain written consent from each participant before the research begins. If the participant is under the age of 18, psychologists must obtain written consent from a parent or guardian.

Confidentiality

Psychologists must ensure the privacy of the participant's by protecting the information collected throughout the experiment. This includes access, collection and disposal of all information. The psychologist must notify the participant of all parties that will have access to the information and gain written consent for this.

Voluntary Participation

All participants must be willing to partake in the experiment without consequences or threats influencing their decision.

Withdrawal Rights

All participants must have the right to withdrawal from the experiment at any time. A participant must be able to withdrawal without consequences and at any time that they feel uncomfortable throughout the experiment.

Deception in Research

Psychologists should not use deception in research unless prior knowledge of the experiment will affect the participant's behaviours towards the event. For example, when participants are not aware of the true reason for the experiment as it could alter the results. Milgram conducted an obedience study and led his participants to believe the learners were receiving electric shocks. The true reason for the experiment is then given to the participants (debrief) at the end of the experiment.

Privacy

The participant's information will not be shared without the participant's permission.

Professional conduct

Psychologists need to follow the code of ethics.



Review Questions

1. A school principal wanted to conduct an experiment on his primary school students. Explain how he would collect informed consent.

2. Identify 3 ways informed consent needs to be conducted.

3. If a university professor wanted to use animals for his research, explain the ethical processes he needs to ensure he has met before it being approved.

4. Explain how deception is used in research.

5. Explain how confidentiality is used in research.

1.2 FORMULATING RESEARCH

The **Aim** is the purpose of what you are investigating.

The **Independent variable** is the factor that is being changed or manipulated by the researcher. The **Dependent variable** is the variable that is dependent on the independent variable or the variable that is being measured (as the result or outcome).

Control variables: variables that are kept the same across the experiment

Extraneous variables: factors that affect the dependent variable can include participant (emotions and personality), environment (what is going around the experiment (temperature etc), researcher (researcher influences the experiment and participants behaviours)

Confounding variables: third variable that effects both independent and dependent variable.

An **hypothesis** is a testable statement that explains the relationship between both the independent and dependent variable. The hypothesis is not a question. It should be a prediction of the effect the independent variable has on the dependent variable (for example increase or decrease).

You should be able to recognise the independent and dependent variable from a experimental statement and pose a hypothesis.

Quantitative hypothesis directional and non-directional

A **directional hypothesis** gives a prediction of which way results will go. For example It is hypothesised that students who meditate will have higher semester one exam results than those students that do not meditate.

A **non-directional hypothesis** states that there will be a difference between the results. For example It is hypothesised that there will be a difference in the memory score for those participants that drank caffeine and for those participants who did not drink caffeine

Qualitative inquiry questions

Qualitative inquiry questions are usually vague and look at exploring relationships. For example: What is the relationship between cigarette intake and mental wellbeing.

A researcher will usually use a sample, a small group of people studied which is a sub set of a larger group/population.

Sources and effects of extraneous variables and confounding variables EXPERIMENTAL EFFECT

Participants are affected by the actions of experiment. This can occur by:

- Treating the control and experimental group differently
- Knowing which group is being treated and which group is getting the placebo.

Demand characteristics

Giving clues to the participants to gain the desired results for the experiment, for example telling the participants how to act or giving them clues to what the experiment is about.

Minimise the effects of extraneous and confounding variables:

Random allocation of participants: participants have an equal chance of either being in the control or experimental groups, this can be achieved by drawing names out of a hat.

Single-blind procedures: The participant is unaware of what group they are in, either the experimental or control group.

Standardisation of procedures and instructions: Experimental procedures and instructions can be put into place to ensure that both experimental and control group conditions are the same (for example temperature of room).

Review Questions

1. A principal conducted an experiment to see if Monday morning classes were better for students than Friday afternoon classes. She asked the Mathematics teacher to teach the same content for both Monday and Friday classes and give a small quiz after each class to measure the retention of content.

- a) Identify the aim of the above experiment.

- b) Identify the following:

- i. Independent variable

- ii. Dependent variable

iii. 2 controlled variables

iv. 1 extraneous variable

c) Write a suitable hypothesis for the above study.

2. A teacher wanted to know if meditation would improve her Year 12 Psychology students' exam results. With one of her classes she started each lesson with 10 minutes of meditation. Her second class did not have meditation. The semester one-exam results were collected and the two classes were compared.

a) Identify the aim of the above experiment.

b) Identify the following:

i. Independent variable

ii. Dependent variable

iii. 2 controlled variables

iv. 1 extraneous variable

c) Write a suitable hypothesis for the above study.

d) Identify the control and experimental group.

3. One hundred 20–25 year old women were given a test to measure their personality. They were put in to two groups: extraverts and introverts. The examiner then measured each woman's IQ score.

a) Identify the aim of the above experiment.

b) Identify the following:

i. Independent variable

ii. Dependent variable

iii. 2 controlled variables

iv. 1 extraneous variable

c) Write a suitable hypothesis for the above study.

4. A Year 9 Geography teacher investigated which learning style would be best for teaching the capital cities. Class one was given the capital cities on a map (using a visual strategy) and Class two were given an auditory lesson on the capital cities. The classes were then given a test and the scores were compared.

a) Identify the aim of the above experiment.

b) Identify the following:

i. Independent variable

ii. Dependent variable

iii. 2 controlled variables

iv. 1 extraneous variable

c) Write a suitable hypothesis for the above study.

5. A scientist conducted an experiment on forty 50 year old males. He split the groups in half and asked group one to consume one cup of coffee and group two to consume one cup of decaffeinated coffee. He then asked each participant to sit a driving stimulus test. He compared the results of the driving test and found those that consumed coffee, achieved lower scores.

a) Identify the aim of the above experiment.

b) Identify the following:

i. Independent variable

ii. Dependent variable

iii. 2 controlled variable

iv. 1 extraneous variables

c) Write a suitable hypothesis for the above study.

d) Identify the control and experimental group.

6. The scientist decided to see if caffeine had an affect on a person’s wellbeing by asking questions about how they felt after consuming the coffee.

a) Identify the type of hypothesis the scientist would use in the above scenario.

b) Write a suitable hypothesis for the above scenario.

1.3 METHODOLOGY

Types of research designs.

Review Questions

- Complete the table below:

TYPE OF RESEARCH DESIGN	METHOD	STRENGTH	LIMITATION
Experimental			
Non-experimental			
Operational			
Case study			
Correlation			
Longitudinal			
Cross-sectional			

2. Complete the table below:

SELECTION OF PARTICIPANTS	METHOD	STRENGTH	LIMITATION
Convenience Sampling			
Snowballing			
Random Sampling			
Stratified Sampling			

3. A school principal conducted a study at his school he wanted to know what the students thought of the new canteen menu. He selected 20 students from each year group Year 7 through to Year 12 and asked them to fill in a questionnaire asking them multiple questions about how they were enjoying the new menu. He took the sample from the first 20 students who arrived through the school gates.

a) Identify the type of research design the school principal used. Justify your answer.

b) Identify the type of selection the principal used to choose his participants. Justify your answers.

1.4 DATA COLLECTION

Data can be collected in various ways. Qualitative methods are used for descriptive data, and are presented in non-numerical forms. Quantitative data is numerical data and can be displayed in forms such as tables and graphs. Quantitative data can either be objective (physiological measures) or subjective (measured by rating scales or checklists).

Review Questions

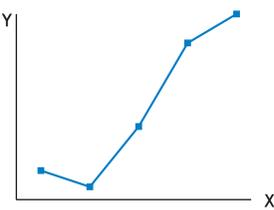
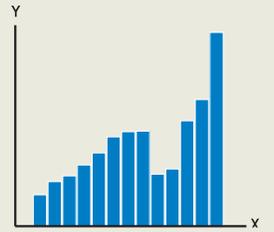
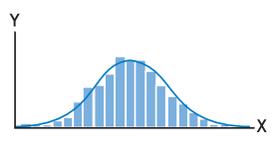
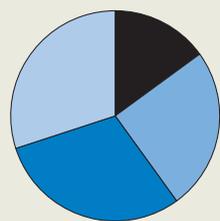
1. Complete the table below:

TYPE OF DATA COLLECTION	DESCRIPTION	STRENGTH	LIMITATION	EXAMPLE
Qualitative				
Subjective Quantitative				
Objective Quantitative				

2. A school principal conducted a study at his school he wanted to know what the students thought of the new canteen menu. He selected 20 students from each year group Year 7 through to Year 12 and asked them to fill in a questionnaire asking them multiple questions about how they were enjoying the new menu. He took the sample from the first 20 students who arrived through the school gates.
- a) Identify the type of data collection the principal used. Justify your answer.

b) Explain a different type of data collection the principal could have used and why this type could have improved his study.

1.5 PROCESSING AND ANALYSING DATA

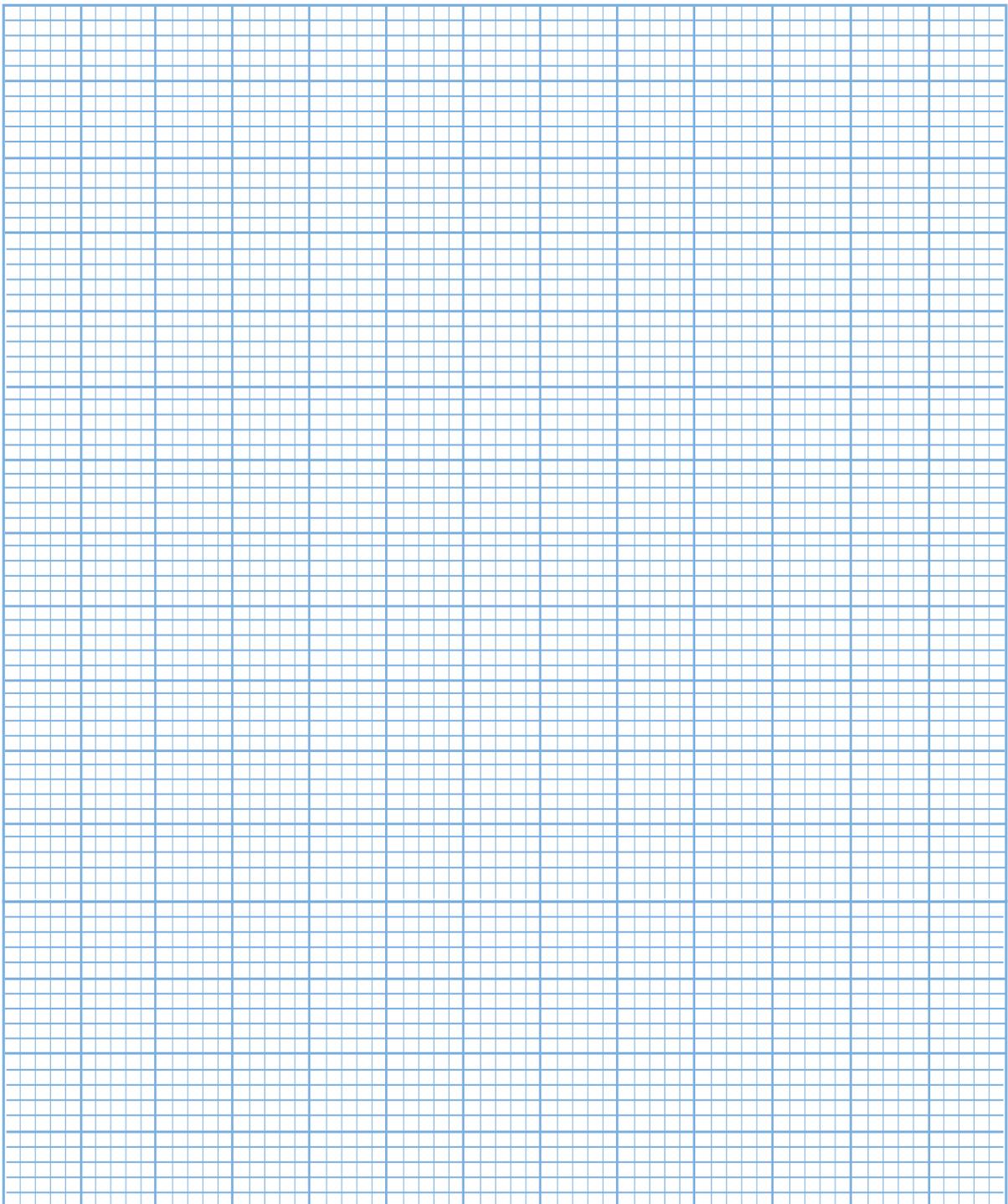
TYPE OF GRAPH	DIAGRAM	WHAT IS IT USED FOR?
Line Graph		Continuous data
Bar Graph		Non continuous data
Frequency Polygon		To show information about frequency of data
Pie Chart		To show proportions of data

Review Questions

1. Draw the following table in a suitable scatter graph.

HOURS SLEPT	MOOD RATING SCORE /20
6	9
8	12
9	12
9	13
12	15
13	17
14	19

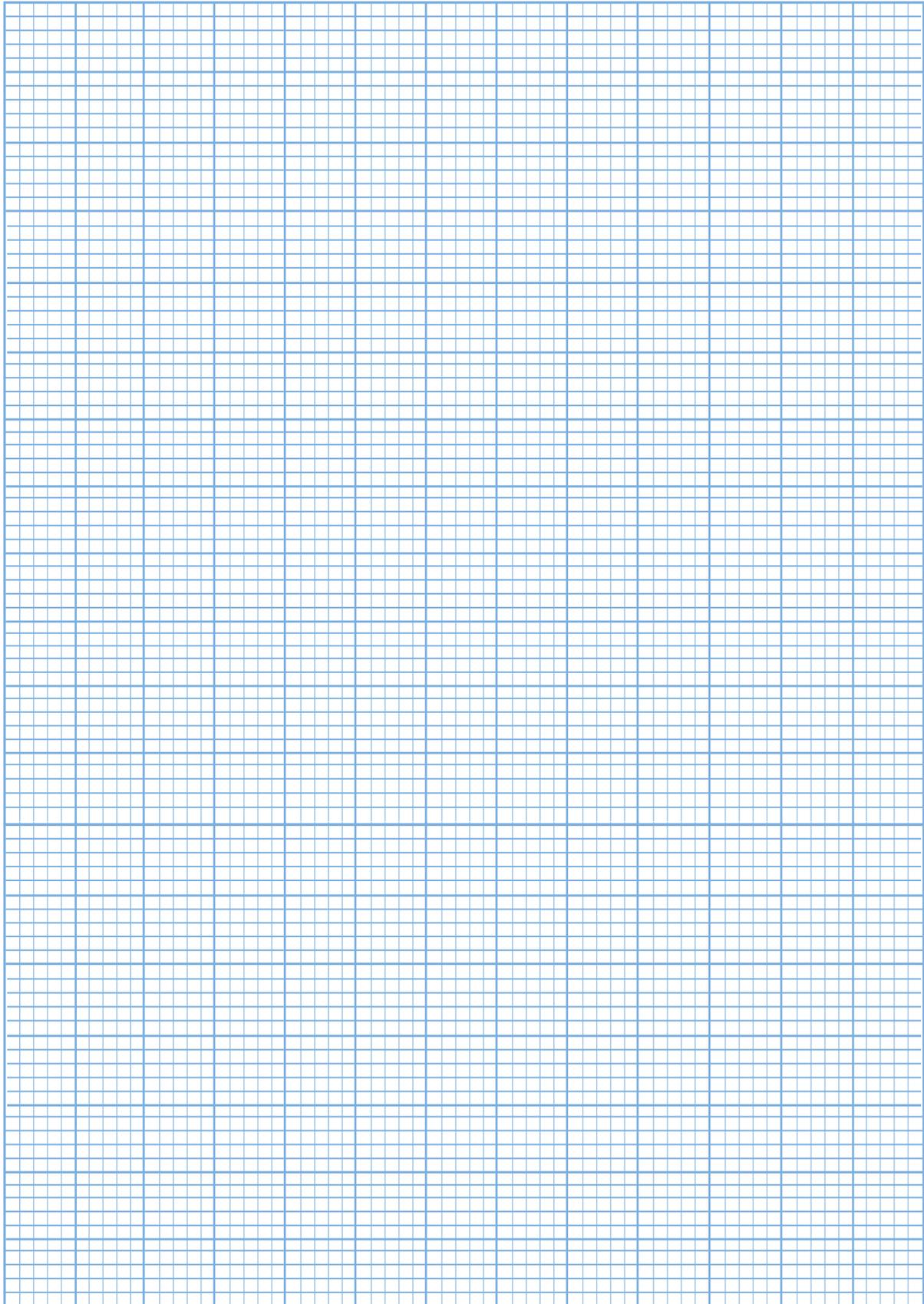
Figure 1: Relationship between Hours slept and Mood rating



2. Draw the following table on a suitable graph.

COLOURED PAPER	AVERAGE EXAM RESULT (%)
White	58
Green	66
Yellow	75

Figure 2: Coloured paper effect on exam scores.



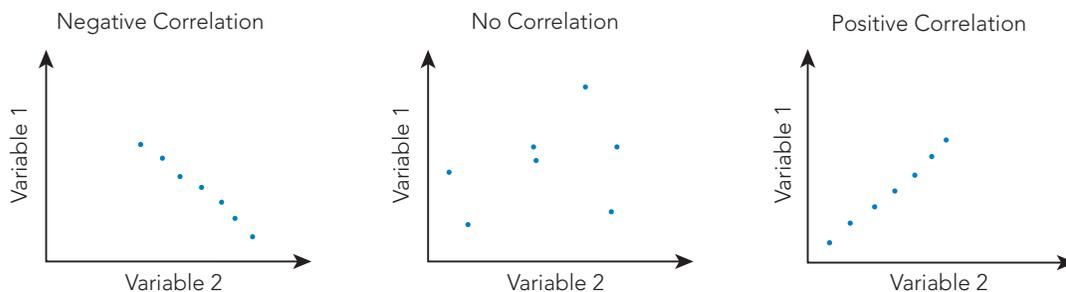
1.6 PROCESSING AND ANALYSING DATA CONTINUED

Correlation

Correlation is the strength of relationship between two different variables. Correlation is represented in graph format called a scatter graph (sometimes also referred to as a scattergram).

Correlation can range from -1 to +1. Correlations can be described according to their strength and direction (most correlations are not perfect, so they range in strength). For example, there is a strong positive relationship between the amount of sugar in a person's diet and their risk of diabetes. Correlation does not imply cause.

The following graphs show different correlational directions:



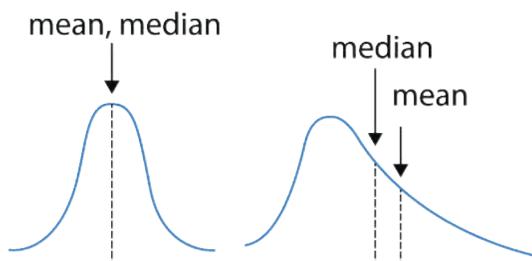
Measures of central tendency

Descriptive statistics are used for organising, describing and representing numerical data.

Examples of these methods are:

Mean: average score found by the sum of a set of numbers divided by the number of scores in the set.

Median: middle number when scores are arranged in numerical order.



Examples of these methods are:

Mean: average score

Median: middle number

Example:

IQ	FREQUENCY
100	3
104	4
106	5
96	4
98	3
Total	19

Table 2: Frequency of IQ value in Year 12 students.

From the scores in Table 2 we can see the most frequent IQ is 106 and this occurs 9 times. Therefore the mode is 106.

Mean is the average scores so we need to add all of the scores up and divide it by the total number of subjects/trials (19)

$$\frac{96+96+96+96+98+98+98+100+100+100+104+104+104+104+106+106+106+106+106}{19} = 96.8$$

Median: is the middle number so you spread out all of the scores.

Line the numbers up from smallest to largest.

Work your way to the middle number OR there are 19 numbers so the middle number will be $(19+1) \div 2 = 10^{\text{th}}$ number.

96 96 96 96 98 98 98 100 100 100 104 104 104 104 104 106 106 106 106 106

Median is 100.

Example:

AGE (YEARS)	FREQUENCY
1	6
2	8
3	9
4	8
5	6
Total	37

Figure 2. Frequency of the age first caught a ball.

From the above scores we can see the most frequent age is 3 and this occurs 9 times. Therefore the mode is 3 years.

Mean is the average scores so we need to add all of the scores up and divide it by the total number of subjects/trials (37)

$$\frac{1+1+1+1+1+1+2+2+2+2+2+2+2+2+3+3+3+3+3+3+3+3+3+4+4+4+4+4+4+4+4+4+5+5+5+5+5+5}{37} = 3$$

Median is the middle number so you spread out all of the scores and line the numbers up from smallest to largest.

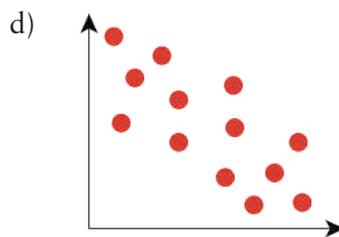
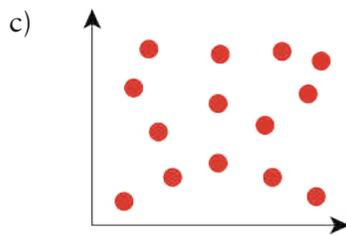
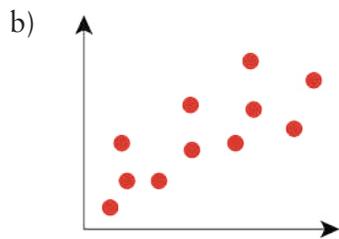
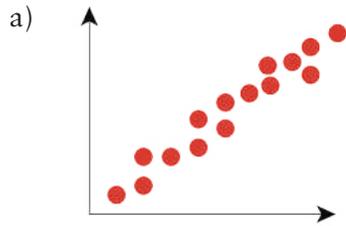
Work your way to the middle number OR there are 37 numbers so the middle number will be $(37+1) \div 2 = 19^{\text{th}}$ number

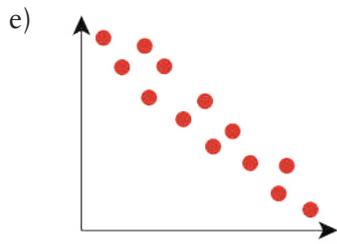
1 1 1 1 1 1 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5
↑ Median is 3

Range is the difference between the higher number (5) and lower number (1) = 4.

Review Questions

1. Identify the following correlations strength and direction of the following graphs.

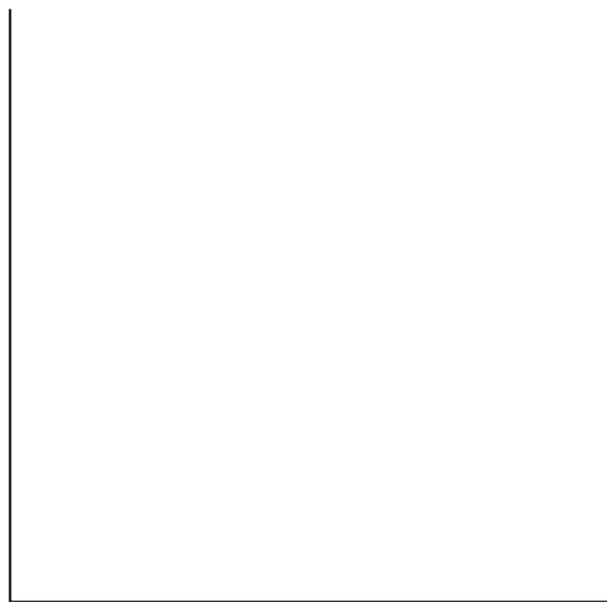




f) Draw a scattergram of the following results.

Number of cigarettes per day	Heart Rate (BPM)
2	71
5	77
7	86
9	98
10	112
13	120
15	125

Table 1: Relationship between number of cigarettes per day and Heart rate



g) Explain what the research can conclude about these results.

2. Calculate the mean, mode, median and range of the following table:

AGE OF EAR PIERCING (years)	FREQUENCY
12	5
14	6
16	8
17	6
18	4

Table 4: Frequency of ages first got their ears pierced

Mean: _____ Mode: _____ Median: _____

3. Calculate the mean, mode, median and range of the following table:

AGE FIRST WALKED (months)	Frequency
9	2
10	6
11	7
12	6
13	3

Table 5: Frequency of age first walked

Mean: _____ Mode: _____ Median: _____

1.7 SCIENTIFIC INQUIRY

Mandy wanted to conduct an experiment on her Pre-primary class. She noticed that when her class came in after lunch they were restless and took a long time to settle down. One day she decide to play meditation music as they sat on the mat to see if this would help them settled down. To investigate further she decided to conduct the experiment with the two pre-primary classes. Class 1 would come into class as normal with no music and the teacher would time how long it would take for them to settle down. Class 2 would come into class with meditation music playing and timed how long they would take to settle down. She conducted this experiment over 2 weeks and averaged the time taken to settle down.

- a) Identify an aim for the above experiment.

- b) Identify the following:

- i. Independent variable

- ii. Dependent variable

iii. Controlled variable

iv. Extraneous variable

c) Identify and explain **two (2)** ethical considerations Mandy would need to follow.

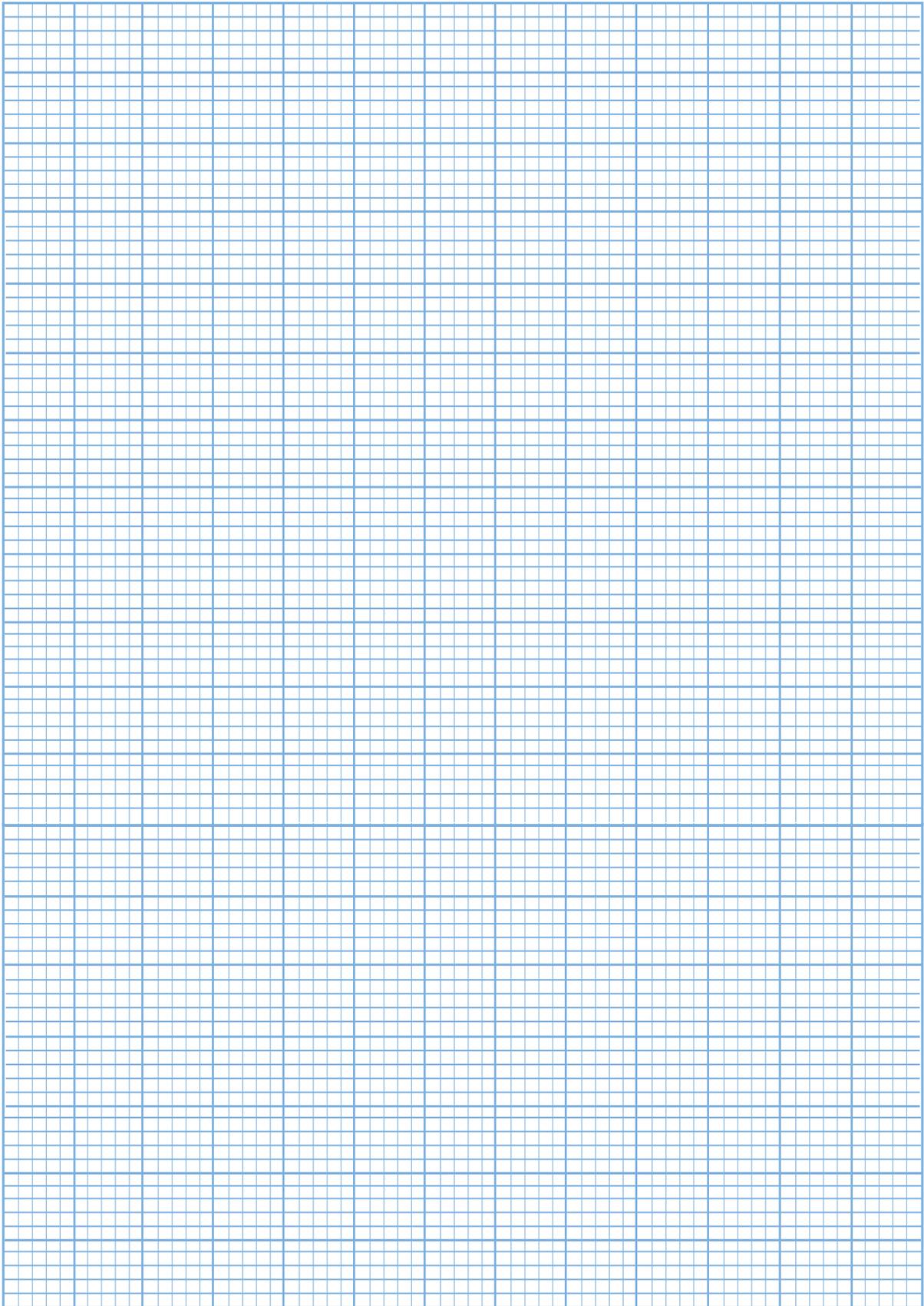
d) i. Identify the above study as either an experimental or non-experimental research design. Justify your answer.

ii. Identify a strength and limitation of the above research design.

e) Identify and explain the selection of participation used in the above experiment.

f) Draw the results as a suitable graph from the table below.

MEDITATION MUSIC VS NO MEDITATION MUSIC	AVERAGE TIME TAKEN FOR THE CLASS TO SETTLE (MINUTES)
Class 1 no music	4.5
Class 2 music	2.7





Syllabus Checkpoint

On completion of this chapter you should be able to understand:

Psychological knowledge and understanding

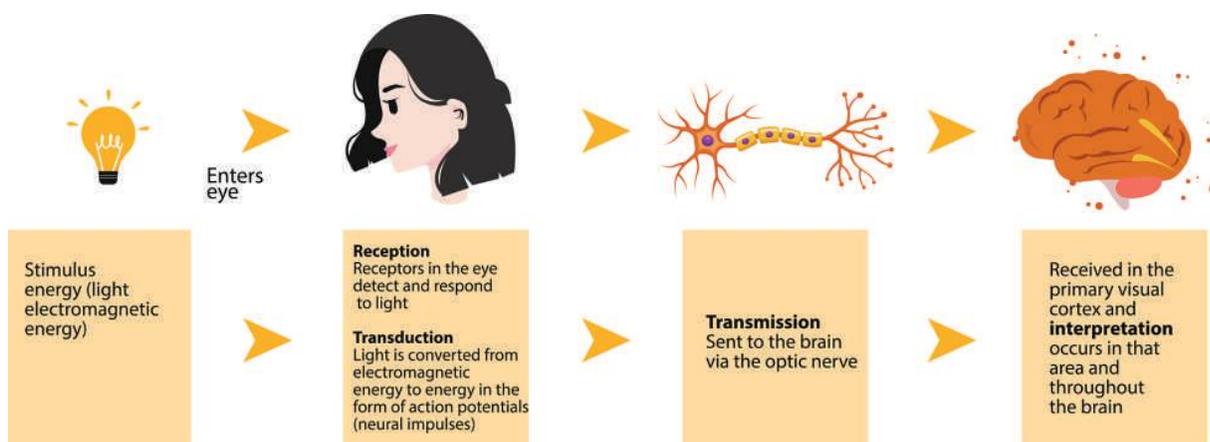
Memory

- sensation and perception
 - processes of sensation – reception, transduction, transmission
 - processes of perception – selection, organisation and interpretation
- the role of attention in memory
 - selective and divided attention as seen in the Cocktail party effect (Cherry, 1953)
- models for explaining memory
 - processes of memory – encoding, storage, retrieval
 - features of the multi-store model of memory (Atkinson and Shiffrin, 1968)
 - o sensory register: duration, capacity, encoding
 - o short term memory: duration, capacity, encoding
 - o long-term memory: duration, capacity, encoding
 - procedural, declarative – semantic and episodic memory
 - o features of the working memory model (Baddeley and Hitch, 1974; Baddeley, 2000)
 - central executive, phonological loop, visuospatial sketchpad, episodic buffer
- memory formation
 - structures of the brain
 - o the role of the hippocampus in the formation and storage of memory
 - Henry Molaison – case study

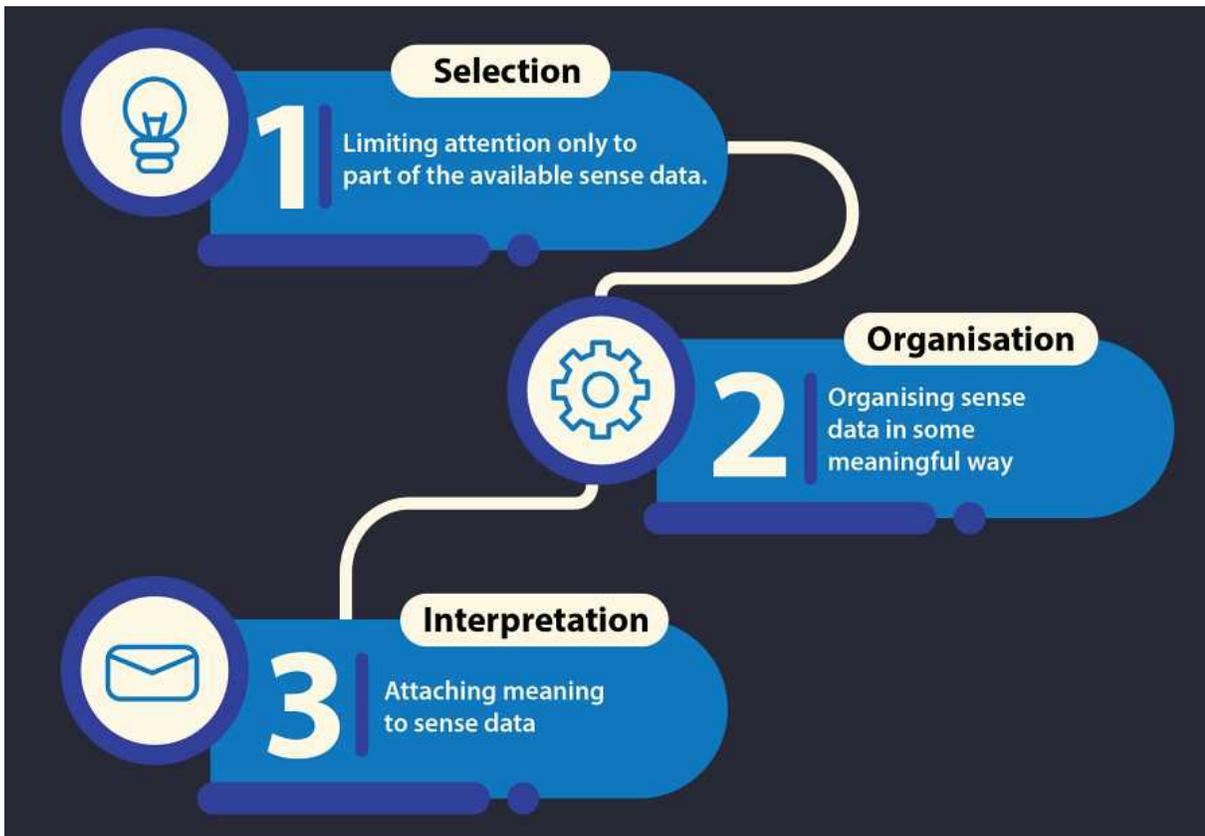
- o the role of the cerebellum in the formation and storage of implicit memories
- o the role of the amygdala in the formation of memories
- process of forgetting and remembering
 - forgetting
 - o types of forgetting
 - retrieval failure
 - interference – proactive and retroactive
 - motivated forgetting
 - decay theory
 - remembering
 - o the role of recall (free, serial and cued), recognition and re-learning in memory
 - o levels of processing model of memory (Craik and Lockhart, 1972)
 - shallow (structural, phonemic) and deep (semantic, elaboration) processing
 - study: Depth of processing and the retention of words in episodic memory (Craik and Tulving, 1975)
 - rehearsal as a strategy to improve memory
 - o maintenance rehearsal
 - o elaborative rehearsal
 - o role of repetition as seen in Ebbinghaus and the forgetting curve (1885)
 - causes of memory loss and impacts on behaviour and emotion
 - o trauma – Chronic Traumatic Encephalopathy (CTE)
 - o degeneration – Alzheimer’s disease
 - o drug induced – Wernicke-Korsakoff Syndrome (WKS)

Sensation and perception

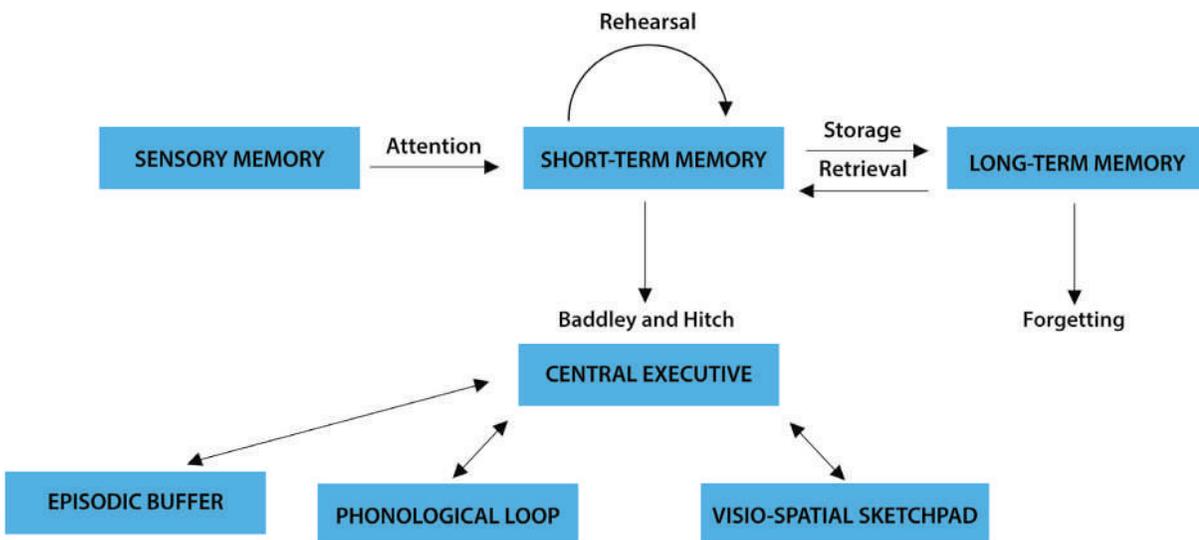
PROCESS OF SENSATION



PROCESS OF PERCEPTION



MULTI-STORE MODEL (Atkinson and Shiffrin, 1968)





Terminology

These are some of the terms from this section which you should know. Write the meaning of each term in the space provided.

(i) declarative memory

(ii) encoding

(iii) procedural memory

(iv) retrieval

(v) storage

Review Questions

1. Explain the difference between sensation and perception processes.

c) Long term memory

i. Duration

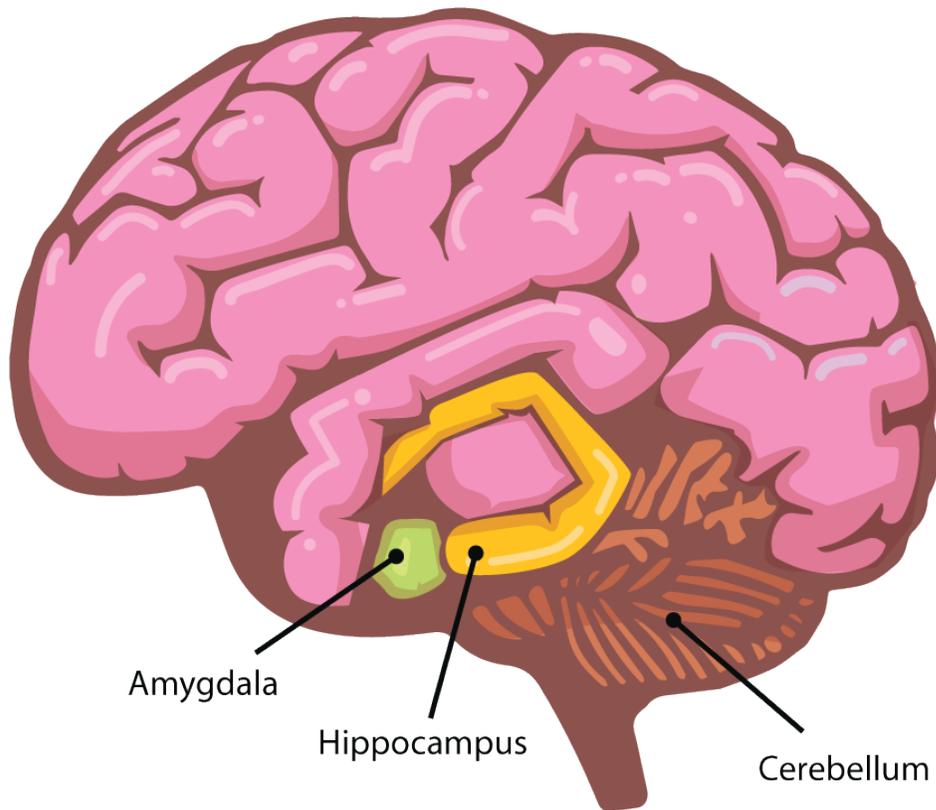
ii. Capacity

iii. Encoding

4. Explain, using an example the difference between procedural and declarative memory in the long-term memory.

5. Why do we forget? Use the terms retrieval failure, interference, motivated forgetting and decay to explain your answer.

6. Explain the role in memory formation in the following structures of the brain:



7. Explain Baddley and Hitch's working memory model.

8. Identify and describe **three** ways of remembering.

9. Explain the difference between maintenance and elaborative rehearsal.

10. Fill in the following table on memory loss.

CAUSE OF MEMORY LOSS	DISORDER	IMPACT ON BEHAVIOUR AND EMOTION
trauma		
	Alzheimer's Disease	
	Wernicke-Korsakoff Syndrome	



Syllabus Checkpoint

On completion of this chapter you should be able to understand:

Psychological knowledge and understanding

Learning

- theories of learning
 - classical conditioning
 - o neutral stimulus, unconditioned stimulus, unconditioned response, conditioned stimulus, conditioned response
 - o stimulus generalisation, discrimination, extinction and spontaneous recovery
 - o study: Pavlov's dogs (Pavlov, 1902)
 - o study: 'Little Albert' experiment (Watson and Rayner, 1920)
 - operant conditioning
 - o three phase model – antecedent, behaviour, consequence
 - o reinforcement
 - role of reinforcers – positive and negative
 - o punishment
 - role of punishers – positive and negative
 - o schedules of reinforcement – fixed, variable, interval and ratio
 - o study: Law of effect (Thorndike, 1898)
 - o study: Skinner box (Skinner, 1948)
 - social learning theory – Bandura (1977)
 - o process of observational learning – attention, retention, reproduction, motivation, reinforcement
 - o modelling – vicarious reinforcement
 - o study: 'Bobo doll' experiment (Bandura, Ross and Ross, 1961)
 - application and evaluation of learning theories in behaviour modification
 - o systematic desensitisation as a treatment for phobias
 - o token economies



Terminology

These are some of the terms from this section which you should know. Write the meaning of each term in the space provided.

(i) behaviour modification

(ii) classical conditioning

(iii) conditioned response (CR)

(iv) conditioned stimulus (CS)

(v) neutral stimulus (NS)

(vi) observational learning

(vii) operant conditioning

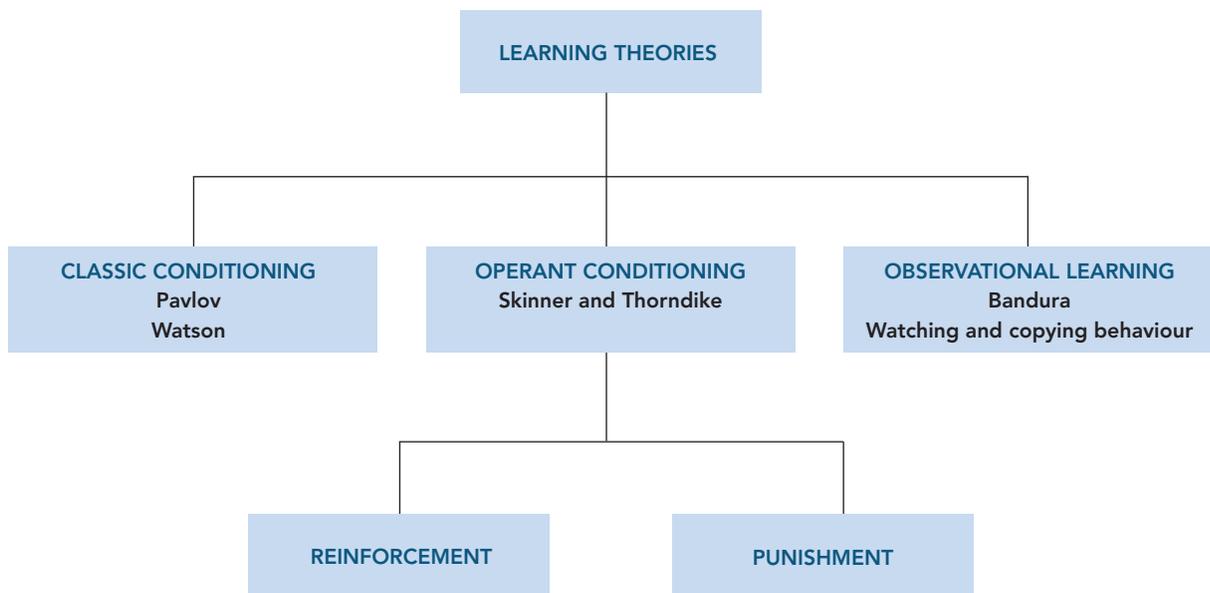
(viii) punishment

(ix) reinforcement

(x) token economy

(xi) unconditioned stimuli (UCS)

(xii) unconditioned response (UCR)



CLASSICAL CONDITIONING

BEFORE CONDITIONING	
Food (UCS)	Salivation (UCR)
Bell	No response
DURING CONDITIONING	
Bell (NS) + Food (UCS)	Salivation (UCR)
AFTER CONDITIONING	
Bell (CS)	Salivation (CR)



OPERANT CONDITIONING

Reinforcement increases the frequency of desirable behaviour



Punishment decreases the frequency of undesirable behaviour



POSITIVE (+) APPLIES STIMULUS	NEGATIVE (-) REMOVES STIMULUS
Positive Reinforcement	Negative Reinforcement
Positive Punishment	Negative Punishment

1. In horror movies, scary music is paired with a violent scene. Based on classical conditioning what would be an effect of this pairing? (*Hint: use UCS, CS, UCR, CR*).

2. An owner of a dog feeds its dog at 5 pm every night when she comes home. As she comes in the door she will turn the TV on. The owner has found that when she turns on the TV on a Saturday morning, the dog will run to its dinner bowl. Use your understanding of classical conditioning to explain the dog's behaviour.

3. Explain the differences between classical conditioning and operant conditioning.

4. Explain Pavlov's experiment.

5. John Watson conducted a classical conditioning experiment on Little Albert. Explain, using the classical conditioning theory, why Little Albert had a fear of rats.

6. How would a psychologist use the process of systematic desensitisation to help a person overcome their fear of rats?

7. Explain the following terms:

(i) Reinforcement

(ii) Punishment

8. From the following examples identify if they are:

(i) Reinforcement or punishments

(ii) Positive or negative

(a) A student completes all her homework and is given a 'Scratch and Sniff' sticker.

(b) You pat a horse on its mane and in return he bites you.

(c) Your mother begins to nag you to do the dishes. When you start the nagging stops.

(d) You are late for curfew and in return your parents tell you that you won't be going out for a week.



9. Explain what Skinner found from his experiment with rats.

10. Define and give an example of the term 'token economies'.

11. Social learning theory is a well-accepted theory. Explain the process of observational learning.

12. Explain the following terms for classical conditioning theory:

i. *Stimulus generalisation*

ii. *Discrimination*

iii. *Extinction*

iv. *Spontaneous recovery*

13. Fill in the following table:

LEARNING THEORIES

THEORIST	THEORY	AIM OF STUDY	KEY FINDINGS	CONTRIBUTIONS	LIMITATIONS
PAVLOV					
WATSON and RAYNER					

THEORIST	THEORY	AIM OF STUDY	KEY FINDINGS	CONTRIBUTIONS	LIMITATIONS
THORNDIKE					
SKINNER					
BANDURA, ROSS AND ROSS					

PSYCHOLOGY

UNIT 2





Syllabus Checkpoint

On completion of this chapter you should be able to understand:

Psychological knowledge and understanding

Motivation and wellbeing

- sources of motivation – physiological, cognitions, emotions, social
- self-determination theory – Deci and Ryan (1985)
 - amotivation, extrinsic and intrinsic motivation
 - psychological needs for motivation – autonomy, competence, relatedness
- hierarchy of needs – Maslow (1954, 1970)
 - levels of motivation based on deficiency and growth needs (1954)
 - o deficiency needs – physiological, safety, love and belongingness, esteem
 - o growth needs – self-actualisation
 - expanded hierarchy of needs (1970) – cognitive, aesthetic and transcendence needs
 - concept of self-actualisation
 - o characteristics of a self-actualised person
- models of wellbeing
 - subjective wellbeing – model of subjective wellbeing – Diener (1984)
 - o key components – life satisfaction, affective balance
 - psychological wellbeing – six factor model of wellbeing – Ryff (1989)
 - o autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance

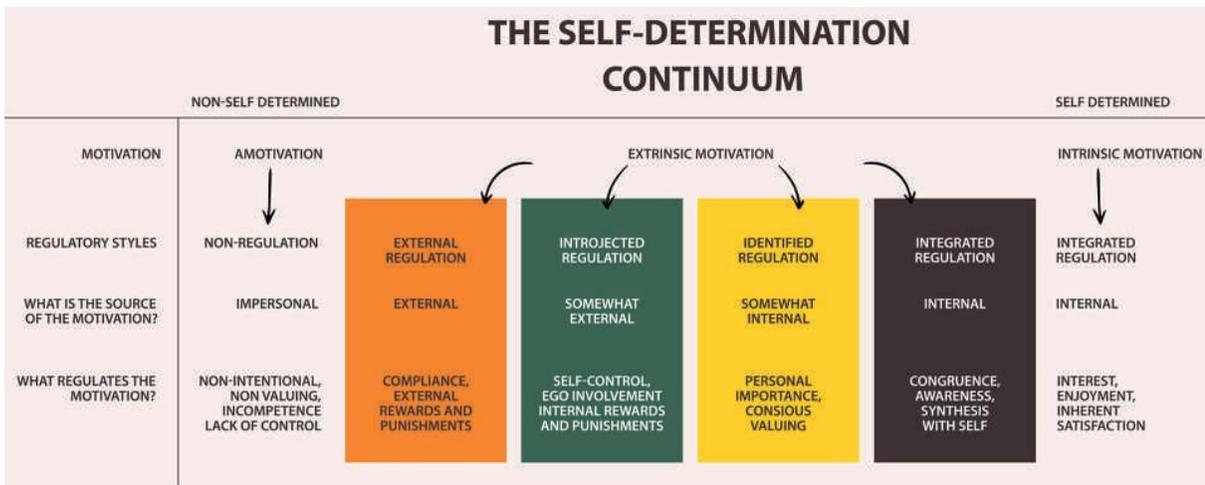


Figure 4.1: Sources and Types of Motivation

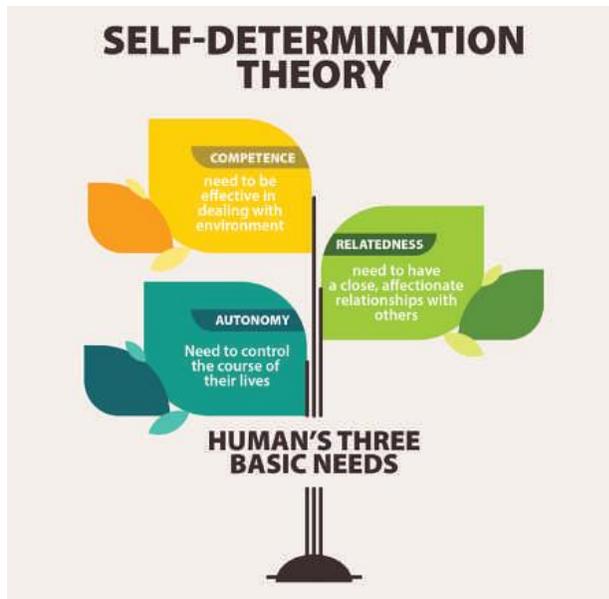


Figure 4.2: Deci and Ryan's Self Determination Theory - Psychological Needs for Motivation

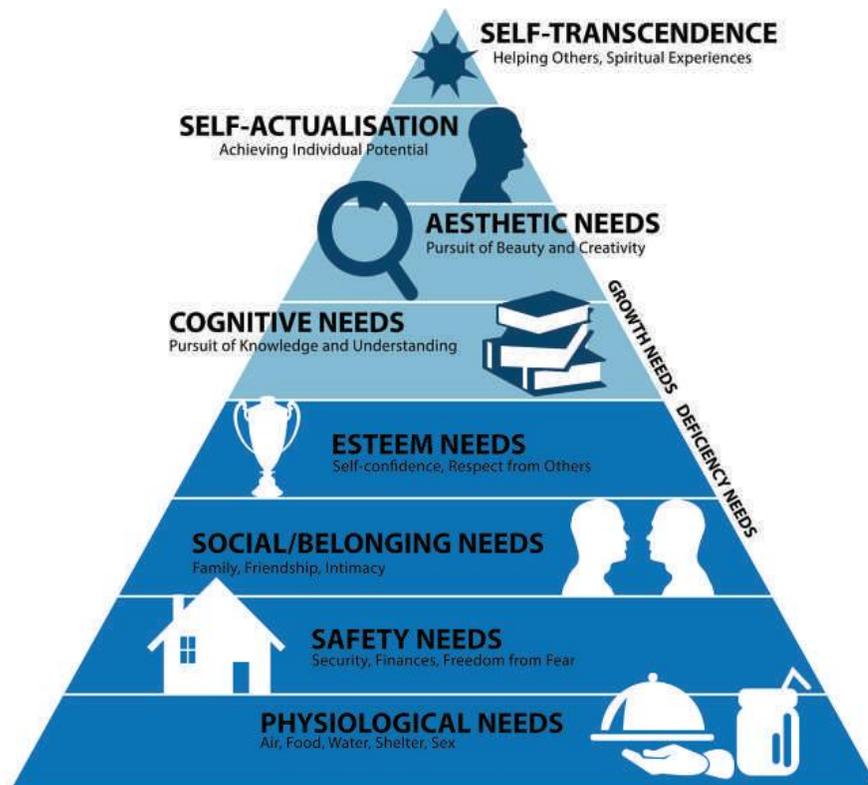


Figure 4.3 Figure 4.3. Maslow's Hierarchy of Needs



Figure 4.4: Ryff 1989 Psychological wellbeing - six factor model of wellbeing

Terminology:



These are some of the terms from this section which you should know. Write the meaning of each term in the space provided.

(i) amotivation

(ii) deficiency needs

(iii) extrinsic motivation

(iv) growth needs

(v) intrinsic motivation

(vi) self-actualisation

Review Questions

1. Explain the difference between deficiency needs and growth needs.

2. Explain the following needs from Maslow's hierarchy of needs:

NEED	EXPLANATION	EXAMPLE
Physiological		
Safety		
Social/belonging		
Esteem		
Social actualisation		

3. Explain Maslow's expanded hierarchy of needs.

4. Explain Maslow's characteristics for self-actualisation.

5. Beau was a 13 year old boy who had a close group of friends at school. Explain where Maslow would place Beau on his hierarchy of needs.

6. Fill in the following table on sources of motivation.

SOURCE OF MOTIVATION	EXPLANATION	EXAMPLE
Physiological		
Cognitions		
Emotion		
Social		

7. Explain two (2) limitations of Maslow's theory.

8. Explain two (2) strengths of Maslow's theory.

9. Explain the following characteristics of Deci and Ryan's theory of self determination. Give an example with your explanation.

Amotivation

Extrinsic Motivation

Intrinsic motivation

10. Identify and explain the **three (3)** psychological needs for motivation.

11. Explain **two (2)** limitations of Deci and Ryan's theory.

12. Explain **two (2)** strengths of Deci and Ryan's theory.



Syllabus Checkpoint

On completion of this chapter you should be able to understand:

Psychological knowledge and understanding

Applications of psychology to health

- stress as defined by Selye (1936)
 - types of stress – distress and eustress (Selye, 1983)
- stressors
 - types of stressors – environmental, psychological, social, cultural
 - characteristics of stressors – nature, duration, strength
- models of stress
 - stress as a response – General Adaptation Syndrome (GAS) model (Selye, 1936, 1983)
 - o physiological response to stress – heart rate, breathing rate
 - o stages – alarm, resistance, exhaustion
 - stress as a stimulus
 - o application of the Social Readjustment Scale (Holmes and Rahe, 1967) to assess the impact of stressors on individual health and wellbeing
 - stress as a transaction – Transactional Theory of Stress and Coping (Lazarus and Folkman, 1984)
 - o interaction between individual and environment
 - o role of cognitive appraisal – primary and secondary appraisal
 - o methods of coping – problem-focused, emotion-focused
- health related consequences of stress – maladaptive and adaptive coping strategies
- purpose of sleep – evolutionary and restorative

- sleep–wake cycle
 - four stages of non-rapid eye movement (NREM) and rapid eye movement (REM)
 - characteristics – sleep state, heart rate, eye movement, muscle tension
 - length and repetition of the sleep cycle
- sleep deprivation
 - causes of sleep deprivation – shift work, drugs, sleep environment, stressors
 - psychological and physiological effects of partial and chronic sleep deprivation
 - partial sleep deprivation – mood, attention, reflex speed, vision
 - chronic sleep deprivation – heart disease, obesity, insomnia, anxiety
- techniques to improve sleep hygiene – management of electronic devices, consistent sleep patterns, creation of a healthy sleep environment
 - study: Effect of restricting bedtime mobile phone use on sleep, arousal, mood and working memory (He et al., 2020)



Figure 5.1: General Adaptation to Stress (GAS) Model

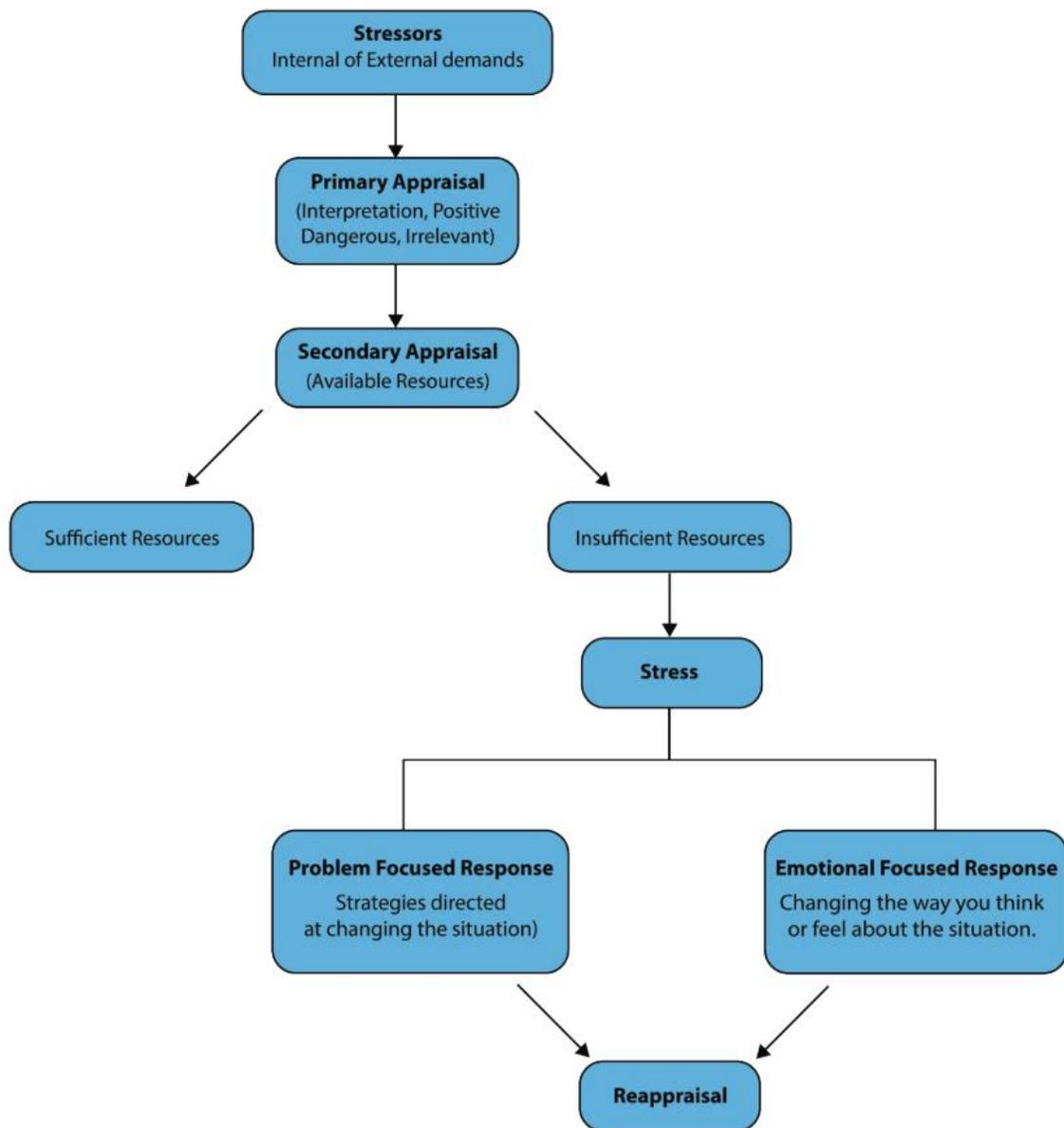


Figure 5.2: Transactional Theory of Stress and Coping (Lazarus and Folkman, 1984)

THE 4 STAGES OF SLEEP

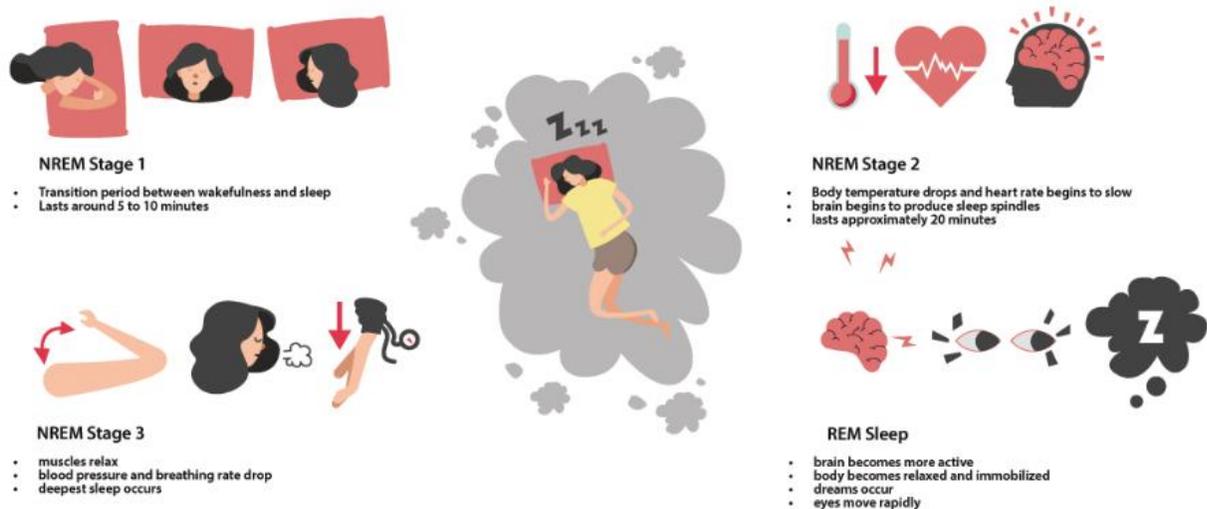


Figure 5.3 Sleep – wake cycle



Terminology:

These are some of the terms from this section which you should know. Write the meaning of each term in the space provided.

(i) distress

(ii) eustress

(iii) non-rapid eye movement

(iv) rapid eye movement

(v) sleep deprivation

Review Questions

1. Define stress according to Selye.

2. Explain the differences between distress and eustress.

3. a) Give examples of types of stressors:

- b) Identify the characteristics of stressors and how they can vary:

4. Explain the following stages of the General Adaptation Syndrome model:

Alarm

Resistance

Exhaustion

5. Explain how the Transactional theory of stress and coping appraises a stressor through both primary and secondary appraisal.

6. Identify two problem-focused coping strategies and two emotion-focused coping strategies.

7. Explain the Social readjustment scale and how it assesses stressors on individual health.

8. Identify four maladaptive coping strategies for stress and four adaptive coping strategies for stress.

9. Identify the following for He et al's study on: The effect of restricting bedtime mobile phone use on sleep, arousal, mood and working memory.

i) Aim

ii) Method used in study

iii) Key findings of the study

iv) Contributions of the study

14. Fill in the following table on the four stages of sleep cycle:

	NREM SLEEP CYCLE				REM SLEEP
Characteristic	Stage 1	Stage 2	Stage 3	Stage 4	
Sleep state					
Heart rate					
Eye movement					
Muscle tension					

TRIAL TEST 1: SCIENCE INQUIRY: ETHICAL GUIDELINES AND PRACTICES



Time allowed: 35 minutes

Total marks: 35 marks

1. A Maths professor found that his students came back from Summer holidays with little motivation. He decided to try an experiment to see if he could improve the students motivation. He asked his class to sit a motivation questionnaire at the start of the Term. He then gave the students in his first Year 12 class lollies before they entered the classroom, his second Year 12 class did not get lollies. He then gave the students another motivation questionnaire at the end of the term and compared the results.

- (a) Identify the aim of the Professors research

(2 marks)

- (b) Identify the following variables:

- (i) Independent variable:

(1 mark)

- (ii) Dependent variable:

(1 mark)

- (iii) Two controlled variables

(2 marks)

(c) Construct a hypothesis for the above research

(3 marks)

(d) Identify and explain **two (2)** ethical guidelines the professor would need to follow in his experiment.

(4 marks)

2. A Lab assistant conducted a learning experiment on her pet guinea pigs. Explain the **three (3)** ethical guidelines she would need to follow before conducting research on animals.

(6 marks)

3. Vitamin D has been found to help control infections. During Winter a school principal asked for volunteers from teachers to test whether vitamin D would help them reduce sickness in the cold months. He had 100 volunteers to take part. The 100 teachers would take a vitamin D supplement each day for 3 months. The other 100 participants would not take a supplement. At the end of the 3 months the principal would see how many sick days the groups would have and compare results.

(a) Identify the aim of the principal's experiment.

(2 marks)

(b) Identify the following variables:

(i) Independent variable:

(1 mark)

(ii) Dependent variable:

(1 mark)

(iii) Controlled variables:

(1 mark)

(c) Construct a hypothesis for the above research

(3 marks)

- (d) The Principal followed all ethical guidelines while conducting his experiment. However, he did not use deception. Explain deception and what occurs if deception is used.

(3 marks)

4. A psychology PhD student was investigating the impact sleep has on memory. She asked for 200 volunteers from Psychology students in their first year at university. They initially sat a memory questionnaire then they were split into two groups. Group 1 slept for less than eight hours and Group 2 slept for more than eight hours. This occurred for two weeks and then they sat another memory test.

Identify the following variables.

- (i) Independent variables

(1 mark)

- (ii) Dependent variables

(2 marks)

- (iii) Two controlled variables

(1 mark)

- (iv) Extraneous variable

(1 mark)

TRIAL TEST 2: SCIENCE INQUIRY: METHODOLOGY



Time allowed: 30 minutes

Total marks: 30 marks

1. (a) (i) A year 12 student wanted to know how many people in Perth had a streaming subscription at their house. Outline **two (2)** ways in which she could obtain a convenience sample.

(2 marks)

- (ii) Identify **one (1)** advantage and **one (1)** disadvantage of using a convenience sample.

(2 marks)

- (b) The school captains, wanted to present to the principal an idea to introduce free dress to the school twice a term. To do this the captains wanted to use data from the school community who would be supportive of this decision. To gather this information they decided to take a random sample of 100 volunteers from the school community and they would complete a questionnaire.

- (i) Outline **two (2)** ways in which they could obtain a random sample.

(2 marks)

- (ii) Identify **one (1)** advantage and **one (1)** disadvantage of using a random sample.

(2 marks)

- (c) The chancellor of a Perth University wanted to hold a vote to decide who this years key note speaker would be at graduation. With over 3000 staff and graduates this year he decided to form a stratified sample and only take a vote from those members of the sample.

- (i) Explain how the chancellor can execute the vote to ensure the choice is fair.

(4 marks)

- (ii) Identify **one (1)** advantage and **one (1)** disadvantage of using a stratified sampling.

(2 marks)

2. (a) Complete the table below on the different types of research designs.

RESEARCH DESIGN	METHOD	STRENGTH	LIMITATION
Correlational			
Longitudinal			
Cross sectional			

(9 marks)

(b) Explain the difference between an experimental and a non-experimental research design

(4 marks)

3. Identify **one (1)** way an experiment can be effected by experimental effect and identify **two (2)** ways of reducing this effect.

(3 marks)



TRIAL TEST 3: SCIENCE INQUIRY: DATA COLLECTION

Time allowed: 20 minutes.

Total marks: 20 marks

1. A Maths professor found that his students came back from Summer holidays with little motivation. He decided to try an experiment to see if he could improve the students motivation. He asked his class to sit a motivation likert questionnaire at the start of the Term. He then gave the students in his first Year 12 class lollies before they entered the classroom, his second Year 12 class did not get lollies. He then gave the students another motivation likert questionnaire at the end of the term and compared the results.

- (a) Identify the type of data collection the professor has used in the above experiment. Justify your answer

(2 marks)

- (b) Identify **one** (1) advantage and **one** (1) disadvantage of the above data collection.

(2 marks)

- (c) Identify **two** (2) different ways the professor could collect the data to ensure it is qualitative.

(2 marks)

- (d) Identify **two (2)** advantage and **two (2)** disadvantage of using a qualitative data collection.

(4 marks)

2. (a) Explain the difference between objective data and subjective data

(4 marks)

- (b) Fill in the following table:

DATA COLLECTION	EXAMPLE	STRENGTH	LIMITATION
Subjective quantitative			
Objective quantitative			

(6 marks)



TRIAL TEST 4: SCIENCE INQUIRY: PROCESSING AND ANALYSING DATA

Time allowed: 30 minutes.

Total marks: 26 marks

1. A school counsellor, wanted to investigate a relationship between amount of sugar intake and the mood score from a questionnaire out of 20. The Year 5 students filled in a questionnaire with help from their parents and she compiled results into a table.

A sample of his results are below:

- (a) Complete the following for mood questionnaire:

AMOUNT OF SUGAR INTAKE (G)	MOOD QUESTIONNAIRE SCORE /30
100	12
108	14
120	14
130	16
150	25
155	30

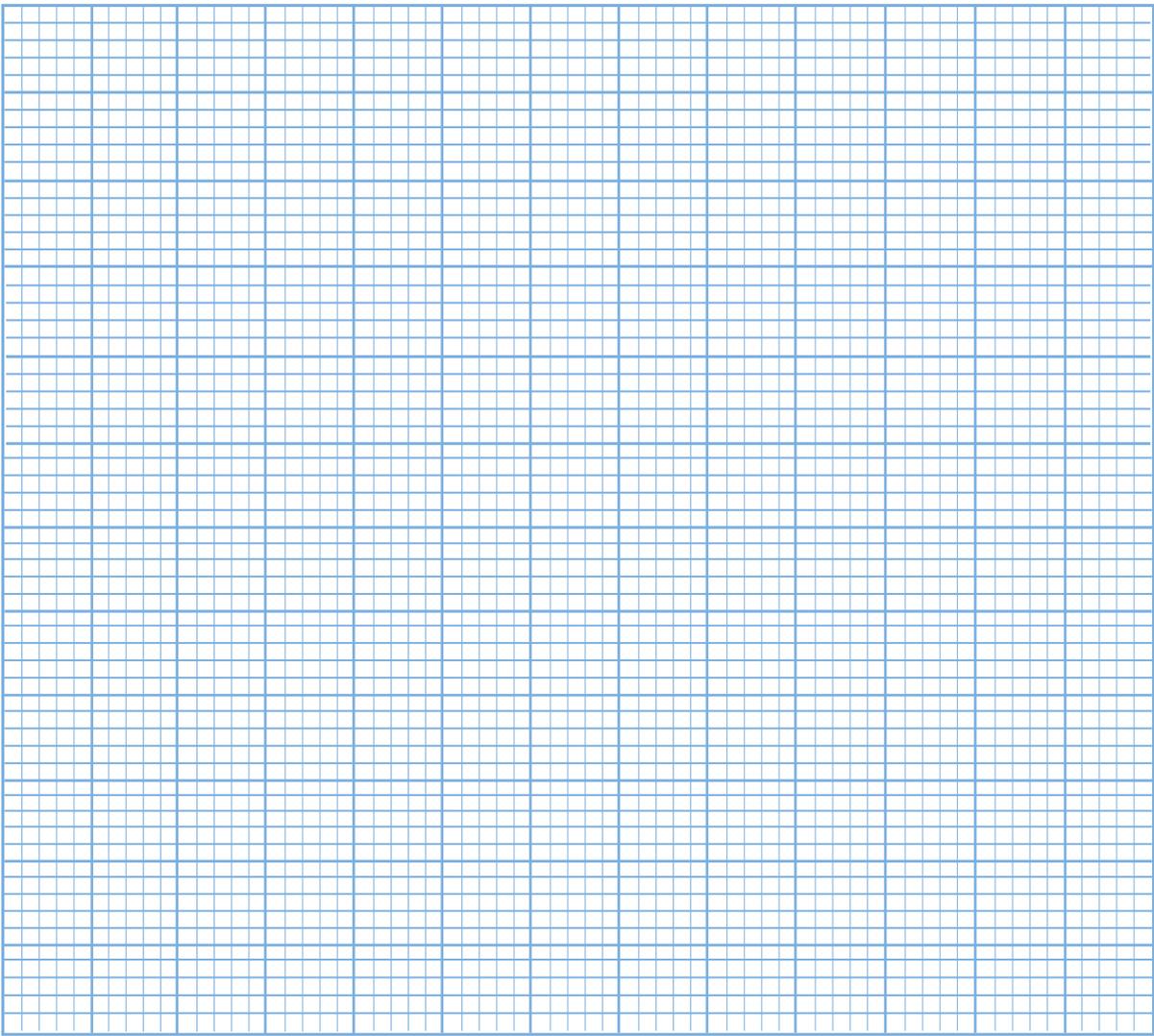
Figure 1: Relationship between amount of sugar intake and mood score questionnaire

Mean: _____

Median: _____

(2 marks)

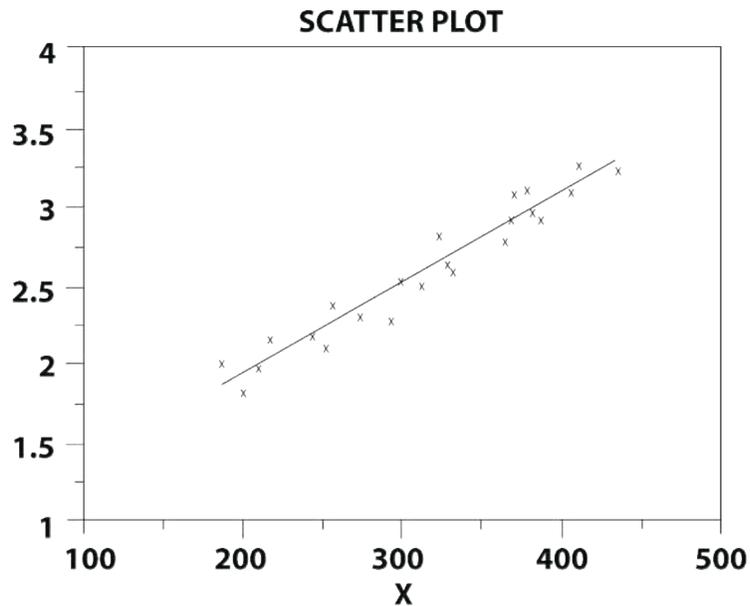
(b) Graph the above results in a correct graph below:



(6 marks)

(c) Explain what the counsellor can conclude about the above results.

(3 marks)



2. (a) Identify the strength and relationship of the above graph

(2 marks)

- (b) Explain what the relationship shows about the variables

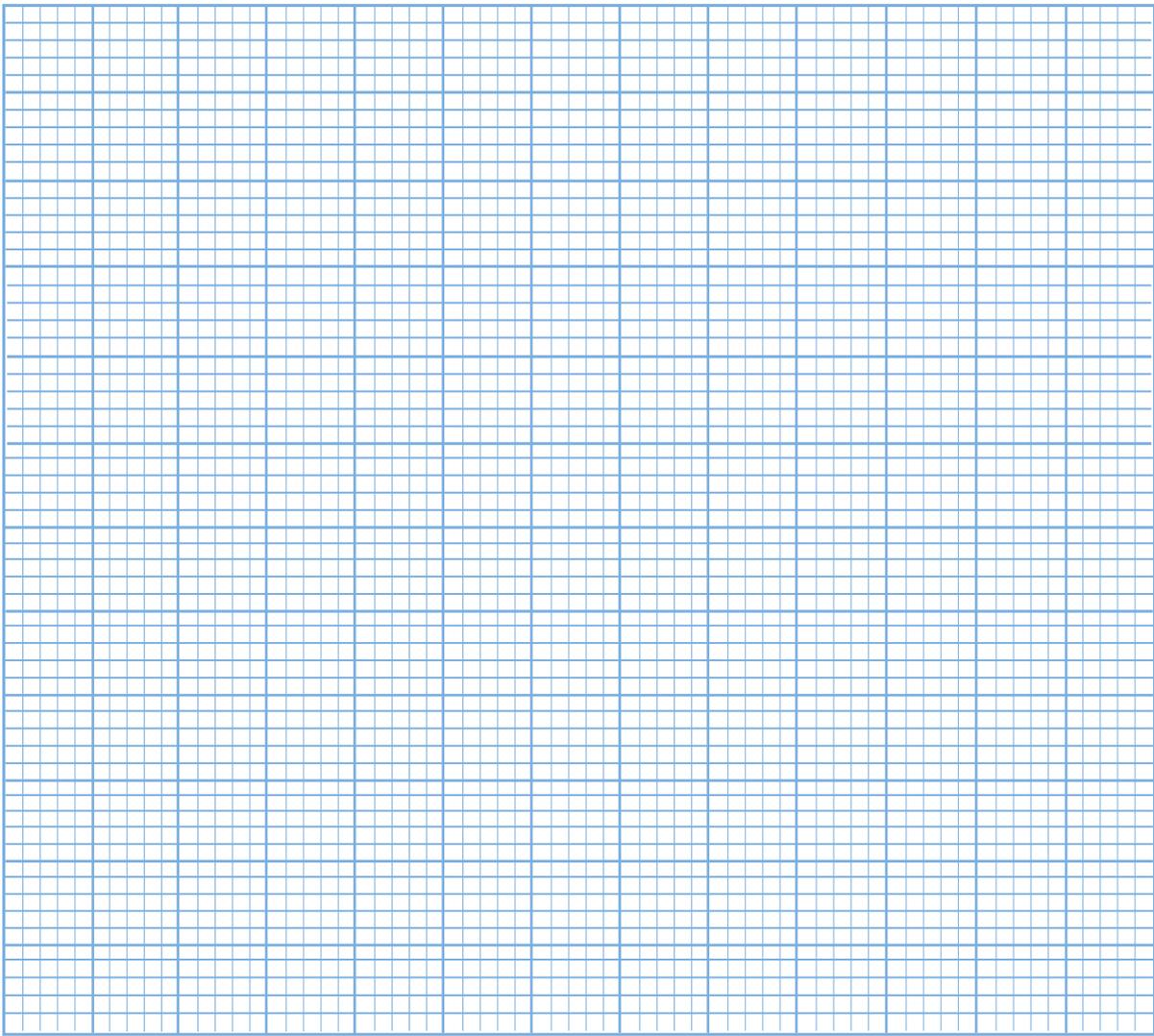
(2 marks)

3. Principal believed that if his Year 12 students had more time starting their revision they would improve their ATAR results

Below is a summary of her results:

NUMBER OF WEEKS REVISION	AVERAGE ATAR RESULT
1	74
2	82
3	85
4	92
5	96

(a) Draw a correct graph of her results.



(6 marks)

(b) The principal concluded that a longer revision program does produce better ATAR results. Is she correct? Explain your answer.

(3 marks)

(c) Calculate the following for ATAR Results.

Mean: _____

Median: _____

(2 marks)



TRIAL TEST 5 : LEARNING

Time allowed: 40 minutes
Total marks: 42 marks

1. (a) Define token economies.

(1 mark)

- (b) Describe how a psychologist could use the process of systematic desensitisation to reduce Ashlea's fear of spiders.

(4 marks)

2. (a) Define the term observational learning.

(2 marks)

4. Identify the correct type of punishment or reinforcement in the scenarios below:

(i) Michael was asked to return from the party at 11pm he arrived back at 11:30pm and his parents took his mobile phone from him for a week.

(ii) Sam handed all her homework on in time and the teacher gave her a lollipop

(iii) Emma forgot to take the garbage out in time and her mum got angry and yelled at her.

(iv) Poppy wanted her book back from her sister she nagged her until she got it back.

(4 marks)

5. Identify the key findings of the following theorists.

(i) Thorndike

(3 marks)

(ii) Watson

(3 marks)



TRIAL TEST 6 : MEMORY

Time allowed: 40 minutes

Total marks: 40 marks

1. Harold is telling his grand daughter about his Year 12 ball. Half way through his story he cannot remember his date's name.

(a) Identify and explain one reason why Harold cannot remember his date's name.

(2 marks)

(b) Explain the difference between proactive and retroactive interference.

(2 marks)

2. Using Baddley and Hitch's model explain working memory.

(5 marks)

3. Fill in the following table:

MEMORY	DURATION	CAPACITY	ENCODING
Sensory			
Short			
Long			

(9 marks)

4. Isabelle saw a beautiful peacock on her way to school, she stopped and watched as it spread its train. When she got to school she wanted to tell her teacher all about it. Explain using Atkinson and Shiffrin’s multi store model how she would explain what she saw.

(6 marks)

5. (a) Adam presented to the ER after being hit in the head with a baseball at his game. He lost consciousness at the game and when he was in hospital he was sent for an MRI. They found that he had damaged his cerebellum. Along with having some jerky movements, the doctor said he could have some issues with his memory.

Explain the role the cerebellum has on memory and what symptoms Adam could experience.

(2 marks)

- (b) Explain the role of the hippocampus on memory.

(2 marks)

- (c) Later that year after another accident at his baseball game the doctors diagnosed him with chronic traumatic encephalopathy. Explain how this can occur and the symptoms and treatment he will undergo.

(5 marks)

6. Identify and explain **two (2)** rehearsal strategies that can help improve memory.

(4 marks)

7. Identify a drug induced cause of memory loss and explain how this can impact a persons behaviour.

(3 marks)



TRIAL TEST 7: MOTIVATION AND WELLBEING

Time allowed: 40 minutes

Total marks: 40 marks

Spencer is an 18-year-old girl. Her friends describe her as an overachiever and a perfectionist. She has a supportive and close group of friends and has been known as the leader of the group. She would rather stay at home with a good book or study than go out to a party. She works very hard at her schoolwork, hands all her assignments in on time and receives excellent results.

1. (a) Maslow developed a hierarchy of needs, explain what Maslow would conclude about Spencer's needs.

(5 marks)

- (b) Identify **one** limitation of Maslow's hierarchy of needs.

(1 mark)

- (c) In 1970 Maslow expanded his hierarchy of needs. Identify and explain his **three (3)** new needs.

(6 marks)

- 2. A Year 5 teacher was trying to get his students excited about the upcoming Science assessment. It was end of term and the students were lacking motivation. To try and improve the motivation he decided to allow each student to pick their favourite animal to do the assignment on. As an added incentive he also said the top 3 presentations would have a pizza lunch with him at the end of term.

- (a) Identify and explain the types of motivation the teacher used.

(6 marks)

- (b) Identify and explain **three (3)** psychological needs for motivation.

(6 marks)

TRIAL TEST 8: APPLICATIONS OF PSYCHOLOGY TO HEALTH



Time allowed: 40 minutes
Total marks: 40 marks

1. Mrs Stanley took her 4 year old daughter to the doctor because she wasn't sleeping well she would be up throughout the night and was only managing 5-6 hours of sleep a night.

(a) Explain **three (3)** techniques the doctor could have the mother try to improve her daughters sleep patterns.

(6 marks)

(b) The doctor asked her mother to try these techniques for 3 weeks and if it did not improve to come back to see her, she was concerned that the child would develop chronic sleep deprivation. Identify **three (3)** health concerns the doctor may have.

(3 marks)

2. (a) Explain the key findings He et al, found on their study of restricting bedtime mobile phone.

(4 marks)

- (b) Identify two (2) limitations of the above study.

(2 marks)

3. (a) Explain the difference between distress and eustress.

(2 marks)

- (b) Explain the impact General Adaptation Syndrome has as a stress response.

(6 marks)

4. Explain the difference between primary and secondary appraisal of stress. Include an example in your answer.

(6 marks)

5. Identify and explain **two (2)** different methods of coping with stress. Include an example in your answer.

(6 marks)

6. (a) Identify the differences between the four stages of non-rapid eye movement.

(4 marks)

- (b) Identify the length of one REM cycle.

(1 mark)



PRACTICE EXAM 1

Structure of this paper

Section	Suggested working time	Number of questions available	Number of questions to be attempted	Marks	Weighting
Section One: Short Answer	120 minutes	8	8	95	70
Section Two: Extended answer	60 minutes	3	2	40	30

SECTION ONE: SHORT ANSWER

This section contains **eight (8)** questions. You must answer all questions

Suggested working time: 120 minutes

Question 1

(12 marks)

A university professor conducted research into Alzheimer patients. He enlisted his undergraduate students to conduct an experiment to see if a magnesium supplement could improve patient's memory. They had 200 volunteers with early onset Alzheimers. Group One would receive the magnesium supplement twice a day for 6 months, Group Two would receive a placebo twice a day for 6 months. Before the trial began each volunteer would take memory questionnaire and would repeat this questionnaire at the end of the trial.

At the end of the 6 months the undergraduates collated the data and found $P < 0.05$.

- (a) Write an operational hypothesis for the above experiment.

(3 marks)

- (b) Identify the following: (3 marks)

- (i) Independent variable:
- (ii) Dependent variable:
- (iii) Controlled variable:

(3 marks)

- (c) Identify and explain the type of research design the professor has used.

(2 marks)

- (d) Identify **one (1)** advantage and **one (1)** disadvantage of using this type of design.

(2 marks)

- (e) Identify and explain **one** way of reducing the source of error shown in the above experiment.

(2 marks)

Question 2

(12 marks)

- (a) Fill in the table below:

DATA COLLECTION	EXAMPLE	ADVANTAGE	DISADVANTAGE
Objective quantitative			
Subjective quantitative			
Qualitative			

(9 marks)

(b) Explain the difference between experimental and non-experimental research.

(2 marks)

(c) Identify the variable used in a correlational study.

(1 mark)

Question 3

(16 marks)

(a) Fill in the following table:

MEMORY	DURATION	CAPACITY	ENCODING
Sensory			
Long term			

(6 marks)

(b) Explain Baddeley and Hitch’s working memory model.

(6 marks)

- (c) Identify and explain two types of memory found in the long-term memory.

(4 marks)

Question 4

(13 marks)

Ms Claris was a Year 2 teacher at Maslow Primary School. She was having trouble with behaviour management at the beginning of the year, so decided to introduce a few new strategies. When she arrived on Monday morning she sat her class down in their chairs, and introduced her new strategies. She told her class that if they sat down quietly at their desks once the bell rang she would give the class a sticker on her new chart, but if they did not sit down quietly as soon as the bell went then she would put a strike on the board.

- (a) Using the theory of operant conditioning, explain Ms Claris' new strategies.

(6 marks)

- (b) Ms Claris then took her class into their buddies classroom and showed the students how important it was to sit quietly while the teacher was talking.

Explain the theory of learning Ms Claris was using in the above scenario.

(3 marks)

- (c) Token economies is another form of behaviour modification. Explain what this is and how Ms Claris could use it in her classroom.

(4 marks)

Question 5

(14 marks)

- (a) Explain the method used in Skinner's Box experiment

(4 marks)

- (b) Explain the key findings in Skinner's experiment

(4 marks)

- (c) One of the criticism's to Skinner's theory was his treatment to animals. Explain how a psychologist today would have to ensure certain ethical considerations were met before using animals for their research.

(6 marks)

Question 6

(20 marks)

- (a) Explain the role each of the following structures of the brain have on memory.

- (i) Hippocampus.

(2 marks)

- (ii) Cerebellum

(2 marks)

- (iii) Amygdala

(2 marks)

Question 7

(12 marks)

Principal Howard started his back-to-school speech with “My life is fantastic”, he wanted to show his staff that he had had worked hard over the holidays working on his wellbeing and he hoped the same for his staff over the term.

- (a) Explain how Diener would explain Principal Howard’s statement, by explaining his model of subjective wellbeing.

(6 marks)

- (b) Identify and explain **three (3)** factors that contribute to psychological wellbeing.

(6 marks)

Question 8

(12 marks)

Lazarus and Folkman, 1984 produced the transactional theory of stress and coping.

- (a) Identify and explain the role of the cognitive appraisal process.

(6 marks)

- (b) Fill in the following table.

METHOD OF COPING STRATEGY	EXPLANATION	EXAMPLE 1	EXAMPLE 2
Problem-focused			
Emotion-focused			

(6 marks)

Question 10

(20 marks)

A psychologist had a patient come in complaining of low mood and unable to focus. After discussing these symptoms the patient told the psychologist she was a FIFO worker and often worked night shift while she was away. The psychologist said shift work was one of the main causes of sleep deprivation and what she was experiencing was partial sleep deprivation and that it was important to resolve the psychological and physiological effects before she developed more serious chronic sleep deprivation. Before the session ended she gave the patient some further information and homework to work on before her next session.

Explain the sleep-wake cycle to the patient to explain how sleep occurs. (10 marks)

Explain chronic sleep deprivation and the psychological and physiological effects this could cause the patient. (4 marks)

Identify and explain **three (3)** techniques to improve sleep hygiene. (3 marks)

(3 marks for communication)

OR

Question 11

(20 marks)

Michael was an 18 year old who had just graduated high school and his parents had bought him a car for graduating with all A grades. He got into his dream university and had a part time job teaching swimming lessons. He and his girlfriend were planning a huge trip to Europe in the summer holidays. He had plans to travel the world more when he had graduated university.

Explain Maslows hierarchy of needs and where Michael would be based on his needs. (8 marks)

Explain Deci and Ryan’s self-determinmation theory and how Michael was motivated to go to university. (9 marks)

(3 marks for communication)

Horizontal lines for writing answers.



Structure of this paper

Section	Suggested working time	Number of questions available	Number of questions to be attempted	Marks	Weighting
Section One: Short Answer	120 minutes	5	5	97	70
Section Two: Extended answer	60 minutes	3	2	48	30

SECTION ONE: SHORT ANSWER

This section contains **five (5)** questions. You must answer all questions

Suggested working time: 120 minutes

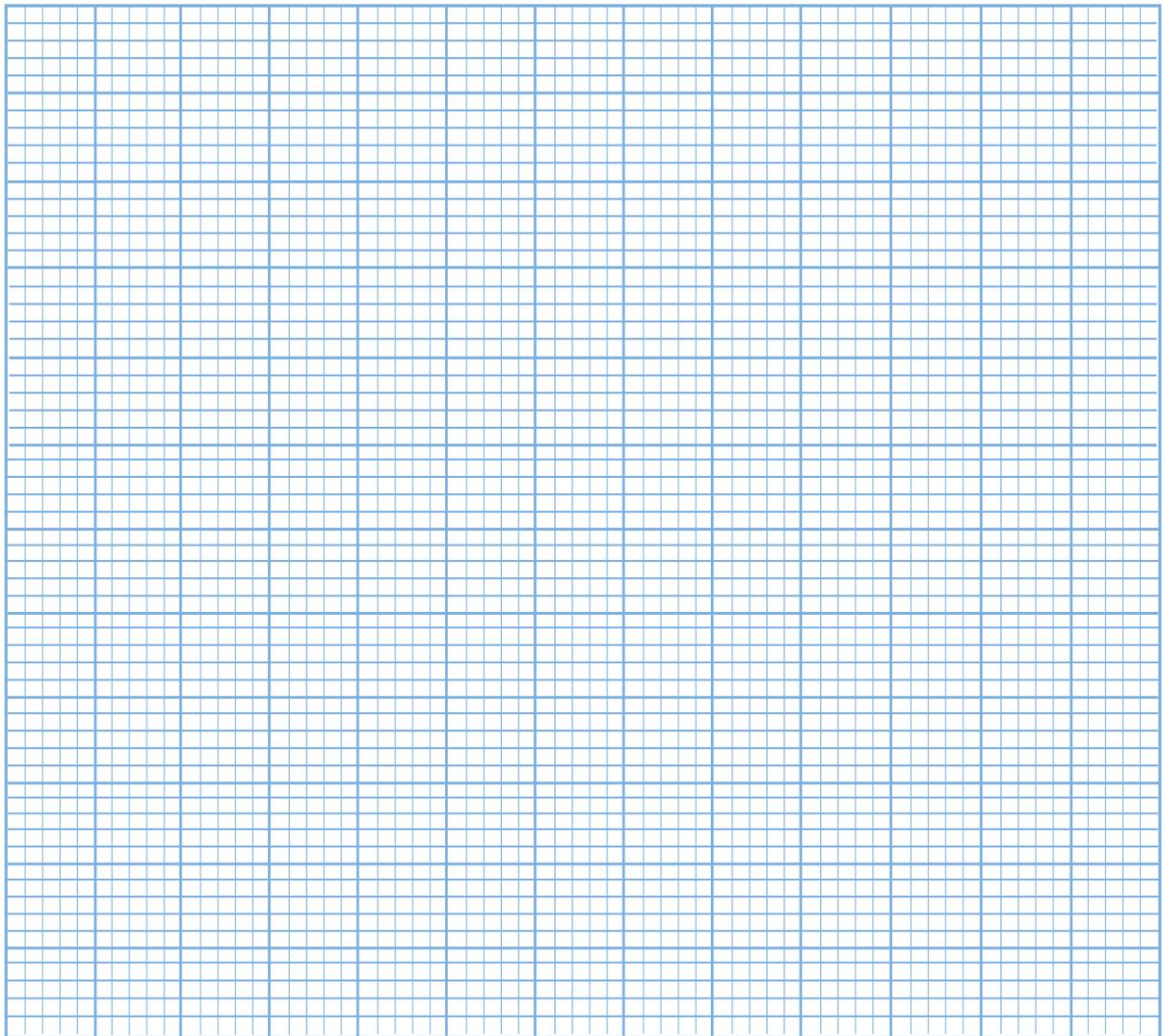
Question 1

(14 marks)

A Year 2 teacher wanted to know if the amount of sugar intake a student had affected the students number of hours sleep a student had each night. She asked the parents to fill in a survey of number of hours slept and amount of sugar consumed. She collated the results below.

Sugar Intake (grams)	Number of hours sleep
16	10
18	9
20	7
24	8
26	6
16	11
10	12

(a) Draw a graph using the results above.



(6 marks)

(b) Calculate the following for sugar intake.

(i) Mean

(ii) Median

(2 marks)

(c) Identify and describe the relationship shown in the graph.

(3 marks)

(d) (i) Identify the data collection method the teacher used.

(1 mark)

(ii) Identify **one (1)** advantage and **one (1)** disadvantage of the method used.

(2 marks)

Question 2

(22 marks)

Harold was telling his grandmother about his football match on the weekend, he had scored 4 goals and received player of the match award and a free pizza.

- (a) Explain using Atkinson and Shiffrin, how Harold's grandmother would store this memory into her long term memory.

(8 marks)

- (b) When they sat down to eat pizza for dinner, Harold's grandmother asked how they were so lucky to get a free pizza for dinner. Harold was concerned how she had forgotten his story already.

Identify and explain **three (3)** types of forgetting his grandmother could be experiencing.

(6 marks)

- (c) This was not the only time his grandmother had forgotten one of his stories, so they decided to go to the doctor and found that she had a degeneration disease that was causing her memory loss.

- i) Identify the disease that causes degeneration of memory loss.

(1 mark)

- (ii) State **two (2)** impacts the above disease could have on her behaviour.

(2 marks)

- (d) After his grandmother's diagnosis, Harold did some research to see if there was anything that could help his grandmother. He found a study that showed 30 minutes of physical activity a day could help decrease memory loss. The study involved 200 patients with degenerative memory loss and half the patients would walk 30 minutes a day for 2 months and the other half would not. They tested the memory score before and after the trial by giving the patients a memory questionnaire.

- (i) Write a directional hypothesis for the above study

(2 marks)

- (ii) Identify the type of sampling method the study used.

(1 mark)

- (iii) Identify **one (1)** advantage and **one (1)** disadvantage for the above sampling method.

(2 marks)

- (e) Explain the process of perception.

(7 marks)

Question 3

(22 marks)

- (a) Explain the difference between Maslow's deficiency needs and growth needs.

(4 marks)

- (b) Explain the **three (3)** expanded hierarchy needs from Maslow.

(6 marks)

- (c) Helen moved school when she was 15, her family moved into a big new house after her father's promotion at the local hospital. She came home from school upset telling her mum she hadn't met any new friends. Her mum told her even though she was shy, give it time and she will meet new friends.

Explain how Maslow would explain Helen's needs.

(6 marks)

- (d) Describe **one (1)** contribution of Maslow's theory.

(2 marks)

- (e) Describe **two (2)** limitations of Maslow's theory.

(4 marks)

Question 4

(20 marks)

Alexa went out for dinner on her birthday to her favourite seafood restaurant. The next day she woke up feeling terrible, nauseous and couldn't stop vomiting. Her sister asked her the next week if she wanted to go back to the restaurant, Alexa immediately started feeling sick and said she couldn't go back to that restaurant again.

- (a) Explain using the classical conditioning theory Alexa's behaviour.

(10 marks)

- (b) Using Alexa's scenario explain the following terms:

- (i) Stimulus generalisation

(2 marks)

- (ii) Extinction

(2 marks)

(iii) Spontaneous recovery

(2 marks)

(c) Explain the difference between classical conditioning and operant conditioning.

(4 marks)

Question 5

(19 marks)

He et al 2020 investigated the Effect of restricting bedtime mobile phone use on sleep, arousal, mood and working memory.

(a) Identify the following for the above study:

(i) Aim

(1 mark)

(ii) Method

(4 marks)

(iii) Key findings

(2 marks)

(iv) One contribution

(1 mark)

(v) One limitation

(1 mark)

(b) Fill in the following table on the stages of sleep.

(10 marks)

Characteristic	NREM Sleep cycle				REM sleep
	Stage 1	Stage 2	Stage 3	Stage 4	
Sleep state					
Heart Rate					

PSYCHOLOGY THEORIST SUMMARY

THEORISTS	CHARACTERISTICS	STRENGTHS	LIMITATIONS
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Bandura

Deci and Ryan			
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Maslow

THEORISTS	AIM	METHOD	KEY FINDINGS	CONTRIBUTIONS	CRITICISMS
Craik and Tulving					
Pavlov					
Watson and Rayner					
Thorndike					

THEORISTS	AIM	METHOD	KEY FINDINGS	CONTRIBUTIONS	CRITICISMS
Skinner					
Bandura, Ross and Ross					
He et al					

PSYCHOLOGY THEORIST SUMMARY ANSWERS

THEORISTS	CHARACTERISTICS	STRENGTHS	LIMITATIONS
Bandura	<p>Observational learning: learning a behaviour by watching and copying a person's behaviour</p> <p>Attention: individuals need to focus on the behaviour</p> <p>Retention: retain the information by making a mental representation of it</p> <p>Reproduction: action of the behaviour</p> <p>Motivation: individual needs to be motivated to produce the behaviour</p>	<p>Emphasis on cognitive processes on learning</p> <p>Explains how people learn new behaviours by watching others.</p>	<p>Ethical concerns of the aggressive behaviour.</p> <p>Gender bias using same-sex adults as the children</p>
Deci and Ryan	<p>1. competence the need to effectively deal with the environment around you, a person would have the skills and the judgement to interact with the environment. 2. Relatedness is the need to have affectionate relationships, a person needs to feel like they belong and have attachment to those around them. 3. Autonomy the need to feel independent, a person needs to feel in control of their behaviour and their own destiny, includes self-regulation of your own behaviour.</p>	<p>Theory can be put into place at workplaces, school setting, sport centres/theory has helped individuals understand motivation and wellbeing.</p>	<p>Theory is based on western cultures, individual motivations can vary, assessing motivation is subjective and can lead to bias</p>
Maslow	<p>Heirarchy of Needs:</p> <p>Physiological: food,water, sex, shelter</p> <p>Social/belonging: friendship, family, intimacy</p> <p>Esteem: confidence, achievement, respect for others</p> <p>Social Actualisation: morality, creativity, acceptance.</p>	<p>contributions to teaching and classroom management. Ensuring students bottom needs are met before they can reach their cognitive needs.</p>	<p>Maslows Heirarchy of needs are based on his opinions of who is self actualised, this leads to bias and low validity of the results. Bias towards highly educated white males this makes it difficult to generalise to the wider population. Small sample size.</p>

THEORISTS	AIM	METHOD	KEY FINDINGS	CONTRIBUTIONS	CRITICISMS
Craik and Tulving	investigated how deep and shallow processing effects memory recall.	They produced 60 words in either a deep way (semantic) or a shallow way (visual and auditory processing)	They found that participants recalled more words if the words were delivered in a semantic processing rather than when they were delivered using visual and auditory processing. Semantic processing used more elaborative rehearsal to allow for longer and more accurate recall of words.	Influenced our understanding of memory processes and how we encode, store and retrieve information	the study did not explain how deeper processing results in better recall and deeper processing takes more effort than shallow processing.
Pavlov	Original aim was to investigate dogs, he then found an association between dogs salivation and a learned stimuli of the bell and researched the association of learning	Pavlov attached a tube to the dogs salivary glands the dog was kept in a small room to measure and to collect saliva, he knew he would collect saliva when the meat powder came out but not when the bell was rung on its own. He then paired these two together for multiple trials and collected saliva, he then removed the meat powder and found he could still collect saliva from the bell on its own	Pavlov first set out to study a dog's digestive system. He soon found that when he placed food in front of the dog it would salivate. The dog's unconditioned stimulus is food and its unconditioned response was to salivate. Pavlov then paired a bell (a neutral stimulus the dog gave no response to) with the food. Over time Pavlov found that the dog would salivate with only the sounds of the bell (without being presented with the food). Therefore the conditioned stimulus became the bell and the conditioned response became the dog's salivation.	Found that learning was through association	Can not be used with human subjects Humans thinking skills can interrupt the learning process

THEORISTS	AIM	METHOD	KEY FINDINGS	CONTRIBUTIONS	CRITICISMS
Watson and Rayner	To investigate if classical conditioning could bring on a phobia in a child	Watson paired a white rat with a loud noise.	Watson paired a white rat with a loud noise. Albert's unconditioned response to the unconditioned stimulus (loud noise) was fear. The neutral stimulus (white rat) was then paired with the loud noise. The rat would then cause Albert fear without the presence of the loud noise. Therefore the conditioning stimulus became the white rat and the conditioned response became the fear.	Showed that classical conditioning can apply to humans	No control subject, no objective measurements used. Discussion whether it was a phobia and not a fear. As only one person can not be generalized.
Thorndike	The aim to find out how behaviour is influenced by its consequences	Thorndike placed a cat inside a puzzle box and a scrap of fish outside the box to encourage the cat to escape and reach the fish.	Law of effect: behaviours that offer rewards will be continued, whereas behaviours that give unpleasant consequences will not continue.	Introduced concept of reinforcement, further studies followed on learning	Unable to generalize to the real world/ humans as was set in laboratories and animals/ oversimplification of behaviour, there are many other influences to ones behaviour
Skinner	To investigate how behaviours are influenced by consequences	Skinner had a box with levers that when pressed could present food to the animals; another lever would present the animal with a buzzer	. He found that the animals would learn to stop pressing the button that would produce the buzzer and would press the lever to be presented with food.	Influenced child development and how behaviours can be learned and adapted through reinforcement and punishments	Puts stress on the animal, questioned if the animal actually understands their behaviours, cannot be generalized to real life situations.

THEORISTS	AIM	METHOD	KEY FINDINGS	CONTRIBUTIONS	CRITICISMS
Bandura, Ross and Ross	To investigate if social behaviours can be acquired through observation	Groups of children were exposed to an adult either playing with a bobo doll aggressively or non-aggressively	<p>Discovered that when children watched a videotape of an adult violently hitting a bobo doll, they would repeat the behaviour when presented with the same bobo doll.</p> <p>Observational learning – watching behaviour and then copying it.</p> <p>Albert Bandura revised his original observational learning theory using the bobo doll from a person watching behaviour and copying the behaviour, to people having the ability to choose whom they wish to copy. Learners will copy those people who are important to them and behaviours that match their beliefs and values (children will copy idols, family and peers as these are important figures to them). Children would not copy behaviours that did not follow their own values.</p>	<p>Displays how violence in the media can have an effect on children</p> <p>Experimental studies allows for replication.</p>	<p>The children and adults were strangers which is not normal for copying behaviours, study wasn't able to show long term effects only a snap shot at a specific time, unethical</p>

THEORISTS	AIM	METHOD	KEY FINDINGS	CONTRIBUTIONS	CRITICISMS
He et al	Assess the effect of restricting bedtime mobile phone use on sleep, arousal, mood and working memory.	38 participants were randomly allocated as the intention group who were told they could not use their mobile phones for 30 minutes before bed or control group where no instructions were given. Sleep habits, quality of sleep and mood were recorded using sleep diaries, Pittsburgh sleep quality index and pre-sleep arousal scale and the working memory was tested.	Restricting mobile phone use before bed increased sleep duration and quality of sleep, improved working memory and reduced pre-sleep arousal.	mobile phone use can affect working memory and cognitive functions/ results showing reducing mobile phone use before bed can reduce pre-sleep arousal can be used to focus on patients with insomnia which show a high pre-sleep arousal.	The data they collected was too subjective (sleep diary), objective data collection should have also been used/smaller sample size.



CHAPTER 1 – SCIENTIFIC INQUIRY

Terminology

- (i) *Controlled variable: different factors that are kept consistent between the control and experimental groups.*
- (ii) *Correlation: the strength of relationship between two different variables.*
- (iii) *Dependent variable: the variable that is measured.*
- (iv) *Experimental: variables are manipulated in research (independent and dependent variable).*
- (v) *Hypothesis: a scientific prediction about the relationship between the independent and dependent variable.*
- (vi) *Independent variable: the variable that is changed.*
- (vii) *Mean: average score found by the sum of a set of numbers divided by the number of scores in the set.*
- (viii) *Median: middle number when scores are arranged in numerical order.*
- (ix) *Non-experimental: descriptive research through observations or interpretations.*
- (x) *Non-scientific: data collection through observations.*
- (xi) *Placebo: an inert substance that does not cause physiological or physical symptoms which is used as a control in testing.*
- (xii) *Population: a particular group of people.*
- (xiii) *Privacy: the participant's information will not be shared without participants' permission.*
- (xiv) *Reliability: the same results are obtained when retested.*
- (xv) *Sample: a small group of people studied which is a sub set of a larger group/population.*
- (xvi) *Scientific: data collection through experimental research using hypothesis.*
- (xvii) *Validity: the test measures what it is supposed to measure.*

1.1 Ethical Guidelines and Practices for Psychological Research

1. *The principal will need to explain to both parents and students what is involved in his experiment so they are aware of what it entails. As the students are under the age of 18 permission from parents and students will also be needed to be collected.*
2. *Purpose of study, risks of the study and what is involved is needed to be explained to participant and then they need to have permission by participant and parents if they are under the age of 18.*
3. *The professor would need to ensure he has ensured the following: Replacement: Professor must ensure they have exhausted all possibilities to undergo their experiment without laboratory animals. If they cannot they need to justify their research and need for use of animals. Reduction: Professor must try and reduce the number of animals used in the experiment and only use the absolute minimum of animals that is necessary to gain results. Refinement: Professor must ensure they minimise harm and any suffering of the animal, they must minimise the risk and ensure animal welfare is the utmost importance.*
4. *Deception occurs when the participants are unaware of the true propose of the experiment as if they did it may alter the results. Debrief must occur after the experiment, to ensure participants are aware of the what the study was about and offer counselling to the participants to ensure no harm is involved.*
5. *Confidentiality includes how the information is collected and stored. Information from participants need to ensure that participant names are not used and that information is stored in a secure location and properly disposed of when no longer required.*

1.2 Formulating Research

1.

- (a) To investigate if time of a lesson effects a student's results in class.
 (b) IV: Monday morning class vs Friday afternoon class, DV: Results in a small content quiz, CV: Same content on quiz, same class EV: how much study the students have done prior to the quiz
 (c) Students who take the quiz Monday morning would perform higher than the students who take the quiz on Friday afternoon.

2.

- (a) To investigate if meditation effects student exam results
 (b) IV: meditation vs no meditation, DV: exam results, CV: same subject, same exam paper EV: how much study and preparation the students had
 (c) The Year 12 students who had meditation before each class would have higher semester one examination results, than those students who did not have meditation before class.
 (d) experimental group: meditation group, control group: non meditation group

3.

- (a) To investigation if personality effects a person's IQ
 (b) IV: extravert vs introvert personality, DV: IQ score, CV: type of personality test, type of IQ score, EV: perception of self for the personality test
 (c) The women who are extraverts will have a higher IQ score than those women who are introverts.

4.

- (a) To investigate the type of learning style which is best to teach capital cities.
 (b) IV: visual strategy vs auditory lessons, DV: scores on the capital cities test, CV: same content, same class, EV: prior knowledge of capital cities
 (c) The class that learnt capital cities with a visual strategy would score higher on their test than those that learnt capital cities on an auditory strategy.

5.

- (a) To investigate if caffeine effects the result of a driving stimulus test.
 (b) IV: caffeine coffee vs decaffeinated coffee DV: results of a driving stimulus test, CV: type of stimulus test, amount of coffee, EV: how much coffee they consume regularly, driving ability.
 (c) The males that drink caffeinated coffee would perform lower on a driving stimulus test than those males that drink decaffeinated coffee.
 (d) Experimental group: those that drank caffeinated coffee Control group: decaffeinated coffee

6.

- (a) Qualitative inquiry question
 (b) What is the relationship between caffeine and mental wellbeing?

1.3 Methodology

1.

TYPE OF RESEARCH	METHOD	STRENGTH	LIMITATION
Experimental	Variables are manipulated in research (independent and dependent variable).	Specific conclusions Allows for cause and effect	No explanation of results Time consuming
Non-experimental	descriptive research Through observations or interpretations.	Cost effective Can study past events	Can not observe single variables Researcher bias
Operational	Involves individuals observing groups or individuals in their natural environment	Can reduce extraneous variables of artificial environments	Observer bias, observers sees only what they want to see
Case study	Detailed study of a single person or group of people	Gives specific information about a particular phenomenon	Time consuming Difficult to generalise to wider population
Correlation	Looking for a relationship between two variables (behavioural)	Can determine strength and direction of research Can use multiple data collections	Does not show influence of variables on each other Time consuming extraneous variables

TYPE OF RESEARCH	METHOD	STRENGTH	LIMITATION
Longitudinal	Studying same participants over a period	Shows development of participants	Lose participants Time consuming Practice effect expensive
Cross-sectional	Participants differ in age, but tested at same point in time	Quick easy	Cohort effect (does not look at changes in generations) Doesn't study developmental differences

2.

SELECTION OF PARTICIPANTS	METHOD	STRENGTH	LIMITATION
Convenience sampling	Participants are selected based on ease of access to them	Easy to obtain	Sample will be biased
Snowballing	People are recruited from the original sample to form a bigger sample, can be helpful when looking for specific traits in your sample	Quick Cost effective	Smaller groups so could be sampling bias Lack of cooperation
Random sampling	Participants selected randomly so all of the population has an equal chance of being selected	Time efficient Cost efficient	Not a representation of the population
Stratified sampling	Population is broken into strata based on certain characteristics Then a number of these are selected for the sample	Representative of the population	Takes a lot of time and money

3.

- (a) *Cross-sectional as he took different cohorts (year 7-12) at the same period of time.*
- (b) *convenience sampling was used as he took the participants from ease of access as the first 20 who entered the school*

1.4 Data Collection

1.

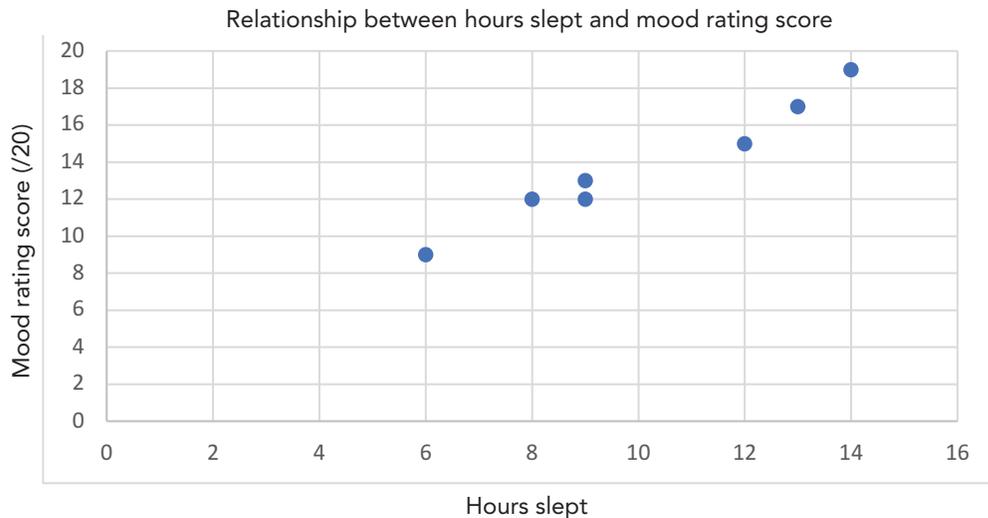
TYPE OF DATA COLLECTION	DESCRIPTION	STRENGTH	LIMITATION	EXAMPLE
Qualitative	Data that is descriptive, that is not measured in numbers and cannot be statistically analysed	Can explain the reason for responses Detailed responses	Can not be statistically analysed Time consuming Dishonest responses	Open-ended responses.
Subjective Quantitative	Information measured in numbers and can be statistically analysed using fixed response questionnaires	Can be statistically analysed	Relies on honesty of participants	Checklists, fixed responses-rating scales, likert scales
Objective Quantitative	Information measured in numbers, using physiological testing measures.	1. Numerical 2. Can be statistically analysed 3. Participants can not lie	1. Costly	Physiological measures: blood pressure, hormone levels

2.

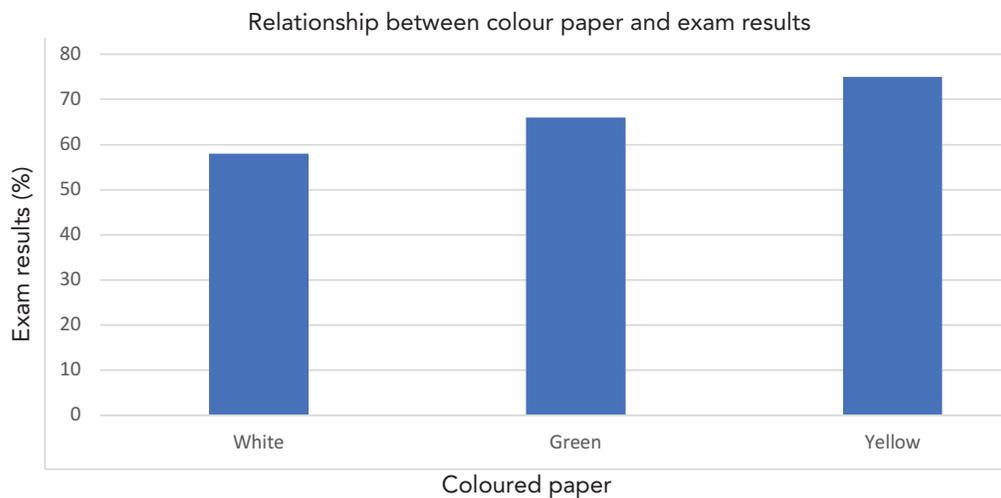
- (a) *the principal used qualitative data, allowing him to get descriptive answers about how they felt about the new menu.*
- (b) *He could have used a subjective quantitative questionnaire, this would have provided him with statistical data to allow for easy and clear results of their attitudes towards the canteen food.*

1.5 Processing and Analysing Data

1.



2.

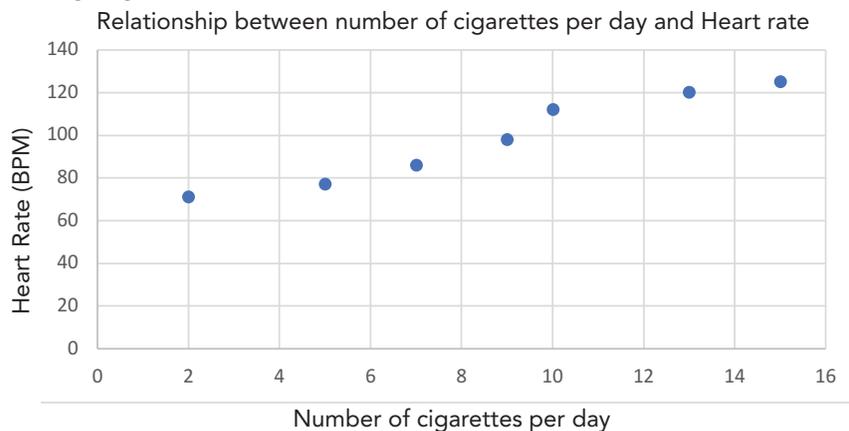


1.6

1.

- (a) strong positive
- (b) weak positive
- (c) no correlation
- (d) weak negative
- (e) strong negative

(f)



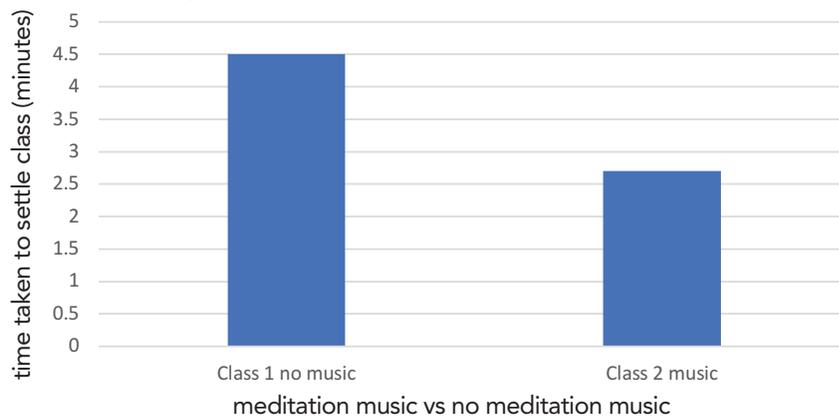
- (g) The graph shows a strong positive correlation, The research can say that as number of cigarettes per day increases, heart rate also increases.
2. Mean: 15.4 years
 Mode: 16 years
 Median: 16 years

3. Mean: 11 months
 Mode: 11 months
 Median: 11 months

1.7 Scientific Inquiry

- (a) To investigate if meditation music has an effect on pre primary students ability to settle down after lunch.
- (b) IV: meditation music vs no meditation music, DV: time take to settle down after lunch, CV: time of day experiment was taken, age EV: what they ate for lunch, what type of activities they did at lunch time.
- (c) Informed consent: each students parent will need to sign permission to be a part of the investigation and be fully aware of what the investigation entails, Right to withdrawal: students can leave at any time without consequences, Voluntary participation: students are willing to partake in the experiment, confidentiality, psychologist must ensure privacy of the participant's by protecting the information collected throughout the experiment
- (d)
- (i) experimental as it is looking at cause and effect, involves manipulation of variables (independent variable and dependent variable)
- (ii) Strength: Cost effective Can study past events, limitations Can not observe single variables Researcher bias
- (e) convenience sampling, participants were selected based on ease of access to them.

- (f) Relationship between meditation music and time taken to settle a class



CHAPTER 2 – PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING: MEMORY

Terminology

- (i) Declarative memory: the memory of facts and experiences.
- (ii) Encoding: processing of information into a form suitable for storage by the brain.
- (iii) Procedural memory: the memory of how we do things.
- (iv) Retrieval: getting information out of stored memory
- (v) Storage: retention of information.

Review Questions

1. Sensation is when information has come from our senses, for example light energy enters our eyes and receptors respond to this stimulus light is then converted to electromagnetic energy to form action potentials these nerve impulses are transmitted to the brain via the optic nerve and received via the primary visual cortex and interpreted in the brain whereas perception is being able to interpret that information from our senses. This occurs through 3 stages, selection, organization and interpretation.
2. The cocktail party effect, is an example of selective attention: when an individual focuses their awareness on a limited amount of what you are experiencing, hence like at a cocktail party. You can hold a conversation with a person even though there is music, other conversations going on around you. The cocktail party effect is the ability to attend selectively to one voice among many.

3.
 - (a) *Sensory memory*
 - (i) *Duration: up to 5 seconds*
 - (ii) *Capacity: all sensory information*
 - (iii) *Encoding: depending on the senses*
 - (b) *Short term memory*
 - (i) *Duration: up to 30 seconds*
 - (ii) *Capacity: Millar's magic number 7 plus or minus 2 pieces of information*
 - (iii) *Encoding: auditory*
 - (c) *Long term memory*
 - (i) *Duration: unlimited*
 - (ii) *Capacity: unlimited*
 - (iii) *Encoding: semantic*
4. *Procedural memory is the memory of how we do things (ride a bike). Declarative memory is the memory of facts and experiences (your 7th birthday)*
5. *Forgetting is the inability to remember or retrieve information. Retrieval failure is the inability to recover information. Interference is when information retrieved is disrupted by other information (retrieving the memory of your 5th birthday, when trying to retrieve your 7th birthday). Motivated forgetting is the inability to recover information when there is an advantage to not retrieving the information and decay is the fading away of memories over time.*
6. *Amygdala: The amygdala regulates fear and emotions, it plays a role in how memories are stored. It helps to form emotional memories and plays an important role in forming fear emotions. It is involved in implicit and procedural memories (unconscious and does not require intentional recall, the how we do things)*
Hippocampus: The hippocampus is responsible for explicit memories (conscious retrieval for example recall) and the declarative memory (facts and events)
Cerebellum: Procedural memories are processed and stored here. It also has a role in classical conditioning and how to perform motor tasks.
7. *Baddley and Hitch's central executive is split into two sections: Phonological loop, which is the rehearsal of sounds and the visuo-spatial sketchpad, which is the processing of information in visual form.*
8. *Recall: searching memory for previously learnt and memorised information (recalling information for a test).*
Recognition: sense of familiarity, having to identify the information at a later time (faces).
Re-learning: inability to recall or recognize the information, so re-learning the information at a later occasion (a language).
9. *Maintenance rehearsal is remembering a piece of information for immediate use by repeating the information, it will not be transferred to the long term memory (for example remembering a person's mobile phone number). Elaborative rehearsal is actively processing the information, making the information more meaningful so you can store it in your longterm memory.*
- 10.

CAUSE OF MEMORY LOSS	DISORDER	IMPACT ON BEHAVIOUR AND EMOTION
trauma	Chronic Traumatic Encephalopathy (CTE)	Brain disease associated with repeated traumatic brain injuries, can cause memory loss, impulse control, aggression, depression, progressive dementia
Degeneration	Alzheimers Disease	Destroys memory and thinking skills and eventually the ability to perform simple tasks. Patients can get upset, worried and angry, depressed. They can be seen hiding things or imagining things. Aggressive and misunderstanding towards other people.
Drug induced	Wernicke-Korsakoff Syndrome	Lack of vitamin B1 due to severe alcoholism and can cause confusion, inability to coordinate voluntary movements and eye problems, inability to form new memories and memory loss

11. *Craik and Tulving investigated how deep and shallow processing effects memory recall. They produced 60 words in either a deep way (semantic) or a shallow way (visual and auditory processing). They found that participants recalled more words if the words were delivered in a*

semantic processing rather than when they were delivered using visual and auditory processing. Semantic processing used more elaborative rehearsal to allow for longer and more accurate recall of words. Some limitations of their study include the study did not explain how deeper processing results in better recall and deeper processing takes more effort than shallow processing.

12.

- (a) *Craik and Tulving aimed to investigate how deep and shallow processing effects memory recall.*
- (b) *Contributions are that they influence our understanding of memory processes and how we encode, store and retrieve information. Criticism includes the study did not explain how deeper processing results in better recall and deeper processing takes more effort than shallow processing.*

CHAPTER 3 – PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING: LEARNING

Terminology

- (i) *Behaviour modification: uses classical and operant conditioning. Using reinforcements to continue behaviours and punishments to reduce unwanted behaviours.*
- (ii) *Classical conditioning: learning through association between two different stimuli*
- (iii) *Conditioned response (CR): a learned response to a stimulus.*
- (iv) *Conditioned stimulus (CS): a stimulus that has been learned (conditioned) to trigger a certain response.*
- (v) *Neutral stimulus (NS): a stimulus that has no effect on the unconditioned response.*
- (vi) *Observational learning: copying behaviour by watching others and repeating the behaviour.*
- (vii) *Operant conditioning: learning through consequences of reward and punishment.*
- (viii) *Punishment: causes certain behaviours to occur less frequently.*
- (ix) *Reinforcement: causes desired behaviours to occur less frequently.*
- (x) *Token economy: an artificial system of reward and reinforcement given to continue desired behaviours.*
- (xi) *Unconditioned stimuli (UCS): is automatically triggered by an unconditioned stimulus.*
- (xii) *Unconditioned response (UCR): a stimulus that does not need to be learned (is automatic) to trigger a response.*

Review Questions

1. *UCS – violent scene UCR – being scared NS – scary music CS – scary music CR – being scared*
 2. *The dog has paired the TV being turned on with dinner time and over time, the TV being turned on has initiated the response of being fed.*
UCS – dinner time UCR – being fed NS – TV turns on CS – TV turns on CR – being fed
 3. *Classical conditioning is the learning through association between two different stimuli. Operant conditioning is learning through consequences of reward and punishments.*
 4. *Pavlov first set out to study a dog's digestive system. He soon found that when he placed food in front of the dog it would salivate. The dog's unconditioned stimulus is food and its unconditioned response was to salivate. Pavlov then paired a bell (a neutral stimulus the dog gave no response to) with the food. Over time Pavlov found that the dog would salivate with only the sounds of the bell (without being presented with the food). Therefore the conditioned stimulus became the bell and the conditioned response became the dog's salivation.*
 5. *Watson paired a white rat with a loud noise. Albert's unconditioned response to the unconditioned stimulus (loud noise) was fear. The neutral stimulus (white rat) was then paired with the loud noise. The rat would then cause Albert fear without the presence of the loud noise. Therefore the conditioning stimulus became the white rat and the conditioned response became the fear.*
 6. *Systematic desensitisation would consist of the patient making a list of the least fear-provoking situation to the most fear provoking (seeing the word rat, holding a rat). Introduction to the items on the list is called a graded exposure. They would then use relaxation techniques to work through from the least fear provoking activity and when only feeling comfortable moving on to the next activity in the list, until the most fear provoking activity is attempted.*
- 7.
- (i) *Reinforcement causes desired behaviours to occur more frequently.*
 - (ii) *Punishment causes certain behaviours to occur less frequently.*

- 8.
- Positive reinforcement.
 - Positive punishment.
 - Negative reinforcement.
 - Negative punishment.
9. Skinner had a box with levers that when pressed could present food to the animals; another lever would present the animal with a buzzer. He found that the animals would learn to stop pressing the button that would produce the buzzer and would press the lever to be presented with food.
10. Token economies are an artificial system of reward and reinforcement given to continue a desired behaviour (such as stickers or fake money). These can be collected and used to collect a secondary reinforce (after 10 stickers you can have an extra 10 minutes of play time).
11. Albert Bandura discovered that when children watched a videotape of an adult violently hitting a bobo doll, they would repeat the behaviour when presented with the same bobo doll. *Observational learning – watching behaviour and then copying it.*
- 12.
- stimulus generalisation: when similar stimuli to the conditioned stimulus can cause the same conditioned response e.g Watson's little Albert was also scared of fluffy white teddy bears
 - discrimination: being able to distinguish between the neutral stimuli and other stimuli that has not been paired with the unconditioned stimulus
 - extinction: when the conditioned stimulus is repeated multiple times and the response no longer occurs.
 - spontaneous recovery: when a response has been extinct and then reappears after a break in reconditioning sessions.
- 13.

THEORIST	THEORY	AIM OF STUDY	KEY FINDINGS	CONTRIBUTIONS	LIMITATIONS
PAVLOV	Classical conditioning	Original aim was to investigate dogs, he then found an association between dogs salivation and a learned stimuli of the bell and researched the association of learning	Pavlov first set out to study a dog's digestive system. He soon found that when he placed food in front of the dog it would salivate. The dog's unconditioned stimulus is food and its unconditioned response was to salivate. Pavlov then paired a bell (a neutral stimulus the dog gave no response to) with the food. Over time Pavlov found that the dog would salivate with only the sounds of the bell (without being presented with the food). Therefore the conditioned stimulus became the bell and the conditioned response became the dog's salivation.	Found that learning was through association	Can not be used with human subjects Humans thinking skills can interrupt the learning process
WATSON and RAYNER	Classical conditioning	To investigate if classical conditioning could bring on a phobia in a child	Watson paired a white rat with a loud noise. Albert's unconditioned response to the unconditioned stimulus (loud noise) was fear. The neutral stimulus (white rat) was then paired with the loud noise. The rat would then cause Albert fear without the presence of the loud noise. Therefore the conditioning stimulus became the white rat and the conditioned response became the fear.	Showed that classical conditioning can apply to humans	No control subject, no objective measurements used. Discussion whether it was a phobia and not a fear. As only one person can not be generalized.

THEORIST	THEORY	AIM OF STUDY	KEY FINDINGS	CONTRIBUTIONS	LIMITATIONS
THORNDIKE	Operant conditioning	The aim to find out how behaviour is influenced by its consequences	<p>Thorndike placed a cat inside a puzzle box and a scrap of fish outside the box to encourage the cat to escape and reach the fish.</p> <p>Law of effect: behaviours that offer rewards will be continued, whereas behaviours that give unpleasant consequences will not continue.</p>	Introduced concept of reinforcement, further studies followed on learning	Unable to generalize to the real world/ humans as was set in laboratories and animals/ oversimplification of behaviour, there are many other influences to ones behaviour
SKINNER	Operant conditioning	To investigate how behaviours are influenced by consequences	<p>Skinner had a box with levers that when pressed could present food to the animals; another lever would present the animal with a buzzer. He found that the animals would learn to stop pressing the button that would produce the buzzer and would press the lever to be presented with food.</p>	Influenced child development and how behaviours can be learned and adapted through reinforcement and punishments	Puts stress on the animal, questioned if the animal actually understands their behaviours, cannot be generalized to real life situations.
BANDURA, ROSS AND ROSS	Social learning theory	To investigate if social behaviours can be acquired through observation	<p>Discovered that when children watched a videotape of an adult violently hitting a bobo doll, they would repeat the behaviour when presented with the same bobo doll. Observational learning – watching behaviour and then copying it.</p> <p>Albert Bandura revised his original observational learning theory using the bobo doll from a person watching behaviour and copying the behaviour, to people having the ability to choose whom they wish to copy. Learners will copy those people who are important to them and behaviours that match their beliefs and values (children will copy idols, family and peers as these are important figures to them). Children would not copy behaviours that did not follow their own values.</p>	Displays how violence in the media can have an effect on children Experimental studies allows for replication.	The children and adults were strangers which is not normal for copying behaviours, study wasn't able to show long term effects only a snap shot at a specific time, unethical

CHAPTER 4 – PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING: MOTIVATION AND WELLBEING

Terminology

- (i) *Amotivation: the lack of drive to engage in an activity*
- (ii) *Deficiency needs: the need for basic survival*
- (iii) *Extrinsic Motivation: a desire to perform a behaviour to gain rewards or avoid punishment*
- (iv) *Growth Needs: the need to strive for full potential.*
- (v) *Intrinsic motivation: a desire to perform a behaviour for your own benefit.*
- (vi) *Self-actualisation: the process where an individual reaches their full potential.*

Review Questions

1. *Deficiency needs are the need for basic survival and include the physiological needs of food and shelter and safety needs of security and to feel safe. Deficiency needs come from a lack of something and motivation grows when these need are not met. These needs need to be met before being able to move on the growth needs. Growth needs come about when a person feels the need to reach their full potential. Motivation comes from having a desire to be self-actualised.*

2.

NEED	EXPLANATION	EXAMPLE
Physiological	Biological need for survival	Food, water, sex, shelter
Safety	Need to feel safe and secure, stable that the world is organised	Health, employment, family
Social/belonging	Need to avoid loneliness and to feel love and be accepted	Friendship, family, intimacy
Esteem	Need for self-esteem, achievement, and respect	Confidence, achievement, respect for others
Social Actualisation	Need to live up to ones full potential	Morality, creativity, acceptance

3. *Maslow expanded his needs to cognitive needs and aesthetic needs, which he placed between esteem and self-actualisation. Cognitive needs involves a person's love for knowelsdge so through education and analysis. Aesthetic needs involves a person's desire to appreciate beauty through art and creation. The last expanded need is, transcendence needs which is a step above self-actualisation.*
 4. *Self actualization is ones need to live up to their full potential, can include creativity, morality, acceptance purpose, problem solving and spontaneity.*
 5. *Maslow would place Beau at the love/belonging stage as he has a close group of friends and has acceptance and close relationships.*
- 6.

SOURCE OF MOTIVATION	EXPLANATION	EXAMPLE
Physiological	Biological motive	Hunger, thirst, sex, sleep When we are hungry we eat
Cognitions	Behaviour motives driven by our beliefs and values	Self efficacy, goal setting
Emotion	Positive or negative emotions drive us to continue activities that give us positive emotions or resolve and face those that give us negative emotions	Positive emotions: joy, excitement Negative emotions – fear and anger
Social	Social interactions and relationships drive us as we have a sense to belong	Maintain relationships and gain social acceptance

7. *Limitations: Maslow's Heirarchy of needs are based on his opinions of who is self actualised, this leads to bias and low validity of the results. Bias towards highly educated white males this makes it difficult to generalise to the wider population. Small sample size.*
8. *Strengths include contributions to teaching and classroom management. Ensuring students bottom needs are met before they can reach their cognitive needs.*
9. *Amotivation: the lack of drive to engage in an activity*
Extrinsic motivation: a desire to perform a behaviour to gain rewards or avoid punishment, if my parents pay me money I will study and pass my exams
Intrinsic motivation: a desire to perform a behaviour for your own benefit, I will study because I love to learn and score high marks.
10. *1. competence the need to effectively deal with the environment around you, a person would have the skills and the judgement to interact with the environment. 2. Relatedness is the need to have affectionate relationships, a person needs to feel like they belong and have attachment to those around them. 3. Autonomy the need to feel independent, a person needs to feel in control of their behaviour and their own destiny, includes self-regulation of your own behaviour.*
11. *Theory is based on western cultures, individual motivations can vary, assessing motivation is subjective and can lead to bias*
12. *Theory can be put into place at workplaces, school setting, sport centres/theory has helped individuals understand motivation and wellbeing.*

13.

FACTOR	EXPLANATION
Autonomy	Self-determination and independence, the ability to regulate your own behaviour and avoid peer pressure
Environmental mastery	Being able to feel that you can manage and deal with the environment around you
Personal growth	Growing and developing yourself. Reaching your potential by new experiences, learning
Positive relations with others	Feeling a connection and affections with others creating relationships out of trust and closeness.
Purpose in life	Having believes that give you purpose, feeling that your life past, present and future has purpose
Self-acceptance	Accepting yourself in all aspects of your life, having a positive attitude towards yourself.

14. Diener's model of subjective well-being is how a person evaluates their own life. It looks at Life satisfaction and affective balance (both positive affect and negative affect). Diener looked at a tripartite model where we evaluate our affect components both positive emotions (joy) and negative emotions (fear) and then our satisfaction with our life to determine our subjective wellbeing, usually through subjective questionnaires.

CHAPTER 5 – PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING: APPLICATIONS OF PSYCHOLOGY TO HEALTH

Terminology

- (i) Distress: a negative psychological response to a stressor
- (ii) Eustress: a positive psychological response to a stressor
- (iii) Non-rapid eye movement: one of two phases of sleep, with little to no eye movement
- (iv) Rapid eye movement: one of two phases of sleep, with eye movement
- (v) Sleep deprivation: when a person does not get enough sleep that is required

Review Questions

1. A physical or psychological response to a stressor that challenges a person's ability to cope. A stressor can be either internal or external source of tension
2. Distress is negative stress (from bad news) that causes a negative emotional state due to being overwhelmed by loss or threat, where is eustress is positive stress (good news, caused by an optimal level of stimulation, from being challenged or doing enjoyable tasks.
- 3
 - (a) Environmental: weather, noise, bright lights, traffic, psychological: health, illness, injury, pregnancy, social: rudeness in others, conflict with others, lack of social support, being lonely, not seeing people who are important to us, cultural: discrimination, being away from your culture, or adapting to new cultures.
 - (b) Nature, duration and strength
4. The General Adaptation syndrome (GAS) Model:
Alarm: The first stage of the GAS model when the person realises they are in danger/threat or faced with a stressor. This is when your sympathetic nervous systems starts and your fight or flight response is activated. In this phase, adrenalin, noradrenalin and cortisol is released to increase energy. Alarm can happen in two phases. The first one is shock, when your body temperature and blood pressure will drop. Your body acts as it has been injured as you become aware of what has happens, some people can faint at this phase. The second phase is countershock, this is when your sympathetic nervous system kicks in and your heart rate and breathing rates increase and more glucose is releases so you can fight or flight. If you deal with this situation you may not go onto the next stage.

Resistance: This is the second stage and your body will try to adapt, the parasympathetic nervous system will activate and reduce the heart rate and breathing rate. If stress continues the person will be on high alert and an increased state of arousal, using energy to try to deal with the situation. The energy conservation stage is if the person has not dealt with the stress and the continued release of cortisol in the body would decrease the persons immune system and the person would become withdrawn from society as they focus on the stress.

Exhaustion: If resistance continues the body would become depleted of its biological resources and become more susceptible to diseases. IF they have reached this stage they would become psychologically exhausted and could be showing signs of depression.

5. *Primary appraisals determine if the stress is relevant to our wellbeing. An individual will evaluate the stress as having either: no significance to the person or it is a desirable outcome (benign-positive) or threatening/harmful. If the appraisal is deemed stressful our response can be classified as harmful (damage has been done), threat (future harm) or challenge (positive outcome). Secondary appraisals determines how the individual will deal with the situation and try to make it work into a positive or desirable outcome. This can be either internal option (our own strength and power) or external option (seeking help from professionals or peers)*
6. *Problem-focused coping strategies can include: taking control, seeking information, evaluating pros and cons, problem solving. Emotion-focused coping strategies include: distancing/avoiding/seeking social support/talking to a friend/positive reappraisal*
7. *The social readjustment scale lists stressors/life events and gives each stressor a mean value score. Individuals are asked to add up the total scores of the stressors they had encountered in the last year. The scores will then display how much health problems you are likely to have due to your score.*
8. *Maladaptive coping strategies make things easier in the short term but harder in the long run and include: risk taking, substance abuse, mental and physical escape, procrastination, avoidance. Whereas adaptive strategies make things easier in the short term and also easier in the long term and include: problem solving, taking action to reduce stress, changing how we think about the stressor, changing expectations.*
9.
 - (i) *Aim: Assess the effect of restricting bedtime mobile phone use on sleep, arousal, mood and working memory.*
 - (ii) *Method: 38 participants were randomly allocated as the intention group who were told they could not use their mobile phones for 30 minutes before bed or control group where no instructions were given. Sleep habits, quality of sleep and mood were recorded using sleep diaries, Pittsburgh sleep quality index and pre-sleep arousal scale and the working memory was tested.*
 - (iii) *Key findings: Restricting mobile phone use before bed increased sleep duration and quality of sleep, improved working memory and reduced pre-sleep arousal.*
 - (iv) *Contributions: mobile phone use can affect working memory and cognitive functions/ results showing reducing mobile phone use before bed can reduce pre-sleep arousal can be used to focus on patients with insomnia which show a high pre-sleep arousal.*
 - (v) *Criticisms: The data they collected was too subjective (sleep diary), objective data collection should have also been used/smaller sample size.*
10. *Management of electronic devices: your bedroom should be clear of all electronic devices including tv, mobile phones and computers. Consistent sleep patterns: Going to bed and waking up at the same time every day gives your body a regular rhythm of sleep even on weekends. Creation of a healthy sleep environment: the bedroom should be quiet dark and at a cooler yet comfortable temperature and relaxing*
11. *Shift work, drugs, sleep environment, stressors*
- 12.

SLEEP DEPRIVATION	PSYCHOLOGICAL EFFECTS	PHYSIOLOGICAL EFFECTS
Partial sleep deprivation	Mood disturbances, lack of motivation, feeling of fatigue, slowed performance, difficulty paying attention, memory problems, impaired creativity	Hand tremors, headaches, lower energy levels, droopy eyelids, slower reflexes, difficulty focusing eyes
Chronic sleep deprivation	Depression, anxiety, insomnia,	Obesity, diabetes, heart disease, hypertension, heartburn

13. One sleep cycle usually occurs for 90 minutes and an adult will usually have 4–6 cycles per night. Stage 1 NREM is when you are falling asleep this is brief and usually only lasts between 30 seconds–10 minutes. It's a very light sleep before you start stage 2 NREM which will last around 20 minutes and true sleep begins. Stage 3 NREM transitions us into a deep sleep before going to NREM stage 4 which is our deepest sleep, this is 30 minutes usually in our first cycle, and as we go into our second cycle going backwards from stage 4, to stage 3 and into stage 2 and then straight to REM sleep skipping stage 1 of NREM sleep. Our REM sleep lasts for about 10 minutes and usually where we remember our dreams.

14.

Characteristic	NREM SLEEP CYCLE				REM SLEEP
	Stage 1	Stage 2	Stage 3	Stage 4	
Sleep State	Drifting in and out	Light sleep	Moderate deep	Deep sleep	Light sleep
Heart Rate	Irregular	Slower and more regular	Slower	Slow and regular	Increases and fluctuates
Eye Movement	Slow down	Stop	No movement	No movement	Move rapidly
Muscle Tension	Muscles twitch	Become relaxed	Completely relaxed	Relaxed	Immobilized



SOLUTIONS TO TRIAL TESTS

TRIAL TEST 1

1.
 - (a) To investigate if lollies could improve motivation (2)
 - (b)
 - (i) Lollies vs no lollies (1)
 - (ii) results in a motivation questionnaire. (1)
 - (iii) motivation questionnaire/maths students (2)
 - (c) Maths students (1) who received lollies before class (1) would have higher motivation scores (1) from the questionnaire than those students who did not receive lollies before class.
 - (d) Any 2 of the following (1 mark for name 1 mark for explanation)
Privacy- information is not shared without permission of participant.
Confidentiality- information is protected and no personal information is identified on the results.
Voluntary participation- participants must be willing to partake in the experiment.
Withdrawal rights- participant is able to leave the experiment at anytime without consequences.
Informed consent
2. Replacement: Professor must ensure they have exhausted all possibilities to undergo their experiment without laboratory animals. If they cannot they need to justify their research and need for use of animals. (2) Reduction: Professor must try and reduce the number of animals used in the experiment and only use the absolute minimum of animals that is necessary to gain results. (2) Refinement: Professor must ensure they minimise harm and any suffering of the animal, they must minimise the risk and ensure animal welfare is the utmost importance. (2)
3.
 - (a) To investigate if vitamin D can reduce the amount of infections and reduce the number of sick days in teachers. (2)
 - (b)
 - (i) Vitamin D vs no vitamin D (1)
 - (ii) Number of sick days taken in 3 months
 - (iii) 3 month trial/all teachers at school
 - (c) The teachers who had a Vitamin D supplement (1) every day in Winter for 3 months will have fewer sick days (1) than those teachers that do not take Vitamin D supplements (1)
 - (d) Deception occurs when the participants are unaware of the true purpose of the experiment as if they did it may alter the results (1). Debrief (1) must occur after the experiment, to ensure participants are aware of the what the study was about and offer counselling to the participants to ensure no harm is involved. (1)
4.
 - (i) Over 8 hours of sleep vs less than 8 hours of sleep.
 - (ii) scores from a memory questionnaire.
 - (iii) First year psychology students/memory questionnaire
 - (iv) learning difficulties, caffeine consumption, sleep disorders.

Trial Test 2

1.
 - (a)
 - (i) Convenience sampling is selecting participants because of the ease, so she could ask her classmates who has a streaming subscription (1) or asks people at a local shopping centre (1)
 - (ii) Advantage: sample is easy to obtain (1) Disadvantage: sample will be biased (1)

- (b)
- (i) *Random sample is when everyone has an equal chance of being selected, randomly select families in the school from a list of alphabetical order and selecting every second family (1) draw out random names from a hat (1) Other reasonable answers allowed.*
- (ii) *Advantage: time efficient/cost efficient (1) Disadvantage: not a representation of the population (1)*
- (c)
- (i) *Stratified sample is when population is broken down into strata based population. The chancellor could break the 3000 staff into groups, staff, mature age graduates, under 30 graduates then randomly sampling from these strata groups (4)*
- (ii) *Advantage: representative of population (1) Disadvantage: takes a lot of time and effort (1)*
- 2.
- (a)

RESEARCH DESIGN	METHOD	STRENGTH	LIMITATION
Correlational	Looking for a relationship between two behavioural variables (1)	Can determine strength and direction of research/ can use multiple data collections (1)	Does not show influence of variables on each other/time consuming/ extraneous variable (1)
Longitudinal	Studying same participants over a period of time (1)	Shows development of participants (1)	Lose participants/time consuming/practice effect/expensive (1)
Cross sectional	Participants differ in age but tested as same point in time (1)	Quick/easy (1)	Cohort effect/doesn't study developmental differences (1)

- (b) *Experimental research involves variables being manipulated (1) having an independent and dependent variable (1) whereas non-experimental research involves descriptive research (1) through observations or interpretations (1)*
3. *Experimental effect can occur when an experimenter treats the control and experiment group different, usually because they know which group is being treated and which is given the placebo. (1) Ways to reduce this effect is by randomly allocating the participants to either the control or experimental group or single blind procedures so the participants are unaware of what group they are in. (2)*

Trial Test 3

- 1.
- (a) *Subjective quantitative (1) as he has used a likert scale which is a numerical questionnaire (1)*
- (b) *Advantage: can be statistically analysed (1) Disadvantage: relies on honesty of the participant (1)*
- (c) *Open ended questionnaire or interview (2)*
- (d) *Advantage: can explain the reason of response/detailed responses (2) Disadvantage: cannot be statistically analysed/time consuming/dishonest responses (2)*
- 2
- (a) *Objective data is data that can be measured factually such as weight, height, temperature (2) Subjective data is data that is expressed from the point of view of the participant 'How are you feeling on a scale of 1 to 10'(2)*
- (b)

DATA COLLECTION	EXAMPLE	STRENGTH	LIMITATION
Subjective quantitative	Checklists/fixed responses- rating scales, likert scales (1)	Can be statistically analysed (1)	Relies on honesty of participants (1)
Objective quantitative	Physiological measures: hormone levels, blood pressure (1)	Numerical, can be statistically analysed, participants can not lie (1)	Costly (1)

Trial test 4

1.

(a) Mean: 18.5

Median 15

(b) Correct graphing from table (1)

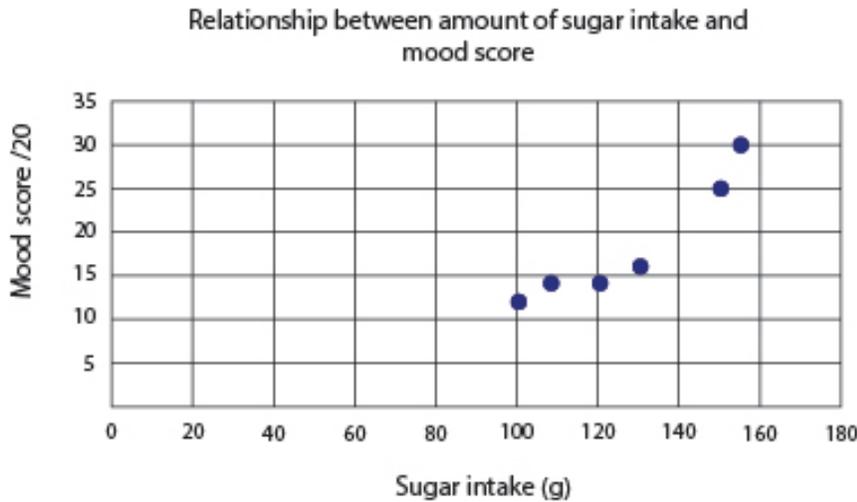
Title (1)

X axis labelled correctly with units (1)

Vertical axis labelled correctly with units (1)

X axis appropriate scale (1)

Plot correctly (1)



(c) As the amount of sugar intake increases (1) the mood score from questionnaire also increases (1)
there is a strong positive relationship between amount of sugar and mood score (1)

2.

(a) Strong (1) positive (1)

(b) As X increases (1) Y also increases (1)

3.

(a) Correct graphing from table (1)

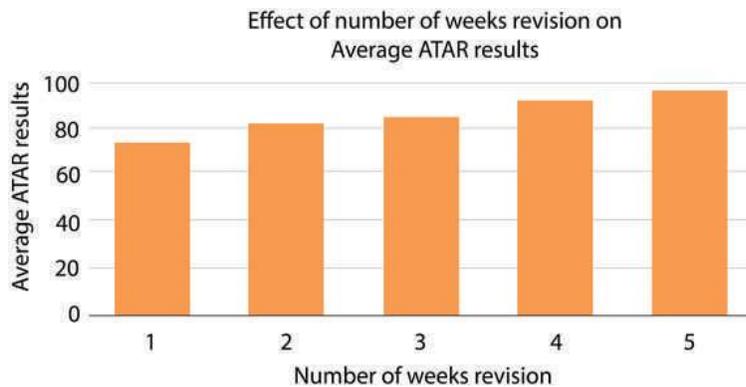
Title (1)

X axis labelled correctly with units (1)

Vertical axis labelled correctly with units (1)

Y axis appropriate scale (1)

X axis appropriate scale (1)



(b)

(i) As more weeks of revision were completed the higher the average. After results (1) 1 week had average of 75 and 5 weeks is 96% (1)

(c) Mean: 85.8

Median: 85

Trial Test 5

1.
 - (a) *Token economies is an artificial reward such as stickers used to reward behaviour [1]*
 - (b) *Ashlea will be asked to make a list of least fear provoking to most fear provoking. [1] Which is called: Graded exposure. [1] Learn relaxation techniques. [1] Using relaxation techniques to progress through the list of fear provoking activities. [1] Ashlea moves on after she feels comfortable. [1] Any 4 @ 1 mark*
2.
 - (a) *Observational learning – watching behaviour and then copying it. [2]*
 - (b) *Attention: Watching someone you look up to (2)*
Retention: remembering the behaviour that you observed (2)
Reproduction: Practicing the behaviour (2)
Motivation: There needs to be motivation (reward or praise to continue the behaviour) (2)
Reinforcement: Continually getting the reward would continue the person doing the behaviour (2)
3. *Unconditioned stimulus – mother. [1] Conditioned stimulus – perfume. [1] Conditioned response – the baby smiling. [1] Unconditioned response – the baby smiling. [1] Neutral stimulus – perfume. [1]*
4.
 - (i) *negative punishment*
 - (ii) *positive reinforcement*
 - (iii) *positive punishment*
 - (iv) *negative reinforcement*
5.
 - (i) *Learning is a response between stimuli and response. (1)*
Law of effect (1): behaviours that offer rewards will be continued, whereas behaviours that give unpleasant consequences will not continue. (1)
 - (ii) *Albert's unconditioned response to the unconditioned stimulus (loud noise) was fear (1) . The neutral stimulus (white rat) was then paired with the loud noise. (1) The rat would then cause Albert fear without the presence of the loud noise. Therefore the conditioning stimulus became the white rat and the conditioned response became the fear. (1)*
6.
 - (i) *Unable to generalize to the real world/humans as was set in laboratories and animals/ oversimplification of behaviour, there are many other influences to ones behaviour (2)*
 - (ii) *No control subject, no objective measurements used. Discussion whether it was a phobia and not a fear. As only one person can not be generalized. (2)*
7. *Antecedent (1) involves a stimulus being presented that precedes a behaviour. (1)*
Behaviour (1) When an action occurs in response to the antecedent stimulus (1)
Consequence (1) Following the behaviour there is a consequence this can either be a reinforcement to strengthen the likelihood of a behaviour occurring again or a punishment which will reduce the likelihood of the behaviour happening again. (1)

Trial Test 6

1.
 - (a) *Retrieval failure [1] is the inability to recover information [1]. OR Interference [1] is when information retrieved is disrupted by other information [1]. OR Motivated forgetting [1] is the inability to recover information when there is an advantage to not retrieving the information [1] OR decay [1] is the fading away of memories over time [1].*
 - (b) *Proactive interference is when you can't learn a new task because of an old task that has already been learnt (1) retroactive interference is when you forget an old task due to learning a new task*
2. *Central executive [1] is split into two sections: Phonological loop [1], which is the rehearsal of sounds [1] and the visuo-spatial sketchpad [1], which is the processing of information in visual form [1] Episodic Buffer was added later to explain how memories are 'backed up', communicates between the long term memory and the working memory.(1)*

3.

MEMORY	DURATION	CAPACITY	ENCODING
Sensory	Up to 5 seconds (1)	All sensory information (1)	Depending on the senses (1)
Short	Up to 30 seconds (1)	Millars magic number 7 plus or minus 2 (1)	Auditory (1)
Long	Unlimited (1)	Unlimited (1)	Semantic (1)

4. Isabelle would start with Sensory memory (1), all the senses around her and the peacock would enter sensory memory and stored for up to 5 seconds (1). Attention would have been paid while looking at the peacock as the train was large and colourful and she would store it in her short term memory (1) The image of the peacock would have been rehearsed as she stopped to look at it (1) then the memory would be stored into the long term memory in her episodic memory (1) where it can be recalled back into the short term memory when she was telling her friend about the memory (1)
- 5.
- (a) The cerebellum stores and processes procedural memories (1) Adam could have trouble with performing motor tasks and remembering how to do tasks such as ride a bike, tying shoe laces (1)
- (b) The hippocampus is responsible for explicit memories (conscious retrieval for example recall) (1) and the declarative memory (facts and events) (1)
- (c) CTE is caused by a repeated trauma like a baseball to the head (1), can cause memory loss, impulse control, aggression, depression, progressive dementia (2) There is no treatment for CTE and will continue to get worse over time (2)
6. Maintenance rehearsal (1) is remembering a piece of information for immediate use by repeating the information, it will not be transferred to the long term memory (for example remembering a person's mobile phone number). (1) Elaborative rehearsal (1) is actively processing the information, making the information more meaningful so you can store it in your longterm memory. (1)
7. Wernicke-Korsakoff Syndrome (1) can cause confusion, inability to coordinate voluntary movements and eye problems, inability to form new memories and memory loss (2)

Trial Test 7

1.

- (a) Spencer is working towards self-actualisation, she has reached physiological needs (water, shelter) and safety (security of friends) she also has love and belonging because she has a supportive and close group of friends. Spencer would be in the esteem need as she is an overachiever and always trying for perfection. [5]
- (b) Limitations: Any one of the following: Maslows Heirarchy of needs are based on his opinions of who is self actualised, this leads to bias and low validity of the results/Bias towards highly educated white males this makes it difficult to generalise to the wider population./Small sample size.
- (c) Cognitive needs (1) involves a person's love for knowelsdge so through education and analysis (1). Aesthetic needs (1) involves a person's desire to appreciate beauty through art and creation. (1) The last expanded need is, transcendence needs (1) which is a step above self-actualisation. (1)

2.

- (a) Extrinsic motivation: (1) a desire to perform a behaviour to gain rewards or avoid punishment (1), the teacher offered a pizza lunch for the top 3 presentations (1)
Intrinsic motivation (1) : a desire to perform a behaviour for your own benefit, (1) I want to do really well because I got to do my assignment on my favourite animal so I am enjoying it (1)
- (b) 1. Competence (1) the need to effectively deal with the environment around you, a person would have the skills and the judgement to interact with the environment. (1) 2. Relatedness (1) is the need to have affectionate relationships, a person needs to feel like they belong and have attachment to those around them (1). 3. Autonomy (1) the need to feel independent, a person needs to feel in control of their behaviour and their own destiny, includes self-regulation of your own behaviour (1)
3. 1. Autonomy (1) Self-determination and independence, the ability to regulate your own behaviour and avoid peer pressure (1) 2. Environmental mastery (1) Being able to feel that you can manage and deal with the environment around you (1) 3. Personal growth (1) Growing and developing

- yourself. Reaching your potential by new experiences, learning (1) 4. Positive relations with others (1) Feeling a connection and affections with others creating relationships out of trust and closeness. (1) 5. Purpose in life (1) Having believes that give you purpose, feeling that your life past, present and future has purpose (1) 6. Self-acceptance (1) Accepting yourself in all aspects of your life, having a positive attitude towards yourself. (1)
4. Affective balance (1) we evaluate our affect components both positive emotions (joy) and negative emotions (fear) (1) and Life satisfaction (1) by looking at our satisfaction with our life to determine our subjective wellbeing, usually through subjective questionnaires. (1)

Trial Test 8

1.
 - (a) Management of electronic devices (1): your bedroom should be clear of all electronic devices including tv, mobile phones and computers. (1)
 Consistent sleep patterns (1): Going to bed and waking up at the same time every day gives your body a regular rhythm of sleep even on weekends (1)
 Creation of a healthy sleep environment: (1) the bedroom should be quiet dark and at a cooler yet comfortable temperature and relaxing (1)
 - (b) Any 3 of the following: depression, obesity, anxiety, insomnia, diabetes, heart disease, heart burn, hypertension
2.
 - (a) Restricting mobile phone use before bed increased sleep duration (1) and quality of sleep (1), improved working memory (1) and reduced pre-sleep arousal. (1)
 - (b) The data they collected was too subjective (sleep diary), objective data collection should have also been used/ (1) smaller sample size.(1)
3.
 - (a) Distress is negative stress (from bad news) that causes a negative emotional state due to being overwhelmed by loss or threat (1) , where is eustress is positive stress (good news, caused by an optimal level of stimulation, from being challenged or doing enjoyable tasks. (1)
 - (b) Alarm: The first stage of the GAS model when the person realises they are in danger/threat or faced with a stressor. This is when your sympathetic nervous systems starts and your fight or flight response is activated.. (2)
 Resistance: This is the second stage and your body will try to adapt, the parasympathetic nervous system will activate and reduce the heart rate and breathing rate. (2)
 Exhaustion: If resistance continues the body would become depleted of its biological resources and become more susceptible to diseases. IF they have reached this stage they would become psychologically exhausted and could be showing signs of depression. (2)
4. Primary appraisals determine if the stress is relevant to our wellbeing. An individual will evaluate the stress as having either : no signifance to the person or it is a desirable outcome (benign-positive) or threatening/harmful. If the appraisal is deemed stressful our response can be classified as harmful (damage has been done), threat (future harm) or challenge (positive outcome). (3)
 Secondary appraisals determines how the individual will deal with the situation and try to make it work into a positive or desirable outcome. This can be either internal option (our own strength and power) or external option (seeking help from professionals or peers) (3)
5. Problem-focused coping strategies (1) involve removing or attempting to change the problem (1) can include: taking control, seeking information, evaluating pros and cons, problem solving. (1)
 Emotion-focused coping strategies (1) dealing with the emotion causing the stress (1) include: distancing/avoiding/seeking social support/talking to a friend/positive reappraisal (1)
6.
 - (a) One sleep cycle usually occurs for 90 minutes and an adult will usually have 4- 6 cylces per night. (1)
 Stage 1 NREm is when you are falling asleep this is brief and usually only lasts between 30 seconds-10 minutes. It's a very light sleep before you start stage 2 NREM which will last around 20 minutes and true sleep begins. (1)
 Stage 3 NREM transitions us into a deep sleep before going to NREM stage 4 which is our deepest sleep, this is 30 minutes usually in our first cycle, and as we go into our second cycle going backwards from stage 4, to stage 3 and into stage 2 and then straight to REM sleep skipping stage 1 of NREM sleep. (2)
 - (b) Our REM sleep lasts for about 10 minutes and usually where we remember our dreams. (1)



SOLUTIONS TO PRACTICE EXAMS

Exam Practice 1

1.

(a) *Early onset Alzheimer patients [1] who took a magnesium supplement twice a day for 6 months [1] would have improved memory as shown on the memory questionnaire [1] than those early onset Alzheimer patients who took the placebo.*

(b)

(i) *Independent variable: magnesium supplement vs placebo*

(ii) *Dependent variable: memory improvement as shown on a memory questionnaire*

(iii) *Controlled variable: tablet twice a day/ memory questionnaire/6 month trial/early onset Alzheimers*

(c) *Longitudinal [1] studying the same participants over a period of time [1]*

(d) *Advantage: shows development of the participants [1]*

Disadvantage: lose participants/ time consuming/practice effect/expensive [1]

(e) *Practice effect [1] change the memory test before and after the trial [1]*

2.

(a)

DATA COLLECTION	EXAMPLE	ADVANTAGE	DISADVANTAGE
Objective quantitative	Physiological measures (1)	Numerical/can be statistically analysed/ participants can not lie (1)	Costly (1)
Subjective quantitative	Checklists/ fixed responses/ likert scales (1)	Numerical/can be statistically analysed (1)	Relies on honesty of participants (1)
Qualitative	Open-ended responses (1)	Can explain reason for response/detailed responses (1)	Cannot be statistically analysed/time consuming/ dishonest responses (1)

(b) *Experimental research is when variables are being manipulated, has an independent and dependent variable [1] non-experimental variable is looking at research through observations and interpretations [1]*

(c) *behavioural variables [1]*

3.

(a)

MEMORY	DURATION	CAPACITY	ENCODING
Sensory	Up to 5 seconds (1)	All sensory information (1)	Depending on senses (1)
Long term	Unlimited (1)	Unlimited (1)	Semantic (1)

(b) *The model contains the central executive that is split into two sections (1) the phonological loop, which rehearses sounds (2) and the visuo-spatial sketchpad, which is the processing of information in the visual form (2) Episodic buffer communicates between the long term memory and the working memory (1)*

(c) *Procedural memory [1] which is memory of how we do things [1] and declarative memory [1] which is the memory of facts and experiences [1]*

4.

(a) *Ms Claris used positive reinforcement [1] where she offered a sticker [1] to increase the behaviour sitting down on their chairs when the bell rang [1] she also used positive punishment [1] by adding a strike to the board [1] to stop the behaviour of not sitting down quietly. [1]*

(b) *observational learning [1] students would watch their buddies sitting quietly and then model that behaviour [1] by using students that they look up to observational learning is more likely to occur [1]*

(c) *Token economies is an artificial system of reward and reinforcement given to continue desired behaviours [2] Ms Claris used this in her room by using stickers as the artificial reward to continue the behaviour of sitting quietly (2)*

- 5.
- (a) Skinner had a box with levers that when pressed could present food to the animals; (1) another lever would present the animal with a buzzer (1) The box reduces other stimuli from distracting the animal so they are able to be studied in a controlled environment (2)
- (b) He found that the animals would learn to stop pressing the button that would produce the buzzer and would press the lever to be presented with food. (2) Skinner's research introduced 2 types of punishment to stop a behaviour by either introducing a negative stimuli or removing an unpleasant stimulus (1) or 2 types of reinforcement to continue a behaviour by introducing a positive stimuli or removing an unpleasant stimuli.
- (c) Replacement: Professor must ensure they have exhausted all possibilities to undergo their experiment without laboratory animals. If they cannot they need to justify their research and need for use of animals. (2) Reduction: Professor must try and reduce the number of animals used in the experiment and only use the absolute minimum of animals that is necessary to gain results. (2) Refinement: Professor must ensure they minimise harm and any suffering of the animal, they must minimise the risk and ensure animal welfare is the utmost importance. (2)

6.

- (a)
- (i) Hippocampus: The hippocampus is responsible for explicit memories (conscious retrieval for example recall) and the declarative memory (facts and events) (2)
- (ii) Cerebellum : Procedural memories are processed and stored here. It also has a role in classical conditioning and how to perform motor tasks. (2)
- (iii) Amygdala: The amygdala regulates fear and emotions, it plays a role in how memories are stored. It helps to form emotional memories and plays an important role in forming fear emotions. It is involved in implicit and procedural memories (unconscious and does not require intentional recall, the how we do things) (2)
- (b) Any 3 of the following (1 mark for identify and 1 mark for explanation)
- Retrieval failure is the inability to recover information. Interference is when information retrieved is disrupted by other information (retrieving the memory of your 5th birthday, when trying to retrieve your 7th birthday).
- Motivated forgetting is the inability to recover information when there is an advantage to not retrieving the information and decay is the fading away of memories over time.
- Proactive interference: is when you can't learn a new task because of an old task that has already been learnt
- Retroactive interference: is when you forget an old task due to learning a new task
- Decay:] is the fading away of memories over time
- (c) Maintenance rehearsal is remembering a piece of information for immediate use by repeating the information, it will not be transferred to the long-term memory (for example remembering a person's phone number). (2)
- Elaborative rehearsal is actively processing the information making the information more meaningful so you can store it in your long-term memory. (2)
- (d)

CAUSE OF MEMORY LOSS	DISEASE	IMPACT ON BEHAVIOUR
Degeneration	Alzheimers Disease (1)	Destroys memory and thinking skills and eventually the ability to perform simple tasks. Patients can get upset, worried and angry, depressed. They can be seen hiding things or imagining things. Aggressive and misunderstanding towards other people. (1)
Drug induced (1)	Wernicke-Koraskoff Syndrome	causes confusion, inability to coordinate voluntary movements and eye problems, inability to form new memories and memory loss (1)

7.

- (a) Diener's model of subjective well-being is how a person evaluates their own life. (1) Principal Howard had said "his life was fantastic (1) he would score highly on the satisfaction with his life if he was to take the subjective questionnaire (1) Deiner also looked at affective balance (1) He looked at both positive emotions (1) and negative emotions (1)
- (b) Any of the following 3 (1 mark for factor and 1 mark for explanation)
1. *Autonomy* :Self-determination and independence, the ability to regulate your own behaviour and avoid peer pressure
 2. *Environmental mastery* : being able to feel that you can manage and deal with the environment around you

3. *Personal growth* : Growing and developing yourself. Reaching your potential by new experiences, learning
 4. *Positive relations with others*: Feeling a connection and affections with others creating relationships out of trust and closeness.
 5. *Purpose in life*: Having believes that give you purpose, feeling that your life past, present and future has purpose
 6. *Self-acceptance*: Accepting yourself in all aspects of your life, having a positive attitude towards yourself.
- 8.
- (a) *Primary appraisals* (1) determine if the stress is relevant to our wellbeing. An individual will evaluate the stress as having either : no signifance to the person or it is a desirable outcome (benign-positive) or threatening/harmful. (1) If the appraisal is deemed stressful our response can be classified as harmful (damage has been done), threat (future harm) or challenge (positive outcome). (1)
- Secondary appraisals* (1) determines how the individual will deal with the situation and try to make it work into a positive or desirable outcome. (1) This can be either internal option (our own strength and power) or external option (seeking help from professionals or peers) (1)
- (b)

METHOD OF COPING STRATEGY	EXPLANATION	EXAMPLE 1	EXAMPLE 2
Problem- focused	involve removing or attempting to change the problem (1)	Leaving unhealthy situations/ ask for support (1)	Set boundaries/ tackle the problem (1)
Emotion-focused	dealing with the emotion causing the stress (1)	Journaling/ meditation/ talk to a psychologist (1)	Forgiving/positive thinking (1)

9.

Question 9 Guide to Marking Extended Responses	Marks
Atkinson and Shiffrin	8
<ul style="list-style-type: none"> • Sensory memory [1] information coming in from the senses [1] Samantha would have seen the spider and felt the pain of the bite [1] • She would have paid attention to the bite [1] • this would be then sent to her Short term memory [1] where she would rehearse the event [1] • The information would then be stored in the long term memory [1] for her to remember and retrieve back in her short term memory when she was near a spider again [1] 	0-8
Systematic Desensitisation	5
<ul style="list-style-type: none"> • Samantha would need to make a list that consists of least fear provoking (picture of a spider) to most fear provoking (holding a spider) [1] • This list is called graded exposure [1] • Relaxation techniques would be taught [1] where she can use these as she is working through the list [1] • Once she feels comfortable with one point on the list she can then move on to the next [1] 	0-5
Psychological Evidence	4
Detailed Description of the theory (one or two examples and sentences of the theory)	4
Basic description of theory and name only	2-3
One or more anecdotal stories provides as evidence	1
No psychological evidence or incorrect evidence	0
Structure	3
A well-constructed answer, use of appropriate psychological language	3
Answers with well-developed sentences and paragraphs	2
Lack of paragraph structure and incoherent responses	1
TOTAL	/20

Question 10 Guide to Marking Extended Responses	Marks
Sleep Cycle	10
<ul style="list-style-type: none"> One sleep cycle usually occurs for 90 minutes and an adult will usually have 4- 6 cycles per night. (1) Stage 1 NREm (non-rapid eye movement (1) is when you are falling asleep this is brief and usually only lasts between 30 seconds-10 minutes. (1) It's a very light sleep before you start stage 2 NREM which will last around 20 minutes and true sleep begins. (1) Stage 3 NREM transitions us into a deep sleep before going to NREM stage 4 (1) which is our deepest sleep, this is 30 minutes usually in our first cycle, (1) and as we go into our second cycle going backwards from stage 4, to stage 3 and into stage 2 and then straight to REM sleep skipping stage 1 of NREM sleep. (2) Our REM (rapid eye movement) sleep (1) lasts for about 10 minutes and usually where we remember our dreams. (1) 	0-10
Chronic Sleep deprivation	4
<ul style="list-style-type: none"> Chronic sleep deprivation is when you have a prolonged lack of sleep over a long period of time (1) it can cause heart disease (1) obesity (1) insomnia (1) and Anxiety (1) 	0-4
Techniques to improve sleep hygiene	3
<ol style="list-style-type: none"> Management of electronic devices, do not sleep with devices in your room and switch off from devices at least 30 minutes before bed. Consistent sleep patterns, try to go to bed at the same time and wake up at the same time even on weekends Create a healthy sleep environment: a dark room that is cooler in temperature, but still comfortable 	3
Structure	3
A well-constructed answer, use of appropriate psychological language	3
Answers with well-developed sentences and paragraphs	2
Lack of paragraph structure and incoherent responses	1
TOTAL	/20

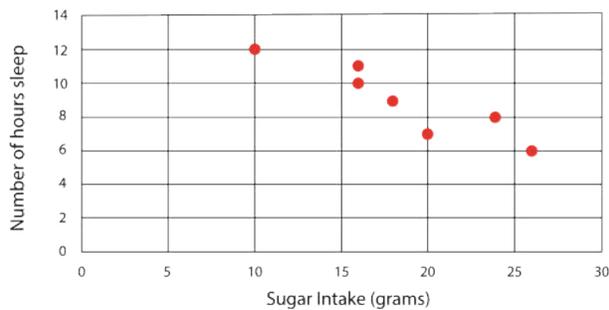
Question 11 Guide to Marking Extended Responses	Marks
Maslows Hierarchy of needs	8
<p>Michael has definitely met his deficiency needs: these include his physiological and safety needs (2) as he has food, water, shelter and employment and family (2)</p> <p>He has social belonging (1) as he has a loving girlfriend (1) he has esteem (1) as he is confident with his choice of university and a part time job sense of achievement (1)</p>	0-8
Deci and Ryan	9
<ol style="list-style-type: none"> Competence (1) the need to effectively deal with the environment around you, a person would have the skills and the judgement to interact with the environment. (1) Michael has chosen his dream university, he feels like he has accomplished his straight A's and got into the university he wanted to get in to (1) Relatedness (1) is the need to have affectionate relationships, a person needs to feel like they belong and have attachment to those around them. (1) Michael has a loving relationship with his girlfriend who he is going to travel the world with (1) Autonomy (1) the need to feel independent, a person needs to feel in control of their behaviour and their own destiny, includes self-regulation of your own behaviour. (1) He has chosen his part time job and to travel this allows him to have control over his life after highschool (1) 	0-9
Structure	3
A well-constructed answer, use of appropriate psychological language	3
Answers with well-developed sentences and paragraphs	2
Lack of paragraph structure and incoherent responses	1
TOTAL	/20

Practice Exam 2

Section 1

1.

(a) Relationship between sugar intake and number of hours slept



Title [1], x axis labelled correctly [1], y axis labelled correctly [1] scale correct [1] Plots correct [1] scattergraph [1]

(b) Mean: 18 Median: 18 Range 10-26 (16)

(c) strong [1] negative [1] as sugar intake decreases number of hours slept increase [1]

(d)

(i) subjective quantitative [1]

(ii) advantage: numerical data/can be statistically analysed [1] disadvantage: relies on honesty of patients [1]

2.

(a) Sensory memory [1] information coming in from the senses [1] Grandma would have been listening to Harold's story (1)

She would have paid attention to her grandson telling the story [1]

this would be then sent to her Short term memory [1] where she would rehearse the event [1]

The information would then be stored in the long term memory [1] for her to remember and retrieve back in her short term memory when she sees the free pizza [1]

(b) Retrieval failure [1] is the inability to recover information [1]. OR Interference [1] is when information retrieved is disrupted by other information [1]. OR Motivated forgetting [1] is the inability to recover information when there is an advantage to not retrieving the information [1] OR decay [1] is the fading away of memories over time [1]. Any 3 of the above.

(c)

(i) Alzheimers Disease

(ii) Destroys memory and thinking skills and eventually the ability to perform simple tasks/ Patients can get upset, worried and angry, depressed/ They can be seen hiding things or imagining things. Aggressive and misunderstanding towards other people.

Any two of the above for 1 mark each

(d)

(i) 30 minutes of physical activity a day (1) can decrease a person's memory loss (1)

(ii) snowballing (1)

(iii) Advantage: quick/cost effective(1) Disadvantage: similar groups so could be sampling bias/lack of cooperation (1)

(e) Perception is being able to interpret that information from our senses.(1) This occurs through 3 stages, selection (1) limiting your attention to only part of the senses information (1) , organization (1) organising the senses information in a meaningful way (1) and interpretation (1) attaching meaning to the senses information (1)

3.

(a) Deficiency needs are the need for basic survival and include the physiological needs of food and shelter and safety needs of security and to feel safe. (1) Deficiency needs come from a lack of something and motivation grows when these need are not met. (1) These needs need to be met before being able to move on the growth needs. Growth needs come about when a person feels the need to reach their full potential. (1) Motivation comes from having a desire to be self-actualised. (1)

(b) Cognitive needs (1) involves a person's love for knowelsdge so through education and analysis. (1) Aesthetic needs (1) involves a person's desire to appreciate beauty through art and creation. (1) Transcendence needs (1) which is a step above self-actualisation (1)

- (c) Helen has her psychological needs met with her new house -shelter (2) she has her security needs met with her dad's new job (2) she is working on love and belonging – she has a loving family but is motivated to try make new friends to satisfy this need (2)
- (d) teaching and classroom management. Ensuring students bottom needs are met before they can reach their cognitive needs.(2)
- (e) Maslow's Hierarchy of needs are based on his opinions of who is self actualised, this leads to bias and low validity of the results.(2) OR Bias towards highly educated white males this makes it difficult to generalise to the wider population. Small sample size. (2)

4.

- (a) UCS: nauseous (2) UCR: vomiting (2) NS: seafood restaurant (2) CS: seafood restaurant (2)
CR: Vomiting (2)
- (b)
- (i) Stimulus generalisation: when similar stimuli to the conditioned stimulus can cause the same conditioned response (1) if Alexa was sick every time she saw seafood
- (ii) Extinction: when the conditioned stimulus is repeated multiple times and the response no longer occurs. (1) if Alexa kept going back to the seafood restaurant she would eventually stop feeling sick each time she went (1)
- (iii) spontaneous recovery: when a response has been extinct and then reappears after a break in reconditioning sessions. (1) if she went back to the restaurant for her next birthday and then felt sick again after not for so long (1)
- (c) Classical conditioning is the learning through association between two different stimuli.(1) whereas Operant conditioning is learning through consequences of reward and punishments. (1)

5.

- (a)
- (i) Aim: Assess the effect of restricting bedtime mobile phone use on sleep, arousal, mood and working memory. (1)
- (ii) Method: 38 participants were randomly allocated as the intervention group who were told they could not use their mobile phones for 30 minutes before bed (1) or control group where no instructions were given.(1) Sleep habits, quality of sleep and mood were recorded using sleep diaries, (1) Pittsburgh sleep quality index and pre-sleep arousal scale and the working memory was tested. (1)
- (iii) Key findings: Restricting mobile phone use before bed increased sleep duration and quality of sleep, improved working memory and reduced pre-sleep arousal. (2)
- (iv) contributions: mobile phone use can affect working memory and cognitive functions/ results showing reducing mobile phone use before bed can reduce pre-sleep arousal can be used to focus on patients with insomnia which show a high pre-sleep arousal. (1)
- (v) Criticisms: The data they collected was too subjective (sleep diary), objective data collection should have also been used/smaller sample size. (1)
- (b)

	NREM SLEEP CYCLE				
Characteristic	Stage 1	Stage 2	Stage 3	Stage 4	REM sleep
Sleep state	Drifting in and out (1)	Light sleep (1)	Moderate deep (1)	Deep sleep (1)	Light sleep (1)
Heart Rate	Irregular (1)	Slower and more regular (1)	Slower (1)	Slow and regular (1)	Increases and fluctuates (1)

6.

Question 6 Guide to Marking Extended Responses	Marks
Observational Learning	10
Attention: Tim watched as his brother Tom played something new, the recorder (2) Retention: the next morning Tim remembers watching his brother play the recorder and tells his teacher (2) Reproduction: Tim gets a recorder from his teacher to practice playing it (2) Motivation: Tim is motivated to go home and show his brother he can also play the recorder (2) Reinforcement: If Tim is praised or rewarded by his brother or teacher he will want to continue with the recorder (2)	0-10
Social Learning Theory	4
Learners will copy those people who are important to them (1) and behaviours that match their beliefs and values (1) (children will copy idols, family and peers as these are important figures to them). (1) Children would not copy behaviours that did not follow their own values. (1)	0-4
Aim of Bobo Doll	2
To investigate if social behaviours (1) can be acquired through observation (1)	0-2
Key Findings	4
Discovered that when children watched a videotape of an adult violently hitting a bobo doll, (1) they would repeat the behaviour (1) when presented with the same bobo doll. (1) Observational learning – watching behaviour and then copying it. (1)	0-4
Contributions and Limitations	2
Contribution: Displays how violence in the media can have an effect on children Experimental studies allows for replication. Limitations: The children and adults were strangers which is not normal for copying behaviours, study wasn't able to show long term effects only a snap shot at a specific time, unethical	0-2
Structure	3
A well-constructed answer, use of appropriate psychological language	3
Answers with well-developed sentences and paragraphs	2
Lack of paragraph structure and incoherent responses	1
TOTAL	/25

Question 7 Guide to Marking Extended Responses	Marks
Subjective Wellbeing	8
Subjective well-being model looks at life satisfaction (1) and affective balance (both positive affect and negative affect) (1) . Diener looked at a tripartite model where we evaluate our affect components both positive emotions (joy) (1) and negative emotions (fear) (1) and then our satisfaction with our life to determine our subjective wellbeing, (1) usually through subjective questionnaires. (1) Relate to scenario: Jimmy would say he has high life satisfaction as he has a great job and great friends (1) he would also have more positive affect as he is celebrating and experiencing joy with his friends and his new contract (1)	0-8
Psychological Wellbeing	12
Autonomy (1); self determination and independence (1) Jimmy has worked hard for 5 years and made senior partner (1) Positive relations with others(1): feeling a connection and affection with others (1) Jimmy has a good group of friends he likes to go out with (1) Purpose in life (1): having believes that give you purpose(1) he has made senior partner in a law firm that he has worked hard at (1) Self acceptance (1): accepting yourself in all aspects of your life (1) Jimmy feels that he has a good sense of wellbeing in all aspects of his life, work and friends (1)	0-12

Question 7 Guide to Marking Extended Responses	Marks
Structure	3
<i>A well-constructed answer, use of appropriate psychological language</i>	3
<i>Answers with well-developed sentences and paragraphs</i>	2
<i>Lack of paragraph structure and incoherent responses</i>	1
TOTAL	/23

Question 8 Guide to Marking Extended Responses	Marks
Definition of Stress	2
<i>A physical or psychological response to a stressor that challenges a person's ability to cope. (1) A stressor can be either internal or external source of tension (1)</i>	0-2
General Adaptation Syndrome	9
Alarm: (1) The first stage of the GAS model when the person realises they are in danger/threat or faced with a stressor. (1) Melanie realises that their isn't enough money for the staff raise as they are losing companies support (1) Resistance: (1) This is the second stage and your body will try to adapt, the parasympathetic nervous system will activate and reduce the heart rate and breathing rate. If stress continues the person will be on high alert and an increased state of arousal, using energy to try to deal with the situation. (1) If Melanie reaches the energy conservation stage she could start having decreased immune system and become withdrawan from society (1) Exhaustion: (1) If resistance continues the body would become depleted of its biological resources and become more susceptible to diseases. (1) If Melanie has reached this stage she could be showing signs of depression (1)	0-9
Lazarus and Folkman	9
<i>Primary appraisals (1) determine if the stress is relevant to our wellbeing. (1) Melanie will evaluate the stress of her staff wanting a raise as a possible threat as there isn't enough money to give to her staff. Secondary appraisals (1) determines how the individual will deal with the situation and try to make it work into a positive or desirable outcome. (1) Melanie could seek help from her peers to come to a compromise about the raise. (1) Problem-focused coping strategies can include: taking control, seeking information, evaluating pros and cons, problem solving. (1) Melanie could problem solve by telling her staff that once they land the next big job she can look at increasing their pay (1) Emotion-focused coping strategies include: distancing/avoiding/seeking social support/ talking to a friend/positive reappraisal (1) Melanie could avoid her staff and not answer their request for a raise (1)</i>	0-9
Structure	3
<i>A well-constructed answer, use of appropriate psychological language</i>	3
<i>Answers with well-developed sentences and paragraphs</i>	2
<i>Lack of paragraph structure and incoherent responses</i>	1
TOTAL	/23

GLOSSARY

Amotivation: the lack of drive to engage in an activity

Behaviour modification: uses classical and operant conditioning. Using reinforcements to continue behaviours and punishments to reduce unwanted behaviours.

Classical conditioning: learning through association between two different stimuli

Conditioned response (CR): a learned response to a stimulus.

Conditioned stimulus (CS): a stimulus that has been learned (conditioned) to trigger a certain response.

Controlled variable: different factors that are kept consistent between the control and experimental groups.

Correlation: the strength of relationship between two different variables

Declarative memory: the memory of facts and experiences.

Deficiency needs: the need for basic survival

Dependent variable: the variable that is measured

Distress: a negative psychological response to a stressor

Encoding: processing of information into a form suitable for storage by the brain.

Eustress: a positive psychological response to a stressor

Experimental: variables are manipulated in research (independent and dependent variable)

Extrinsic Motivation: a desire to perform a behaviour to gain rewards or avoid punishment

Growth Needs: the need to strive for full potential.

Hypothesis: a scientific prediction about the relationship between the independent and dependent variable.

Independent variable: the variable that is changed

Intrinsic motivation: a desire to perform a behaviour for your own benefit.

Mean: average score found by the sum of a set of numbers divided by the number of scores in the set

Median: middle number when scores are arranged in numerical order

Neutral stimulus (NS): a stimulus that has no effect on the unconditioned response.

Non-experimental: descriptive research through observations or interpretations

Non-rapid eye movement: one of two phases of sleep, with little to no eye movement

Non-scientific: data collection through observation

Observational learning: copying behaviour by watching others and repeating the behaviour.

Operant conditioning: learning through consequences of reward and punishment.

Placebo: an inert substance that does not cause physiological and physical symptoms which is used as a control testing

Population: a particular group of people

Privacy: the participants information will not be shared without participants permission

Procedural memory: the memory of how we do things.

Punishment: causes certain behaviours to occur less frequently.

Rapid eye movement : one of two phases of sleep, with eye movement

Reinforcement: causes desired behaviours to occur less frequently.

Reliability: the same results are obtained when retested.

Retrieval: getting information out of stored memory

Sample: a small group of people studied which is a subset of a larger group/population

Self-actualisation: the process where an individual reaches their full potential.

Sleep deprivation: when a person does not get enough sleep that is required

Storage: retention of information.

Scientific: data collection through experimental research using hypothesis

Token economy: an artificial system of reward and reinforcement given to continue desired behaviours.

Unconditioned stimuli (UCS): is automatically triggered by an unconditioned stimulus.

Unconditioned response (UCR): a stimulus that does not need to be learned (is automatic) to trigger a response.

Validity: the test measures what is supposed to measure.

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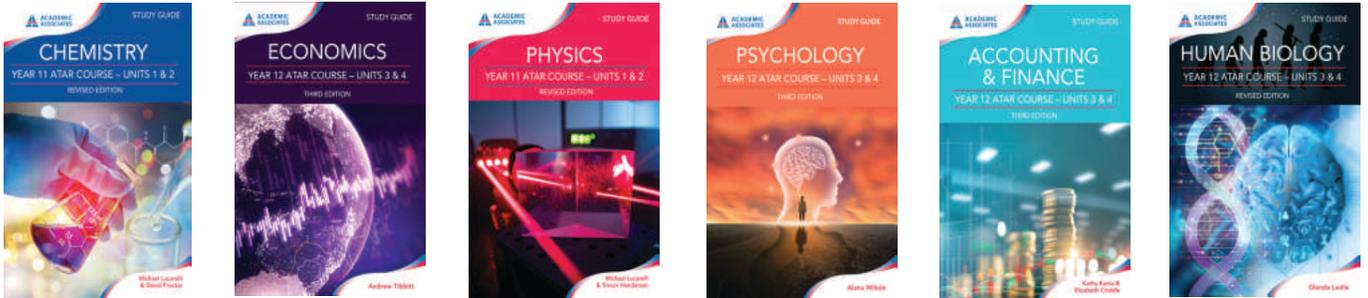


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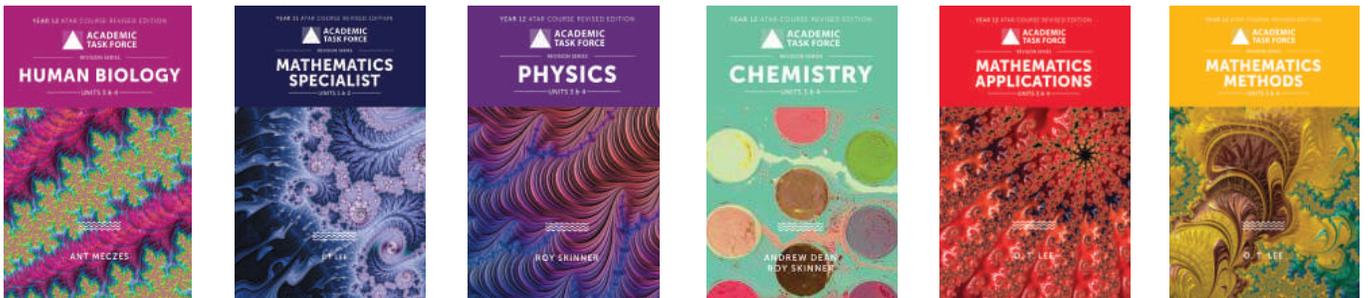
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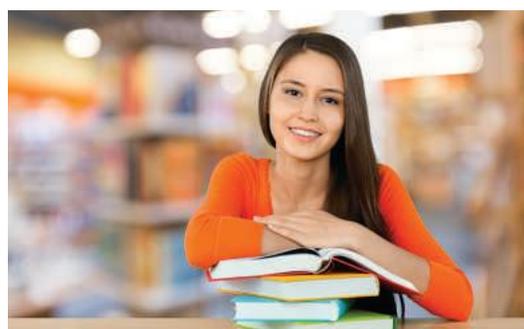
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