

Name: \_\_\_\_\_

Class: \_\_\_\_\_

**CHAPTER TEST**

# Chapter 7 Data analysis and visualisation

Section	Number of questions	Number of questions to be answered	Number of marks	Marks achieved
A	15	15	15	
B	5	5	25	
<b>Total</b>			40	

Grade: \_\_\_\_\_

Scale:

A+	36–40	A	32–35	B	28–31	C	24–27	D	20–23	E	11–19	UG	0–10
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**INSTRUCTIONS**

Write your **name** and **class** in the space provided above. All written responses must be in English.

**MATERIALS**

- Question book of 10 pages.
- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are **NOT** permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- Calculators are **NOT** permitted in this examination.
- Students are **NOT** permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

## Section A

### Multiple-choice questions

#### INSTRUCTIONS FOR SECTION A

- Circle the correct answer in pencil for multiple-choice questions.
- Choose the response that is **correct** or that **best answers** the question.
- A correct answer scores 1 and an incorrect answer scores 0.
- Marks will **not** be deducted for incorrect answers.
- No marks will be given if more than one answer is given for a question.

- 1 In the problem-solving methodology (PSM), evaluation criteria are determined during:
  - A analysis.
  - B design.
  - C development.
  - D evaluation.
- 2 Primary data:
  - A is collected first-hand by the researcher.
  - B is processed into secondary data.
  - C is used by younger students.
  - D is often biased.
- 3 You would expect reliable and unbiased information about Australian politics to come from:
  - A the ALP or Liberal Party websites.
  - B TV political commentators.
  - C newspaper editorials.
  - D a VCE politics textbook.
- 4 If data has integrity, it:
  - A is in one piece.
  - B is accurate, timely, authentic and relevant.
  - C has good character.
  - D has been generated from good secondary data.
- 5 The difference between valid data and accurate data is that:
  - A accurate data is reasonable, but valid data is true.
  - B valid data has been tested.
  - C valid data is reasonable, but accurate data is true.
  - D accurate data has been proven to exist and have correct range and data type.

- 6 A radio button would be appropriate to enter data about:
- A which state or territory you live in.
  - B the sort of pets you own.
  - C your family name.
  - D your date of birth.
- 7 Sally is creating a database for a shop that sells chocolate and delivers online. She makes one field of the online order form compulsory, so people cannot complete a purchase unless they enter a value for that field. The compulsory field might be:
- A their phone number.
  - B an email address.
  - C their date of birth.
  - D their town or suburb.
- 8 Timely data:
- A is produced quickly.
  - B relates to a time of day.
  - C is current and available when needed.
  - D is stored in a field with a time/date data type.
- 9 A researcher wants to find out how much sugar Australian teenagers eat daily. The researcher finds a detailed study done last year about sugar consumption by teenagers in England. The researcher may choose not to use the data because it is:
- A irrelevant.
  - B not timely.
  - C inaccurate.
  - D biased.
- 10 A researcher creates a database to store survey data. One question asks how many children the respondents have. In what data type should the answer be stored?
- A Boolean
  - B numChildren
  - C Floating point
  - D Integer
- 11 Wei collects data about the amount of rainfall in his backyard every day. To store a year's worth of data during processing, he should use:
- A a record.
  - B an array.
  - C a text file.
  - D a field.

- 12** Wei wants to expand his weather monitoring to store each day's maximum and minimum temperatures, UV rating, and level of cloud cover. To store this daily data on disk, he should use:
- A** records.
  - B** arrays.
  - C** databases.
  - D** variables.
- 13** Wei wants to show clearly how rainfall changes across the course of an entire year. He should create a:
- A** line chart.
  - B** pie chart.
  - C** table.
  - D** map.
- 14** A site map for a website is an example of:
- A** a time visualisation.
  - B** a network visualisation.
  - C** a hierarchy visualisation.
  - D** a flow visualisation.
- 15** A magazine wants to briefly and humorously show a summary of the differences between men's and women's daily grooming activity. This would best be achieved using:
- A** an essay.
  - B** a spreadsheet.
  - C** an infographic.
  - D** a survey.

## Section B

### Short-answer questions

#### INSTRUCTIONS FOR SECTION B

Answer **all** questions in the spaces provided.

1 When solving an information problem, the first stage of the problem-solving methodology (PSM) is analysis.

a Name the three main tasks undertaken during analysis.

(3 marks)

b Describe one serious consequence of not undertaking the analysis stage of the PSM.

(2 marks)

2 Describe five conventions used in webpages, and explain the reason each one is valued.

(5 marks)

3 a What are two things you would change in the following visualisation to make its meaning more clear?



(2 marks)

- b Use the following data to create a data visualisation, other than a scatter diagram, that clearly displays the data's main trends or patterns.

Student	James	Sally	Jessica	Tracey	Billy	Andrew
Test 1	60%	90%	77%	67%	40%	70%
Test 2	65%	51%	77%	72%	87%	68%

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Need Help? Please contact us.  
Reference Cart Number:  
145017137

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Returning Customer?

Sign In

**1 BILLING ADDRESS** Please enter your billing information as shown on your credit card statement.

Full Name \*

Company Name

Country \* AUSTRALIA ▼

Address \*

Town/City \*

State/Territory \* - Select - ▼

Postcode \*

Phone Number \*

Email Address \*

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Ship to a different address

This is a gift order.  
Check this box to see gift options. Please note that posters are not eligible for gift options.

**3 SELECT SHIPPING OPTION** Select Shipping Method

Standard Delivery: AUD \$20.00 ▼

**Estimated Arrival**  
Jul 31, 2015 - Aug 4, 2015  
Includes all duties & taxes.

**4 SELECT PAYMENT METHOD**

Credit Card

Credit Card No. \*

Expiration Date \* 07 (July) ▼ 2015 ▼

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Shipping/Handling	AUD \$20.00
Tax	AUD \$0.00
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<b>Subtotal</b>	<b>AUD \$50.50</b>
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<b>Order Total</b>	<b>AUD \$50.50</b>

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**4 a** In the data-entry form shown above, identify four different data input controls and justify their use for that item of data.

(4 marks)

**b** Choose one of the controls you used in Question **a** above, and explain the possible consequences if a less-appropriate control had been used.

(1 mark)

**5 a** Identify two problems a data visualisation may have that would make it less successful.

(2 marks)

- b** Identify three ways that you may need to modify a data visualisation from a website if you needed to re-publish it in a print newspaper in only black ink.

(3 marks)