

## **QCE Psychology Units 3&4**

### **Paper 2**

Student's Name: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

#### **Time allowed**

- Perusal time – 10 minutes
- Working time – 90 minutes

#### **General instructions**

- Answer all questions in this question and response booklet.
- Write using black or blue pen.
- QCAA-approved calculator permitted.
- Planning paper will not be marked.

#### **Section 1 (45 marks)**

- 5 short response questions

Students are advised that this is a trial examination only and cannot in any way guarantee the content or the format of the 2023 QCE Psychology Units 3&4 Written Examination.

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## **SECTION 1**

### **Instructions**

- If you need more space for a response, use the additional pages at the back of this booklet.
    - On the additional pages, write the question number you are responding to.
    - Cancel any incorrect response by ruling a single diagonal line through your work.
    - Write the page number of your alternative/additional response, i.e. See page ...
    - If you do not do this, your original response will be marked.
  - This section has five questions and is worth 45 marks.
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**DO NOT WRITE ON THIS PAGE**  
**THIS PAGE WILL NOT BE MARKED**

**QUESTION 1 (10 marks)**

This question refers to the investigation conducted by Watson and Rayner (1920).

- a) Distinguish between a neutral stimulus and an unconditioned stimulus. Provide an example of each stimulus from the investigation. *[3 marks]*

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- b) Describe extinction. Support your response with an example that is relevant to the investigation. *[2 marks]*

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- c) Compare Watson and Rayner’s investigation to the experiment conducted by Bandura (1977). *[3 marks]*

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- d) Identify two methods of social learning theory that would explain how fear can be a learned response to stimuli. *[2 marks]*

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**QUESTION 2 (8 marks)**

This question refers to the investigation conducted by Bargh, Chen and Burrows (1996).

- a) Describe how stereotypes can influence behaviour. Support your answer with an example from experiment 1 in the investigation. *[2 marks]*

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- b) Describe the priming effect and how it explains the results obtained in experiment 1, 2 or 3 in the investigation. *[2 marks]*

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- c) Identify one strength and one limitation of the investigation. *[2 marks]*

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- d) Propose how the findings of the investigation could be used by teachers who are attempting to increase empathy in students. *[2 marks]*

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**QUESTION 3 (7 marks)**

This question refers to the investigation conducted by Milgram (1963).

- a) In terms of obedience, explain the behaviour of the participants in the investigation. *[1 mark]*

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- b) With reference to the fundamental attribution error, describe how an individual observing the investigation would justify the behaviour of the teachers in the investigation. *[2 marks]*

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- c) Describe the purpose of deception in research and how Milgram used deception in the investigation. *[2 marks]*

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- d) Identify two limitations of Milgram's investigation. *[2 marks]*

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**QUESTION 4 (10 marks)**

This question refers to an experiment by Karpicke and Bauernschmidt (2011).

The experiment investigated whether repeated retrieval of information would improve memory retention. Participants were given lists of word pairs across cycles of study and recall trials. In the study trials, participants were asked to learn both words in each word pair from a computer screen. In the recall trials, only one word from each word pair was shown to participants on the screen and participants were required to recall and type the other word in the pair. Participants were randomly allocated to one of four conditions during the study trials.

1. Participants studied the word pairs once before completing the recall trial.
2. Participants repeated the study and recall trials until all word pairs could be correctly recalled. Once a word pair was correctly recalled, this word pair was then dropped from the study list.
3. Participants repeated a modified study and recall trial where the correctly recalled word pairs are immediately matched three more times (referred to as repeated massed retrieval).
4. Participants repeated a modified study and recall trial where the correctly recalled word pairs are matched three more times but are spaced throughout the remaining word pairs (referred to as repeated spaced retrieval).

a) Identify the type of explicit long-term memory store that the participants used to learn the word pairs. Justify your answer. *[2 marks]*

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b) Identify the area of the brain responsible for memory formation in this investigation. Describe its role in memory. *[2 marks]*

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- c) Identify the type of strategy used in conditions 2, 3 and 4 to improve participants' recall of the word pairs. Justify your answer. *[2 marks]*

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- d) One month after the experiment, the participants repeated the word pair test using pen and paper, rather than a computer. Identify and describe two reasons why the participants' recall may have decreased. *[4 marks]*

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**QUESTION 5 (10 marks)**

This question refers to a modified investigation based on the methodology of Cialdini et al. (2006).

Two different signage types were installed at the entrance of the Arizona Petrified Forest National Park to deter visitors from removing petrified wood from the park. One sign used injunctive norms, while the other sign used descriptive norms. The percentage of petrified wood removed from the park was recorded over eight days. The table shows the raw data for the two signage types.

Amount of petrified wood removed from the park (%)										
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Standard deviation	<i>p</i> -value
Descriptive signage	7.8	6.2	7.3	6.5	7.8	6.9	8.1	7.2	0.67	<i>p</i> < 0.05
Injunctive signage	3.2	4.1	3.7	2.6	2.7	3.1	2.8	2.6	0.55	

- a) Identify one characteristic of the data that show that the mean is an appropriate measure of central tendency. *[1 mark]*

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- b) Calculate the mean for the descriptive signage condition. Show your working and give your answer correct to two decimal places. *[2 marks]*

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- c) The mean for the injunctive signage condition is 3.1. Contrast the means of the injunctive and descriptive signage conditions. *[1 mark]*

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- d) Determine which signage condition had the greater variability within its data. Justify your answer. *[2 marks]*

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- e) Draw a conclusion about the  $p$ -value for the investigation. *[2 marks]*

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- f) Draw a conclusion about the best type of signage to deter visitors from removing petrified wood from the park. Justify your conclusion. *[2 marks]*

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**END OF PAPER**









## REFERENCES

### Question 1

Bandura, A. (1977) *Social Learning Theory*, Prentice Hall, Englewood Cliffs, NJ.

Watson, J. B., and Rayner, R. (1920) 'Conditioned emotional reactions', *Journal of Experimental Psychology*, vol. 3, no. 1, pp. 1–14.

### Question 2

Bargh, J. A., Chen, M., and Burrows, L. (1996) 'Automaticity of social behaviour: Direct effects of trait construct and stereotype activation on action', *Journal of Personality and Social Psychology*, vol. 71, no. 2, pp. 230–244.

### Question 3

Milgram, S. (1963) 'Behavioural study of obedience', *Journal of Abnormal and Social Psychology*, vol. 67, pp. 371–378.

### Question 4

Karpicke, J. D., and Bauernschmidt, A. (2011) 'Spaced retrieval: Absolute spacing enhances learning regardless of relative spacing', *Journal of Experimental Psychology: Learning, Memory and Cognition*, vol. 37, no. 5, pp. 1250–1257.

### Question 5

Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W, Rhoads, K., and Winter, P. L. (2006) 'Managing social norms for persuasive impact', *Social Influence*, vol. 1, no. 1, pp. 3–15.