



Government of **Western Australia**
School Curriculum and Standards Authority



ATAR course examination, 2021

Question/Answer booklet

PSYCHOLOGY

Place one of your candidate identification labels in this box.
Ensure the label is straight and within the lines of this box.

WA student number: In figures

--	--	--	--	--	--	--	--	--	--

In words

Time allowed for this paper

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

Number of additional
answer booklets used
(if applicable):

Materials required/recommended for this paper

To be provided by the supervisor

This Question/Answer booklet

To be provided by the candidate

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

Special items: up to three calculators, which do not have the capacity to create or store programmes or text, are permitted in this ATAR course examination

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 material. 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 examination
Section One Research methods	2	2	30	33	20
Section Two Short answer	8	8	90	101	55
Section Three Extended answer	2	2	60	54	25
Total					100

Instructions to candidates

- The rules for the conduct of the Western Australian external examinations are detailed in the *Year 12 Information Handbook 2021: Part II Examinations*. Sitting this examination implies that you agree to abide by these rules.
- Write your answers in this Question/Answer booklet preferably using a blue/black pen. Do not use erasable or gel pens.
- Answer the questions according to the following instructions.

Sections One and Two: Write your answers in this Question/Answer booklet. Wherever possible, confine your answer to the line spaces provided.

Section Three: Consists of two questions. You must answer both questions.
- You must be careful to confine your answers to the specific questions asked and to follow any instructions that are specific to a particular question.
- Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

See next page

Section One: Research methods**20% (33 Marks)**

This section has **two** questions. Answer **all** questions. Write your answers in the spaces provided.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 30 minutes.

Question 1**(16 marks)**

Ari, a Year 12 Psychology student, attempted to investigate cognitive changes in school-aged children as they age. Ari presented various tasks to 100 students. These students were aged between 6 and 18 years and were all from Ari's school. There was an equal representation of each age group. Ari analysed the participants' responses.

- (a) Identify the population in this study. (1 mark)

- (b) Define the term 'sample' as it relates to psychology experiments. (1 mark)

- (c) Identify the sample group in this experiment. (1 mark)

The research method used was a cross-sectional design.

- (d) Outline the main features of a cross-sectional design research method. (3 marks)

See next page

Question 1 (continued)

- (e) State **one** benefit and **one** limitation of using a cross-sectional design research method. (2 marks)

Benefit

Limitation

- (f) (i) Name **one** other experimental research design Ari could have used for her investigation. (1 mark)

- (ii) Propose how Ari could adapt her experiment to follow this alternative type of experimental research. (4 marks)

Ari had to design the experiment to avoid errors due to experimenter effect.

- (g) (i) Define the term 'experimenter effect'. (1 mark)

- (ii) State **two** ways in which Ari could design her experiment to avoid errors due to experimenter effect. (2 marks)

One: _____

Two: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 2

(17 marks)

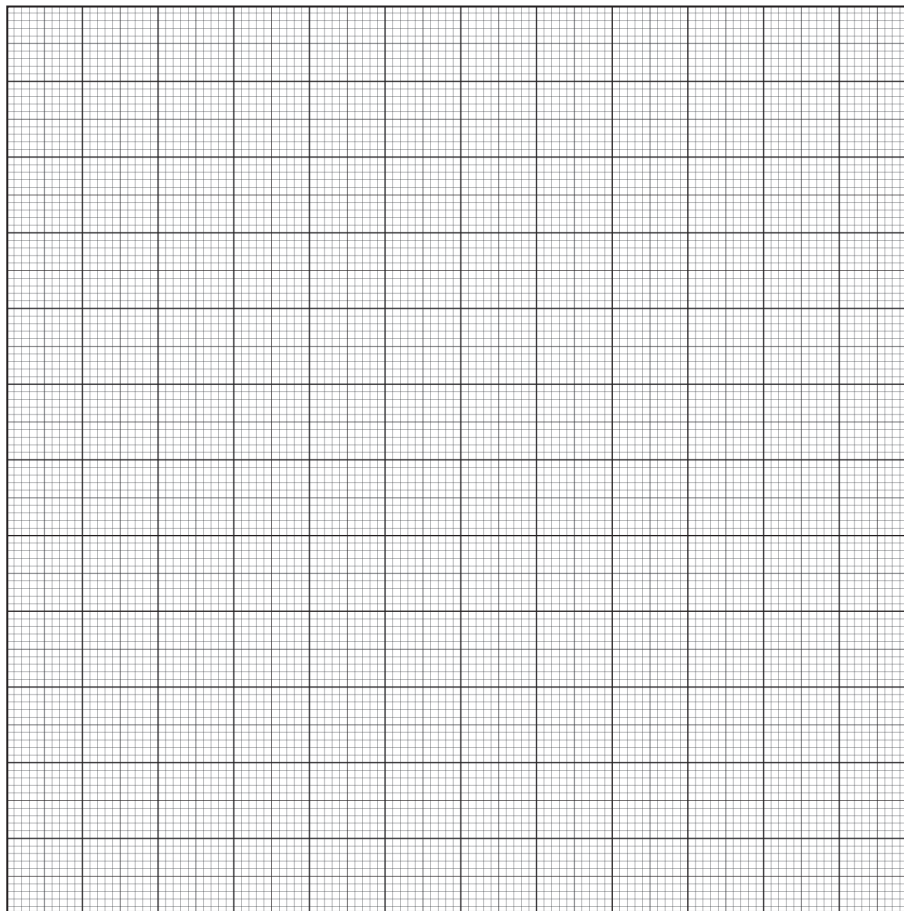
A team of sports psychologists were investigating how much time young adolescents spent exercising at different intensity levels. The table below summarises the results.

Middle school girls' daily mean time (minutes) spent at different levels of exercise

	11 years	12 years	13 years
Exercise level	Time (minutes)		
Moderate	68	75	71
High	73	41	80

- (a) Construct a line graph for the data set above.

(6 marks)



A spare grid is provided at the end of this Question/Answer booklet. If you need to use it, cross out this attempt and indicate that you have redrawn it on the spare page.

When the researchers recorded their data, they thought they had made an error. However, upon double-checking, they determined that the data was correct and classified the error as an outlier.

- (b) Referring to your graph, identify the outlier (year and exercise level). (1 mark)
-

Below are the results for the amount of time 11-year-old boys undertook high-levels of exercise.

Participant	Duration of high-level exercise (minutes)
1	80
2	73
3	75
4	69
5	83
6	86
7	59
8	71
9	78
10	84
11	76
12	75

- (c) Identify correctly the relevant measures of central tendency for the data above. (3 marks)

Value	Measure of central tendency
75.5	
75	
75.75	

Question 2 (continued)

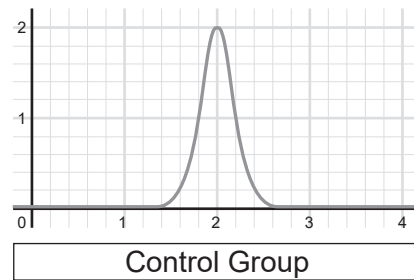
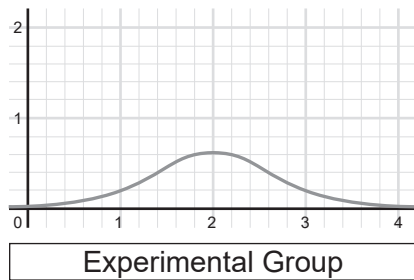
The psychologists then conducted an experiment to investigate if they could change the exercise levels in adolescents. The experimental group were trained with a new technique while the control group were provided with no training. Both groups had the same number of participants, and their exercise levels were remeasured after ten weeks.

Measures of dispersion tell us about the spread of a data set.

(d) Outline why a psychology researcher would use the following measures.

(i) Variance (2 marks)

(ii) Range (2 marks)



The graphs above show the data collected from the experimental and control groups plotted as normal curves.

(e) (i) Compare the features of the graphs above, referring to the mean. (1 mark)

(ii) Comparing the two graphs and the standard deviations, identify the **two** differences in the spread of both groups. (2 marks)

End of Section One

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Section Two: Short answer**55% (101 Marks)**

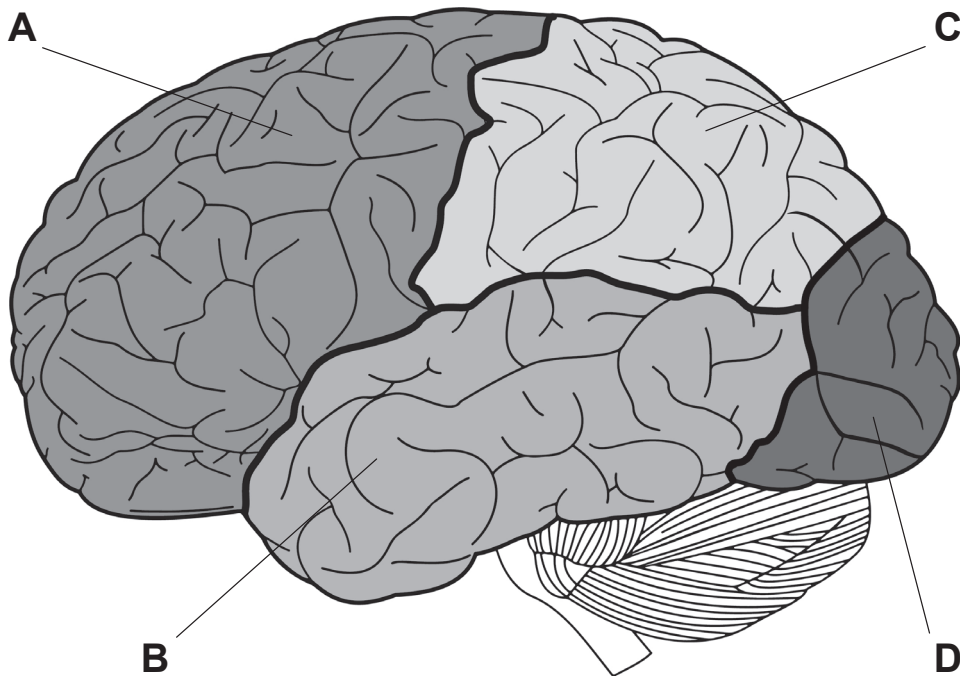
This section has **eight** questions. Answer **all** questions. Write your answers in the spaces provided.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 90 minutes.

Question 3**(13 marks)**

Use the following diagram of the brain to answer parts (a) and (b).



- (a) Name the lobes represented by the letters 'A' and 'B'. (2 marks)

A: _____

B: _____

- (b) Describe a function of the lobes represented by the letters 'C' and 'D'. (2 marks)

C: _____

D: _____

See next page

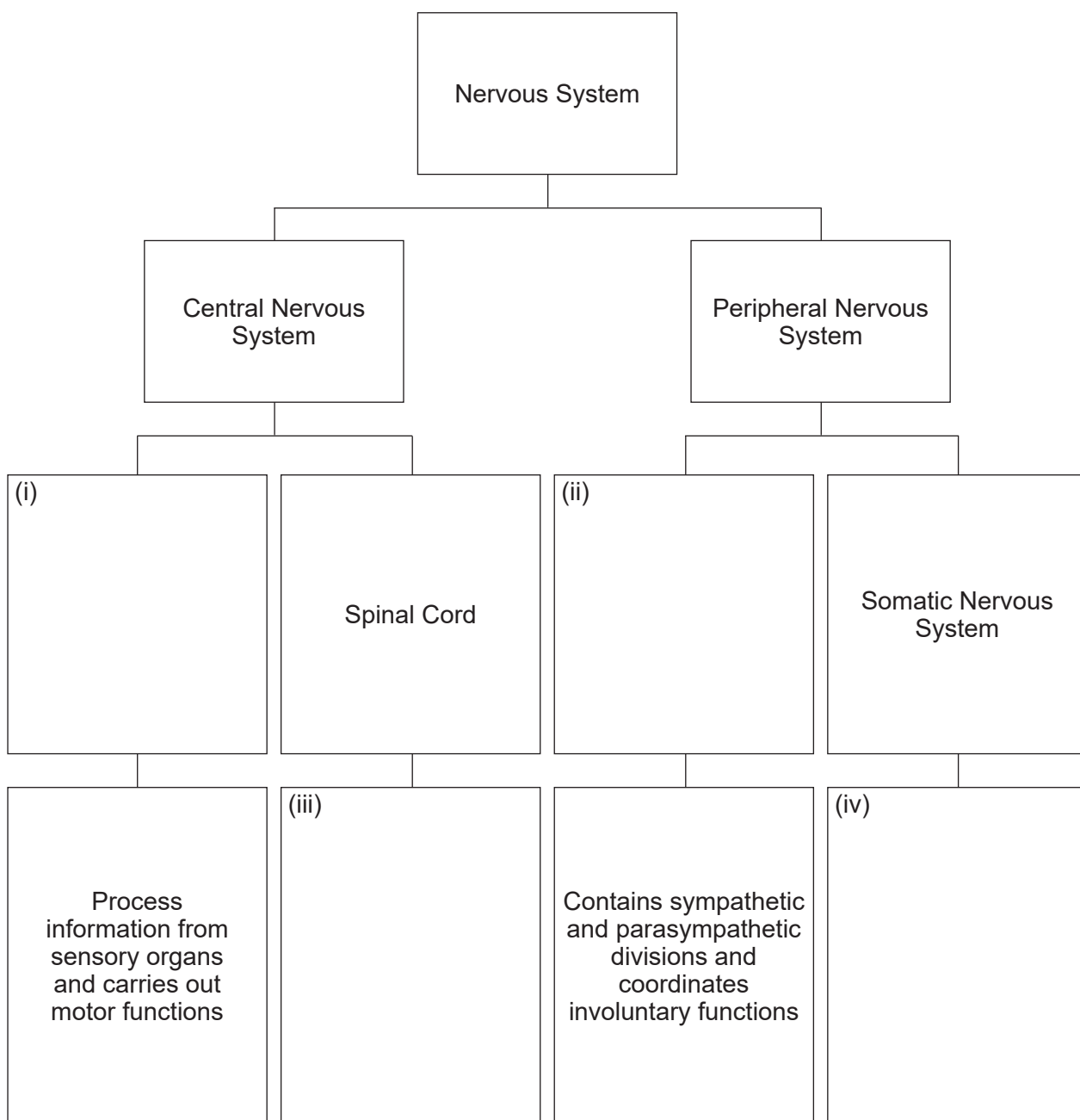
Question 3 (continued)

(c) Each of the people described in the scenarios below have suffered a head injury. On the basis of their symptoms, identify the area or cortex that has been damaged.

(i) Jose is having trouble in initiating movement when trying to walk. (1 mark)

(ii) Amos has difficulty in understanding what people are saying. (1 mark)

(d) Complete the blanks in the diagram below. (4 marks)



See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

(e) On the basis of the symptoms given in each scenario below, identify which class of drugs the people had taken.

(i) Sally had a delay in reaction time and kept dropping things. (1 mark)

(ii) Ahmed's sense of time and space was distorted. (1 mark)

(iii) Yu was sweating profusely and had an elevated heart rate. (1 mark)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

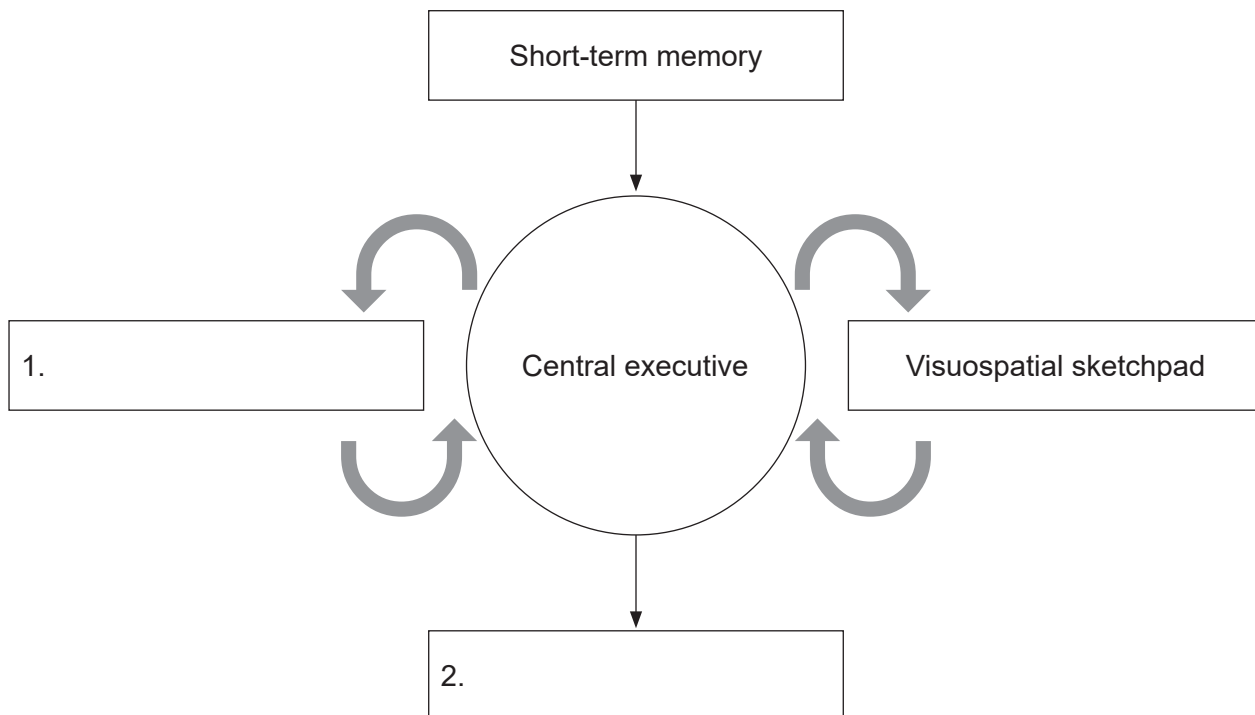
See next page

Question 4

(13 marks)

- (a) Define the psychological term 'memory'. (1 mark)

The diagram below represents Baddeley and Hitch's (1974) 'working memory' model.



- (b) Label Parts 1 and 2 on the diagram above. (2 marks)

Vu was working away from home and was reading from a storybook over the phone to his children. He was describing a picture to his children. The children listened while Vu spoke.

- (c) Referring to Baddeley and Hitch's (1974) model, describe the role of each of these components with respect to Vu's and the children's working memory.

- (i) Central executive (2 marks)

Vu: _____

Children: _____

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

- (ii) Visuospatial sketchpad (2 marks)

Vu: _____

Children: _____

Psychologists were investigating memory in chimpanzees. Over several days, they taught the chimpanzees a new procedure to access their food. On the last day, one of the assistants showed the process differently by mistake. When the psychologists came back to assess how well the chimpanzees had remembered the new procedure, some were doing parts of the old procedure, while others were adding in steps that the assistant had shown by mistake.

- (d) Explain how recently- and previously-learned information affects memory. (3 marks)

The psychologists came back one year later and found that the chimpanzees could not recall the procedure they had been taught.

- (e) Explain how the time between a stimulus and it being retrieved is a factor that affects memory. (3 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 5

(17 marks)

Wundt College is planning a whole-school approach to behaviour management.

Approach A involves the teacher providing praise each time a student does something correctly.

Approach B involves the teacher placing a tick next to a student's name each time they complete a lesson without disrupting their peers. The students were then able to exchange these ticks for various prizes at the college's shop.

- (a) (i) Using your knowledge of learning theories, identify the process of learning demonstrated in **Approach A**. (1 mark)

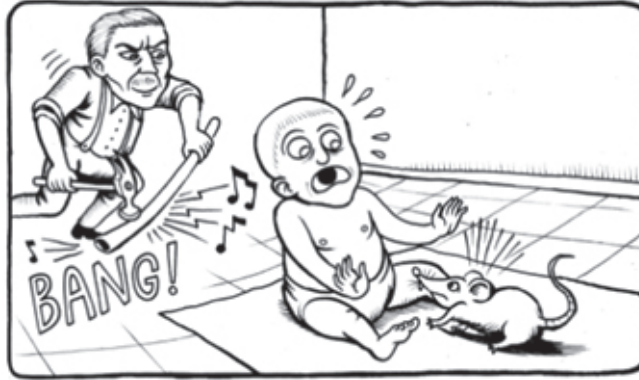
- (ii) Classify the technique of behaviour modification used in **Approach A**. (2 marks)

- (b) (i) Identify the technique of behaviour modification used in **Approach B**. (1 mark)

- (ii) According to this technique, the prizes and ticks perform different roles. Explain how these roles modify behaviour differently. (4 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

In Watson and Raynor's (1920) 'Little Albert' experiment, Albert developed a phobia of white furry things after being scared while playing with a white rat. He used to love playing with a pet rat, but one day, Watson and Raynor played a very loud instrument that scared Albert. After that incident, Albert became scared of white furry things such as toy animals and even people with white beards.



'Little Albert'

If Albert reached adulthood, he may have wanted to treat his phobia by consulting a psychologist who practises systematic desensitisation.

- (c) List **five** steps a psychologist would have taken to treat Albert's phobia using systematic desensitisation. (5 marks)

One: _____

Two: _____

Three: _____

Four: _____

Five: _____

Question 5 (continued)

- (d) (i) Identify **two** similarities between the behaviour modification techniques of systematic desensitisation and cognitive behaviour therapy. (2 marks)

One: _____

Two: _____

- (ii) Contrast systematic desensitisation and cognitive behaviour therapy. (2 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 6

(12 marks)

Bowlby and Ainsworth developed attachment theories to describe and predict human behaviour.

- (a) Explain Bowlby’s concept of ‘monotropy’ as it relates to attachment theory. (3 marks)

Bowlby’s *‘Forty-four Juvenile Thieves’* study investigated the impact of a child being separated from its mother during a critical or sensitive period.

- (b) (i) Name the term used to describe the situation in which a child has been separated from its mother during the critical or sensitive period. (1 mark)

- (ii) State the duration of this critical period as articulated by Bowlby. (1 mark)

Bowlby concluded from his study that the longer a child was separated from its mother, the more likely it was to develop affectionless psychopathy.

- (c) State **two** characteristics of an individual with affectionless psychopathy. (2 marks)

One: _____

Two: _____

- (d) Describe the concept of a ‘secure base’ in attachment theory. (2 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 6 (continued)

Mary Ainsworth developed a laboratory-based method for measuring attachment security in infants. Martha and her daughter Aila are participants in an experiment designed in the same way as Ainsworth's original study.

In the experiment, Martha leaves the room and, when she returns, Aila rushes back to Martha and hugs her while looking fearfully at the door. She soon settles and returns to playing with the toys away from Martha.

(e) (i) Identify which of Ainsworth's classifications applies to Aila's behaviour. (1 mark)

(ii) Justify your response to part (e)(i). (2 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 7

(12 marks)

- (a) Name the theorist who coined the term 'social learning theory'. (1 mark)

- (b) Describe why social learning theory involves observation and cognitive processes. (2 marks)

Ten-year-old Ade admired his uncle greatly. He always observed his uncle cooking food. Ade's aunt always praised his uncle for his delicious food.

One day, Ade decided to try to cook as well. The aunt saw him cooking and praised his skills. When the uncle heard that he was trying to cook, he spent an hour teaching Ade how to cook and praised his efforts.

- (c) Identify who the model is in this scenario. (1 mark)

- (d) Describe an example of vicarious reinforcement from the scenario. (2 marks)

Ade used to watch his grandmother who was also a good cook. When asked what he wanted to be when he was older Ade said he wanted to be a good cook like his uncle.

- (e) Outline why Ade was more likely to say that he wanted to be a 'good cook like his uncle'. (2 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 7 (continued)

Ade's sister, Noor, is four-years-old and has also seen her uncle cook. However, she has yet to try to cook herself.

- (f) Using Bandura's 'social learning theory', outline **two** reasons why Noor is less likely to try to cook. (4 marks)

One: _____

Two: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 8

(13 marks)

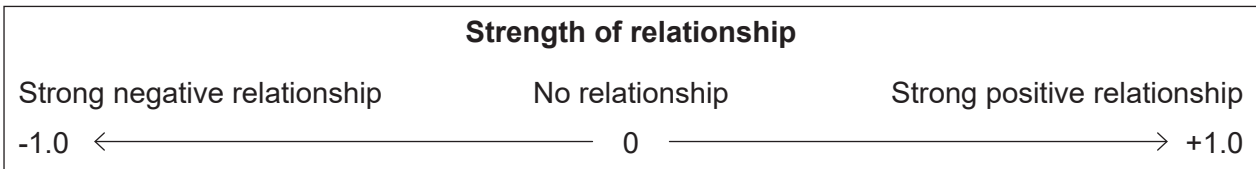
- (a) Describe the term 'trait' as it applies to personality. (2 marks)

- (b) According to trait theory, a person's personality remains the same in different situations. Identify the term that best describes this feature. (1 mark)

Food neophobia is a psychological concept that describes an individual's resistance to trying new foods. When presented with a new food type, an individual either approaches (tries it) or avoids (not tries it) the food. A person with high levels of food neophobia will be more likely to avoid the new food.

Below is a table of correlation coefficients from recent research by Nezlek and Forestell (2019) into the relationship between the big-five traits, also known as the five factor model, and food neophobia.

A correlation coefficient is a numerical representation of a relationship between two variables. The closer the number is to 1.0, the stronger the association between the two factors.

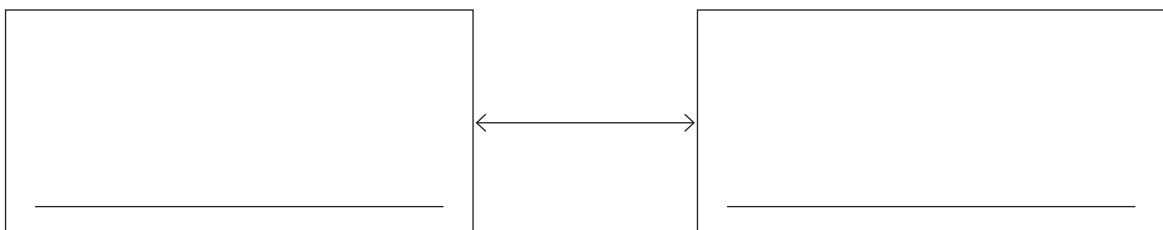


Correlations between the five factor personality model and new food approaches

	O	C	E	A	N
Approach	.24	.09	.11	.17	.01
Avoid	-.12	-.03	-.12	-.07	.09

- (c) Identify the trait represented by 'O' in the table above. (1 mark)

- (d) Label the continuum below to represent the trait represented by 'N' in the table above. (2 marks)



See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 8 (continued)

- (e) Using McCrae and Costa's trait theory, present a description of a person's personality with high levels of food neophobia compared to a person with low levels of food neophobia. Refer to the data from the table in your answer. (5 marks)

Humanistic and social-cognitive psychologists often criticise trait theories of personality.

- (f) Propose a limitation of trait theories according to each of the following personality perspectives.

- (i) Humanistic (1 mark)

- (ii) Social-cognitive (1 mark)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 9

(11 marks)

(a) Name a theorist who studied obedience.

(1 mark)

Both conformity and obedience are psychological processes that influence group behaviour.

(b) State the main difference between these two processes.

(2 marks)

(c) Would you be more likely to obey a teacher in a school or a supermarket?

Circle the setting in which you would be more likely to obey the teacher and justify your choice.

(2 marks)

School

Supermarket

Justification: _____

Asch's studies of conformity examined several different factors that influence conformity.

(d) For each of the following, identify and explain the impact the factor has on conformity.

(i) Group unanimity

(3 marks)

(ii) The difficulty of the task

(3 marks)

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 10

(10 marks)

Amare and Emem are currently renting a house and are about to have their first-ever rental inspection. In the inspection, the property agent will come to the house and check how well they are looking after the property. All they know is that it will be some time during the week. The agent told them that if the house is not up to the agent's expectations, they will be fined. They were not provided with any instructions or any standards to follow. They are feeling stressed by this event.

Research by psychologists indicates three characteristics make an event more stressful.

- (a) Name the **three** event characteristics and account for how they contribute to Amare's and Emem's level of stress. (6 marks)

One: _____

Two: _____

Three: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

As Amare and Emem were preparing for the inspection, some student psychologists from the local university knocked on the door. The students were researching whether residents in the local neighbourhood felt a sense of community. They were using *The Sense of Community Index – Short Form* (McMillan and Chavis, 1986) survey of twelve true or false questions to measure sense of community.

Below is a table with some of the questions from this survey.

- (b) Classify each of the following questions according to the four Sense of Community elements. Place a 'X' into the chosen element. The first two questions have been completed for you. (Each statement relates to one element only.) (4 marks)

	Membership	Influence	Integration and fulfilment of needs	Shared emotional connection
I feel at home in this neighbourhood.	X			
I care about what my neighbours think of my actions.		X		
Very few of my neighbours know me.				
My neighbours and I want the same thing from this neighbourhood.				
People in this neighbourhood generally don't get along with one another.				
If there is a problem in this neighbourhood, people who live here get it solved.				

End of Section Two

See next page

Section Three: Extended answer**25% (54 Marks)**

Section Three consists of **two** questions. You must answer **both** questions.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 60 minutes.

Write your answer to Question 11 on pages 28–33. When you have answered this question, turn to page 34 for Question 12 and write your answer on pages 36–41.

Question 11**(27 marks)**

The World Health Organisation (WHO), an agency of the United Nations, is responsible for international health responses and policies, and manages health campaigns across the globe. The *#NoTobacco* campaign is aimed at countries where tobacco users' health effects are causing social and economic problems. This campaign has been produced in a range of languages.

Research into persuasive communication identifies a range of features that influence whether campaigns alter attitudes and behaviours effectively. Much of the research is conducted using attitude change questionnaires to measure campaign advertising effectiveness and collect quantitative and qualitative data.

The advertisement below was designed to be used as a social media post. This form of advertising would have had a very wide distribution.

World Health Organization #NoTobacco

**DON'T LET TOBACCO
TAKE YOUR BREATH AWAY**

normal
asthma
asthma attack

Children who breathe second-hand smoke are more likely to develop asthma and experience frequent and more severe asthma attacks.

See next page

Write an extended answer with reference to the scenario and advertisement by applying your psychological understanding of the features of persuasive communication.

In your answer you must:

- define persuasive communication (2 marks)
- name and describe **two** features of persuasive communication (4 marks)
- explain how each of your identified features contribute to persuasive communication (4 marks)
- apply each of your selected features to their use in this advertisement (6 marks)
- describe a subjective quantitative measure that could be used to collect data (3 marks)
- outline **two** ways in which participants can affect the validity of data gathered using a qualitative survey (4 marks)
- communicate psychological understandings clearly with correct use of psychological language. (4 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Horizontal lines for writing.

See next page

Question 12

(27 marks)

A group of Year 12 Psychology students wanted to investigate group polarisation.

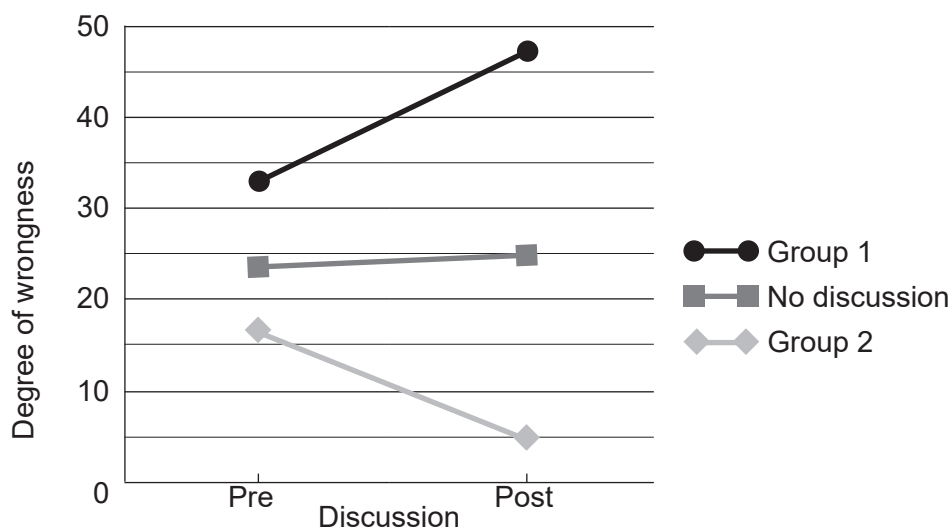
They presented 20 students with Heinz’s dilemma. Each participant had to read the dilemma and rate, on a scale of one to fifty, how strongly they felt that Heinz did the wrong thing. The higher the rating, the more the participant felt Heinz was in the wrong.

The participants were placed into three groups, and the average scores for each group were taken. Two groups were then required to discuss the scenario for 10 minutes, and after the discussion, each participant had to re-rate Heinz on the same scale. The third group of participants did not discuss the matter but completed the rating scales both times.

The three groups were

- discussion group 1: A group that initially strongly rated Heinz as doing the wrong thing;
- discussion group 2: A group that initially strongly rated Heinz as not doing the wrong thing; and,
- no discussion group: Participants that did not discuss the dilemma.

The mean group results from the pre- and post-discussion surveys are presented below.



	Pre-discussion	Post-discussion
●—● Group 1	33	48
■—■ No discussion	24	25
◆—◆ Group 2	17	5

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Write an extended answer with reference to the scenario by explaining the relevant psychological concepts.

In your answer you must:

- outline the concept 'group polarisation' (3 marks)
- apply the results from the graph and table to the concept of group polarisation (6 marks)
- outline Kohlberg's methods for studying moral development (5 marks)
- name the levels of Kohlberg's moral development theory (3 marks)
- explain how a person at each level of moral reasoning would rationalise Heinz being in the wrong (6 marks)
- communicate psychological understandings clearly with correct use of psychological language. (4 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

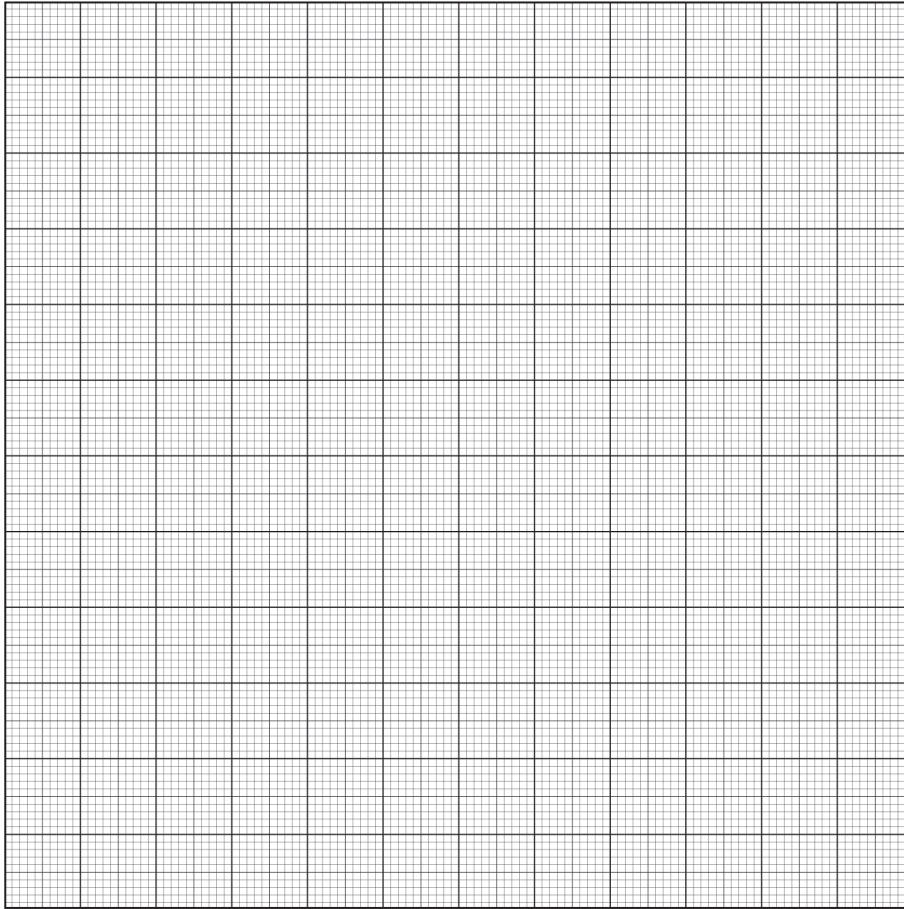
End of questions

Supplementary page

Question number: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Spare grid



DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

ACKNOWLEDGEMENTS

- Question 2** Adapted from: Kaapa, M., Palomaki, S., Vaha-Ypya, H, et al. (2019, November). The role of physical education homework to adolescent girls' physical activity in Finland. *Scientific Research*, 9(4). Retrieved May, 2021, from <https://www.scirp.org/journal/paperinformation.aspx?paperid=95589>
Used under a Creative Commons Attribution 4.0 International licence.
- Question 3** Adapted from: ArtsyBee (Venita Oberholdter). (2015). [Diagram of the lobes of the brain]. Retrieved May, 2021, from <https://pixabay.com/illustrations/brain-lobes-neurology-human-body-1007686/>
- Question 4** Adapted from: Baddeley, A. (2010, February). Working memory [Diagram]. *Current Biology*, 20(4), p. 137. Retrieved May, 2021, from [https://www.cell.com/current-biology/comments/S0960-9822\(09\)02133-2](https://www.cell.com/current-biology/comments/S0960-9822(09)02133-2)
- Question 5(c)** Information from: Farinella, M. (2012). *Little Albert experiment*. Retrieved May, 2021, from <https://matteofarinella.wordpress.com/2012/10/22/little-albert-experiment/>
Farinella, M. (2012, October 22). [Cartoon of a person banging a pipe behind a child with a rat]. Retrieved May, 2021, from <https://matteo-farinella.wordpress.com/2012/10/22/little-albert-experiment/>
- Question 8** Adapted from: Nezelek, J. B., & Forestell, C. A. (2019, April). Food neophobia and the five factor model of personality. *Food Quality and Preference*, 73, pp. 210–214.
- Question 11** World Health Organisation (WHO). (2019). *Don't let tobacco take your breath away* [Infographic]. Retrieved May, 2021, from https://www.who.int/images/default-source/imported/world-no-tobacco-day/social-media-squares/6188-who-wntd19-infographics-en-3.jpg?sfvrsn=96094096_2&ua=1

This document – apart from any third party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that it is not changed and that the School Curriculum and Standards Authority is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the School Curriculum and Standards Authority. Copying or communication of any third party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the Creative Commons [Attribution 4.0 International \(CC BY\)](https://creativecommons.org/licenses/by/4.0/) licence.

An *Acknowledgements variation* document is available on the Authority website.