



Western Australian Certificate of Education Examination, 2014

Question/Answer Booklet

PSYCHOLOGY

Stage 3

Please place your student identification label in this box

Student Number: In figures

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In words

Time allowed for this paper

Reading time before commencing work: ten minutes
Working time for paper: three hours

Materials required/recommended for this paper

To be provided by the supervisor

This Question/Answer Booklet

Number of additional
answer booklets used
(if applicable):

To be provided by the candidate

Standard items: pens (blue/black preferred), pencils (including coloured), sharpener,
correction fluid/tape, eraser, ruler, highlighters

Special items: non-programmable calculators approved for use in the WACE examinations

Important note to candidates

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

Structure of this paper

Section	Number of questions available	Number of questions to be answered	Suggested working time (minutes)	Marks available	Percentage of exam
Section One: Research methods	2	2	30	34	20
Section Two: Short answer	8	8	90	88	55
Section Three: Extended answer	2	2	60	49	25
				Total	100

Instructions to candidates

1. The rules for the conduct of Western Australian external examinations are detailed in the *Year 12 Information Handbook 2014*. Sitting this examination implies that you agree to abide by these rules.
2. Write your answers in this Question/Answer Booklet.
3. You must be careful to confine your responses to the specific questions asked and to follow any instructions that are specific to a particular question.
4. 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 that you are continuing to answer at the top of the page.

Section One: Research methods

20% (34 Marks)

This section has **two (2)** questions. Answer **both** 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.

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- 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 that you are continuing to answer at the top of the page.

Suggested working time: 30 minutes.

Question 1

(20 marks)

A psychologist was interested in studying the characteristics of young people who do volunteer work.

- (a) Name **two** non-experimental (descriptive) research methods that the psychologist could use. (2 marks)

- (b) Name **two** qualitative methods that the psychologist could use. (2 marks)

- (c) The psychologist designs a subjective quantitative measure to collect information about the personality characteristics of volunteers, using a Likert scale.

- (i) Name each of the **five** points on the line below to show a Likert scale. (1 mark)



- (ii) Describe **one** advantage of using a Likert scale compared with a checklist. (2 marks)

See next page

Question 1 (continued)

The psychologist was interested to find out whether there is a relationship between the number of hours spent volunteering and self-esteem in young people.

- (d) Is this an experimental or correlational study? Explain the reason for your response. (2 marks)

The psychologist collected data on the self-esteem of ten young people who were currently involved in volunteer work in their community, using the Likert scale.

The Likert scale produced scores for each person ranging from 10 to 50. Higher scores indicated higher levels of self-esteem.

The self-esteem scores for the 10 young people were:

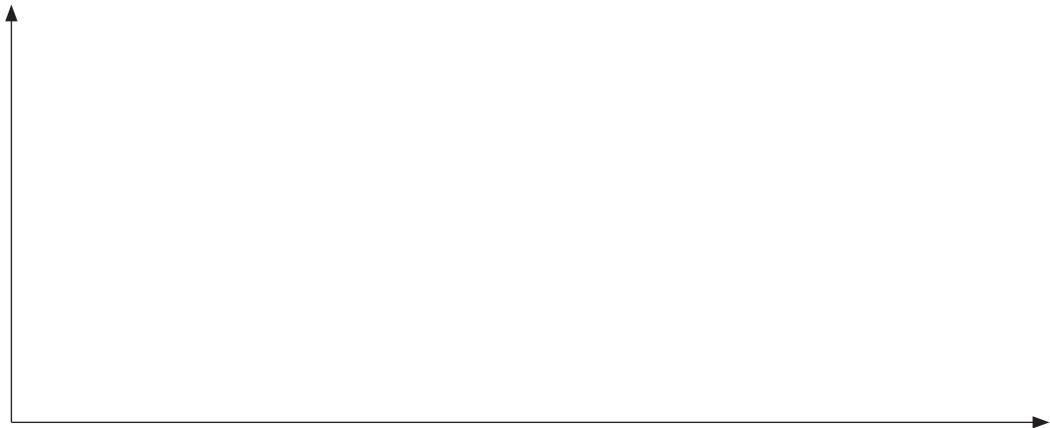
30, 32, 38, 40, 45, 43, 46, 38, 45, 46

- (e) (i) Complete the frequency table below. (1 mark)

Self-esteem score	Number of people
11–15	
16–20	
21–25	
26–30	
31–35	
36–40	
41–45	
46–50	
Total	

- (ii) The psychologist is writing a report on the results of the research and needs to include a graph of the frequency of self-esteem scores. Graph the results from the frequency table in part 1 (e) (i) on the axes below. (6 marks)

Frequency of self-esteem scores in volunteers



The psychologist then collected data from a sample of ten young people who had never done any volunteer work.

The psychologist calculated the mean self-esteem score for the volunteer group and the non-volunteer group.

	Mean self-esteem score
Volunteer group	40.3
Non-volunteer group	38.5

A statistical test of the difference between the two means showed $p > 0.05$.

- (f) (i) State whether the difference between the two means was statistically significant. (1 mark)

- (ii) Describe the meaning of 'statistically significant'. (2 marks)

- (iii) Outline the conclusion that the researcher should draw from the statistical results. (1 mark)

Question 2

(14 marks)

Professor Zheng of Smart University wanted to test whether a vitamin supplement helped to improve students' grades. To test her idea, she told her class she was giving them all a supplement that would make them smarter. She told them they all had to participate.

Professor Zheng divided the class into two equal groups. Group A received the vitamin supplement and Group B received an inactive substance (sugar pill).

Over the two week trial, Professor Zheng spent a lot of time with the students gathering data. She was excited to find that the results showed that all students' grades had improved. She concluded that the vitamin supplement had worked.

- (a) (i) Name **three** rights that people have as participants in research. (3 marks)

- (ii) Outline **two** pieces of information about a research study that a researcher must provide to participants so that they can give informed consent. (2 marks)

- (b) (i) Identify the term that refers to a substance with no known medical effects used as a control in an experiment. (1 mark)

- (ii) Explain why Professor Zheng gave one group a substance with no known medical effects. (1 mark)

- (c) Explain what Professor Zheng should do after the experiment has ended to make sure the research has been conducted ethically. (1 mark)

(d) Outline how Professor Zheng may have affected the results of the experiment. (1 mark)

(e) (i) Outline **three** ethical issues associated with this research. (3 marks)

(ii) Identify **two** sources of error in the design of this experiment. (2 marks)

End of Section One

See next page

Section Two: Short answer

55% (88 Marks)

This section has **eight (8)** 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.

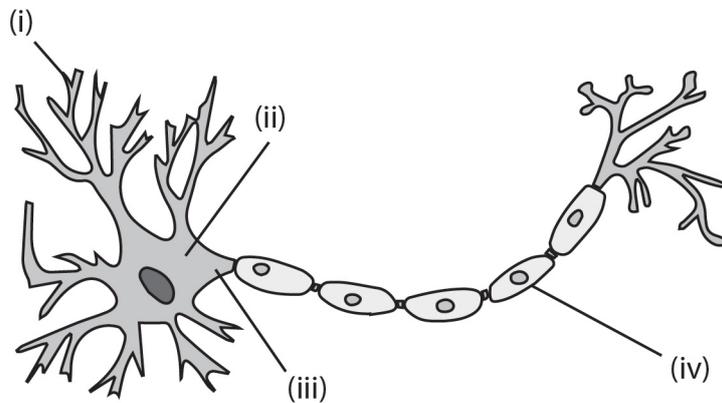
- Planning: If you use the spare pages for planning, indicate this clearly at the top of the page.
- Continuing an answer: If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the question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

Suggested working time: 90 minutes.

Question 3

(13 marks)

- (a) Identify the structure of a neuron shown by the labels in the illustration below. (4 marks)



Structure of a neuron

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____

(b) Describe the purpose of the structure labelled at (iv) in part (a). (1 mark)

(c) Describe how neurotransmitters work in communicating messages between neurons at a synapse. (3 marks)

(d) List **two** effects of each of the following neurotransmitters.

(i) Dopamine (2 marks)

(ii) Serotonin (2 marks)

(e) Outline **one** way in which exercise can affect emotion. (1 mark)

Question 4

(12 marks)

Adam was at a party with friends from school. He was not enjoying himself and was thinking 'I want to go home'.

- (a) Identify **one** observable behaviour that Adam may be showing. (1 mark)

Suddenly Adam sees Lucy, with whom he lost contact many years ago. As she walks toward him, he remembers her name.

- (b) Identify what type of memory Adam used when he remembered Lucy's name. (1 mark)

Adam and Lucy chat for a while and she says that they should stay in contact. Lucy tells Adam that her telephone number is 0425 456 789. Adam does not have anything to write the phone number down on, so he tries to remember it.

- (c) (i) Describe briefly **one** problem that Adam might have in trying to remember Lucy's telephone number. Explain the reason why, referring to a feature of short-term memory. (2 marks)

- (ii) Outline **two** strategies that Adam could use to assist him in remembering Lucy's telephone number. (2 marks)

- (d) List **two** changes in cognition that can be experienced when a person has an altered state of consciousness. (2 marks)

- (e) Name **two** physiological responses that can indicate a change in a state of consciousness. Outline how each physiological response is different in sleep compared with waking consciousness. (4 marks)

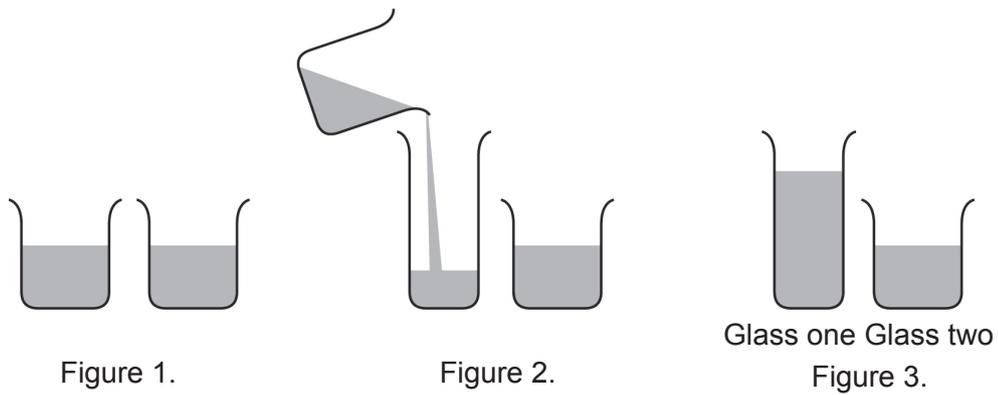
Question 5

(14 marks)

(a) Name the stage of Piaget’s theory of cognitive development that corresponds to each of the following characteristics. (4 marks)

- (i) Conservation: _____
- (ii) Object permanence: _____
- (iii) Abstract thinking: _____
- (iv) Egocentrism: _____

(b) A psychologist has two glasses that are the same shape and size and are filled with equal amounts of water (see Figure 1). The psychologist pours the water from one glass into a tall thin glass (see Figure 2). The psychologist asks two children whether Glass one or Glass two has more water in it or whether both glasses have the same amount of water. (see Figure 3).



Describe the response that each child would be **most** likely to give and explain the reason for the response.

(i) Nikolas (age 4) (2 marks)

(ii) Hannah (age 10) (2 marks)

- (c) Dana is playing hide-and-seek with her brother Dion (aged three). Dion stands in the centre of the room and covers his eyes with his hands and says 'I am hiding'. Explain, why Dion believes that he is 'hiding', referring to the relevant concept from Piaget's theory of cognitive development. (3 marks)

- (d) Name **one** researcher who has criticised the tasks used by Piaget and explain their criticism. (3 marks)

Question 6

(10 marks)

(a) Define 'personality'.

(2 marks)

(b) Psychologists do not agree on whether personality is the result of genetics or environment or both. Outline what determines personality according to each of the following theories:

(i) trait theory

(1 mark)

(ii) humanistic theory

(1 mark)

(iii) psychodynamic theory.

(1 mark)

(c) At age six, Anna has many friends and is very confident in speaking with adults. At age 17, Anna is the captain of her school debating team and a member of the student council.

(i) Identify **one** personality trait that Anna has, according to Eysenck's trait theory.

(1 mark)

(ii) Explain how trait theory would account for the consistency of Anna's personality over time.

(1 mark)

- (d) At age 23, Anna gets her first full-time job in a large company. At work, Anna eats her lunch at her desk rather than going out to lunch with her colleagues. However, on the weekends, she enjoys going out to lunch with her friends.

Explain, with reference to personality theory, why Anna’s behaviour is not consistent across these situations. (1 mark)

- (e) Outline **two** limitations of trait theories of personality. (2 marks)

Question 7

(7 marks)

(a) Provide a psychological definition of 'attribution'.

(2 marks)

(b) Sandie is waiting in a long line at the supermarket checkout to pay for a box of chocolates. Sandie is tapping her foot quickly and sighing loudly. An onlooker observes Sandie's behaviour and thinks that she is a quick-tempered person.

(i) Explain, using attribution theory, why the onlooker is likely to think this. (2 marks)

(ii) Describe **one** alternative attribution for Sandie's behaviour. (1 mark)

(c) Explain, using attribution theory, the difference between the attributions people tend to make for the behaviour of others compared with their own behaviour. (2 marks)

Question 9

(10 marks)

- (a) Outline **one** reason why psychologists are interested in studying cultural influences on social and emotional development. (1 mark)

- (b) Cross-cultural research using Kohlberg’s stages of moral development has concluded that the moral reasoning of people from Western cultures is at a higher level than people from non-Western cultures.

- (i) Explain whether this is an accurate conclusion to draw. (2 marks)

- (ii) Name the author(s) and describe **one** study that has challenged the conclusion that people from Western cultures reason at a higher level than people from non-Western cultures. (3 marks)

- (c) Mr Eades told his doctor that he often hears his mother talking to him. Mr Eades’s mother died two years ago. The doctor was very concerned and wondered if he should suggest that Mr Eades see a psychologist. Explain why the doctor should investigate Mr Eades’s culture before making the suggestion. (1 mark)

- (d) Mrs Costa is referred to a psychologist for cognitive-behavioural therapy because she has been feeling sad and worried. Explain **three** things that the psychologist could tell Mrs Costa about how cognitive-behavioural therapy might help her. (3 marks)

Question 10

(10 marks)

- (a) Two small towns are on the edge of a large forest. People in one town want to cut down the trees in the forest and people in the other town want to protect the forest. For each town, describe **one** value that the people might hold. (2 marks)

- (b) Different group values can create conflict. Provide **two** explanations why these differences can create conflict. Refer to concepts such as emotions, collectivist/individual cultures, perceptions and/or motives in your response. (4 marks)

- (c) Identify **two** issues in society about which different social groups have different values. For each issue explain how the different values conflict. (4 marks)

End of Section Two

See next page

Section Three: Extended answer**25% (49 Marks)**

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

Pages are included at the end of Question 12 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 answer.

Suggested working time: 60 minutes.

Question 11**(26 marks)**

Psychologists have researched and theorised about the influence that biological factors and the environment have on the development of intelligence and language.

Describe what twin and adoption studies reveal about the nature and nurture debate in relation to the development of intelligence (as measured by IQ). In your response you should

- describe examples of biological and environmental factors that can influence the development of intelligence
- describe how twin and adoption studies are carried out
- describe results that have been found
- describe conclusions that have been drawn from the results.

Discuss the conclusions that have been made about whether language is innate or learned with reference to **two** theories. In your response you should

- name the theorists and their theories
- describe each theory and the evidence that is used to support it.

Question 12**(23 marks)**

Mrs Mikopolous's Year 12 Psychology class has decided to raise money to donate to the local animal shelter. There are 24 students in the class. The class will be divided into groups and each group has to develop a plan for a fundraising activity. Mrs Mikopolous will select the best plan for the whole class to carry out.

Discuss what Mrs Mikopolous needs to consider when organising the class into groups so that they are most productive. Your response should refer to

- brainstorming
- cooperation or competition
- examples of psychological evidence to support your points.

Discuss how the groups' productivity might be reduced and describe what could be done to avoid this. Your response should refer to social loafing and deindividuation. Provide examples and justify your responses by referring to evidence from social psychology.

End of questions

ACKNOWLEDGEMENTS

Section Two

- Question 3** Adapted from: Qasar. [Jarosz, Q.]. (2009, August 11). Neuron hand-tuned [Image]. *Wikipedia*. Retrieved from http://en.wikipedia.org/wiki/File:Neuron_Hand-tuned.svg
Used under the Creative Commons Attribution-Share Alike 3.0 Unported license.
- Question 5 (b)** Adapted from: Conservation of liquid [Image]. (n.d.). In Maths to share – CPD for your school. *NCETM Primary Magazine*, (20). Retrieved from www.ncetm.org.uk/resources/22757

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