

This section has **three (3)** questions. Answer **all** questions. Write your answers in the spaces provided.

Spare pages are included at the end of this booklet. They can be used for planning your responses and/or as additional space if required to continue an answer.

- Planning: If you use the spare pages for planning, indicate this clearly at the top of the page.
- Continuing an answer: If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the question(s) that you are continuing to answer at the top of the page.

Suggested working time: 30 minutes.

### Question 1

(12 marks)

Dr Moyo wanted to test the effects of a new anti-anxiety medication that had just come onto the market. She decided to mention this to all of her patients suffering from anxiety and gave them the opportunity to partake in her study. Of the 20 patients that agreed to partake in her study, 10 were placed into a control group and 10 were placed into an experimental group. Dr Moyo informed the patients that they would be taking either an active or inactive medication once a day for three months. They would then be asked to complete a survey acknowledging their levels of anxiety.

- (a) Name one (1) ethical consideration that Dr Moyo abided by. (1 mark)

✶ Voluntary participation

~~NOT~~ informed consent, no mention of a signed consent form.

- (b) Name the operational independent variable and the operational dependent variable. (2 marks)

Operational independent variable: Active medication taken once a day for three months or inactive medication taken once a day for three months.

Operational dependent variable: The level of anxiety (measured using a survey).

- (c) An operational hypothesis is said to need three things. List these three (3) things. (3 marks)

One: Population ①

Two: operational dependent variable ①

Three: operational independent variable ①

(d) Write a possible operational hypothesis for this study.

(3 marks)

It is hypothesised that patients suffering from anxiety (1) who take anti-anxiety medication, once a day for a period of three months (1) will experience lower levels of anxiety as measured through a survey (1), than the patients who did not take the anti-anxiety medication.

operationalised independent variable

population that the sample is taken from

operationalised dependent variable

(e) For the experiment to work successfully, Dr Moyo needed to give one of the groups an inactive substance. Clarify which group she gave the inactive substance to and explain why. (3 marks)

The control group (1)

The control group was used as a measure of comparison to see if any changes (1) to the participant's anxiety levels in the experimental group was a result (1) of the independent variable.

## Question 2

(15 marks)

A university professor conducted a study to determine the correlation between number of hours spent on social media and the number of classes missed per week. The professor asked 10 of his psychology students at university to log the number of hours they spent on social media for one week and how many classes they missed in the same week. The results are shown below.

Student	Number of hours on social media (in 1 week)	Number of classes missed (in 1 week)
1	14	2
2	25	4
3	6	1
4	27	3
5	35	4
6	20	3
7	27	2
8	45	5
9	32	4
10	36	5

Figure 1: Results of psychology students' number of hours on social media and number of classes missed.

6, 14, 20, 25, 27, 27, 32, 35, 36, 45

(a) Identify the population and sample of the study.

(2 marks)

Population: University students

Sample: 10 psychology students (at university)  
can have ↑  
in addition

(b) Calculate the mean, median, mode and range of hours spent on social media.

(4 marks)

Mean:  $267 \div 10 = 26.7$  (1)

Median: 27 (1)

Mode: 27 (1)

Range:  $45 - 6 = 39$  (1)

- (c) Consider whether this is an experimental study or a correlational study and explain the reason for your response. (3 marks)

(1)  
Correlational study as it shows the relationship between number of hours on social media in a week and the number of classes missed in a week. (1)

- (d) For the above study it was found that the results were not reliable. Define the term reliability. (1 mark)

The extent to which an assessment tool measures what it is designed to measure consistently each time it is used.

The graph below shows the number of hours on social media and number of classes missed.

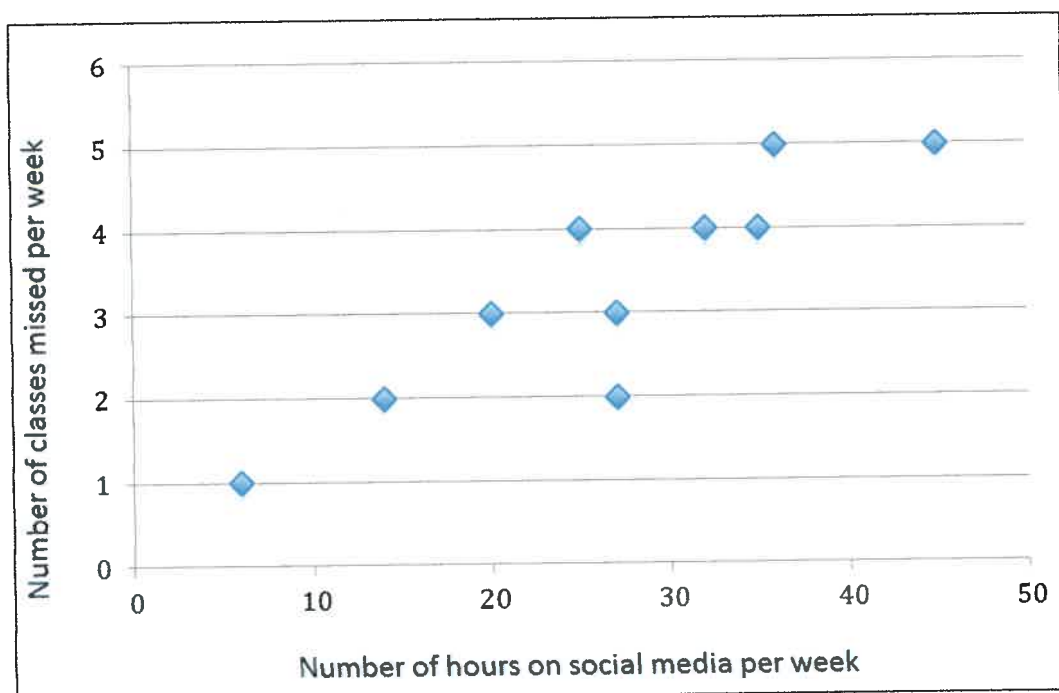


Figure 2: Results of first year psychology students' number of hours on social media and number of classes missed.

- (e) Identify the strength and direction of the correlation between number of hours on social media and number of classes missed. (2 marks)

Positive (1) Strong/moderate (1)

- (f) Does the data in Figure 1 and Figure 2 show that increasing the number of hours on social media per week causes psychology students to miss more classes per week? Explain your answer. (3 marks)

NO (1) The correlation does not imply (1)  
cause, a third variable could be  
involved. (1)

### Question 3

(8 marks)

Dr Ahmed is a university research psychologist specialising in the development of literacy skills in children. Dr Ahmed has designed a new literacy program for grade 4 children in Western Australia. It is a 30-minute television literacy program that runs daily for four weeks. To test this program, Dr Ahmed sent a letter to all parents/guardians of grade 4 children in Western Australia asking for volunteers. The children of the first 100 parents/guardians who replied were accepted into the study. Prior to the experiment, each participant sat a literacy test (Literacy Test A) administered by their grade 4 teacher. The teacher then sent the results to Dr Ahmed. A computer program was used to select, by chance, one member of each pair to undertake the literacy program. These participants had to watch the literacy program on television for 30 minutes each day for four weeks. The other member of the pair was allowed to watch cartoons of their choice for 30 minutes per day for four weeks. At the end of four weeks, the participants' grade 4 teachers administered a second literacy test (Literacy Test B) and sent the results to Dr Ahmed. Results between the two groups were then compared. A test of significance was calculated and  $p > 0.05$ . All ethical guidelines were strictly followed.

- (a) Parents/guardians and participants were debriefed after this study. Outline two (2) pieces of information that the researcher must give during the debriefing process. Any 2 (2 marks)

- Full explanation of the findings in this study.  
 - Information about where and how to seek counselling if needed.  
 - The right to withdraw data after the experiment

- (b) State whether or not the participants in this study randomly allocated. (1 mark)

Yes, the computer placed one of each pair in each of the groups.

- (c) Name one (1) uncontrolled variable that could potentially confound the results and describe how it could affect the results. various student responses. (3 marks)

Uncontrolled variable: \_\_\_\_\_

\_\_\_\_\_

Possible effect on results: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(d) In terms of participant selection, explain whether these results should be generalised. (2 marks)

No these results should not be generalised. (1)

Any of:

- Participants were selected according to who volunteered in the first 100.
- Participants were not randomly selected.
- Not every grade 4 child had an equal chance of being selected.

END OF SECTION ONE

This section has **eight (8)** sections. Answer **all** questions. Write your answers in the spaces provided.

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Suggested working time: 90 minutes.

**Question 4****(9 marks)**

Adam is undergoing a functional magnetic resonance imaging (fMRI) scan. He is asked to perform some cognitive tasks during the fMRI scan.

- (a) Name the substance in the bloodstream that is detected by the fMRI scan. (1 mark)

Oxygen or haemoglobin

- (b) Outline the general information that the fMRI scan provides when a patient performs a cognitive task. (1 mark)

Which parts of the brain are using  
more oxygen / are more active.

- (c) Explain two (2) differences between a MRI scan and a fMRI scan. (2 marks)

- fMRI scan takes dynamic pictures whereas  
MRI takes still pictures.

- fMRI does not use a tracer whereas MRI  
scans can use a tracer.

- More is understood about how MRI scans  
work than how fMRI scans work.

Any 2



Farrah is four months pregnant and has been having migraines (strong headaches) and has fainted numerous times in the recent year. A neurologist has explained that she needs to undergo a MRI scan to check if there are any tumours in her brain.

(d) Explain the main reason why the neurologist told Farrah to have a MRI scan rather than a CAT scan. (2 marks)

- MRI scan images are more clear than CAT scan images.
- MRI scans are in colour / have a better contrast whereas CAT scans are in black and white.
- The CAT scan uses powerful X-rays and cannot be repeated within several months as there is a risk of cancer.
- The CAT scan requires an injection of iodine to provide contrast - it is an invasive procedure.

(e) List two (2) scanning techniques used to study the brain that produce still pictures. (2 marks)

CAT

MRI

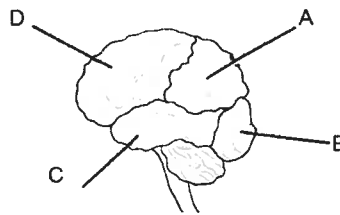
(f) Outline what an electroencephalograph (EEG) is used to measure. (1 mark)

Electrical activity / brain waves in the brain.

## Question 5

(11 marks)

- a) Using the diagram of the brain below, name the labelled areas of the brain and state a main function of area. (8 marks)



Stage 3 2012  
WACE question  
- used WACE marking  
key for question.

- (i) Name of area A: Parietal lobe (1)  
Involved/  
Function of area A: Concerned with body sensations / tactile sensations  
eg. pain, touch, heat.  
- Processing of sensory stimuli.  
- The ability to orient body in space.  
- Recognition of yourself.  
- Recognition of your body including its parts.  
- Speech repetition.  
- Involved with integration of senses.
- (ii) Name of area B: Occipital lobe (1)  
Function of area B: Is responsible for:  
- visual perception.  
- Visual processing/interpreting visual stimuli.
- (iii) Name of area C: Temporal lobe (1)  
Function of area C: Language and speech production.  
- Organising sensory input.  
- Perception and recognition of speech.  
- Perception of auditory stimuli.  
- Memory association and formation  
- sense of smell.  
- Coordinating motor movements. - Related to taste.
- (iv) Name of area D: Frontal lobe (1)  
Function of area D: Higher mental abilities.  
- Control of movement.  
- The expression of personality. - organises informations  
- Ability to reason.  
- Ability to solve problems.  
- planning/decision making.  
- Make judgements

- (b) James had a stroke (a disruption of the blood supply to the brain) in his right hemisphere. List three (3) difficulties he might now have because of the damage to his brain. (3 marks)

- Difficulty controlling left hand
- Problem reasoning
- Problem with problem solving
- Problem with orientation.
- Problems with creativity
- Lack of insight
- lack of imagination
- lack of art awareness
- lack of music awareness

#### Question 6

(15 marks)

- (a) State what the acronym 'IQ' stands for and explain how IQ is calculated.

(3 marks)

Intelligence quotient (1)

- Average performance of a number of test takers of a particular age group (1) is given a score out of 100. (1) (Any 2 points)

If person performs better than average, they will receive a score above 100. (1)

Formula is mental age divided by chronological age  $\times 100$ . (1)

A person's intelligence level is measured as a quotient of their estimated mental age and chronological age (1)

Sir Francis Galton was one of the first people to study intelligence and he proposed the idea of general ability. The theory of general ability was continued and developed by a psychologist in the 1920's.

- (b) State the name of the psychologist who developed Galton's theory and explain the main idea he added to the original theory of general intelligence. (3 marks)

Charles Spearman (1)

- Not only is there a general (1) mental capacity but there are also specific mental (1) abilities.

Weschler's WAIS intelligence test is administered to individuals rather than to groups of people.

- (c) Outline one (1) benefit of individual intelligence testing. (1 mark)

various responses.

A patient is brought to St John of God hospital and is in an agitated state. The patient is experiencing a fast heart rate, fast breathing rate and has a lot of energy. The emergency physician surmises that the patient has taken an illicit drug.

- (d) Infer which drug the patient has taken. (1 mark)

Methamphetamine / ice / crystal meth / cocaine / ecstasy

- (e) Every drug can be classified by its psychological and physiological effects on people. Classify this drug according to its effects on the body. (1 mark)

stimulant

According to Howard Gardner (1999) there are nine different types of intelligence.

2012 STAGE 2  
WACE EXAM  
QUESTION-  
MARKING KEY  
(6 marks)

(f) Name and describe any three (3) of these types of intelligence.

①mark for name, ①mark for correct description

- Linguistic intelligence uses spoken and written language / ability to learn and use language.
- Logical / mathematical intelligence uses the ability to analyse / solve problems and think scientifically.
- Musical intelligence uses the ability to perform and compose music.
- Bodily / kinaesthetic intelligence uses the body or its parts to solve problems.
- Spatial intelligence involves the ability to use large and small spaces, to form and use visual images of objects.
- Interpersonal intelligence uses the ability to understand the intentions, desires and thoughts of others.
- Intrapersonal intelligence uses the ability to understand self and own thoughts, feelings and intentions.
- Naturalistic intelligence involves nurturing and relating information to one's natural surroundings, classifying natural forms such as animal and plant species.
- Existential intelligence involves the ability to contemplate phenomena or questions beyond sensory data, such as the infinite, spiritual or religious.

### Question 7

(15 marks)

Two boys, Jason and Eric, were playing football at school. Jason fell to the ground and hit his head. After the fall, Jason was able to speak but seemed confused. Eric wanted to determine whether Jason was experiencing an altered state of consciousness.

- (a) After the accident, Jason was taken to hospital to be examined by a doctor. Choose one (1) physiological test that might be performed to find out if Jason was experiencing an altered state of consciousness and describe how the test might indicate if he was in an altered state of consciousness. (3 marks)

Test: EEG

Description: An EEG would measure Jason's brain waves or electrical activity of the brain. If they showed beta/alpha and Jason appeared awake then he is not in an altered state of consciousness.

OR

ASR, heart rate, body temperature,  
PET, fMRI

All individuals tend to be misled by the stimulus in the same way when looking at visual illusions.

- (b) Name one aspect of visual illusions that can be misjudged consistently over time. (1 mark)

Aspect 1: Length, position, motion, curvature, depth, tilt  
colour, direction of the stimulus, size, brightness

Chelsea is studying in the library and does not notice her friend come in and sit at the desk next to her.

- (c) Identify whether this is an example of selective attention or divided attention. (1 mark)

Selective attention.

- (d) Outline the reason for your answer to part (c). (2 marks)

Because the student is focusing / paying  
attention to one thing in their environment ①  
to the exclusion of others / and not paying  
attention to something else. ①

Jasmine has just obtained her drivers licence and is excited about being able to drive her own car. Jasmine understands that it would be extremely dangerous for her to drive her new car and talk on her mobile phone at the same time.

- (e) Explain, in terms of types of attention, why it is dangerous to carry out both tasks simultaneously. (2 marks)

Driving is a complex task, a controlled process that  
requires selective attention ①.

In attempting to perform these two tasks at once,  
she would be using divided attention ① and  
would not be able to concentrate sufficiently on  
driving, thus causing danger.

Habituation and dishabituation are both simple forms of learning.

(f) Define the psychological term 'habituation' and describe an example to help explain. (3 marks)

- A simple form of learning in which the repeated presentation of the same stimulus (1) causes reduced attention to the stimulus.

example (2)

(g) Define the psychological term 'dishabituation' and describe an example to help explain. (3 marks)

A simple form of learning that refers to a person's renewed interest in a stimulus after a period of habituation. (1)

example (2)



Question 8

(13 marks)

The two main types of hearing loss are conductive hearing loss and sensorineural hearing loss.

- (a) Contrast between conductive hearing loss and sensorineural hearing loss in relation to where each occurs in the ear. (2 marks)

Conductive hearing loss occurs in the  
outer or middle ear (1)  
whereas sensorineural hearing loss  
occurs in the cochlear or hearing  
nerve (1)

Children who have hearing impairments are unable to hear the sounds of language.

- (b) State two (2) methods that can be used to help children overcome the impact of hearing impairments. (2 marks)

One: AUSLAN (1)

Two: cochlear hearing implant (1)

or  
Hearing aid

(c) Outline three (3) characteristics of a listener that could negatively influence effective communication.

(3 marks)

- Being distracted and only 'half' listening
- 'Topping' the speaker, listening to the story and then trying to 'top' the story with a better one.
- Being judgmental

Any 3.

(d) Identify two (2) of W. Peter Robinson's social skills and explain how each contributes to communication.

(4 marks)

One: Handshake (1) allows the person to physically meet, face-to-face. Shows goodwill and friendship but can also tell a lot about the nature of the speaker. (1)

Two: Politeness (1), -- using a positive face can make someone like you. (1)

or other response

or

Terms of address, use of titles can range from formal to informal and shows the relationship between the speakers

(e) Explain two (2) non-verbal communication techniques that can portray a message. (2 marks)

① Mark for each point

- Body language: how you position your body affects the message portrayed. Being open or closed can affect how a message is sent/received.
- Gestures: hand movements that portray a message. Some hand movements are aggressive or can be misunderstood, affecting the message being sent.
- Facial expression: the expression of a face can portray emotions. Even though a person may be verbally giving one message, their face can say something else.
- Physical distance: How close the person stands to another can portray a message & can be used as a power technique.

### Question 9

(13 marks)

In the 1960's, a sociologist observed and made theories about the formation of adolescent groups. As well as describing three levels of peer groups in adolescence, this sociologist also presented a structure of adolescent group development.

(a) State the name of the sociologist referred to above.

(1 mark)

Dexter Dunphy

(b) Outline the three levels of peer groups in adolescence.

(3 groups)

Dyads are pairs of close friends or lovers (1)

Cliques are small groups who interact frequently (1)

Crowds are larger groups of adolescents with similar identities or affiliations. (1)

- (c) In relation to the five stages of adolescent group development, name the stage in which dating occurs. (1 mark)

stage (3)

- (d) Sixteen-year-old Jakeb was forced to relocate schools due to his parents' work commitments. He realised that Craig had chosen all of the same subjects as him and they soon became friends. Name and explain the determinant of liking Jakeb used to make friends with Craig. (3 marks)

similarity (1)

This determinant suggests that friendship is based on similar interests, attitudes, values, backgrounds and/or personality (1).

As the two boys shared similar interests in the subjects they chose, they quickly became friends (1).

- (e) As a child Lauren spent many months having medical treatment at Princess Margaret Hospital. Recently, she walked past two women raising money for the Princess Margaret Hospital appeal and because of all the help she received from the hospital when she was young, she felt compelled to donate. Identify and explain the determinant of liking that compelled Lauren to donate. (3 marks)

Lauren decided to donate according to the determinant of reciprocity. (1)

she received medical help from the hospital in the past (1) so wanted to help them because they helped her (1).

During early adulthood, individuals undergo major social developmental changes.

(f) Recall two (2) social developmental changes characteristic of people in the stage of early adulthood. (2 marks)

- Become independent.
- Form romantic partnerships
- Develop professional relationships.
- Marriage and family develops.

Question 10

(8 marks)

(a) Outline the two (2) underlying premises of Maslow's humanistic theory. (2 marks)

All people are born good (1).  
Reaching self-actualisation is rare however a person who has reached this stage may show characteristics of self-acceptance, high levels of self-awareness, independence, creativity and enjoyment in life (1).

OR

Human actions are directed toward goal attainment.

According to Hans Eysenck, individuals fall somewhere on an extraverted-introverted scale and on an emotionally stable-emotionally unstable scale. For the following individuals, state where on each of the two scales they fall. (6 marks)

- (b) Sarah tends to be anxious, irritable and moody. She lacks confidence and rarely attends social outings.

Emotionally unstable and introverted.

- (c) Kelly likes to spend time on her own and has a small number of very close friends.

Emotionally stable and introverted.

- (d) Michael is sociable, lively and easy going. He has many friends and enjoys going to parties.

Emotionally stable and extraverted.

### Question 11

(19 marks)

The behaviour of two groups was observed.

- Group one: six people were placed in one group and were asked to complete a task together.
- Group two: a group of six people were asked to work in pairs to answer some questions.

- (a) Identify which of the two groups was more likely to experience social loafing and explain your answer. (3 marks)

Group one is more likely to experience social loafing (1)

Explanation (2)

A university student training to be a teacher is taking her first class. One of her requirements is to get the students to work in small groups. The training teacher notices that not all students are pulling their weight in their groups. After discussing this with her mentor teacher, they realise that some students are social loafing.

(b) Outline three (3) things the training teacher can do to stop the students from social loafing.

(3 marks)

One: Make sure all students identify with  
the group.

Two: Make sure students are motivated.

Three: Make all students' contributions essential  
for success

- Monitor each student's performance.

- The task to be completed is interesting to  
each student.

Any 3 (1 mark each)

- Increase importance of the task.



A teacher is very concerned that some children in her class are prejudiced and show discrimination towards other children in the class. She told another teacher 'most of the children in the class are white and they say cruel things to the other children in the class who are not white. I just don't know what to do.'

- (c) Using your knowledge of psychology, propose three (3) main factors that could work towards reducing prejudice in her class. (3 marks)

One: The teacher could arrange for the children to work together on a task with a common goal. (superordinate goals).

Two: Educating the students on the different social backgrounds of students in the classroom.

Three: Increasing social contact between students of both cultures. (contact hypothesis)

- Cognitive intervention

An attitude is a learned idea about ourselves, others, or objects and experiences.

(d) Using the Tripartite model, explain how an attitude is formed.

(3 marks)

The tripartite model proposes that attitude is formed from the influence of three components: cognitive, affective and behavioural.

Cognitive is what a person thinks about the object, person or institution. / what you believe and why you believe it.

Affective consists of feelings towards the object, person or institution (how you feel).

Behaviour refers to a person's actions towards various people, objects or institutions (what you do).

A group of university students are researching the group behaviour of secondary students. It is understood that when students wear uniforms to school, they are less likely to behave as an individual.

- (e) This is a practical implication of the results of research into a specific type of group behaviour. Recall the type of group behaviour that is being researched. (1 mark)

Deindividuation.

- (f) Distinguish between individualistic cultures and collectivist cultures and for each culture, identify an example of a society that embraces it. (6 marks)

Individualistic cultures

- A culture that values the individual (1)  
over the group.
- Less likely to conform to group norms (1)
- Example: USA, Australia (1)

Collectivist cultures.

- A culture that values the group over the individual. (1)
- More likely to conform to group norms (1)
- Example: Japan, China.

This section has **two (2)** questions. You must answer **both** questions.

Pages are included at the end of the questions for planning and writing your answers.

- Planning: If you use a page for planning, indicate this clearly at the top of the page.
- Answering the question: In the pages provided indicate clearly the number of the question you are answering.
- You should refer to relevant psychological concepts, theories and research in your answers.

Suggested working time: 60 minutes.

### Question 12

(3) marks for communication of response

(26 marks)

Mr Cowle is the principle at Selby High School where there has been ongoing conflict between students from low socioeconomic backgrounds and students from high socioeconomic backgrounds. Mr Cowle believes that if students have more empathy for each other, then the amount of anti-social behaviour at the school will decrease. A BBC film crew will be filming in the school over the next 6 months and will use the footage to make a documentary about pro-social and anti-social behaviour.

In your answer you should directly refer to the information provided above and

(2) definition (2) explanation (2) definition (2) explanation

- Define and explain the terms 'pro-social behaviour' and 'anti-social behaviour'.
- Explain an example of pro-social behaviour. (2)
- Explain an example of anti-social behaviour. (2)
- Define and explain the term 'empathy' and use an example to help explain. (2) definition (1) example (2) explanation
- Contrast pro-social behaviour and anti-social behaviour using detailed explanations. (6)

### Question 13

(3) marks for communication of response

(26 marks)

There are various approaches psychologists take when measuring personality but two of the main types of methods used are projective tests and non-projective tests.

In your answer, you should

- Define the terms 'projective tests' and 'non-projective tests'. (2) (2)
- Explain an example of a projective test and an example of a non-projective test. (2)
- Mention appropriate theorists involved in personality testing. (3)
- Explain in detail two strengths and two weaknesses of both projective tests and non-projective tests.

Projective tests 2 strengths 2 weaknesses (6)

Non projective tests 2 strengths 2 weaknesses (6)