ACADEMIC ASSOCIATES

STUDY GUIDE

PSYCHOLOGY

YEAR 11 ATAR COURSE – UNITS 1 & 2

THIRD EDITION

Alana Wilson

ACADEMIC ASSOCIATES

WACE STUDY GUIDE

PSYCHOLOGY

YEAR 11 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 11 PSYCHOLOGY

The purpose of this study guide is to assist you with your preparation for exams and tests. It consists of revision questions and answers on Scientific Inquiry, Biological and lifespan Psychology and Attitudes, stereotypes, and social influence. It also includes Trial Tests and Essays with detailed answers.

This study guide has been written in sections, in accordance to the syllabus. Each section relates to the topics Scientific Inquiry, Biological and lifespan Psychology and Attitudes, stereotypes, and social influence.

Review Questions and Answers

The review questions are split into Scientific Inquiry and Unit 1 Biological and lifespan Psychology and Unit 2 Attitudes, stereotypes and social influence. These will provide you with all the required knowledge to help you with the trial tests. They begin with a syllabus checklist, an overview of knowledge and numerous study questions related to the syllabus.

Trial Tests and Essays

This section follows the format of your final exam:

Section One: Short answer, questions from Unit 1 and 2 content including both psychological knowledge and understanding and scientific inquiry.

Section Two: Extended answer, which require structured answers.

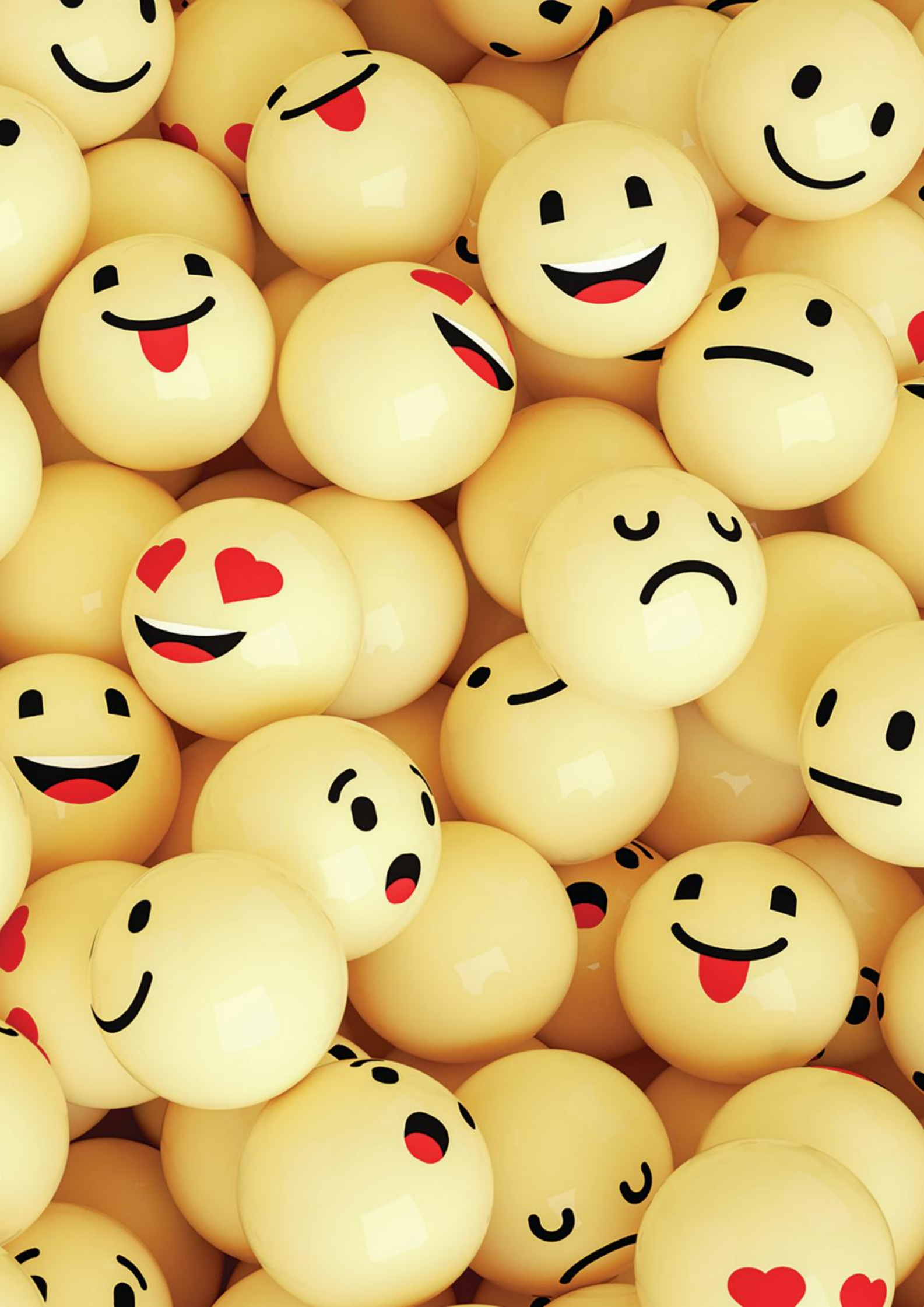
Every question has its own detailed answer, sometimes with more information than is required in an examination. It is imperative you are familiar with the terminology used in the syllabus and are able to apply your understanding in your answers.

This study guide is designed to cover all areas of the syllabus of which you can work through at your own pace and in order. Psychology is an interesting and relavant subject and I hope you find this study guide useful.

I wish you all the best with your revision.

Good luck!

Alana Wilson



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PSYCHOLOGY

UNIT 1

SCIENTIFIC INQUIRY

1

Syllabus Checklist

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 and/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
    - convenience sampling
    - snowballing
    - random sampling
    - 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
    - interviews – focus group and individual; structured, semi-structured
    - open-ended survey
  - quantitative
    - objective physiological measures – heart rate, breathing rate, galvanic skin response (GSR)
    - 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 relationshipsDrawing 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 upmost 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. Identify **two** factors a psychologist must inform participants of, in an experiment.

2. If a researcher needs to use deception in their experiment, explain what the researcher must do at the conclusion of the experiment.

3. In the scenario below, identify what ethics the researcher has adhered to.

A new energy drink was designed to improve a student's performance during an exam. The researcher asked to participate in a study to test the new energy drink. The researcher asked for the student's parents to sign a form allowing the students to drink the energy drink before they sat their examination.

Ten students were asked to drink the energy drink 1 hour before sitting their psychology exam, the other ten students drank water 1 hour prior to the exam. Their examination results were compared and teachers and possible manufacturers of the drink were notified of the findings.

4. In the scenario below identify what ethics the researcher has breached.

A psychology student wanted to find out if primary school students' eating habits affected their grades in school. She asked a local primary school if she could hand out a survey on eating habits to their students. The students who were willing filled out the survey after lunch and handed it back to the psychology student. She requested their recent report cards and matched the results from the survey to the student's grade. She found that students who had a high sugar diet received a grade average of C or below and those who had a low sugar diet received a grade average of B or above. She published her findings in the weekly school newsletter.

_____

_____

_____

_____

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.

Example 1

A Psychology class recently investigated whether test scores could be improved by playing music while studying. One class containing 30 students was split into two groups. 15 students played music when studying for their exam and the other 15 students did not.

Identify the independent (IV) and dependent variable (DV):

- IV: music vs no music
- DV: test scores

Review Questions

For the following experiments, identify the independent variable and dependent variable.

1. (a) A current psychology student wants to research the effect smoking has on a person's memory. His research groups consisted of fifty 1 pack a day smokers aged between 20–25 and fifty non-smokers aged between 20–25. He gave each subject a memory test consisting of 10 questions.

Independent Variable: _____

Dependent Variable: _____

(b) A recent study in the UK followed 100 day care students aged 3-5. They found that those students with a high fat diet had a lower IQ than those with a low fat diet.

Independent Variable: _____

Dependent Variable: _____

(c) A psychology professor wants to research the effect a person's time on FACEBOOK per day has on a person's psychology test scores. He took a sample of 100 Yr 11 psychology students. 50 students were allowed no time on FACEBOOK and the other 50 were allowed FACEBOOK for 3 hours a night for the week leading up to the test. The students' test scores were then recorded.

Independent Variable: _____

Dependent Variable: _____

2. A research study was conducted to examine if fish oil tablets would improve a person's general intelligence. One hundred Year 12 students were selected to participate in the trial and followed over 6 months. 50 participants were given the fish oil tablet and the other 50 a sugar pill three times a day. After the 12-month trial the participants were given an IQ test consisting of 50 questions.

(a) What is the independent variable in this experiment?

_____

_____

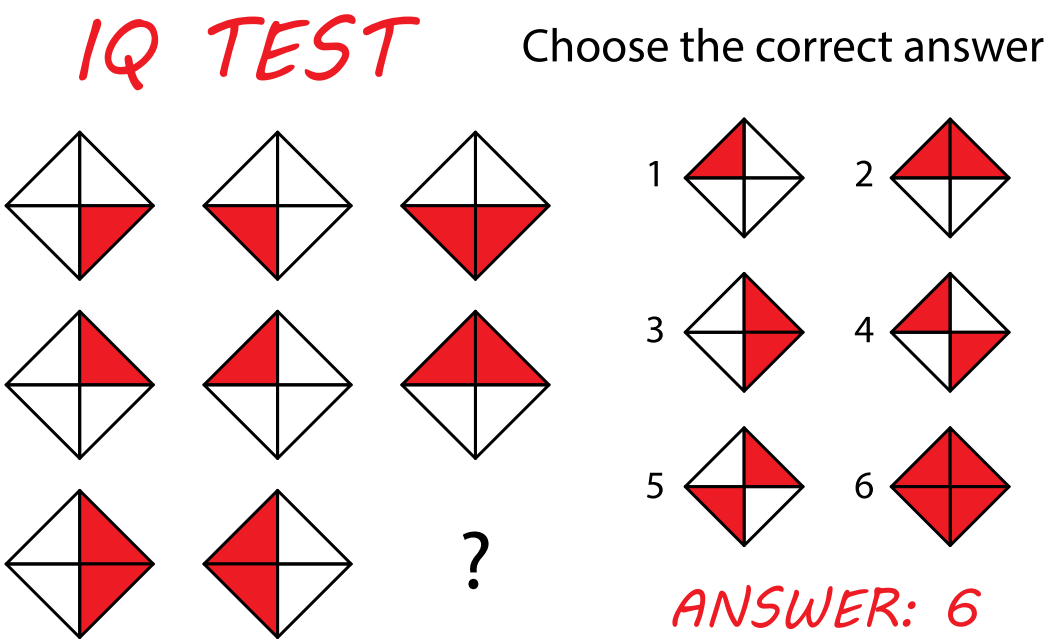
(b) What is the dependent variable in this experiment?

_____

(c) List two variables that should be controlled in this experiment.

(d) Write a hypothesis for this experiment.

(e) Identify the population in the research study.



1.3 METHODOLOGY

Types of research designs.

Review Questions

1. 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. Explain random allocation of participants and identify two (2) strengths and two (2) limitations.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

1.4 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).

A psychologist wanted to investigate the effect chewing gum had on a person's memory score. He took 100 Year 12 participants and asked them to sit a simple memory test. He then split them in to two groups. Group one chewed gum, Group two didn't. Both groups stayed in the classroom for both tests. He then asked the participants to sit the same memory test, to see if there was any improvement to their memory scores.

1. (a) Write an appropriate hypothesis.

_____

_____

_____

(b) Identify the sample of the above experiment.

_____

(c) Identify two controlled variables.

_____

_____

(d) Identify in this experiment how the experiments effect occurred.

_____

_____

_____

_____

(e) Identify and explain **one** ethical consideration the psychologist must follow.

_____

_____

_____

_____

1.5 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				

1.6 PROCESSING AND ANALYSING DATA

Tables

1. Why do we use tables?

_____

_____

A correctly labelled table should include an independent variable heading on the left hand column and a dependent variable heading. The table should have a main title that includes both the independent and dependent variable.

TYPE OF DIET	DAY-CARE STUDENTS AGED 3-5 IQ				
	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5
High Fat	95	97	98	95	96
Low Fat	105	110	112	115	118

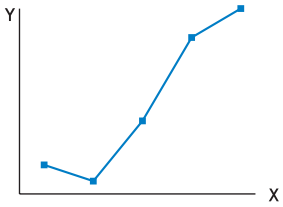
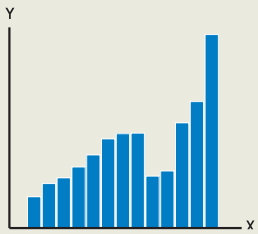
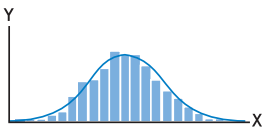
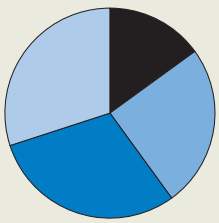
Figure 1. Results for Type of diet affects IQ in day care students age 3-5.

2. Using the results that the UK study found, and the data above, can you support or reject your hypothesis? Why/why not?

Graphs

3. What are some benefits of displaying information in graphs?

4. In the table below, state the type of graph that is shown in the diagram, and then explain when this type of graph should be used.

TYPE OF GRAPH	DIAGRAM	WHAT IS IT USED FOR?
		
		
		
		

5. Which graph would be suitable for the data in Figure 1?

_____

6. What does the data in Figure 1 show? (What is the relationship between the independent variable and dependent variable)

_____

_____

_____

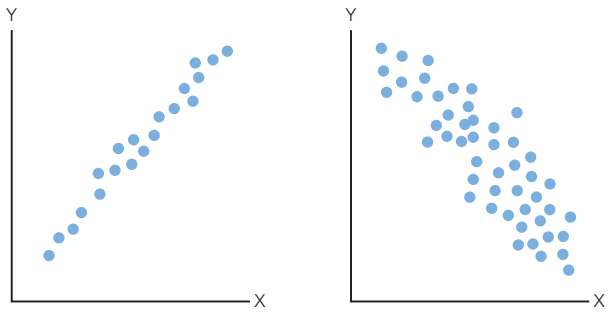
_____

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 correlation between the amount of fat in a person's diet and their body mass index.

Correlation does not imply cause.

The following graphs show different correlation:

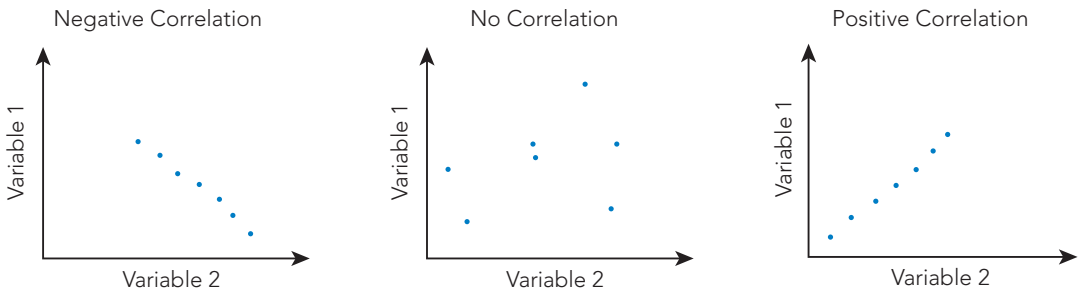


Graph A Graph B

Graph A shows a strong positive correlation. So as X increases, Y also increases.

Graph B shows moderate negative correlation as X increases, Y decreases.

The following graphs show different correlational directions:

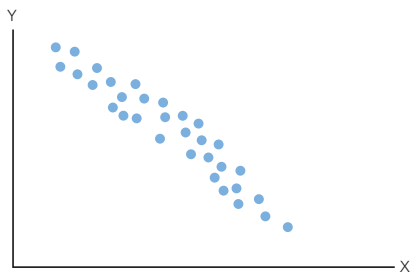


Review Questions

7. State the following correlation and relationship between the variables below.

   X= Amount of adrenalin

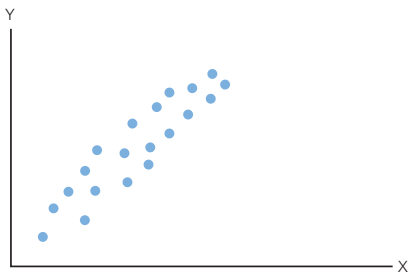
   Y= Amount of sleep



8.

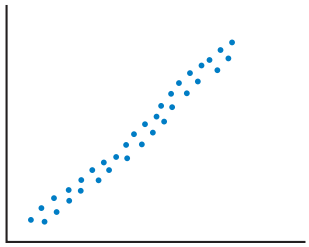
   X= Amount of caffeine consumed in a week

   Y= Memory score



9. From the graphs below state what type of correlation they represent.

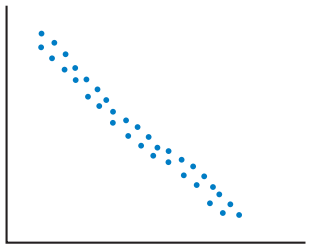
(a)



_____

_____

(b)



_____

_____

10. A researcher conducted a correlational study to determine if the number of hours spent watching TV affected a person's IQ score. The results of the study are shown in the table.

PARTICIPANT	NUMBER OF HOURS SPENT WATCHING TV PER WEEK	IQ SCORE
1	38	95
2	34	105
3	27	108
4	45	85
5	53	90
6	52	78

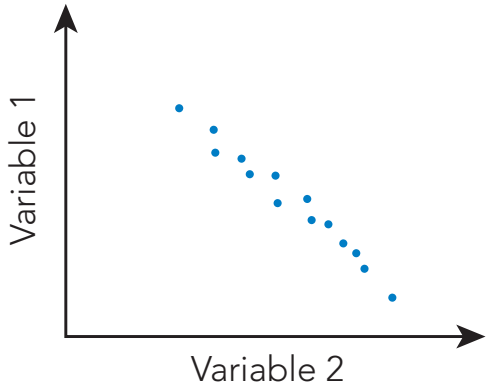
(a) Plot a scattergram of these results.

(b) Identify the strength and relationship between the scores shown in the scattergram.

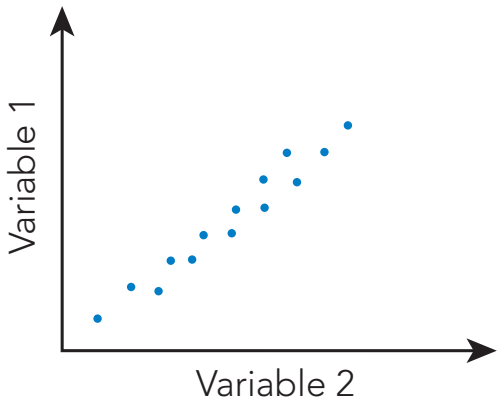
_____

_____

11. Identify the strength and direction of the following graph:



12. Identify the strength and direction of the following graph:



13. Plot the following data in a scattergram.

STRESS LEVELS (questionnaire /10)	HEART RATE (BPM)
2	71
5	78
7	88
9	95
10	108

Table 1: Relationship of stress levels on Heart Rate

1.7 DESCRIPTIVE STATISTICAL METHOD

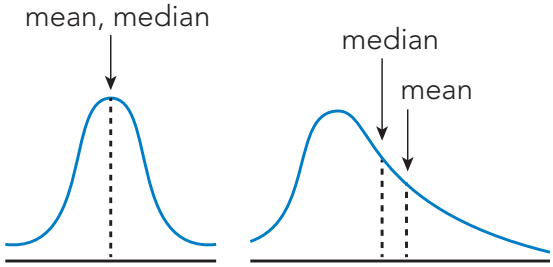
Descriptive statistics are used for organising, describing and representing numerical data.

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.

Measures of central tendency



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) =20/2 = the 10th 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)

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

$$= 3$$

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) =38/2 = the 19th number

1 1 1 1 1 1 2 2 2 2 2 2 2 2 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. 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 3: Frequency of ages first got their ears pierced

Mean: _____ Median: _____

2. 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 4: Frequency of age first walked

Mean: _____ Median: _____

3.

AGE (YEARS)	FREQUENCY
15	3
16	6
17	7
18	6
19	3
Total	**25**

Figure 3. Frequency of the age first got their ears pierced.

Calculate:

Mean:

Median:

1.8 SCIENTIFIC INQUIRY

A psychologist at a university was employed to investigate whether having exam supervisors watching the students while they undertake their exam causes them to perform worse on their examination. The university wanted the results quite quickly so the Psychologist decided to investigate the Psychology students from 1st, 2nd and 3rd year before their semester 1 exams. She had 300 volunteers and split them into two groups. The first group would have an exam supervisor and the second group would be alone during their exam.

Her results are shown in the table below

GROUP	AVERAGE EXAM RESULTS %
Group 1 exam supervisor	67
Group 2 no exam supervisor	78

Average Psychology exam results with and without an exam supervisor.

1. (a) Write a suitable hypothesis for the investigation above.

(b) Identify the following variables:

(i) Independent variable.

(ii) Dependent variable.

(iii) Two controlled variables.

(c) (i) Identify and explain which selection process the psychologist used for her participants.

(ii) Identify one strength and one limitation of the above selection process.

(iii) Identify and explain one other selection process the psychologist could use and one advantage of using this process.

2. (a) Identify the data collection type the psychologist used.

_____

(b) Identify one strength and one limitation of the above data collection.

_____

_____

3. Graph the results from the table above

4. From the graph explain what the psychologist could conclude from her results.

5. Identify and explain three ethical considerations the psychologist would need to follow.

2 PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING

BIOLOGICAL PSYCHOLOGY

Syllabus Checklist

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

- ☐ structural organisation of the nervous system
  - central nervous system – brain and spinal cord
  - peripheral nervous system – somatic and autonomic
- ☐ role of the functional divisions of the peripheral nervous system
  - autonomic – sympathetic and parasympathetic
  - somatic – sensory and motor
- ☐ features of neurons
  - structure and function of the neuron – dendrites, soma/cell body, axon, axon terminals, myelin sheath
  - functions of sensory, motor and interneurons
- ☐ neural transmission
  - direction of transmission
  - electro-chemical signal
  - role of the synapse
  - role of neurotransmitters
- ☐ location, structure and function of the brain
  - hindbrain – medulla, cerebellum
  - midbrain – reticular formation
  - forebrain – hypothalamus, thalamus
  - cerebral cortex
    - o left and right hemispheres – contralateral control of the body

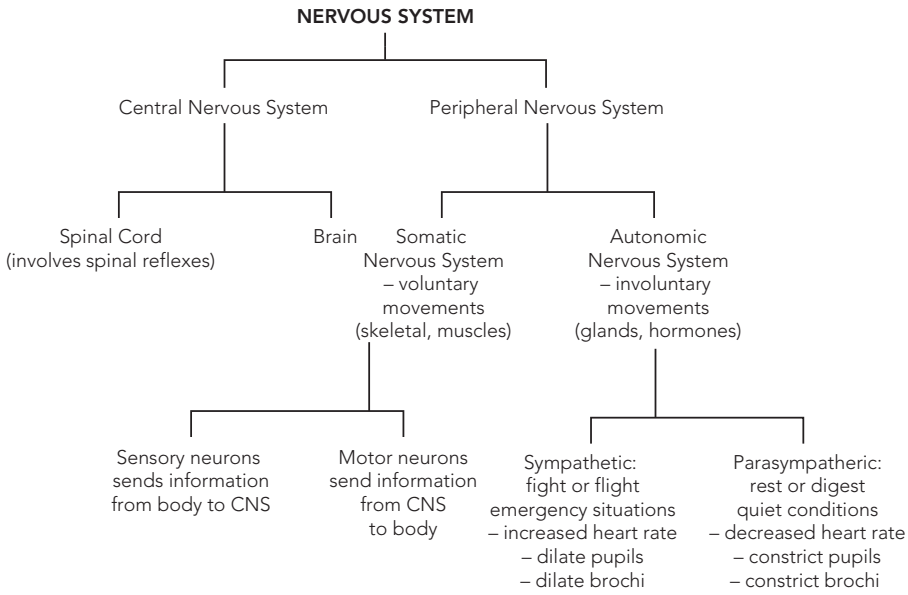
- corpus callosum
- lobes of the brain – frontal, parietal, temporal, occipital
- localisation of functions – Broca's area, Wernicke's area, pre-frontal cortex, primary motor cortex, primary sensory cortex, primary auditory cortex, primary visual cortex

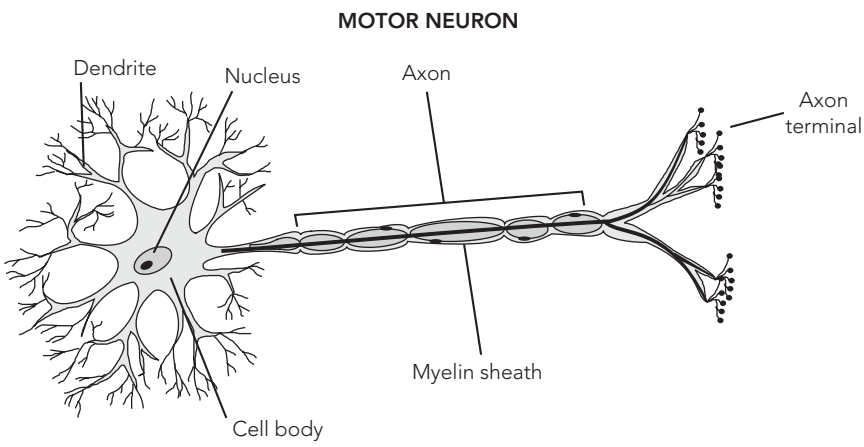
☐ historical research on the structure and function of the brain

- Phineas Gage – case study illustrating localisation of lobe function
- Roger Sperry (1959–1968) – role of the corpus callosum using split-brain experiments
- Walter Freeman (1936–1945) – role of the pre-frontal cortex using frontal lobotomy

☐ applications of contemporary methods to improve knowledge of brain structure and function

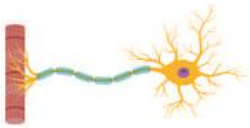
- electroencephalogram (EEG)
- computed tomography (CT)
- magnetic resonance imaging (MRI)
- functional magnetic resonance imaging (fMRI)





NERVOUS SYSTEM

Motor neurons



play a role in voluntary and involuntary movements. Help the CNS communicate with muscles and organs

Interneuron

These neurons are found in the brain and spinal cord. They pass signals from sensory neuron to interneuron to motorneuron to interneuron

Sensory neuron

play a role in your senses and are triggered by your environment, they help you taste, smell, hear, see and feel

Parietal Lobe

Touch perception
Movement control
Manipulation of objects
Sensory activities
Contains primary sensory cortex

Frontal Lobe

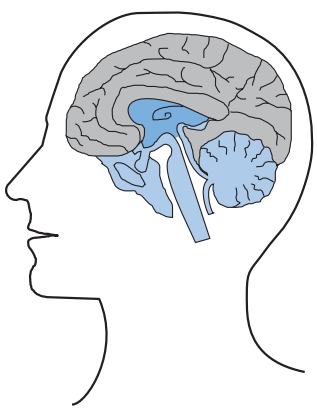
Voluntary movement
Planning — Speech
Intellect — Thinking
Problem solving
Abstract reasoning
Contains primary motor area and Broca's area

Occipital Lobe

Visual reception
Local orientation
Shape perception
Contains primary visual cortex

Temporal Lobe

Long term memory
Speech comprehension
Objects perception
Faces recognition
Hearing
Language (left)
Contains primary auditory cortex and Warnickes' area

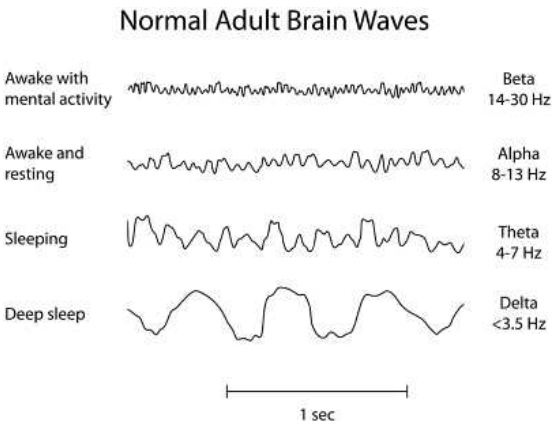


- Forebrain — higher functioning activities hypothalamus, thalamus
- Midbrain — receives messages from senses except smell, reticular formation
- Hindbrain — controls activities not under conscious control medulla, cerebellum

Methods for investigating brain function

External recordings

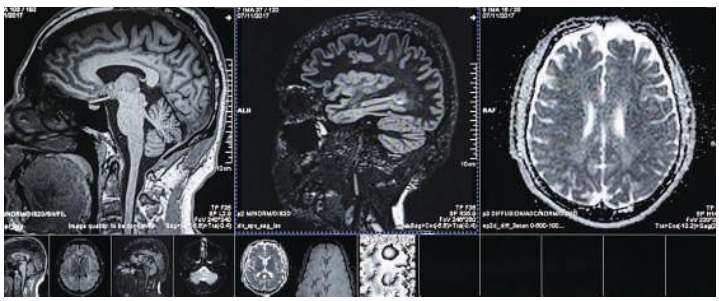
E.E.G



Still Scanning

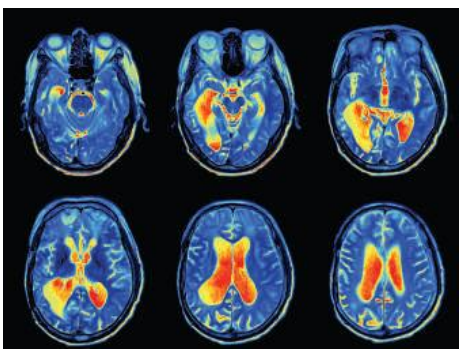
MRI
(Magentic Resonance Imaging)

CAT
(Computerised Axial Tomography)



Dynamic Scanning

fMRI
(Functional Magentic Resonance Imaging)



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) axon

_____

(ii) cell body

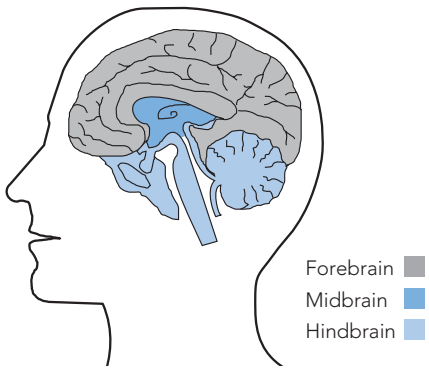
_____

(iii) dendrite

_____

(iv) myelin sheath

_____



Review Questions

1. Describe the functions of the following parts of the brain:

Hindbrain

_____

_____

Midbrain

_____

_____

Forebrain

_____

_____

Corpus callosum

_____

_____

2. The left hemisphere of the brain controls the right side of the body and vice versa. Explain the functions of the left and right hemispheres of the brain.

_____

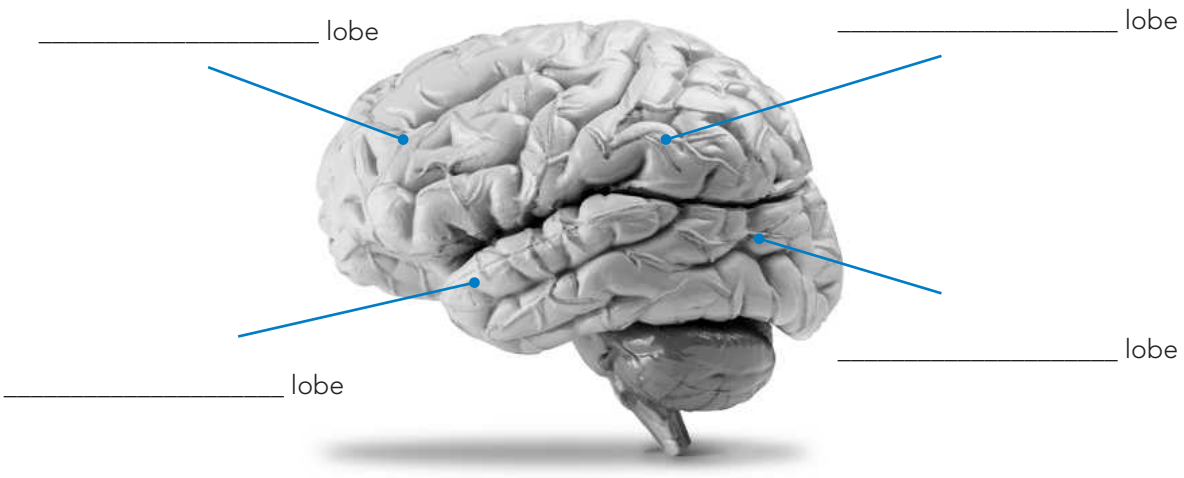
_____

_____

_____

_____

3. Label the four lobes of the cerebral cortex.



4. Describe the functions of each lobe of the cerebral cortex.

LOBE	FUNCTION
Frontal	
Occipital	
Parietal	
Temporal	

5. Draw a structure of a neuron and label the following parts: *cell body, axon, dendrites, myelin sheath*.

6. Fill in the table.

METHODS FOR INVESTIGATION BRAIN FUNCTION

METHOD	NAME	DESCRIPTION
External recording	Electroencephalography (EEG)	
Still Picture	1. 2.	1. 2.
Dynamic Picture		

7. Case studies can also be used to investigate brain function. Animals and humans are used to examine damaged and healthy brains. Phineas Gage is one famous case study. Explain how Phineas Gage was able to assist researchers in investigating brain function.

_____

_____

_____

_____

_____

8. Identify and explain two (2) other historical research on the brain

_____

_____

_____

_____

_____

_____

_____

_____

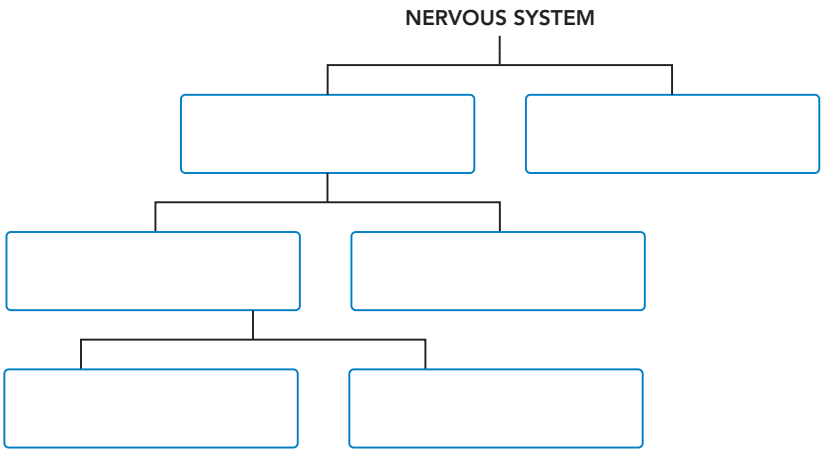
_____

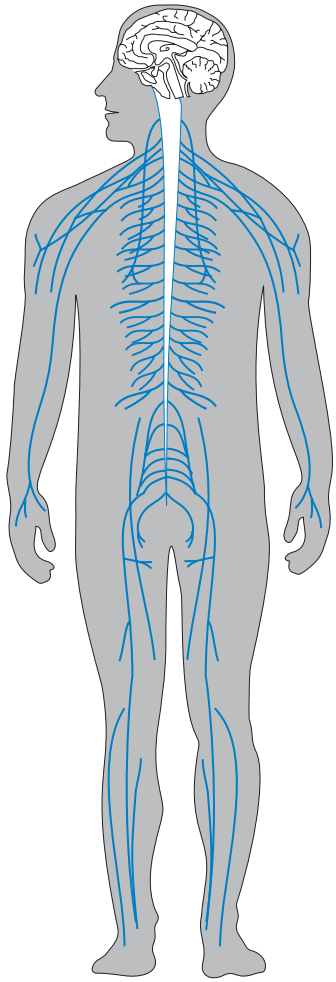
_____

9. Complete the following table:

STRUCTURE	FUNCTION
Occipital Lobe	
Frontal Lobe	
Temporal Lobe	
Parietal Lobe	
Broca's area	
Wernicke's area	

10. Fill in the spaces below from the overview of the nervous system.





11. Explain the difference between the two systems of the autonomic nervous system.

_____

_____

_____

_____

_____

_____

_____

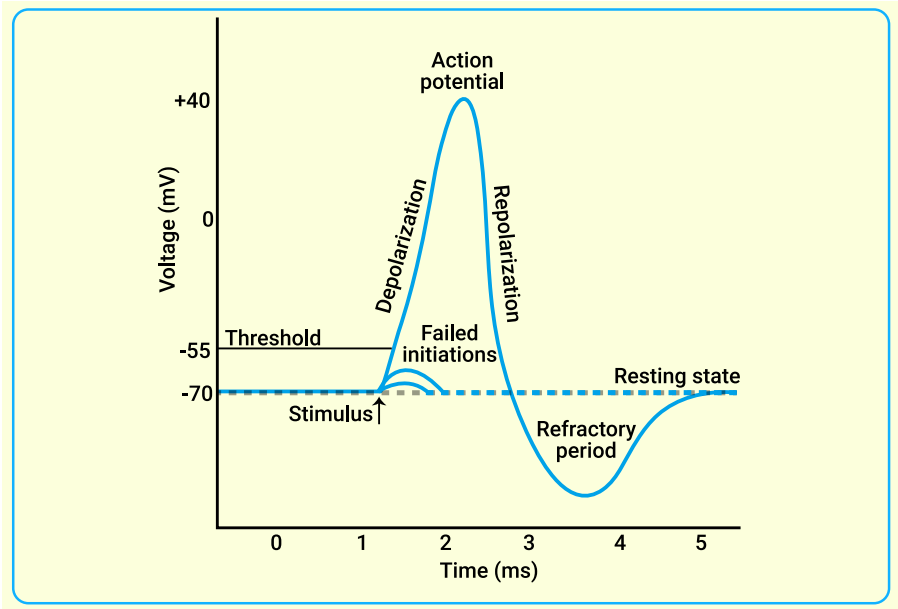
_____

12. If the Broca's area was damaged, explain the symptoms a person may have.

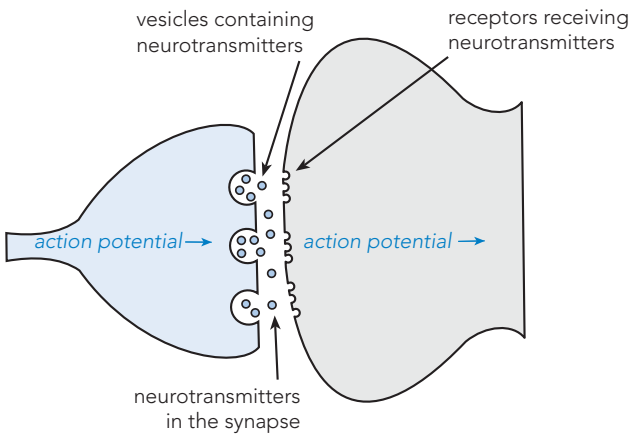
_____

_____

_____



NEURAL TRANSMISSION



13. Define the term neurotransmitter.

14. What is the role of the synapse?

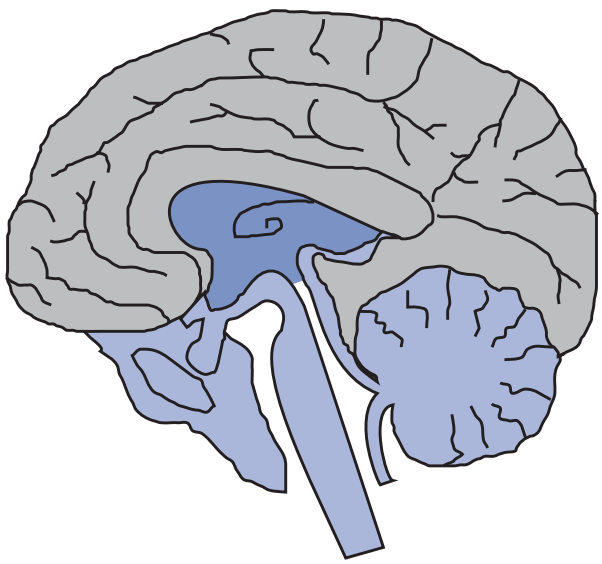
15. Describe the process of an electrical impulse travelling **within** a neuron.

16. Describe the process of a chemical impulse travelling **between** a neuron

17. List and explain the role of **two** neurotransmitters.

18. In what lobe is the primary motor cortex found?

19. Label the primary sensory cortex and the primary auditory cortex of the brain on the image below.



20. Identify the function of the primary sensory cortex and the primary visual cortex.

3 PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING

LIFESPAN PSYCHOLOGY

Syllabus Checklist

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

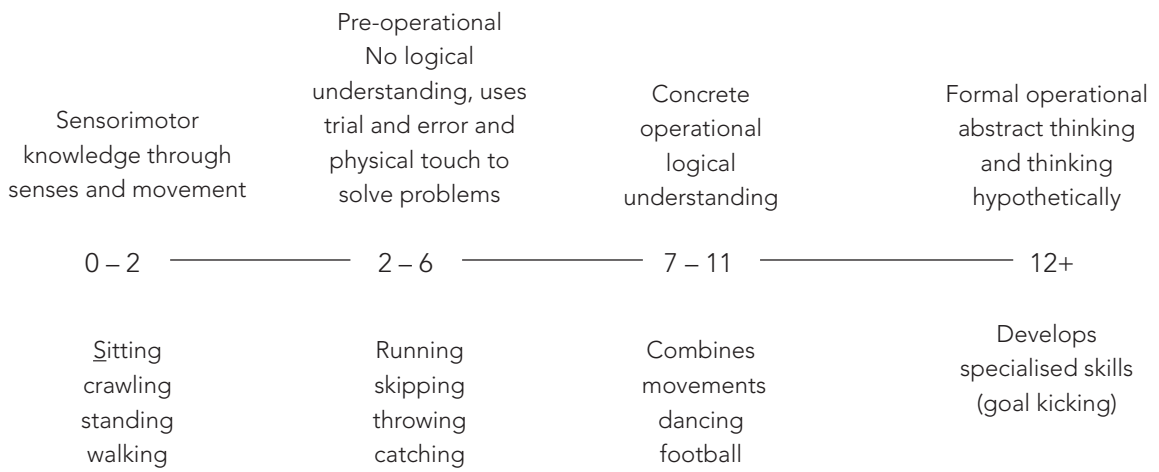
- ☐ developmental stages across the lifespan – prenatal, infancy, childhood, adolescence, early adulthood, middle age, older age
  - changes across developmental stages
    - physical (gross and fine motor skills)
    - cognitive (language)
    - social and emotional development
- ☐ role of brain plasticity in infancy and adolescent development
  - adaptive and developmental plasticity
  - infancy
    - stages of plasticity – proliferation, migration, circuit formation, synaptic pruning, myelination
  - adolescence
  - effect of changes in brain structures on behaviour and emotion – cerebellum, amygdala, corpus callosum, frontal lobe
  - effect of changes in frontal lobe development on behaviour and emotion – pre-frontal cortex
- ☐ domains of development
  - theory of cognitive development – Piaget (1936)
    - process of schema formation – assimilation, accommodation, equilibrium and disequilibrium

- stages and developmental changes
  - sensorimotor – object permanence
  - pre-operational – egocentrism, animism, symbolic thinking, centration, seriation
  - concrete operational – conservation
  - formal operational – abstract thinking
- use of Piagetian tasks to determine developmental changes
  - invisible displacement
  - three mountains
  - conservation
  - pendulum problem

- theories of social and emotional development – attachment
  - study: emotion over physiological needs with Rhesus monkeys (Harlow, 1958)
  - theory of attachment – Bowlby (1969, 1988)
    - definition of attachment
    - evolutionary perspective
    - monotropy, critical and sensitive periods, maternal deprivation, internal working model
  - study: Strange situation to measure attachment (Ainsworth, 1978)
    - Type A – insecure avoidant attachment
    - Type B – secure attachment
    - Type C – insecure resistant attachment
  - Findings about cross cultural patterns of attachment according to van Ijzendoorn and Kroonenberg (1988)
- impact of enriched and deprived environments on development
  - Case study – wild/feral child, such as Genie, the wild child

Aspects of human development across the lifespan

Cognitive



Physical

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) schema

_____

(ii) plasticity

_____

(iii) proliferation

_____

(iv) migration

_____

(v) circuit formation

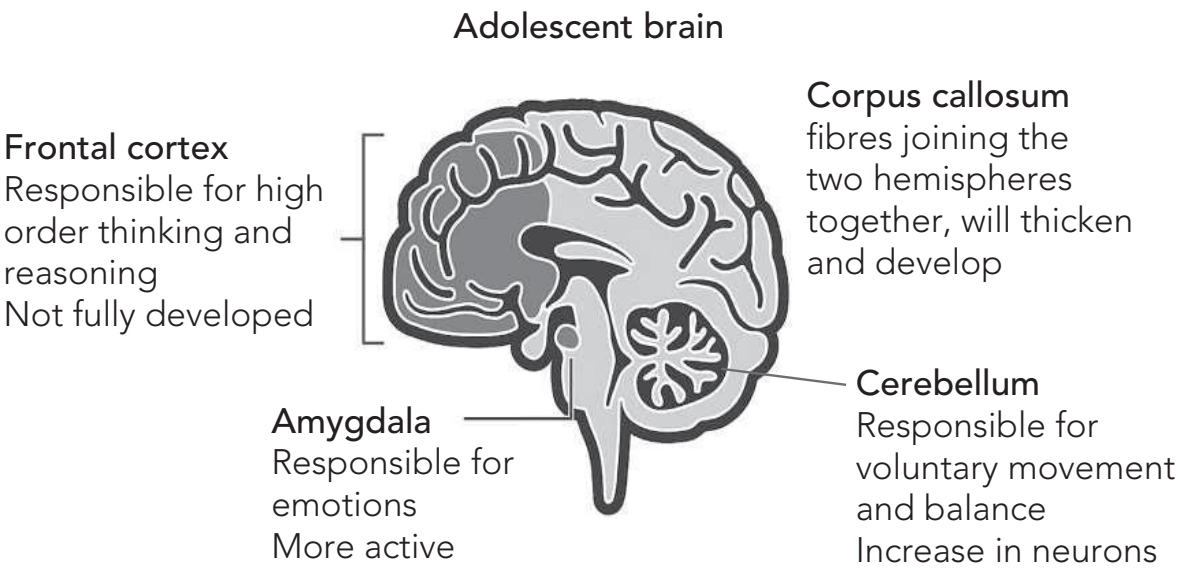
_____

(vi) synaptic pruning

_____

(vii) myelination

_____



Schema Formation

Schema
Dog with 4 legs

Assimilation
Seeing an animal with
4 legs is a dog

Accommodation
Modifies schema
Dog in a house
Cow in a farm

Review Questions

1. Fill in the table below to explain human development.

	DEVELOPMENT ACROSS TIME
Physical (motor skills)	
Social and Emotional	
Cognitive	

2. Identify the difference between developmental plasticity and adaptive plasticity

_____

_____

_____

_____

3. Fill in the table below, to show the changes in brain structure in adolescence

BRAIN STRUCTURE	FUNCTION	CHANGE DURING ADOLESCENCE
Cerebellum		
Amygdala		
Corpus callosum		
Frontal Lobe		

4. List the stages of plasticity in infancy.

_____

_____

_____

5. Explain the following stages of plasticity:

Migration:

_____

_____

_____

Synaptic pruning:

_____

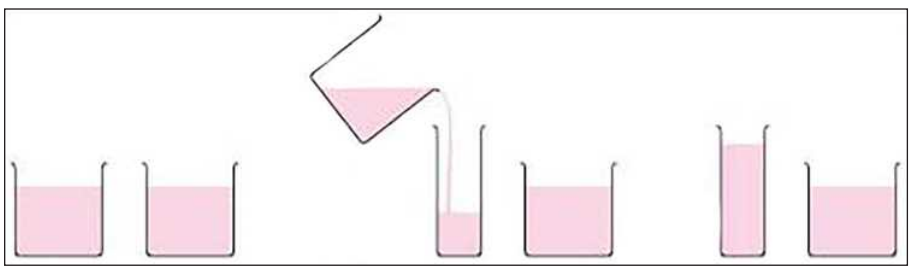
_____

_____

6. Fill in the following table:

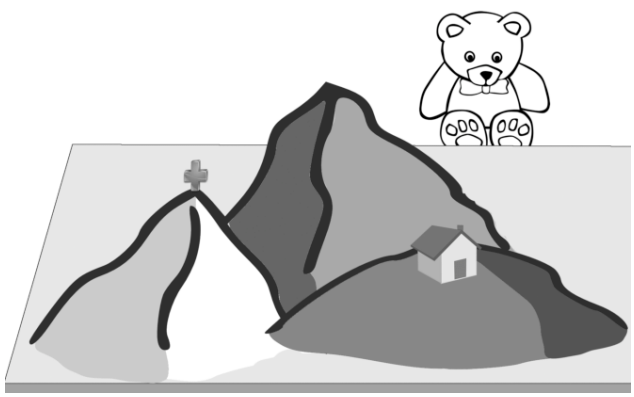
DEVELOPMENTAL THEORY	THEORIST	STAGE	CHARACTERISTICS	PIAGETION TASK
Cognitive Development				

Conservation Task



(a) (b) (c)

Three Mountain Task



7. Explain the process of schema formation

8. Explain the events of Ainsworth's Strange Situation.

9. Explain Bowlby's findings of his attachment theory.

10. Fill in the following table:

ATTACHMENT THEORIST	STUDY	FINDINGS	CONTRIBUTIONS	CRITICISMS/ LIMITATIONS
Ainsworth				
Harlow				
van Ijzendoorn and Kroonenberg				

PSYCHOLOGY

UNIT 2

PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING

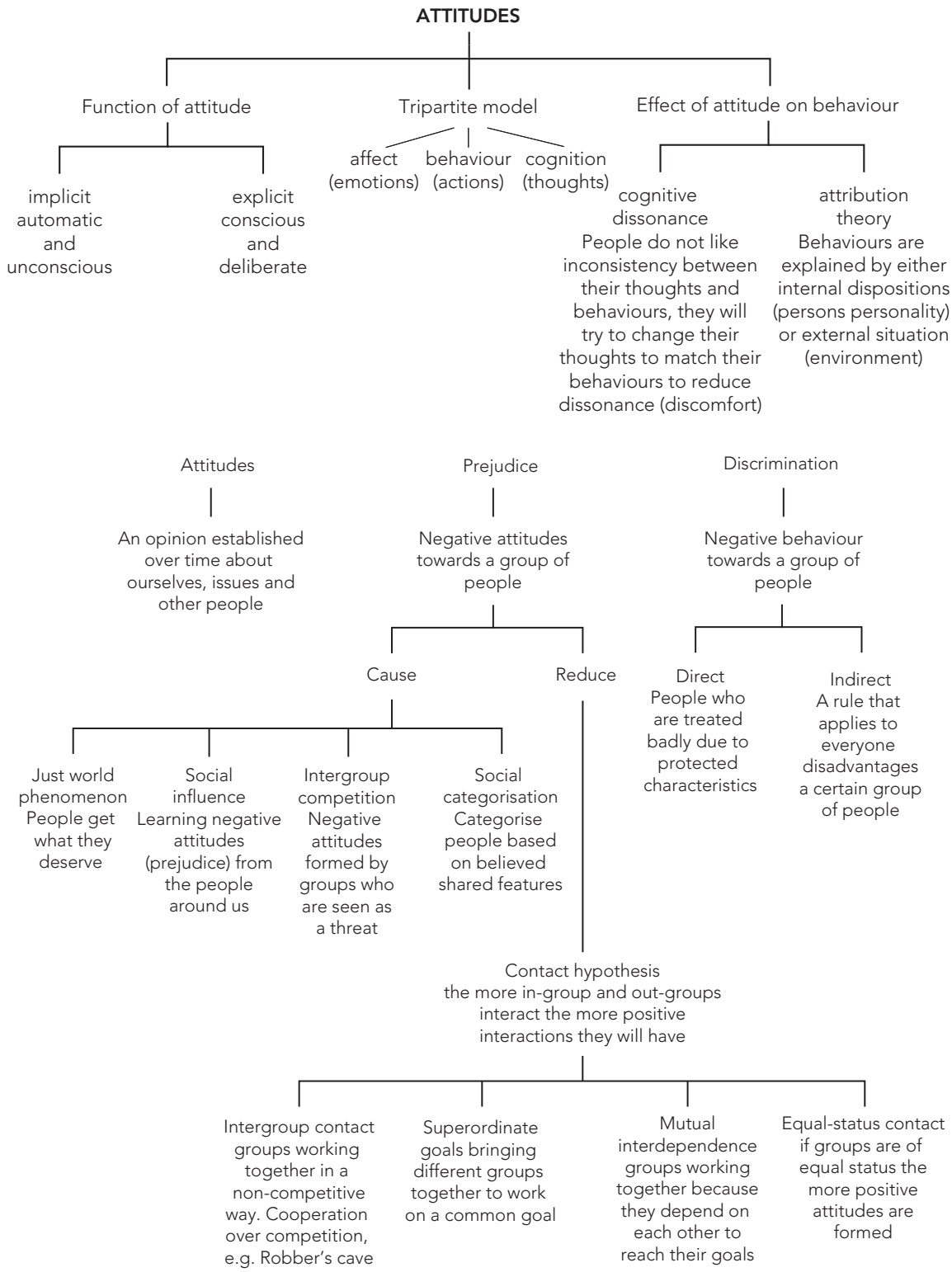
ATTITUDES AND STEREOTYPES

Syllabus Checklist

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

- ☐ function of attitudes – implicit and explicit
- ☐ tripartite model of attitude structure – affective, behavioural, cognitive
- ☐ effect of attitudes on behaviour
  - Theory of cognitive dissonance – Festinger
    - o effect of cognitive dissonance on behaviour – avoidance, reduction, rationalisation
    - o magnitude as a factor affecting cognitive dissonance
    - o responses to cognitive dissonance – change beliefs, change behaviour, change perception of the action
    - o study: Cognitive consequences of forced compliance (Festinger and Carlsmith, 1959)
- ☐ attribution theory to explain behaviour
  - situational and dispositional attributions
- ☐ social identity theory – Tajfel and Turner (1979)
  - social categorisation, social identification, social comparison
- ☐ stereotypes as a form of social categorisation
  - function of stereotypes
- ☐ relationship between attitudes, prejudice and discrimination
  - distinguish between prejudice and discrimination

- direct and indirect discrimination
- examples of prejudice and discrimination in society – gender, race, ethnicity, age, disability, mental illness
- causes of prejudice – social influence, intergroup competition, social categorisation, just world phenomenon
- reducing prejudice – contact hypothesis including intergroup contact; superordinate goals, mutual interdependence, equal-status contact
- study: Robbers Cave experiment (Sherif et al., 1961)



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) attitude

_____

(ii) cognitive dissonance

_____

(iii) discrimination

_____

(iv) prejudice

_____

(v) social identity

_____

(vi) stereotype

_____

Review Questions

1. Why are groups formed?

_____

_____

_____

2. (a) Explain social identity theory.

_____

_____

_____

_____

_____

(b) Explain how social identity influences stereotypes.

3. What is a stereotype?

4. Why do we categorise people?

5. Using psychological understanding explain how we form stereotypes.

6. Explain how stereotypes cause people to alter their behaviour towards individuals.

7. Use the Tripartite model to explain how attitudes are formed.

8. Define the term attitude.

9. Explain **two** causes of prejudice.

10. Explain **two** ways of reducing prejudice.

_____

_____

_____

_____

11. Maya handed in her final Art piece to her teacher. Her teacher looked disappointed with the product. Maya always found art to be her favourite and best subject. Explain using attribution theory how her teacher could explain Maya's behaviour in her art piece.

_____

_____

_____

_____

_____

_____

12. One of the biggest forms of cognitive dissonance is when a person is a smoker. Use this example to explain cognitive dissonance.

_____

_____

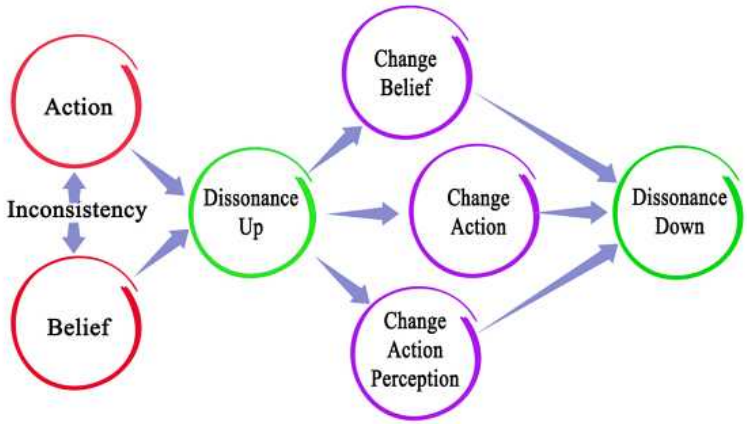
_____

_____

_____

_____

Cognitive Dissonance Resolution



PSYCHOLOGICAL KNOWLEDGE AND UNDERSTANDING

5

SOCIAL INFLUENCES

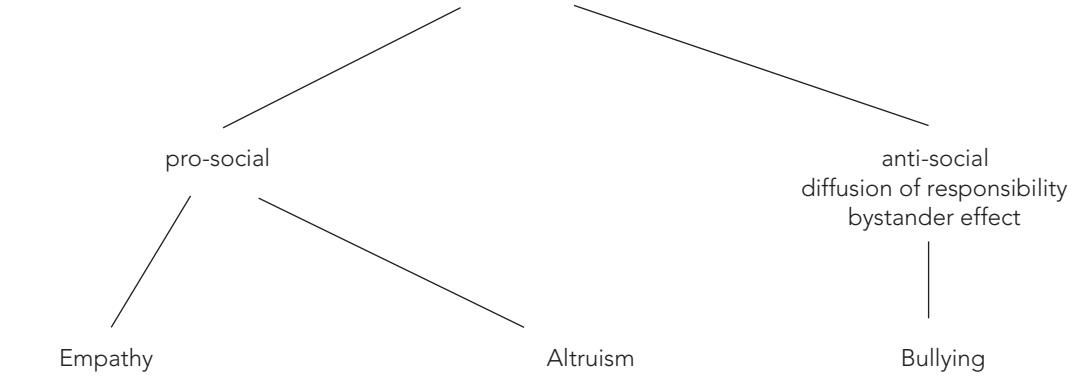
Syllabus Checklist

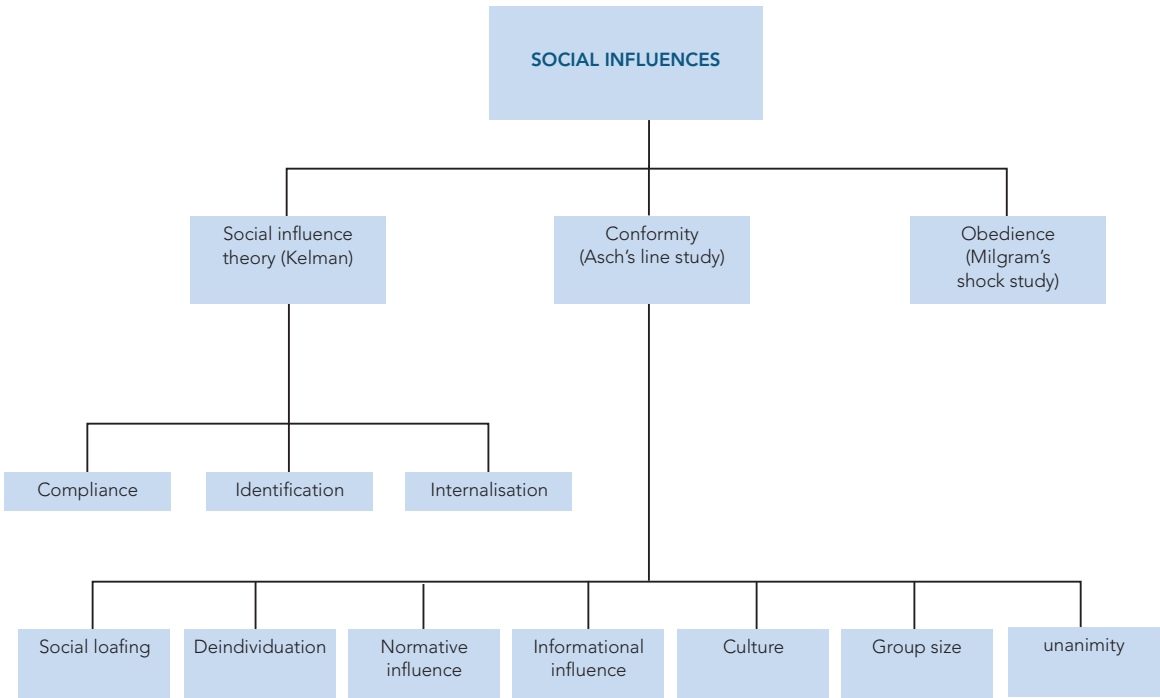
On completion of this chapter you should be able to understand:

- ☐ social influence theory (Kelman, 1958)
  - compliance
  - identification
  - internalisation
- ☐ obedience
  - social response to authority
  - study: Behavioural study of obedience (Milgram, 1963)
- ☐ conformity
  - factors affecting conformity – normative and informational influence, culture, group size, unanimity, deindividuation, social loafing
  - study: Line judgment task (Asch, 1951)
- ☐ antisocial behaviour in response to social influence
  - factors influencing antisocial behaviour – diffusion of responsibility, audience inhibition, social influence, cost–benefit analysis, groupthink
  - concept of bystander effect
  - study: Group inhibition of bystander intervention in emergencies – smoke filled room (Latane and Darley, 1968)
  - bullying as an example of antisocial behaviour
- ☐ pro-social behaviour in response to social influence
  - factors influencing pro-social behaviour – reciprocity principle, social responsibility, personal characteristics (empathy, mood, competence), altruism
  - helping as an example of prosocial behaviour

5 RELATIONAL INFLUENCES

Types of Relationships





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) conformity

_____

_____

(ii) deindividuation

_____

_____

(iii) obedience

_____

_____

(iv) reciprocity

_____

_____

(v) social loafing

_____

_____

Review Questions

1. Explain **one** famous study of obedience.

Study:

_____

_____

_____

_____

_____

_____

_____

2.

BEHAVIOUR	DEFINITION	INFLUENCES	EXAMPLES
Anti-social			
Pro-social			

3. Using an example, explain the term 'reciprocity'.

4. Solomon Asch was the first theorist to conduct an experimental study into the process of **conformity**. Using psychological understandings, explain the findings of Asch's study.

5. Give an example of one study that attempts to explain social loafing.

6. Explain **two** ways of reducing social loafing.

7. Identify and explain **three** (**3**) influences of conformity.

8. Explain Kelmans theory of social influence

9. Explain the study of Latane and Darley.

ANSWERS TO TERMINOLOGY AND REVIEW QUESTIONS

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 observation
(xi) Placebo: an inert substance that does not cause physiological and physical symptoms which is used as a control testing
(xii) Population: a particular group of people
(xiii) Privacy: the participants 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 subset of a larger group/population
(xvi) Scientific: data collection through experimental research using hypothesis
(xvii) Validity: the test measures what is is supposed to measure.

1.1 Ethical Guidelines and Practices for Psychological Research

1. *Psychologist must tell participants of any risks involved, how information is collected and how information is stored.*
2. *Research must debrief the participants after deception, so the true reason of the experiment is told to the participants.*
3. *Informed consent – Parents signed a form. Voluntary participation.*
4. *The students did not get informed consent from parents. Did not keep the students' results private, breaching confidentiality.*

1.2 Formulating Research

1.
(a) Independent variable: smokers vs non- smokers.
Dependent variable: memory test score.
(b) Independent variable: diet high in fat vs diet low in fat
Dependent variable: IQ score
(c) Independent variable: time spent on FACEBOOK vs no time spent on FACEBOOK.
Dependent variable: psychology test scores
2.
(a) Independent variable: fish oil tablets vs sugar pill
(b) Dependent variable: IQ score
(c) Controlled variable: Participants were year 12 students, followed for 12 months, drug taken 3 times a day, IQ test with 50 questions
(d) Hypothesis: Fish oil will improve IQ scores
(e) Year 12 students.

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
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. Random allocation – Participants are chosen for experimental and control groups purely by chance and have equal chance of being allocated to either group.

1.4 Experimental Effect

1.

(a) Chewing gum can improve a person's memory score
(b) Year 12 students
(c) same memory test, same environment – classroom
(d) the psychologist knew which participants were chewing gum and which weren't as they were in the same classroom
(e) Any of the following explained: informed consent, confidentiality, voluntary participation, withdrawal rights, privacy

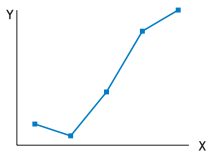
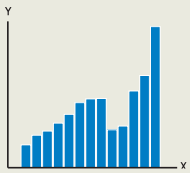
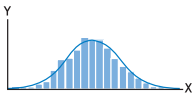
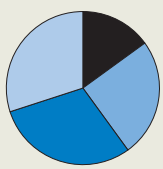
1.5 Data Collection

1.

TYPE OF DATA COLLECTION	DESCRIPTION	STRENGTH	LIMITATION	EXAMPLE
Qualitative	Data that is descriptive, that is not measured in numbers and can be statistically analysed	Can explain the reason for responses Detailed responses Numerical	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 particpants	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

1.6 Processing and Analysing Data

1. *Tables can help to display data in a clear and easy to read format.*
2. *Yes, the hypothesis is supported because the data shows a lower IQ in those students with a high fat diet.*
3. *Graphs can show another way of representing data, which makes it easier to analyse and summarise data.*
4.

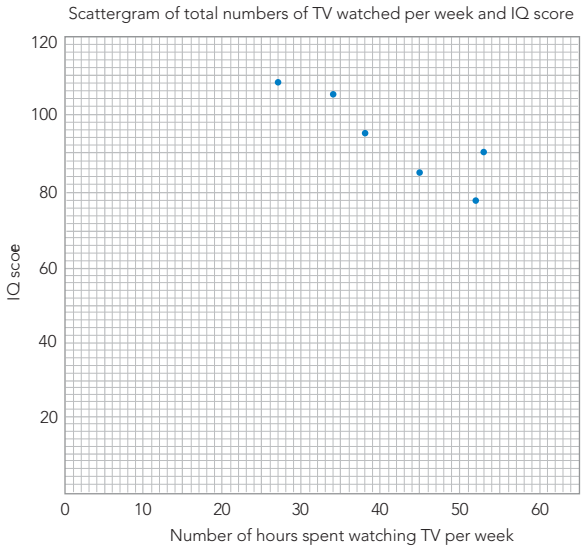
TYPE OF GRAPH	DIAGRAM	WHAT IS IT USED FOR?
Line Graph		Continuous data
Bar Graph		Non continuous data
Frequency Polygon		To show information about frequency of data
Pie Chart		To show proportions of data

5. *Bar Graph.*
6. *The more fat in the diet the lower the IQ. The less fat in the diet the higher the IQ.*
7. *Strong negative relationship*
8. *Moderate positive relationship*
9.

(a) strong positive relationship
(b) strong negative relationship

10.

(a)

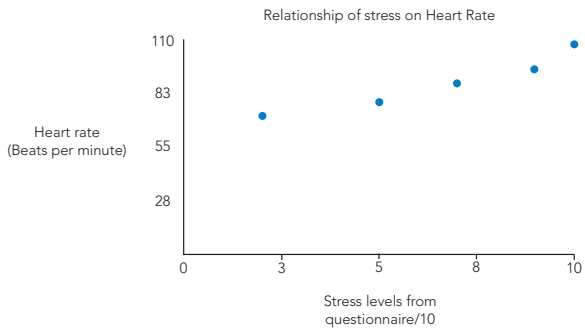


(b) strong negative

11. strong negative

12. strong positive

13.



1.7 Descriptive Statistical Method

1. Mean: 15.4 years
Mode: 16 years

2. Mean: 11 months
Median: 11 months

3. Mean: 17
Median: 17

1.8 Scientific Inquiry

1.

(a) Psychology students who sit their exam without anyone watching will provide higher examination results.

(b)

(i) Exam supervisor vs no exam supervisor

(ii) examination score

(iii) same examination, same subject

(c)

(i) Convenience sampling, the psychologists selected participants based on ease to access them, all psychology students.

(ii) Strength is that they are easy to obtain, limitation is that sample is biased to psychology students

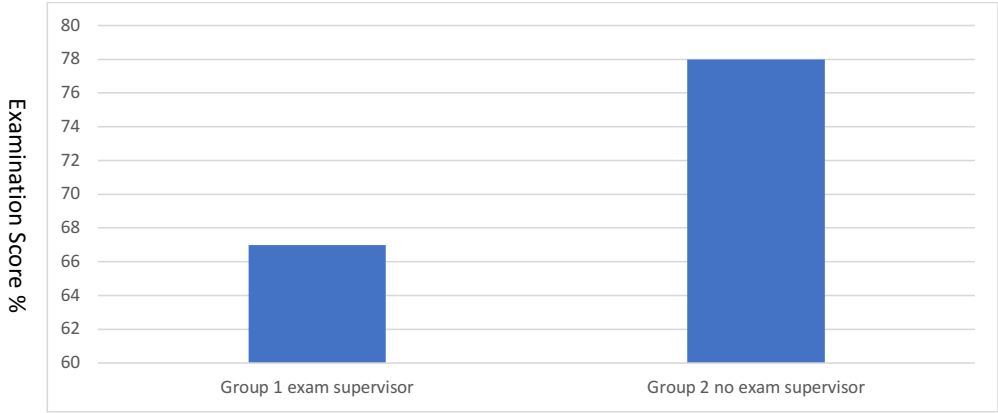
(iii) Snowballing: people are recruited from the original sample to form a bigger sample, strength quick/cost effective, random sampling: participants selected randomly so all of the population has an equal chance of being selected, strength tune efficient/cost efficient, stratified sampling: population is broken into strata based on certain characteristics, strength representative of the population

2.

(a) Subjective quantitative

(b) Strength: can be statistically analysed, limitation: relies on honesty of participants

3. *Average Psychology exam results with and without an exam supervisor.*



4. *The psychologist can conclude that with no exam supervisor the students would have better examination scores and she can support her hypothesis.*
5. *Informed consent: each student 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.*

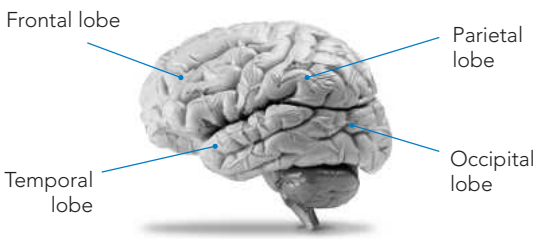
2 – BIOLOGICAL PSYCHOLOGY

Terminology

(i) axon: part of the neuron that sends an electrical impulse from the cell body through the neuron.
(ii) cell body: contains the nucleus.
(iii) dendrite: receives information from other neurons.
(iv) myelin sheath: protects and insulates the axon of the neuron.

Review Questions

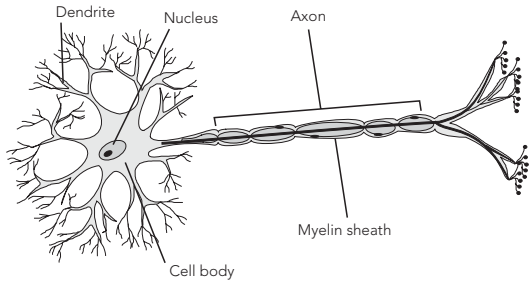
1. *Hindbrain: controls activities that are not under conscious control, e.g. breathing, sleeping and reflexes.*
   Midbrain: receives messages from our senses (not smell) and sends the messages to other parts of the brain.
   Forebrain: higher functioning activities, controls how we think, feel and behave
   Corpus callosum: connects the two hemi- spheres together, relays messages between the hemispheres.
2. *Left hemisphere: controls the right side of the body and controls reading, writing, and language.*
   Right hemisphere: controls the left side of the body and controls non-verbal activities, spatial tasks, puzzles, and drawing.
3.



4.

LOBE	FUNCTION
Frontal	Memory; Speaking; Thinking; Reasoning; Emotions; Higher order thinking
Occipital	Vision
Parietal	Sensation; Reading; Perception
Temporal	Language; Hearing

5.



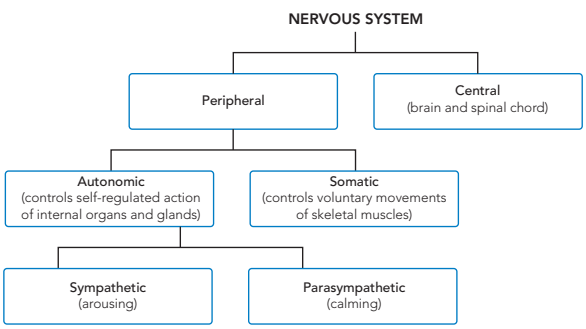
6.

METHOD	NAME	DESCRIPTION
External recording	Electroencephalography (EEG)	Measures electrical activity of the brain (brain waves) different patterns can suggest problems or tumours
Still Picture	1. Computerised Axial Tomography scan (CAT scan)	1. Produces 2D images of the brain using a computer and can detect damaged parts of the brain.
	2. Magnetic Resonance Imaging (MRI)	2. Use of magnetic field to produce a 3D picture of the brain can detect any abnormalities of the brain
Dynamic Picture	1. functional MRI (fMRI)	1. Displays oxygen consumption of brain neurons. The parts of the brain with more oxygen use are more active.

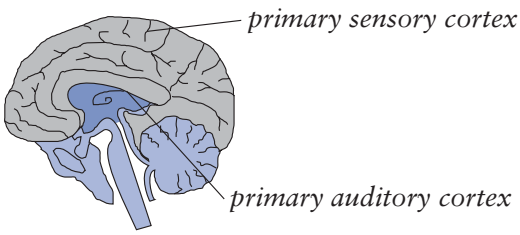
7. *Phineas Gage, a railway worker, had a rod go through his left cheek to the top of his skull. He recovered from the incident; however, people noticed his personality had changed. From this accident the part of the brain that controlled personality and planning was found.*
8. *Walter Freeman was a surgeon who conducted frontal lobotomy's on patients with mental illnesses.*
   Roger Sperry conducted split brain studies on animals. He would cut the corpus callosum. His studies found that the different hemispheres of the brain have different functions and for full functioning they needed to be able to communicate between each other (be connected by the corpus callosum)
9.

STRUCTURE	FUNCTION
Occipital Lobe	Vision
Frontal Lobe	Memory, speaking, thinking, reasoning, emotions, higher order thinking
Temporal Lobe	Language (left), hearing
Parietal Lobe	Sensation, reading, perception
Broca's area	Speech production
Wernicke's area	Understanding of language

10.



11. *Sympathetic system is used in arousing situations (fight or flight). Can affect the body by: increasing heart rate and dilating pupils. Parasympathetic system used in calming situations (rest and digest). Can affect the body by: decreasing heart rate and constricting pupils.*
12. *Cannot produce sound, but can understand language.*
13. *A chemical messenger that travels between neurons through the synapse.*
14. *The gap between neurons, neurotransmitters are transmitted across.*

15. *Electrical impulses within the neuron are called an Action Potential. When there is a resting potential of -70mV an action potential can be transmitted. When a stimulus reaches the threshold of -55mV the impulse will travel (all or nothing response). Only one action potential can travel at a time.*
16. *When an action potential reaches the axon terminal, the neurotransmitters in vesicles will fuse to the synaptic knob and be released into the synapse. The neurotransmitters will then be taken into the receiving dendrite by receptors. Any left over neurotransmitters will be broken down by enzymes or taken back into the axon terminal (re-uptake).*
17. *Serotonin: mood boosting*
    Dopamine: pleasure, movement, emotional responses.
18. *Frontal lobe.*
19. 

20. *Primary sensory cortex receives and processes sensory information from sensory receptors in the skin, primary visual cortex receives visual information and sends the information off for processing and analysing*

3 – LIFESPAN PSYCHOLOGY

Terminology

(i) Schema: an organisation of categories and their relationship e.g. all animals with 4 legs are a dog.
(ii) Plasticity: allows our brain to learn during our lifespan
(iii) Proliferation: foetus cells divide and multiply
(iv) Migration: Foetal neurons moved to the CNS to determine their function
(v) Circuit formation: neuron axons move outwards to form synapses with outer neurons
(vi) Synaptic pruning: neurons start to be removed as more neurons are made than needed
(vii) Myelination: myelin sheath beign to grow around axons

Review Questions

1.

	DEVELOPMENT ACROSS TIME
Physical (motor skills)	0–2 years – sitting, crawling, walking 2–6 years – running, skipping, throwing, catching 7–10 years – combining movements, playing football, dancing 11–12 years – specialized skills gymnastics, goal shooter in netball.
Social and Emotional	Social development begins with trust in caregivers who feed and care for them, children then start to learn a sense of personal control and how to cope with new social demands throughout schooling. Teenagers develop a sense of personal identity and form social relationships. Relationships become more intimate and as adulthood approaches relationships become more nurturing and a feeling of usefulness. Social and emotional development through adolescence can also involve parental conflict, lower grades and risky behaviours (early maturing girls). Early maturing boys tend to have increased self-esteem and confidence. Whereas late maturing adolescents are more insightful, assertive and flexible later in life.
Cognitive	Piaget Sensor motor stages (0–2) – seeing the world through senses and motor skills. Preoperational stages (2–7) – child cannot think logically, needs to use physical actions to solve problems. Concrete operational stage (7–11) – the ability to think logically and carry out tasks with materials that can be seen and touched. Formal operational stage (11+) – the child can think hypothetically and test hypothesis, has the ability to follow the form of an argument and carry out abstract thoughts.

2. *Developmental plasticity is during foetal and adolescent ages when synaspes have the ability to change, adaptive plasticity is when synapses change as we learn throughout life.*

3.

BRAIN STRUCTURE	FUNCTION	CHANGE DURING ADOLESCENCE
Cerebellum	Responsible for voluntary movement and balance	Increase in neurons
Amygdala	Responsible for emotions	More active
Corpus callosum	Fibres joining the two hemispheres together	Develop and thicken
Frontal lobe	Responsible for high order thinking and reasoning	Not fully develpped

4. *Proliferation, migration, circuit formation, synaptic pruning, myelination*
5. *Migration: Foetal neurons moved to the CNS to determine their function Synaptic pruning: neurons start to be removed as more neurons are made than needed*
6.

DEVELOPMENTAL THEORY	THEORIST	STAGE	CHARACTERISTICS	PIAGETIAN TASK
Cognitve development	Piaget	*Sensorimotor (birth – 2 years)*	Child views the world through its senses and motor abilities (touch, sight). After about 1 years of age the child develops object permanence, which is the ability to know an object still exists when it is out of sight. The child also develops mental representation (ability to remember experiences).	*Invisible diplacement*
		Pre operational (2–7 years)	At this stage the child cannot think logically, will solve problems using trial and error using more physical attempts. The child is egocentric – unable to see the world through another's point of view. Cannot conserve volume. Can only think about one idea at a time (centration). Will also play pretend/ symbolic play.	*Three mountains task*
Cognitive	Piaget	*Concrete operational (7–11years)*	The child can conserve mass and volume. Can think logically and classify items into groups.	*conservation*
		Formal Operational (11+ years)	The child can think hypothetically and test hypotheses. Has the ability to follow the form of an argument and understand scientific reasoning. Abstract thought and possibilities can be generated without concrete materials.	*Pendulum problem*

7. *Schema is a concept an infant build to identify things (dog has four legs). As they grow they form assimilations which is the process of adding new information to already existing schemas (cat is also a dog as it has four legs) followed by accommodations when we change our schemas to include new information that doesn't fit in to our original schemas (cat has four legs and dog has four legs)*
8. *Mary Ainsworth conducted a study on attachment of children. The study was conducted as follows:*

(i) An infant and their guardian are placed in an unfamiliar room with toys.
(ii) They play together for a while and a stranger enters.
(iii) The guardian leaves the infant alone with the stranger.
(iv) The guardian returns.
(v) After the infant is settled the guardian leaves infant alone.
(vi) The stranger returns to comfort the infant.
(vii) The guardian then returns for the final reunion.

9. *Majority of the juveniles had been separated from their mother at a young age.*
Infants are programmed to form attachments with their caregivers. The first attachment bond influences future relationships; if infants were deprived of their mother, this could cause later consequences. He believed infants needed to form attachments in a specific time period to avoid later consequences.
Maternal deprevation can cause permanent emotional damage later in life

10.

ATTACHMENT THEORY	STUDY	FINDINGS	CONTRIBUTIONS	CRITICISMS/ LIMITATIONS
AINSWORTH	Strange Situation An infant and their guardian are placed in an unfamiliar room with toys. They play together for a while and a stranger enters. The guardian leaves the infant alone with the stranger. The guardian returns. After the infant is settled the guardian leaves infant alone. The stranger returns to comfort the infant. The guardian then returns for the final reunion.	Mary Ainsworth discovered three types of Attachment • Secure attachment: will happily explore the room and interact with the stranger when guardian is present. Is upset when the guardian leaves and is happy upon return. • Anxious-resistant attachment: Is distressed by the presence of the stranger and will not interact with the stranger. Becomes highly distressed when the guardian leaves. Upon the guardian's return will remain very close to them, but will resist any attention from the guardian. • Anxious-avoidant attachment: avoids both guardian and stranger, showing little emotion when the guardian leaves and will not attempt to explore the room.	Most widely used method for testing attachment in infants. Achieves consistant results and has been classed as reliable.	Study sample is bias towards Middle-classed American families Ethical concerns for putting the child under stress.
HARLOW	Experimented on monkeys. Separated infant monkeys from their mothers and were given two surrogates one covered in terry cloth and one made of wire. Group one terry cloth had no food and the wire mother had milk	Experimented with monkeys to determine the behavioural theory of attachment. Some monkeys were removed from their mother and raised on their own, these monkeys showed abnormal behaviours. The other monkeys were raised with two surrogate mothers, one wire mother who gave food andanother mother who was covered in soft material, the monkeys would feed with the wire mother but would spend most of the time with the soft material 'mother'. Harlow concluded that for normal behaviour the monkeys needed security and interaction from their caregiver.	Harlows research has helped social workers understand neglect and abuse in children and the risk that lack of comfort can have on children in society . Use of animals in research to understand childrens attachment and those children at most risk	Ethical criticisms as his experiments can be seen as cruel and the monkeys suffered from emotional harm Limited value in understanding deprivation in humans
VAN IJZENDOORN AND KROONENBERG		Found that Type B was the most common amongst cultures, Type C was most common in Japan and Israel and Type A was most common in Western Europe.		

4 – ATTITUDES AND STEREOTYPES

Terminology

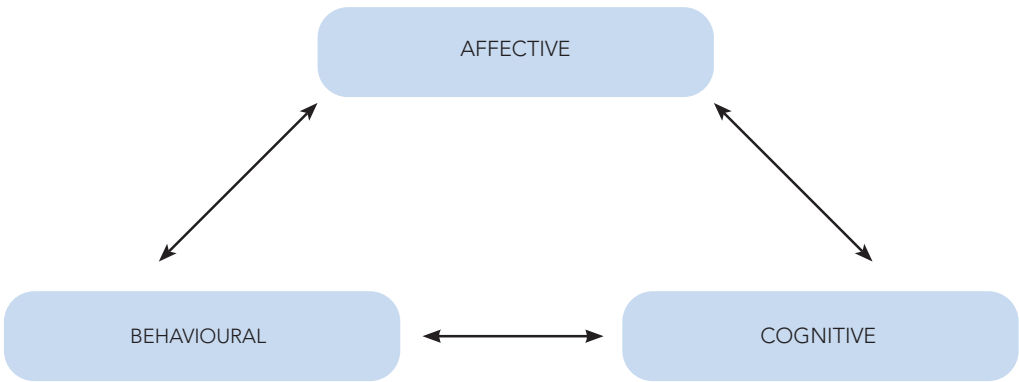
(i) Attitude: an opinion established over time about ourselves, issues and other people
(ii) Cognitive dissonance: The discomfort of when our attitudes and behaviours do not match.
(iii) Discrimination: negative behaviour towards a group of people
(iv) Prejudice: negative attitudes towards a group of people
(v) Social identity: how a person perceives themselves within a group.
(vi) Stereotype: a form of social catagorisation where we categorise people based on believed shared features.

Review Questions

1. *Groups are formed for social interactions, activities and to achieve particular goals.*
2.

(a) Tajfel groups provided members with pride and self-esteem. Groups give members a sense of belonging and identity in the world. We tend to enhance our group's status to increase self-image (Australia is the best country in the world)
(b) Groups tend to discriminate the out-group and exaggerate differences between the groups to enhance the self-image of their own groups.

3. *Stereotypes is a form of social categorization where we catagorise people based on believed shared features.*
4. *We categorise people because it is quicker, easier and safer, reflects the norms of the group.*
5. *Stereotypes are usually formed by popularized beliefs and attitudes towards a group of people. We prejudge individuals and place them into categories according to how they look, dress, behave and act.*
6. *Stereotypes can cause people to make judgements about people that fall into a specific group. For example, minority groups, such as the elderly, can be stereotyped as being incompetent with technology. This can lead to an elderly person not being considered for employment.*
7. *Three components of attitudes*



8. *An attitude is an opinion established over time about ourselves, issues and other people*
9. *Just world phenomenon: people get what they deserve*
   Social categorization: categorise people based on believed shared features
   Intergroup competitions: negative attitudes formed by groups who are seen as a threat.
   Social Influence: learning negative attitudes (prejudices) from the people around us
10. *Inter-group contact: groups that have common goals, equal status and intergroup cooperation can break down stereotypes between people.*
    Cognitive interventions: strategies to change the way people think about members of other groups.
    Mutual interdependence: working together because they depend on each other to reach their goals
    Equal-status contact: if groups are of equal status the more positive attitudes are formed
    Superordinate goals bringing different groups together to work on a common goal
11. *Maya's teacher could either use internal disposition and blame the bad art work on her personality for example: she has no talent for art, or external situation that she was having a hard time at home and couldn't give her best to the project*
12. *A smoker has the behaviour of smoking, but his thoughts that smoking is bad for him does not match this behaviour, so he is more likely to change his thoughts to coincide with the behaviour (I only smoke on weekends).*

5 – Social Influences

Terminology

(i) Conformity: changing one's behaviour or ideas due to group pressures.
(ii) Deindividuation: loss of individual identity to join in group behaviour.
(iii) Obedience: changing one's behaviours by responding to instructions from an authority figure.
(iv) Reciprocity: helping someone that has helped you in the past.
(v) Social loafing: exerting less effort when in a group.

Review Questions

1. *Milgram: Participants were split into two groups: teachers and students. Teachers were told to give the student (in alliance with the experimenter) an electric shock of increasing voltage each time the student got an answer wrong. Each shock was on request from the experimenter. It was found that teachers were more likely to shock the student when the authority of the experimenter was high and when they could not see the student.*
2.

BEHAVIOUR	DEFINITION	INFLUENCES	EXAMPLES
Anti-social	Behaviours that cause hurt or pain to others	Diffusion of responsibility, audience inhibition, social influence, cost-benefit analysis, group think	Bullying (being aggressive or dominating towards another person)
Pro-social	Behaviours that help others can be learned or inereted behaviours	Reciprocity principle, social responsibility, personal characteristics (empathy), altruism	Altruism (selfness to the welfare of another person) Empathy (recognising emotions of another person, carry someone's books) Helping someone

3. *Reciprocity is helping someone who has helped you in the past (carrying someone's books who has helped you in the past).*
4. *Asch's study included 6 participants, 1 subject and 5 actors. The participants were asked to determine which of the 3 lines was equal to the first line. The 5 actors began to give false answers. Asch found that subjects would conform to the groups' wrong answers 75% of the time. When given a partner, conformity would reduce. His study showed that people would ignore their own ideas and give in to group influence, particularly when unanimity was present and group size exceeded four members.*
5. *Social loafing is exerting less effort when in a group, Ingham's rope pulling study, found that individuals exerted less effort when pulling the rope when they thought more team members were present than when they believed they were by themselves.*
6. *Tasks are interesting, tasks are monitored (by a teacher), members are highly motivated (prizes), individual contributions are crucial.*
7. *Conformity influences include normative conformity when a person succumbs to group pressure and changes their behaviour to fit in with the group and informal conformity is when a person lacks the knowledge so looks to the group and changes their behaviour accordingly, unanimity, culture, group size, deindividuation a loss of individual identity to join in group behaviour, Social loafing: exerting less effort when in a group.*
8. *Kelman's theory involves: identification: conforming to a social role for example a policeman, internalisation, conforming to a group both in public and private life and compliance conforming in public only and staying to your own believes in private.*
9. *Latane and Darley aimed to find out if people were less likely to act in an emergency situation when other people were present. They used the smokey room experiment. They firstly put a participant on their own in a room to fill in a questionnaire, when suddenly smoke started to poor into the room. 50-75% of participants had started to act on the smoke within 5-6 minutes when they were on their own. When they put participants in the room with 3 other people they found that most of them would continue on with the questionnaire without acting on the smoke.*
   They later developed a 5 stage model of bystander behaviours, a person will answer Yes (they most likely would help) or No (most likely won't help).
   Bystander:
   1. *Notices something isn't right*
   2. *Will determine if it is an emergency*
   3. *Decide how personally attached they feel*
   4. *Decide how to help*
   5. *Act on their decision*

TRIAL TEST 1: SCIENCE INQUIRY

Time allowed: 30 minutes
Total marks: 29

1. A psychology teacher wanted to investigate whether a student's test scores would improve if the tests were printed on green paper.

   She decided to conduct an experiment and selected 30 students from her Year 11 psychology class and split them into two groups. 15 students received a white test paper and the other 15 received a green test paper.

   (a) Write a suitable hypothesis for this study.

   _____

   _____

   _____

   [1 mark]

   (b) What is the independent variable?

   _____

   [1 mark]

   (c) What is the dependent variable?

   _____

   [1 mark]

   (d) List two controlled variables for the above study.

   _____

   _____

   _____

   _____

   _____

   _____

   [2 marks]

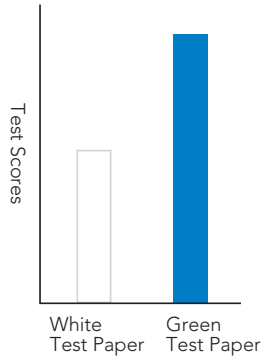


Figure 1. Average test scores with white and green paper.

(e) Explain whether the data from Figure 1 supports or rejects your hypothesis.

_____

_____

_____

_____

[2 marks]

2. A team of scientists were looking into the relationship between the amount of melatonin (a hormone improving the quality of sleep) and scores in a driving test. One hundred female drivers aged 20–25 participated. Their melatonin levels were determined and their test scores in a driving test was recorded. The results were represented in the graph below.

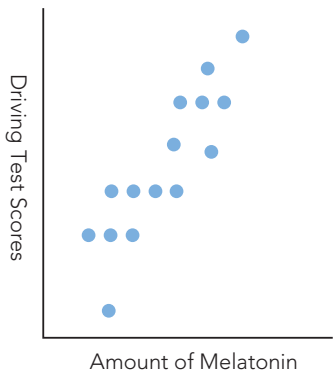


Figure 2. The level of melatonin versus driving test scores for women aged 20 – 25 years.

(a) Describe the strength and direction of Figure 2.

_____

_____

_____

[2 marks]

(b) Identify and explain two ethical considerations the team of scientists need to be aware of when conducting this experiment.

[4 marks]

(c) Can this data be used in the wider population? Explain why/why not?

[2 marks]

(d) Scientists concluded that an increased amount of melatonin in the blood would cause higher driving test scores. Explain why the scientists should/should not publish this conclusion.

[3 marks]

(e) Identify the research design used in the above study.

_____

[1 mark]

(f) Identify one strength and one correlation of the above research design.

_____

_____

_____

_____

[2 marks]

(g) Identify and explain two other forms of research designs.

_____

_____

_____

_____

_____

_____

_____

_____

[4 marks]

(h) Identify one strength and one limitation of the research designs mentioned above.

_____

_____

_____

_____

_____

_____

_____

_____

[4 marks]

TRIAL TEST 2: SCIENCE INQUIRY

Time allowed: 20 minutes
Total marks: 16

1. A researcher wanted to investigate whether completing a driving simulation course before learning to drive, would improve a person's driving test score. 100 female 17-year-old drivers were split into two groups. Group one completed 20 hours of driving simulation, before driving a real car. Group two did not.

(a) Write a suitable hypothesis for the research study above.

_____

_____

_____

_____

[1 mark]

(b) Name the independent variable and the dependent variable in this research study.

Independent variable

_____

Dependent variable

_____

[2 marks]

(c) Give one reason why the researcher could justify deceiving their participants.

_____

_____

[1 mark]

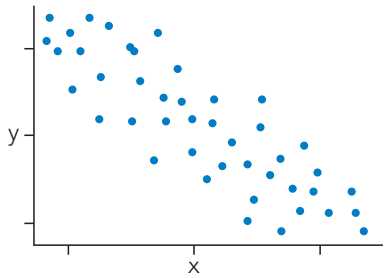
(d) Give one reason why it is important for researchers to debrief research participants.

_____

_____

[1 mark]

2. (a) Identify the strength and direction of the following correlation graph.



_____

_____

_____

[2 marks]

(b) Identify the term used for variables in a correlational study

_____

_____

[1 mark]

3. (a) Fill in the following table:

Research Design	Description	Advantage	Improvement
Longitudinal			
Cross-sectional			

[6 marks]

(b) Identify **two** types of non-experimental research methods.

_____

_____

_____

_____

[2 marks]

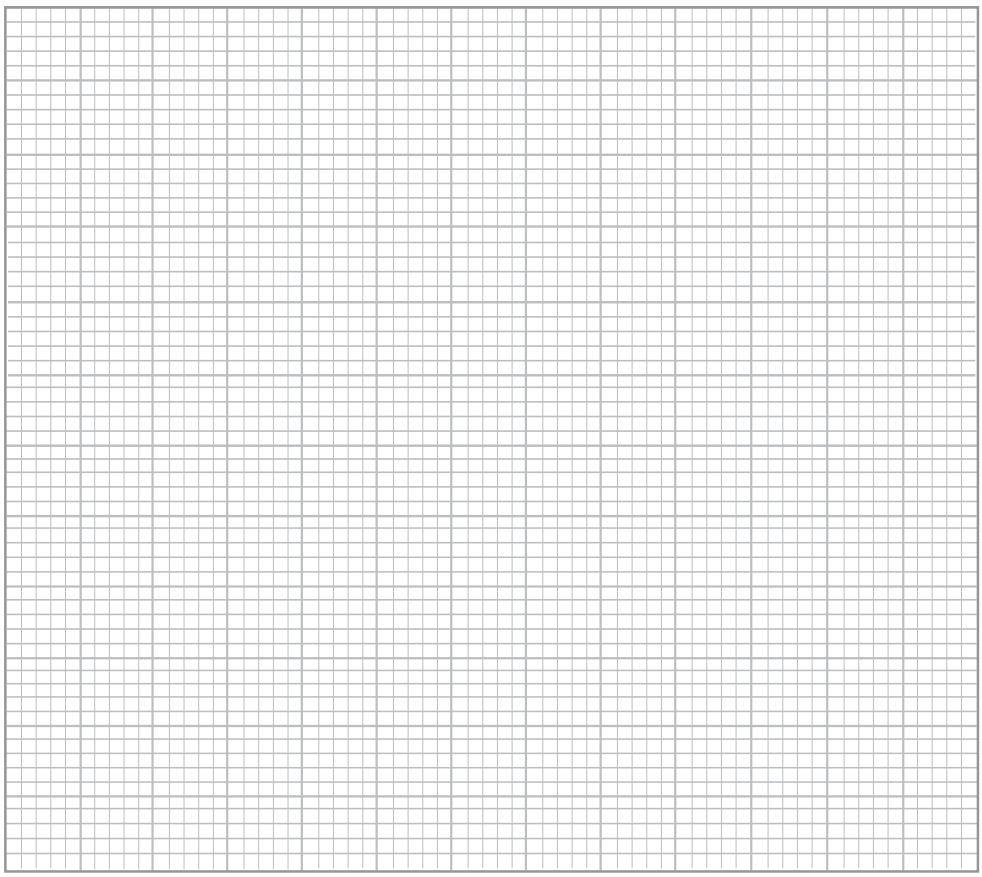
TRIAL TEST 3: SCIENCE INQUIRY

Time allowed: 30 minutes
Total marks: 27

1. (a) The professor's results are shown in the table below.

STUDENT	TEMPO OF MUSIC (BPM)	EXAMINATION SCORE (%)
1	100	91
2	150	70
3	120	84
4	140	76
5	110	91

Plot a scattergram of these results.



[3 marks]

(b) State the median examination score:

_____

[1 mark]

(c) Write a suitable hypothesis for this study.

[1 mark]

2. Calculate each of the following for the number of hours on the internet per week using the table below:

Participant number	Hours on internet per week
1	11
2	6
3	5
4	29
5	14
6	13
7	22
8	14

Mean

Median

[2 marks]

3. Explain the ethical considerations that need to be followed when using animals in research.

_____

_____

_____

_____

_____

_____

_____

_____

[3 marks]

4. Belinda believes that using mind maps to study for a test is a better learning method than mental representation (rote learning). To test her idea, Belinda used her two Biology classes at an all boys' school. Fifty-five students were selected to participate. One group learnt information for the test using mind maps while the other group used mental representation. Each participant sat the same Biology test at the end of two weeks. The results were then recorded. The results are as follows:

Group 1 (mind mapping) Mean test score = 75%
Group 2 (mental representation) Mean test score = 65%
A statistical test on these results found that $p < 0.05$.

(a) Write a suitable hypothesis for the research study above.

_____

_____

_____

_____

[1 mark]

(b) (i) Name the independent variable and the dependent variable in this research study.

Independent variable

_____

Dependent variable

_____

[2 marks]

(ii) Name two controlled variables in this research study.

Controlled variables

[2 marks]

(c) Identify the method of data collection Belinda used.

[1 mark]

(d) Identify two alternative data collection methods Belinda could use and one advantage and one disadvantage to both methods.

[6 marks]

TRIAL TEST 4: SCIENCE INQUIRY

Time allowed: 40 minutes
Total marks: 23

1. (a) Define the term reliability.

_____

_____

[1 mark]

(b) Fill in the following table.

DATA COLLECTION	ADVANTAGE	EXAMPLE
Subjective Quantitative		
Qualitative		
Objective Quantitative		

[6 marks]

(c) Use the frequency table below to answer the following questions.

LENGTH OF BABIES (cm)	FREQUENCY
47	9
48	15
49	19
50	20
51	19
52	15
53	9
Total	106

Figure 1. Frequency table for length of baby when born

Calculate the following:

Mean _____

Median _____

[2 marks]

2. Psychologists were looking into the relationship between introversion and life expectancy. One hundred male participants between the ages of 45–50 years filled in a Likert Scale to determine their levels of introversion. The participants were tracked and their ages at death were recorded. The data is summarised in the graph below.

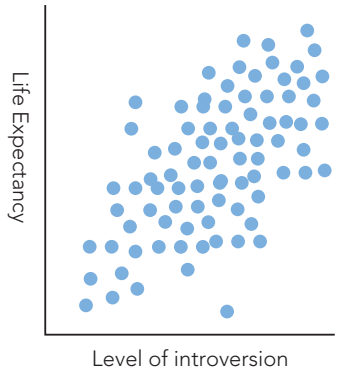


Figure 2. The level of introversion versus life expectancy for men aged 45–50

(a) Describe the correlation represented by the graph.

_____

_____

_____

[2 marks]

(b) Do the results of this research show that being introverted causes you to live longer? Explain your answer.

_____

_____

_____

_____

_____

[3 marks]

3. Researchers developed a new drug which they believed reduced the addiction to nicotine and would therefore stop a person from smoking.

The researchers placed the names of 200 one pack a day smokers into a bag and randomly allocated each person to one of two groups.

Group one received the tablet twice a day and a group two received a placebo tablet twice a day. Over the one-month trial each subject would record the number of cigarettes they smoked in a week.

(a) What is an hypothesis for the above study?

_____

_____

_____

_____

[1 mark]

(b) Identify:

i) The independent variable:

_____

ii) The dependent variable:

_____

iii) Two controlled variables:

_____

_____

[4 marks]

(c) Identify and explain two ethical considerations relevant to this study.

_____

_____

_____

_____

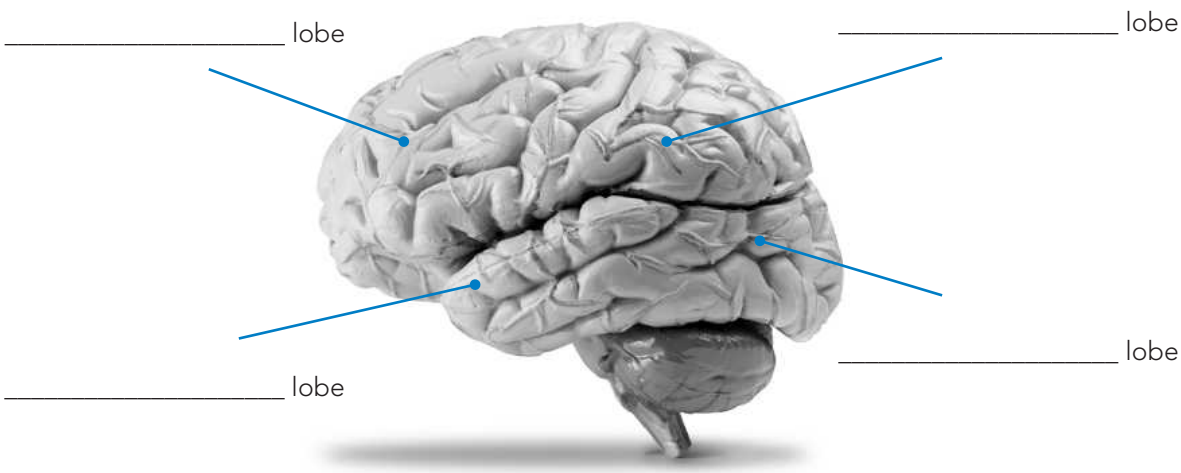
_____

[4 marks]

TRIAL TEST 5:
BIOLOGICAL PSYCHOLOGY

Time allowed: 45 minutes
Total marks: 45

1. Label the following diagram of a brain.



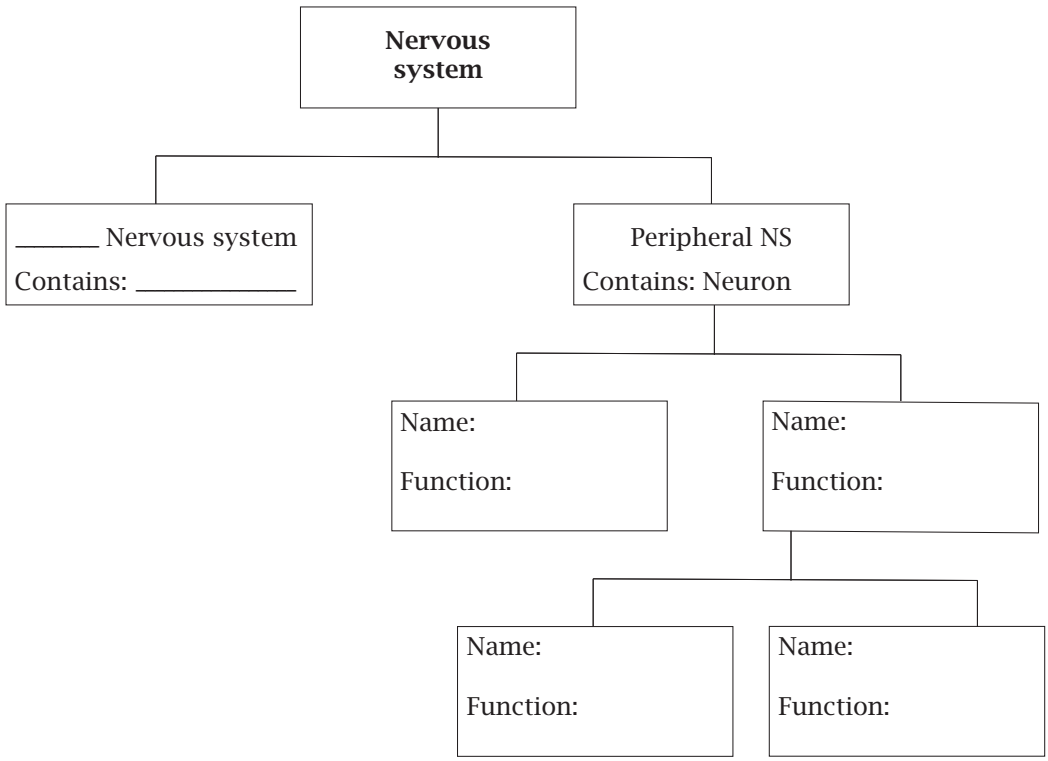
[4 marks]

2. Complete the table below.

PART OF THE BRAIN	FUNCTION
Corpus callosum	
Hindbrain	
Fore brain	
Temporal lobe	

[4 marks]

3. (a) Fill in the following diagram of the nervous system.



[10 marks]

(b) The peripheral nervous system contains neurons, explain how neural transmission occurs across a synapse.

_____

_____

_____

_____

_____

_____

[4 marks]

4. (a) Fill in the following table:

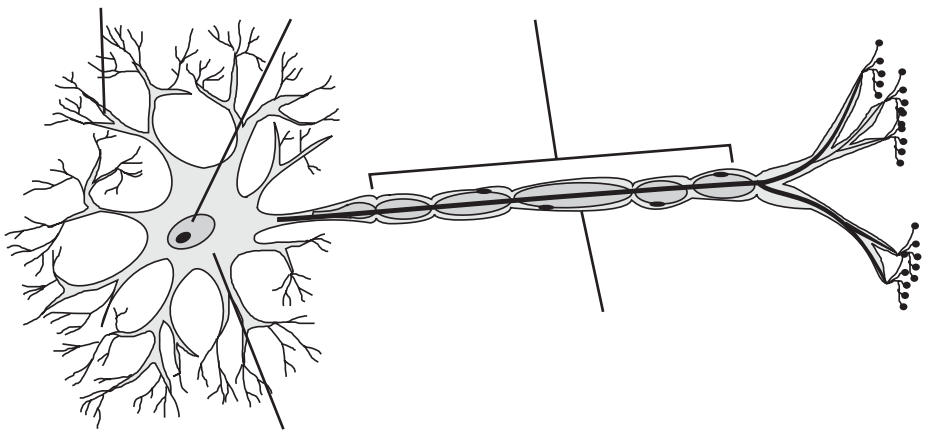
Structure	Function
Frontal Lobe	
Parietal Lobe	
Occipital Lobe	
Temporal Lobe	
Broca's Area	
Wernicke's Area	

[6 marks]

(b) Name and explain **two** methods of investigating brain function.

[4 marks]

5. (a) Label the following diagram of a neuron.



[5 marks]

(b) Identify the type and function of the neuron above.

[2 marks]

6. (a) Identify and explain the difference between the two parts in the somatic nervous system.

[4 marks]

(b) Identify in which lobe Wernicke's area is found and what symptoms a patient would have if this area were damaged.

[2 marks]

TRIAL TEST 6: LIFESPAN PSYCHOLOGY

Time allowed: 50 minutes
Total marks: 61

1. Fill in the following table on physical development.

	Infancy	Childhood	Adolescence
Physical development skills	1. 2.	1. 2.	1. 2.

[6 marks]

2. The neurons change and develop considerably during infancy. Explain the stages the neurons undergo during this stage of development.

[5 marks]

3. Using the example of a horse, explain Piaget's process of schema foundation.

[6 marks]

4. (a) Explain, using Piaget's theory of cognitive development, why a girl aged 5 cannot carry out mental operations with logical thought, while a girl aged 9 can solve problems by thinking logically.

[4 marks]

(b) Identify and explain a Piagetian task that can identify between the girls cognitive development above.

[4 marks]

5. Max was arguing with his older brother because he only got a pizza with 6 slices, whereas his brother had 8 slices. His brother happily switched with him. Identify and explain which stage of cognitive development Max and his older brother are in.

[4 marks]

6. Name and explain Ainsworth's **three** attachment types.

[6 marks]

7. Explain Bowlby's finding on attachment.

[4 marks]

8. Use empirical evidence to explain cross cultural patterns in Ainsworth's attachment types.

[4 marks]

9. Explain the findings of Harlow's theory of attachment.

[2 marks]

10. Identify and explain four brain structures that change during adolescence and effect behaviour and emotion.

[8 marks]

11. Fill in the following table:

Piaget's cognitive development stage	Age (years)	Developmental Change	Explanation
Sensorimotor		Object permanence	
	12+		Ability to understand real concepts and make connections with objects around us
Concrete Operational		Conservation	
	2–7		Can only see the world from their own point of view

[8 marks]

TRIAL TEST 7:
ATTITUDES AND STEREOTYPES

Time allowed: 60 minutes
Total marks: 62

1. Define the term stereotype and explain **two** reasons why we categorise people.

[3 marks]

2. (a) Define the term prejudice.

[1 mark]

(b) List and explain **three** ways that cause prejudice.

[6 marks]

(c) List and explain **two** ways of reducing prejudice.

[4 marks]

3. (a) Use the tripartite model, to explain how attitudes are formed.

[3 marks]

(b) Explain using an example, the difference between implicit and explicit attitudes

[4 marks]

4. (a) Define the term cognitive dissonance.

[1 mark]

(b) Explain 3 effects of cognitive dissonance on behaviour.

[6 marks]

5. Using the example of smoking, give an example of cognitive dissonance.

[3 marks]

6. Your best friend came up to you at lunch and began to yell at you for not saving her a seat in Psychology class. Using the attribution theory, explain the friend's behaviour.

[6 marks]

7. Lily has a very big sweet tooth, loves lollies and chocolate, and she would usually end her day with some chocolate, although she knew that eating a lot of sugar can cause health problems. She decided to only eat chocolate on Sunday.

Explain Lily's cognitive dissonance.

_____

_____

_____

_____

_____

[4 marks]

8. (a) Explain the difference between indirect and direct discrimination.

_____

_____

_____

_____

_____

_____

[2 marks]

(b) Explain the difference between prejudice and discrimination.

_____

_____

_____

_____

_____

_____

[2 marks]

(c) Identify 3 examples of prejudice found in society.

_____

_____

_____

_____

[3 marks]

9. Explain Tajfel's theory of social identity.

[4 marks]

10. Maggie was a straight A student shande was always conscientious in class. When she couldn't finish her Science assignment in class she went to explain to the teacher and ask for an extension.

Define attribution theory and explain how the teacher could explain Maggie's behaviour in the above scenario.

[6 marks]

11. Lily was driving along the freeway when a motorbike driver sped past her and swerved in front of her. She switched lanes and then could see the motorbike driver continuing to swerve in and out of traffic.

Explain how Lily could explain the motorbike driver's behaviour using the attribution theory.

[4 marks]

TRIAL TEST 8: SOCIAL INFLUENCES

Time allowed: 45 minutes
Total marks: 46

1. Use empirical evidence to explain deindividuation.

[4 marks]

2. (a) Use empirical evidence to explain conformity.

[5 marks]

(b) Identify and explain **two** factors that affect conformity

[4 marks]

3. (a) Identify the theorist who studied obedience.

[1 mark]

(b) Explain the above theorist.

[4 marks]

4. Identify and explain **two** ways of reducing social loafing.

[4 marks]

5. Sandy and Sally moved to a new school. They found a group of friends immediately, however, their new group of friends had a rule that they were never allowed to wear their hair in a ponytail. Sally listened to the rule and stuck by it. She would never wear her hair in a pony tail. Even when she was at gymnastics she put it in a bun. Sandy wouldn't wear a pony tail at school, however, when she was at home she always put her hair in a pony tail.

(a) Explain using Kelman's social influence theory how each of the girls were influenced by their new group of friends.

[6 marks]

(b) Identify and explain the last type of Kelman's social influence that was not discussed in your answer above. Give an example in your answer.

[3 marks]

6. (a) Define bystander effect and explain the concept of diffusion of responsibility.

[3 marks]

(b) Define pro-social behaviour and give **two** examples of a behaviour.

[3 marks]

(c) Define anti-social behaviour and give **two** examples of what can cause antisocial behaviour.

[3 marks]

(d) Explain Latane and Darley's findings of the 5 stage model of bystander behaviours.

[6 marks]

ESSAY QUESTIONS

Question 1 (23 marks)

Rebecca and Nicole are best friends; they grew up together and are inseparable. One day Rebecca and Nicole went to the shops after school. After having afternoon tea they browsed the shops. Rebecca found a really nice pair of earrings, but they were very expensive. She told Nicole they were over priced. She decided to steal them. Nicole couldn't believe Rebecca had stolen the earrings and they had a fight and went home.

Using attribution theory and cognitive dissonance explain Rebecca and Nicole's behaviour.
In constructing your extended response, you should:

- Define cognitive dissonance.
- Explain cognitive dissonance.
- Relate the above theory to Rebecca and Nicole's behaviour.
- Define attribution theory.
- Explain attribution theory.
- Relate the above theory to Rebecca and Nicole's behaviour.

Question 2 (20 marks)

Individuals change their behaviour when in a group. Discuss how social loafing and deindividuation affect an individual's behaviour.

In constructing your extended response, you should:

- Explain, using empirical evidence, how deindividuation and social loafing affect behaviours when in a group.
- Discuss how these behaviours can either be increased or decreased.

Marks will be given for including reference to empirical evidence in your answer.

EXAM PRACTICE

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	7	7	95	70
Section Two Extended answer	60 minutes	3	2	40	30
			Total marks		100

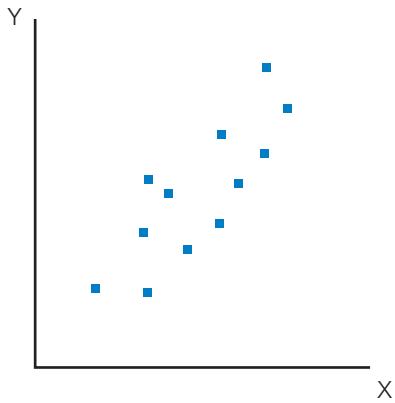
Section One: Short answer — 70% (85 marks)

This section has **seven** (7) questions. Answer **all** questions. Write your answers in the spaces provided.

Suggested working time: 120 minutes

Question 1 — **7 marks**

(a) Identify the strength and direction of the following graph. (2 marks)



(b) Name the variables used in a correlational graph. (1 mark)

(c) Correlation is an example of a non-experimental research method. Identify **two** (2) other types of non-experimental research methods. (2 marks)

(d) Explain the difference between an experimental and a non-experimental research method. (2 marks)

Question 2 **6 marks**

Complete the following table:

DATA COLLECTION	EXAMPLE	ADVANTAGE
Qualitative		1. 2.
Quantitative		1. 2.

Question 3 **10 marks**

Scientists were developing a new vitamin supplement to help with students focus at school. They asked parents from Maslow High for 500 student volunteers. They split the volunteers into two groups. Group one would have the new vitamin supplement for a 10 week term and Group two would have a placebo for the term. They decided to measure the students focus by giving them a pretest in science and another test of similar content at the end of term. They compared the tests and collated the data.

(a) Write a hypothesis for the above experiment. (3 marks)

(b) Identify the following: (3 marks)

Independent Variable:

Dependent variable:

Controlled variable:

(c) Identify the data collection used in the above experiment and **one** (**1**) disadvantage of using this method. (2 marks)

_____

_____

_____

(d) Define the following terms: (2 marks)

i. Reliability:

_____

_____

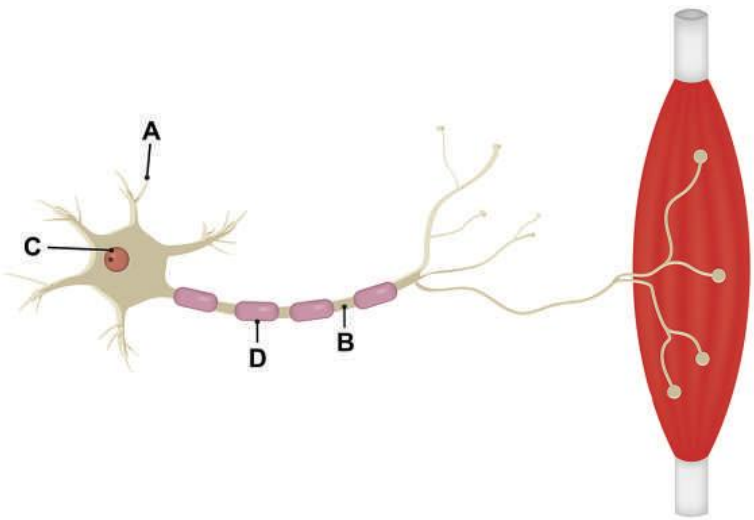
ii. Validity:

_____

_____

Question 4 **10 marks**

(a) Label the picture of a neuron below. (4 marks)



STRUCTURE	NAME

(b) A doctor had an interesting case presented to him after a 14 year old boy came in with concussion from a football to the head. He firstly wanted to run some tests to see if their was any damage to the brain.

(i) Identify and explain **two (2)** scanning techniques the doctor could use to check for brain damage. (4 marks)

(ii) One of the scans presented an issue on the right hemisphere of the brain. Identify **two (2)** problems the boy could present with if there was damage to this side of the brain. (2 marks)

Question 5 **21 marks**

(a) Explain the experiment in Harlow's attachment theory.

(4 marks)

(b) Explain the conclusions in Harlow's attachment theory

(4 marks)

(c) Explain the experiment in Ainsworth's attachment theory

(7 marks)

(d) Explain the conclusions in Ainsworth's attachment theory

(6 marks)

Question 6 **8 marks**

Siblings Faith, 4 years old and Rosemary, 8 years old are very close they have very similar interests. However, they are very different in their development. Explain how Faith and Rosemary differ in their cognitive and physical developments.

Question 7 **8 marks**

(a) Identify and explain **two** (**2**) causes of prejudice. (4 marks)

(b) Identify and explain **two** (**2**) ways of reducing prejudice. (4 marks)

(c) Using Milgram's obedience study explain the following:

(i) Aim of study

(1 mark)

(ii) Method used in study

(4 marks)

(iii) Milgram's findings

(3 marks)

(iv) One contribution and one limitation

(2 marks)

Section Two: Extended Answer

This section contains **three** (3) questions. You must answer **first** questions and pick one from the second and third question.

Suggested working time: 60 minutes

Choose 1 question from Questions 9 or 10

Question 8 **20 marks**

You must answer this question.

A teacher handed back a test to a boy who received 45%. He is usually a straight A student. Her class average was 40%

- Explain the attribution theory and what the teacher could conclude about the test result.
- Explain how the impact of the conformity could have impacted the boy's behaviour on the test.

Question 9 **20 marks**

A group is defined as 2 or more people. A person's behaviour can change when in a group and certain groups can be categorised and cause stereotypical behaviour.

Discuss this statement by explaining **two** (**2**) types of social influence in groups and how stereotypes can be formed in groups.

Question 10 **20 marks**

Sarah and Beth were 4 year old identical twins, they loved going to school and playing with their friends and their favourite thing to do was ride their scooters and dance. Their parents described them as kind and happy.

- Explain the cognitive and physical development of the twins.
- Twins can be known as best friends. Explain how pro-social behaviours can be shown in this relationship.
- Explain using empirical evidence antisocial behaviour due to social influence.

ANSWERS TO TRIAL TESTS

Trial Test 1

1.

(a) Year 11 Psychology students who received green test papers would have higher test scores [1].

(b) Green test papers vs white test papers [1].

(c) Test scores [1].

(d) Type of test questions, subject, psychology students [any 2 @ 1 each].

(e) The hypothesis was supported because the average test scores were higher when the student had a green test paper [2].

2.

(a) strong positive.

(b) Informed consent: participant is aware of the experiment and sign permission to be involved in the experiment.
Debrief: Experimenter explains the experiment to the participant (usually after the experiment)
Voluntary participation: participants willingly involved in the experiment.
Withdrawal rights: participants are able to leave the experiment without consequences.
Confidentiality: Participants results and information are securely stored and are anonymous.
Do no harm: Participants are not to be harmed throughout the experiment.
[1] Identify.
[1] Explain.

(c) No [1] only females [1] or any reasonable explanation (age, sample size).

(d) No [1] correlation does not imply cause [1] could be a third variable involved, e.g. genes [1].

(e) Correlation

(f) A strength is that it can determine the strength and direction of research/can use multiple data collection types [1] and a limitation is that it does not show influence of variables on each other/ time consuming/has extraneous variables [1]

(g) Any two of the following 1 mark for type and 1 mark for method.

TYPE OF RESEARCH	METHOD
experimental	*variables are manipulated in research (independent and dependent variable).*
non-experimental	*descriptive research through observations or interpretations.*
operational	Involves individuals observing groups or individuals in their natural environment
case study	Detailed study of a single person or group of people
longitudinal	Studying same participants over a period
cross-sectional	Participants differ in age, but tested at same point in time

(h) 1 mark for strength 1 mark for limitation for each research design.

TYPE OF RESEARCH	STRENGTH	LIMITATION
experimental	Specific conclusions Allows for cause and effect	No explanation of results Time consuming
non-experimental	Cost effective Can study past events	Can not observe single variables Researcher bias
operational	Can reduce extraneous variables of artificial environments	Observer bias, observers sees only what they want to see
case study	Gives specific information about a particular phenomenon	Time consuming Difficult to generalise to wider population
longitudinal	Shows development of participants	Lose participants Time consuming Practice effect expensive
cross-sectional	Quick easy	Cohort effect (does not look at changes in generations) Doesn't study developmental differences

Trial Test 2

1.

(a) Female 17 year old drivers who completed a driving simulation course before learning to drive would have a higher driving test score [1]

(b) IV: driving simulation course vs no driving simulation course [1]
DV: driving test score [1]

(c) It is beneficial for the participants not to know the true reason for the experiment, as it could alter the results [1]

(d) Ethically research must disclose the participants the true reason for the experiment and offer counselling if needed. [1]

2.

(a) weak [1] negative [1]

(b) behavioural variables [1]

3.

(a)

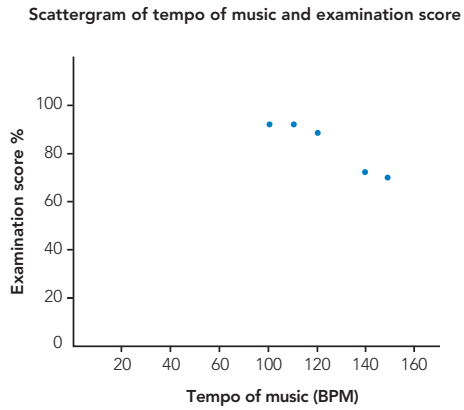
TYPE OF RESEARCH DESIGN	DESCRIPTION	ADVANTAGE	IMPROVEMENT
Cross-sectional	Participants differ in age, but tested at some point in time [1]	Quick/easy [1]	Collect data at more than one point in time [1]
Longitudinal	Studying same participants over a period of time [1]	Shows development of participants [1]	Add a new age group at the same point [1]

(b) Any 2 @1 mark each case study, archival research, observational

Trial Test 3

1.

(a)



(b) 84.

(c) University students who listened to lower tempos of music while sitting their exam would have higher examination results [1].

2. Mean: 14.25 [1]
Median: 13.5 [1]

3. Replacement (1) researchers must ensure they have exhausted all possibilities to undergo their experiment without animals (1). Reduction (1) researchers must try and reduce the number of animals used in the experiment and only use absolute minimum of animals required (1). Refinement (1) researchers must ensure they minimize harm and any suffering of the animal (1)

4.

(a) Biology students who used mind-mapping learning would score higher in their Biology test. [1]

(b)

(i) IV: mind mapping learning vs mental representation learning [1] DV: Biology test scores [1]

(ii) CV Biology students, same biology test, same subject (Any two @ 1 mark each)

(c) subjective quantitative [1]

(d)

TYPE OF DATA COLLECTION	DESCRIPTION	STRENGTH	LIMITATION
Quantitative	Data that is descriptive, that is not measured in numbers and can be statistically uanalysed	Can explain the reason for responses Detailed responses	Cannot be statistically analysed Time consuming Dishonest responses
Objective quantitative	Informed measured in numbers, using physiological testing measures	1. Numerical 2. Can be statistically analysed 3. Participants cannot lie	1. Costly

Trial Test 4

1.

(a) the same results are obtained when retested.

(b)

DATA COLLECTION	EXAMPLE	ADVANTAGE	DISADVANTAGE
Objective quantitative	Physiological measures [1]	Numerical/can be statistically analysed/participants can not lie [1]	Costly [1]
Subjective quantitative	Checklist/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]

(c) Mean: 50 [1] Median: 50 [1]

2.

(a) Positive relationship [1] As level of introversion increases the life expectancy increases [1].

(b) No [1] because this is a correlation study so cannot state level of introversion causes increase in life expectancy [1] could be a third variable involved [1].

3.

(a) One pack a day smokers who received the new drug twice a day [1] would smoke less cigarettes each week [1].

(b)

(i) IV – new drug vs placebo [1]

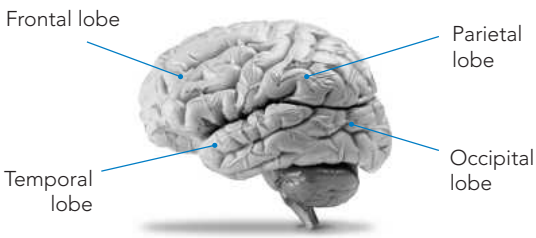
(ii) DV – number of cigarettes smoked per week [1]

(iii) CV – one pack a day smoker/length of trial/amount of time medication was taken per day (any 2@1 mark each)

(c) Informed consent, debriefing, confidentiality, voluntary participation, withdrawal rights, do not harm [1] Identify [1] Explain

Trial Test 5

1.



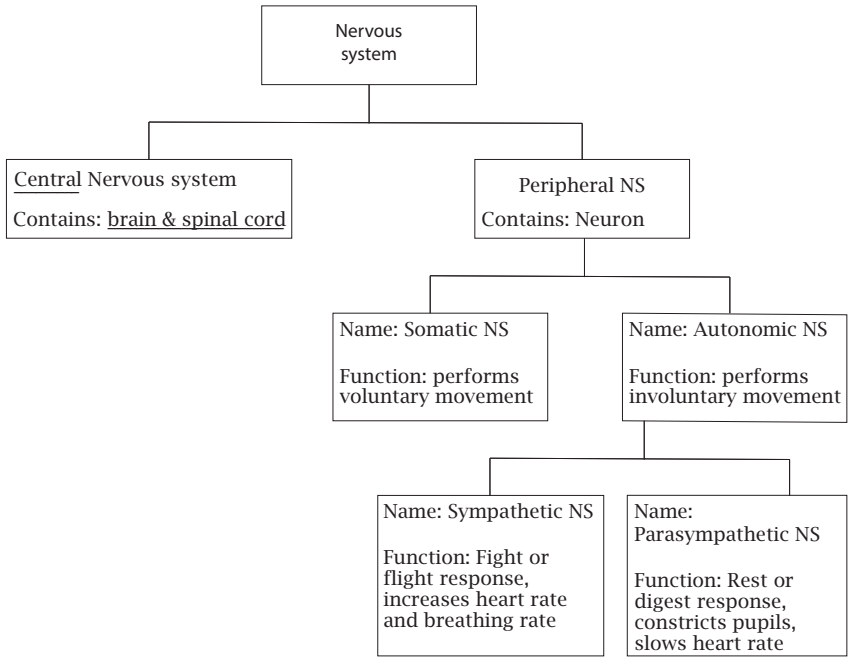
[1 mark per correct label]

2.

PART OF THE BRAIN	FUNCTION
Corpus callosum	Connects the two hemispheres together, relays messages between the hemispheres. [1]
Hindbrain	Controls activities that are not under conscious control, e.g. breathing, sleeping and reflexes. [1]
Forebrain	Higher functioning controls how we think, feel and behave. [1]
Temporal lobe	Language, Hearing. [1]

3.

(a)



(b) An action potential reaches the axon terminal [1] a neurotransmitter inside a vesicle will fuse to the synaptic knob and be released into the synapse [1]. The neurotransmitter will then be taken into the receiving dendrite by receptors [1]. Any left over neurotransmitters will be broken down by enzymes or taken back into the axon terminal [1]

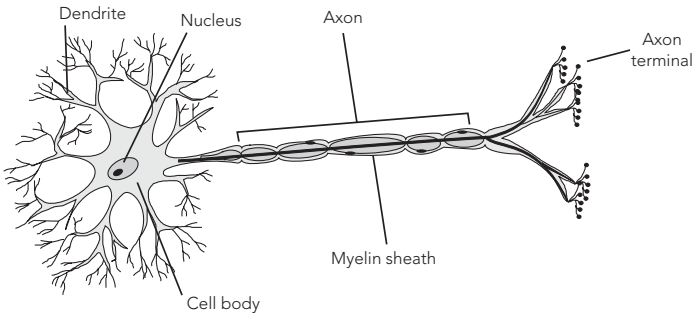
4

(a)

STRUCTURE	FUNCTION
Frontal Lobe	Memory, speaking, thinking, reasoning, emotions and higher order thinking
Parietal Lobe	Sensation, reading, perception
Occipital Lobe	Vision
Temporal Lobe	Language (left) and hearing
Broca's Area	Speech production
Wernicke's Area	Understanding of language

(b) Electroencephalography (EEG): Measures electrical activity of the brain (brain waves) different patterns [2]
Computerised Tomography scan (CT scan): produces 2-D images of the brain using a computer and can detect damaged parts of the brain [2]
Magnetic Resonance Imaging (MRI): use of magnetic field to produce a 3-D picture of the brain can detect any abnormalities of the brain [2]
functional MRI (fMRI): Displays oxygen consumption of brain neurons. The parts of the brain with more oxygen use are more active [2]
Any 2 – [1 mark for name and 1 mark for explanation] [2]

5.
(a)



[1 mark per correct label]

(b) *Motor neuron [1] plays a role in voluntary and involuntary movements [1]*

6.

(a) *Sensory neurons send information from the body to CNS [2]. Motor neurons send information from CNS to the body [2]*

(b) *Parietal [1] person would be able to speak but cannot understand language [1]*

Trial Test 6

1.

	Infancy	Childhood	Adolescence
Physical development skills	Sitting, crawling, walking, standing	Running, skipping, throwing, catching	Combining movements and developing specialised skills

2. *Proliferation: foetus cells that become neurons [1], migration: neurons move to CNS to determine their function [1] circuit formation: axons move outwards and form synapses [1] synaptic pruning: neurons start to be removed as there are more than needed [1] myelination: myelin sheath grows around the axon to protect it [1]*
3. *Schema would be that a horse has 4 legs [2], assimilation is when a child sees a dog who has 4 legs and calls it a horse [2], accommodation changes the schema and is able to distinguish between 4 legged animals, they are no longer all a horse [2]*
4.

(a) *[Any 1 @ 1 mark]*
Age 5 – Preoperational stage [1] egocentric/no understanding of conservation of volume/mental operations needed for logical thought
[Any 1 @ 1 mark]
Age 9 – concrete operational [1] understanding of conservation of volume/classify/solve problems if dealing with concrete materials

(b) *Conservation (1) girls would undergo an experiment to see if they could realise that objects stay the same even when changing appearance (1)The girl who is age 5 would not be able to pass the experiment and would think each volume is the same (1), howver the girl who is age 9 would pass the experiment and understand volumes don't change no matter if they change appearance (1)*

5. *Max is in pre-operational stage [1] because he cannot conserve volume [1] his older brother is in concrete operational [1] because he realises that the two pizzas are the same size (can conserve volume) [1]*
6. *Secure attachment [1] – happily explores the room, upset when guardian leaves, but happy upon return [1]*
Anxious resistant [1] – infant is distressed by stranger and more so when guardian leaves. When guardian returns will cling to guardian, but resist any attention [1]
Anxious-avoidant [1] – avoids guardian and stranger and shows little emotion when guardian leaves [1]
7. *Bowlby found that children experienced monotropy [1] they attached to one parent or caregiver [1] which creates an internal working model of relationships [1] this attachment with the primary caregivers becomes the prototype of all future relationships [1]*
8. *Van Ijzendoorn and Kroonenberg [1] found that Type B was the most common amongst cultures [1] Type C was most common in Japan and Israel [1] Type A was most common in Western Europe [1]*
9. *Monkeys would feed with the wire mother but would spend most of the time with the soft material 'mother' [1] he concluded that for normal behaviour the monkeys needed security and interaction from their caregiver. [1]*

10. *Frontal cortex (1) is not fully developed during adolescence and this is responsible for higher order thinking and reasoning (1) Corpus callosum (1) this will thicken and develop during adolescence and is important in joining the two hemispheres together for communication between hemispheres (1) Amygdala (1) is more active during adolescence and is responsible for emotions (1) Cerebellum (1) neurons increase at this time and are responsible for voluntary movement and balance (1)*
11.

Piaget's cognitive development stage	Age (years)	Developmental Change	Explanation
Sensorimotor	0-2 years	Object permanence	Ability to understand objects exist when out of sight
Formal Operational	12+	Abstract thinking	Ability to understand real concepts and make connections with objects around us
Concrete Operational	7–12 years	Conservation	Ability to understand quantities don't change if they are altered (shape)
Pre-operational	2–7	Egocentric	Can only see the world from their own point of view

Trial Test 7

1. *A form of social categorisation where we categorise people based on perceived shared features [1] quick, easier, safety – must be able to make quick judgements about people especially in emergency situations. (Any 3 marks @ 1 mark each)*
2.

(a) *Prejudice is a negative attitude towards a group of people [1]*
(b) *Any 3 of the following: Just world phenomenon [1] people get what they deserve [1] social influence [1] learning negative attitudes from people around us [1] intergroup competition [1] negative attitudes formed by groups who are seen as a threat [1] social categorisation [1] categorise people based on believed shared features [1]*
(c) *Intergroup contact [1] groups working together in a non-competitive way [1] superordinate goals [1] bringing different groups together to work on a common goal [1] mutual independence [1] groups working together because they depend on each other to reach their goals [1] equal-status contact [1] if groups are of equal status the more positive attitudes are formed [1] (Any 2 of the above)*

3.

(a) *Affective (emotions) [1], Behaviour [1], Cognitive (thought/belief) [1]*
(b) *implicit attitude is an automatic or unconscious attitude [1] and an explicit attitude is a conscious and deliberate attitude [1]*

4.

(a) *The discomfort of when our attitudes and behaviours don't match*
(b) *Any 3 of the following: Just world phenomenon [1] people get what they deserve [1] social influence [1] learning negative attitudes from people around us [1] intergroup competition [1] negative attitudes formed by groups who are seen as a threat [1] social categorisation [1] categorise people based on believed shared features [1]*

5. *A smoker has the behaviour of smoking [1], but his thoughts that smoking is bad for him does not match this behaviour [1] so he is more likely to change his thoughts to coincide with the behaviour (I only smoke at social events) [1]*
6. *Because it is your best friend you would conclude an external situation [1] for example she is having a bad day [1] and not an internal disposition [1] because you would not conclude your best friend has a bad personality [1]*
7. *Lily's thoughts of sugar can cause health problems [1] do not match her behaviour of eating lollies and chocolate every night [1] so Lily changed her behaviour to match her thoughts and only ate chocolate on Sunday [2]*
8.

(a) *Indirect discrimination is a rule that applies to everyone and disadvantages a certain group of people [1] and direct discrimination is when people are treated badly due to protected characteristics [1]*
(b) *Prejudice is negative attitudes towards a group of people [1] and discrimination is negative behaviour towards a group of people [1]*
(c) *Any 3 of the following @ 1 mark each: gender, race, ethnicity, age, disability, mental illness*

9. *Groups provided members with pride and self-esteem [1]. Groups give members a sense of belonging and identity in the world [1]. We tend to enhance our group's status to increase self-image [1] For example Australia is the best country in the world [1]*

10. *Attribution theory is explaining the cause of a behaviour [1] A teacher would explain Maggies behaviour by either an internal disposition [1] she is a lazy student and didn't start her assignment [1] or an external situation [1] something may be happening at home to cause her not to be able to complete the assignment [1]*
11. *Lily could determine the driver to be a bad driver, who is angry (1) which would be an internal disposition (1) or she could say the driver may be having a bad day, late to something or in an emergency (1) which would be an external situation (1)*

Trial Test 8

1. *Zimbardo [1] had participants wear either hoods that hid their identity or normal clothing with nametags [1] and administer electric shocks [1]. Shocks were administered for longer by the participants who were anonymous (wearing hoods and coats) [1]*

2.

(a) *Asch's Line study [1] The actors began to give false answers [1] Asch found that subjects would conform to the groups' wrong answers 75% of the time [1] When given a partner conformity would reduce [1] His study showed that people would ignore their own ideas and give in to the group influence, particularly when unanimity was present and group size exceeded four members [1]*
(b) *Normative conformity [1] a person succumbs to group pressure and changes their behaviour to fit in with the group and informational conformity is when a person lacks the knowledge so looks to the group and changes their behaviour accordingly [1]*

3.

(a) *Milgram*
(b) *A participant who was the teacher was given instructions from the experimenter to give the student an electric shock whenever the student (actor) gave an incorrect answer. The teacher was more likely to give electric shocks to the student when the student was out of sight and experimenter's authority was high [4]*

4. *Tasks are interesting – individuals enjoy the task/tasks are monitored – a teacher monitors group work/members are highly motivated – prizes are available/individual contributions are crucial – everyone is required to submit a section of the work (Any 2 with explanation @ 2 marks each.*

5.

(a) *Kelman would say Sally would have internalisation [1], she has conformed to her group of friends both in public and in her own life privately [1]. She did this by not wearing her hair in a pony tail both at school and in gymnastics. [1] Sandy shows compliance [1] she will in public at school follow the rule but in private does not change her behaviour [1] she does this by not wearing a pony tail at school but as soon as she is at home will wear a pony tail [1]*
(b) *Identification [1] conforming to a social role [1] for example a policeman [1]*

6.

(a) *Bystander effect – when there is a group of people around there is less likelihood of someone helping if someone is in need. [1] Diffusion of responsibility occurs because people believe that someone else will take the responsibility on and help the person, so each person steps back and does not get involved [2]*
(b) *pro-social behaviour is voluntarily helping other people to benefit others or a random act of kindness [1] e.g. empathy, altruism, reciprocity (any 2 @ 1 mark each)*
(c) *antisocial behaviour is voluntarily causing another person harm, hurt or distress [1] e.g. bystander effect, group inhibition, diffusion of responsibility, cost-benefit analysis (any 2 @ 1 mark each)*
(d) *Latane and Darley developed a model for how much bystanders would be useful in an emergency. This would be determined by if they answered yes or no to the following (1) Notices something isn't right, (1)Will determine if it is an emergency (1), Decide how personally attached they feel (1), Decide how to help (1), Act on their decision (1)*

SAMPLE ESSAY ANSWERS

Marks will be allocated for definitions and structure of your essay. The essay needs to use psychological terminology and be well constructed. It needs to be formally written in full sentences and paragraphs. Usually up to 5 marks will be allocated per essay for these requirements. Each topic can then be allocated marks, depending on detail of theorists and use of psychological terminology. Sample answers below provide key points that should be seen in your essay. Please remember that sentences are required and you cannot use dot points in your essay.

Question 1 Sample Essay

Rebecca and Nicole may have grown up together, but that does not mean they share the same values and attitudes. Social influences are integral to what shapes us as people, but so are family and community values. The act of stealing is contrary to Nicole's beliefs; it creates high cognitive dissonance and makes her uncomfortable. After analyzing the attributing factors of her friend's behaviour, she expresses her dissent, resulting in an argument.

Cognitive Dissonance describes the discomfort felt when our attitudes and behaviours do not match. According to Festinger, Nicole would be feeling high dissonance between what she believes to be morally acceptable and the action of stealing the earrings. Before this can be reduced one of two things must happen. Either Nicole changes her thoughts to align with Rebecca's behaviour or Rebecca changes her behaviour to match Nicole's beliefs and returns the earrings.

[Max 5 marks for cognitive dissonance and max 4 marks for linking Rebecca and Nicole's behaviour]

Heider's attribution theory suggests that all actions are influenced by two factors; what is going on in the person's brain (internal) and what is happening around them at the time (external). Rebecca will offer what she believes are reasonable excuses to validate her behaviour and because they are friends Nicole is more likely to find reasons to explain her behaviour. This is known as "Fundamental Attribution Error".

When discussing the behaviour of another person, we tend to focus on their disposition whereas we justify our own actions by the influences surrounding us. Fundamental attribution error occurs when either environmental factors are underestimated or the personality of the person is exaggerated.

[Max 5 marks for attribution theory]

Rebecca is Nicole's best friend, which makes her reluctant to blame the behaviour on internal factors (i.e. she's just a bad person). It is more likely that Nicole justifies the actions by convincing herself that the shop is overpriced and probably won't be affected by the stolen earrings.

[Max 4 marks for linking Nicole's explanations for Rebecca's behaviour]

Festinger theorised that people do not like inconsistency between their thoughts and behaviours and will adjust them accordingly to reduce dissonance. It is Rebecca's actions that have caused the internal rift for Nicole and she expresses this discomfort by arguing with her and going home.

One outcome is that poorly attributed external factors allow Nicole to justify Rebecca's behaviour. In turn, she has altered her attitude and considers shoplifting from overpriced retail outlets forgivable. The two remain best friends.

[Up to 2 marks will be allocated for correct psychological definitions of cognitive dissonance and attribution theory. Up to 3 marks will be allocated for communication skills; this will involve correct sentences, paragraphs, grammar and spelling].

Marks will be allocated for definitions and structure of your essay. The essay needs to use psychological terminology and be well constructed. It needs to be formally written in full sentences and paragraphs. Usually up to 5 marks will be allocated per essay for these requirements. Each topic can then be allocated marks, depending on detail of theorists and use of psychological terminology. Sample answers below provide key points that should be seen in your essay. Please remember that sentences are required and you cannot use dot points in your essay.

Sample Essay 2:

Explain using empirical evidence, how deindividuation and social loafing affect behaviours when in a group.

Deindividuation is the loss of individual identity to join in group behaviour. Zimbardo conducted an experiment where participants either wore hoods that hid their identity or normal clothes with name tags. He found those participants who were anonymous (wearing hoods) would administer shocks for longer. This shows that people will change their normal behaviour when they cannot be recognized.

[Max 5 marks]

Social loafing is exerting less effort when in a group. Ingham conducted a rope pulling study and found that individuals would exert less effort when they thought they were pulling the rope in a team than when they believed they were pulling the rope by themselves. This shows that individuals believe they can reduce their efforts because other group members will exert more effort.

[Max 5 marks]

Discuss how these behaviours can either be increased or decreased.

Deindividuation can be increased when anonymity is high and shift in attention occurs (shift from internal attention to external attention (what is going on around them – rioting).

Social loafing can be decreased when:

- *tasks are monitored (by authority figures),*
- *members are highly motivated (prizes or bonuses),*
- *individual contributions are crucial (each person must submit a section of task for it to be complete).*

[Max 5 marks]

[Max 5 marks for introduction, correct definitions and a well structured essay using psychological terminology]

ANSWERS EXAM PRACTICES

Section One: Short Answer

1.

(a) strong [1] positive [1]

(b) behavioural [1]

(c) Any 2 of the following: case studies/surveys/archival research

(d) experimental uses independent and dependent variable (one variable is manipulated by the other) [1] non-experimental looks at a relationship between variables [1]

2.

DATA COLLECTION	EXAMPLE	ADVANTAGE
Qualitative	Open-ended questionnaire/interview	1. can explain the reason for responses 2. detailed response
Quantitative	Fixed response/rating scales/likert scales [1]	1. statistically analysed 2. cost efficient Less time consuming

3.

(a) Volunteers from Maslow High school who took the new vitamin [1] would have an increase in test scores showing more focus [1].

(b) Independent variable: new vitamin vs placebo
Dependent Variable: difference between pre test and post test
Controlled variable: science subject, time between tests

(c) quantitative [1] does not give a detailed response/explanation for response [1]

(d) (i) the same results are obtained when retested
(ii) the test measures what its supposed to measure

4.

(a)

STRUCTURE	NAME
A	Dendrite
B	Axon
C	Cell body
D	Myelin Sheath

(b) (i) Any 2 of the following 1 mark for identification 1 mark for explanation
CAT: produces 2D images of the brain using a computer and can detect damaged parts of brain
MRI: uses magnetic field to produce 3D picture of the brian can detect abnormalities of the brain
fMRI: displays oxygen consumption of brain neurons, the part of the brain with more oxygen use are more active

(ii) The footballer could have problems controlling the left side of his body he could have trouble with these activities: non-verbal, spatial tasks, puzzles drawing. Any 2 of the above.

5.

(a) An attachment theory using monkeys. One group of monkeys were removed from their mother and raised on their own [1]. Group of monkeys was raised by a surrogate wire mother who gave food [1]. And surrogate mother covered in soft material and offered comfort [1] observations were made on which mother the monkeys spent most time with [1]

(b) Monkeys spent most time with the surrogate mother made of soft material [1] to gain warmth and comfort [1] they would only leave this mother when they were hungry [1] he concluded that attachment is not based on physical needs (of food) but also on emotional needs of warmth and comfort [1]

(c) Strange situation [1] a child and their caregiver placed in an unfamiliar room with toys [1] They play and a stranger enters [1] caregiver leaves and child alone with stranger [1] caregiver returns [1] after child is settled the caregiver leaves and stranger enters to comfort child [1] final reunion when caregiver returns [1]

(d) Ainsworth found 3 types of attachment Secure attachment [1] the child happily explores the room and interacts with stranger while caregiver present [1]
Anxious-resistant [1] distressed in presence of the stranger and will not interact with stranger is highly distressed and will try to resist attention from caregiver [1]
Anxious-avoidant [1] avoids both caregiver and stranger shows little emotion [1]

6. Faith who is 4 would be in the preoperational stage of cognitive development [1] she cannot think logically and needs to use trial and error to solve problems [1] Rosemary who is 8 would be in concrete operational stage of cognitive development [1] she can think logically and solve problems without having to see or touch materials [1] Faith would be in physical stage where she would be able to run, skip throw and catch a ball [2] Rosemary would be able to start combining movements within a sport like dancing or football [2]

7.

(a) Just world phenomenon [1] is people getting what they deserve [1]
Social categorisation [1] is categorising people based on believed shared features [1]
Inter-group competition [1] is negative attitudes formed by groups who are seen as a threat [1]
Social Influence [1] is learning negative attitudes from people around us [1]
Any 2 of the above

(b) Inter-group contact [1] groups that have common goals, equal status and intergroup cooperations can break down stereotypes between people [1]
Cognitive interventions [1] strategies to change the way people think about members of other groups [1]

(c)

(i) Milgram aimed to find out how far participants would go in harming another person if told to do so by an authority figure (1)

(ii) Participants were split into two groups, teachers and students (1). Teachers were told to give the student (in alliance with the experimenter) an electric shock of increasing voltage each time the student got an answer wrong. (2) Each shock was on request from the experimenter (1)

(iii) 65% of particpants would continue to shock the learner all the way to 450 Volts (highest level) (2). All participants would get to 300 volts (1) this shows that people are willing to obey orders from an authority figure (1)

(iv) Contribition: Milgram's study has been replicated and tested in many cultures and situations, it continues to find that humans are more likely to obey instructions from an authority figure (1) .Limitations include: bias towards males/ethical concerns (caused psychological harm to participants, right to withdrawal) (1)

Section Two: Extended Response

QUESTION 8 GUIDE TO MARKING EXTENDED RESPONSES	MARKS
Attribution theory	**10**
• Internal disposition the behaviour is due to a person's personality [2] • External situation the behaviour is due to the environment [2] • Fundamental Attribution error is when we either underestimate the external situation or overestimate the internal situation [2] • People tend to explain others behaviour by the person they are (internal) and explain their own behaviour by our environmental (external) [2] • The teacher would say the boys' behaviour is due to an external situation (something may have happened at home) [2]	0–10
Conformity	**3**
• Conformity is changing one's behaviour or ideas due to group pressures [1] • This can be shown if the boy yielded to group pressure of the class to not do as well on the test as the average was only 40% [2]	0–3
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 provide as evidence	1
No psychological evidence or incorrect evidence	0

QUESTION 8 GUIDE TO MARKING EXTENDED RESPONSES	MARKS
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
Answer is too brief or irrelevant	0
TOTAL	**/20**

QUESTION 9 GUIDE TO MARKING EXTENDED RESPONSES	MARKS
Psychological Evidence	**4**
Detailed Description of the theory (one or two examples and sentences of the theory) Sheriff, Ingham, Zimbardo, Asch, Kelman	4
Basic description of theory and name only	2-3
One or more anecdotal stories provided as evidence	1
No psychological evidence or incorrect evidence	0
Social Influence in Group 1 and 2	**8**
Any of the following described: 4 marks each Competition striving to win something by defeating others [2] Intergroup competition can cause hostility and stops the group from achieving goals, competition between groups can cause solidarity between group members [2] Deindividuation loss of individual identity to join in group behaviour [2]. Behaviour is due to a person being anonymous and a shift of attention, attention being focussed on external events (riots) than internal thoughts (should I be doing this) [2] Social loafing is exerting less effort when in a group [2]. This can be due to numerous things and social loafing can be reduced by increasing motivation, interest, forming groups that get along and monitoring each person's contribution [2] Conformity changing one's behaviour or ideas due to presence of others [2]. Can be normative conformity (a person changing behaviour to fit into the group) [1]. Informational conformity when a person lacks knowledge so goes along with the group [1].	
Social influence theory	0-4
Changing behaviour in response to peer pressure [1]. Compliance Agreeing with the group in public but disagreeing in private [1]. Internalisation Changing your behaviour both in public and private [1]. Indentification Changing your behaviour because of social roles (e.g. policeman) [1].	0-4
Social Categorisation	**5**
• Stereoptypes are a form of social catergorisation where we categorise people in groups based on believed shared features • We categorise people because it reflects the norms of the group • Stereotypes are usually formed by popularized beliefs and attitudes towards a group of people. • We prejudge individuals and place them into categories according to how they look, dress, behave and act. • Stereotypes can cause people to make judgements about people that fall into a specific group.	0-5
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
Answer is too brief or irrelevant	0
TOTAL	**/20**

QUESTION 10 GUIDE TO MARKING EXTENDED RESPONSES	MARKS
Cognitive Development	**3**
• Twins are 4 so will be in pre-operational stage [1] • They cannot think logically [1] • They need to use physical actions to solve problems [1]	0-3
Physical Development	**2**
Twins should be able to: • Run • Skip • Throw • Catch	0-2
Pro-social Behaviour	**5**
Pro-social behaviour can be described as an act of kindness [1] Altruistic behaviours are those that are motivated by helping other people, helping a person with their groceries and can be categorised as unselfish [2] Empathy: is having an understanding of another persons' feeling [2]	0–5
Anti-social behaviour	**3**
Behaviours that cause hurt or pain to others [1] Bullying (being aggressive or dominating towards another person (2)	
Psychological Evidence	**4**
Detailed Description of the theory (one or two examples and sentences of the theory) Latane and Darley	4
Basic description of theory and name only	2-3
One or more anecdotal stories provided 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
Answer is too brief or irrelevant	0
TOTAL	**/20**

PSYCHOLOGY THEORIST SUMMARY

THEORIST	THEORY	EXPLANATION
Ainsworth (1978)		
Asch (1951)		
Broca		
Bowlby (1969,1988)		

THEORIST	THEORY	EXPLANATION
Festinger (1959)		
Walter Freeman (1936–1945)		
Phineas Gage		
Harlow (1958)		

THEORIST	THEORY	EXPLANATION
Kelman (1958)		
Latane and Darley (1968)		
Milgram (1963)		

THEORIST	THEORY	EXPLANATION
Piaget (1936)		
Sherif (1961)		
Sperry (1959–1968)		

THEORIST	THEORY	EXPLANATION
Tajfel and Turner (1979)		
Van Ijzendoorn and Kroonenberg (1988)		
Wernicke		

Add more theorists here that you have learnt from your teacher.

THEORIST	THEORY	EXPLANATION

PSYCHOLOGY THEORIST SUMMARY ANSWERS

THEORIST	THEORY	EXPLANATION
Ainsworth (1978)	Attachment	Mary Ainsworth conducted a study on attachment of children. The study was conducted as follows: • An infant and their guardian are placed in an unfamiliar room with toys. • They play together for a while and then a stranger enters. • The guardian leaves the infant alone with the stranger. • The guardian returns. • After the infant is settled the guardian leaves infant alone again. • The stranger returns to comfort the infant. • The guardian then returns for the final reunion. Mary Ainsworth discovered three types of Attachment: Secure Attachment: will happily explore the room and interact with the stranger when guardian is present. Is upset when the guardian leaves and is happy upon return. Anxious-resistant Attachment: is distressed by the presence of the stranger and will not interact with the stranger. Becomes highly distressed when the guardian leaves. Upon the guardian's return will remain very close to them, but will resist any attention from the guardian. Anxious-avoidant Attachment: avoids both guardian and stranger, showing little emotion when the guardian leaves and will not attempt to explore the room.
Asch (1951)	Conformity	Asch's study included 6 participants,1 subject and 5 actors. The participants were asked to determine which of the 3 lines was equal to the first line.The 5 actors began to give false answers. Asch found that subjects would conform to the groups' wrong answers 75% of the time. When given a partner conformity would reduce. His study showed that people would ignore their own ideas and give in to group influence, particularly when unanimity was present and group size exceeded four members.

THEORIST	THEORY	EXPLANATION
Broca	Brain investigation	Discovered the part of the brain involved in speech production. If damaged, the person is unable to speak, but can understand language.
Bowlby (1969,1988)	Attachment	Infants are programmed to form attachments with their caregivers. The first attachment bond influences future relationships; if infants were deprived of their mother, this could cause later consequences. He believed infants needed to form attachments in a specific time period to avoid later consequences.
Festinger (1959)	Cognitive Dissonance	People do not like inconsistency between their thoughts and behaviours; they will try to change their thoughts to match their behaviours to reduce dissonance (discomfort).
Walter Freeman (1936–1945)	Lobotomy	Walter Freeman was a surgeon who conducted frontal lobotomy's on patients with mental illnesses.

THEORIST	THEORY	EXPLANATION
Phineas Gage	Brain investigation	Phineas Gage was a railway worker, who had a rod go through his brain (frontal lobe). He survived, however, his friends found that his personality had changed and he struggled with decision making. Scientist discovered the frontal lobe was the part of the brain that controlled personality and decision making.
Harlow (1958)	Attachment	Experimented with monkeys to determine the behavioural theory of attachment. Some monkeys were removed from their mother and raised on their own, these monkeys showed abnormal behaviours. The other monkeys were raised with two surrogate mothers, one wire mother who gave food and another mother who was covered in soft material, the monkeys would feed with the wire mother but would spend most of the time with the soft material 'mother'. Harlow concluded that for normal behaviour the monkeys needed security and interaction from their caregiver.
Kelman (1958)	Social Influence	Compliance: conforming to a group publicly but not in private life Internalisation: A person conforming to a group publicly and privately. Identification: conforms to social roles (e.g nurses)
Latane and Darley (1968)	Group Inhibition of bystander	Developed a 5 stage model of bystander behaviours, a person will answer Yes (they most likely would help) or No (most likely won't help). Bystander: 1. Notices something isn't right 2. Will determine if it is an emergency 3. Decide how personally attached they feel 4. Decide how to help 5. Act on their decision

THEORIST	THEORY	EXPLANATION
Milgram (1963)	Obedience	Participants were split into two groups, teachers and students. Teachers were told to give the student (in alliance with the experimenter) an electric shock of increasing voltage each time the student got an answer wrong. Each shock was on request from the experimenter. It was found that teachers were more likely to shock the student when the authority of the experimenter was high and when they could not see the student.
Piaget (1936)	Cognitive development	Piaget's Four stages Sensorimotor (birth–2 years) • Child views the world through its senses and motor abilities (touch, sight). • After about 1 year of age the child develops object permanence, which is the ability to know an object still exists when it is out of sight. • The child also develops mental representation (ability to remember experiences). Preoperational (2–7 years) • At this stage the child can not think logically, will solve problems using trial and error using more physical attempts. • The child is egocentric – unable to see the world through another's point of view. • Cannot conserve volume. • Can only think about one idea at a time (centration). • Will also play pretend/symbolic play. Concrete operational (7–11 years) • The child can conserve mass and volume. • Can think logically and classify items into groups. Formal operational (11+ years) • The child can think hypothetically and test hypotheses. • Has the ability to follow the form of an argument and understand scientific reasoning. • Abstract thought and possibilities can be generated without concrete materials.

THEORIST	THEORY	EXPLANATION
Sherif (1961)	Robbers cave experiment	Rattlers vs Eagles camp group. Sherif believed that intergroup conflict occurs when groups are competing for limited resources. Groups will become hostile within themselves.
Sperry (1959–1968)	Split brain study	Roger Sperry conducted split brain studies on animals. He would cut the corpus callosum. His studies found that the different hemispheres of the brain have different functions and for full functioning they needed to be able to communicate between each other (be connected by the corpus callosum).
Tajfel and Turner (1979)	Social Identity theory	Groups provided members with pride and self-esteem. Groups give members a sense of belonging and identity in the world. We tend to enhance our group's status to increase self-image. (Australia is the best country in the world)

THEORIST	THEORY	EXPLANATION
Van Ijzendoorn and Kroonenberg (1988)	Cultural patterns of attachment	Researched Ainsworth's attachment theory in other cultures. They found: • Type B was found as the most common attachment type in all countries. • Type A is most common in Western European countries. • Type C is most common in Japan and Israel.
Wernicke	Brain investigation	Discovered the part of the brain involved in language. If damaged a person can produce sound, but with no meaning.

GLOSSARY

Anonymity: protection of the participant's identity.

Attachment: the emotional bond that connects a child to their parent or caregiver.

Attitude: an opinion established over time about ourselves, issues and other people.

Axon: part of the neuron that sends an electrical impulse from the cell body through the neuron.

Cell body: contains the nucleus.

Conformity: changing one's behaviour or ideas due to group pressures.

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

Correlation: the strength of relationship between two different variables.

Culture: shared rules, common values and attitudes between a group of people that mould their behaviours, often carried across several generations.

Deindividuation: loss of individual identity to join in group behavior.

Dendrite: receives information from other neurons.

Dependent variable: the variable that is measured.

Descriptive statistics: organising, describing and representing numerical data.

Evidence-based: conclusion of data through hypothesis.

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

Fine motor skills: smaller movements (holding a pencil).

Gross motor skills: bigger movements using larger muscles (rolling over).

Group: two or more members that are connected and influence each other.

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

Independent variable: the variable that is changed.

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.

Myelin Sheath: protects and insulates the axon of the neuron.

Neurotransmitter: chemical messenger that travels between neurons through the synapse.

Non-experimental: descriptive research through observations or interpretations.

Non-scientific: data collection through observation.

Obedience: changing one's behaviours by responding to instructions from an authority figure.

Placebo: an inert substance that does not cause physiological or physical symptoms which is used as a control in testing.
Population: a particular group of people.

Prejudice: negative attitudes towards a group of people.

Privacy: the participant's information will not be shared without participants' permission.

Reciprocity: helping someone that has helped you in the past.

Reliability: the same results are obtained when retested.

Sample: a small group of people studied which is a sub set of a larger group/ population.

Scientific: data collection through experimental research using hypothesis.

Social identity: how a person perceives themselves within a group.

Stereotype: a form of social catagorisation where we categorise people based on believed shared features.

Validity: the test measures what it is supposed to measure.

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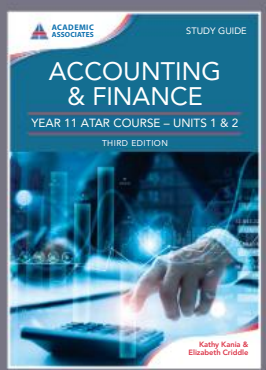

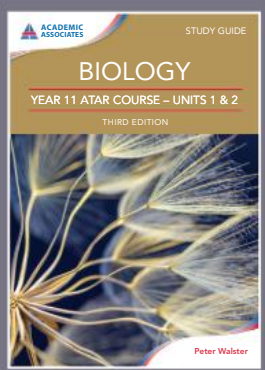

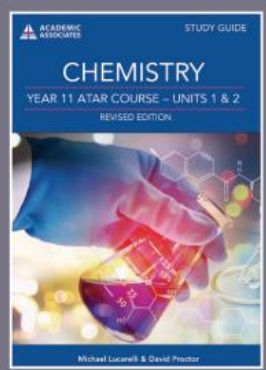

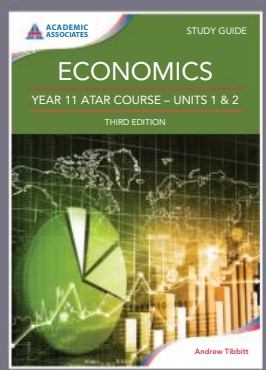

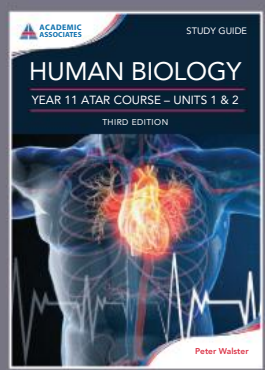

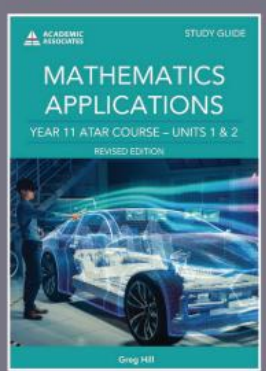

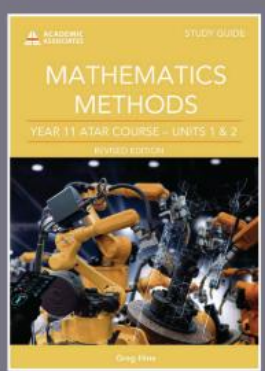

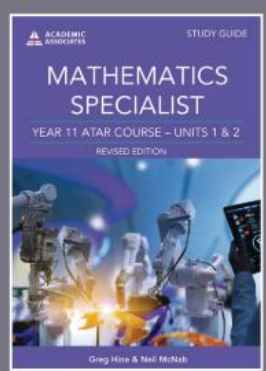

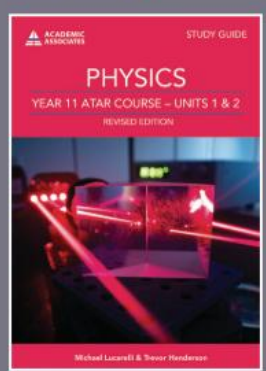

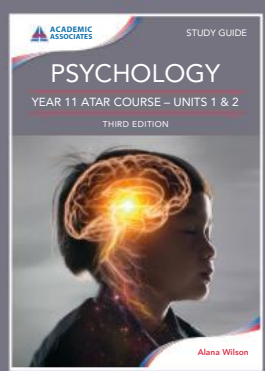

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