

---

# PRACTICE EXAMINATION

## Introduction

This Examination relates to Units 3 and 4 in VCE IT Applications.

Reading time: 15 minutes

Writing Time Allocated: 120 minutes

Marks for each question indicated.

This paper contains TWO sections:

**Section A** – Multiple choice (20 questions, 20 marks). Clearly circle the option letter (A, B, C or D) of the most correct answer.

**Section B** – Short Answer (70 marks). Answer in the spaces provided in this booklet.

Total marks: 90

NAME: \_\_\_\_\_

# Task

## Section A - Multiple Choice

### *Instructions for Section A*

Clearly circle the option letter (A, B, C or D) of the most correct answer. Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

### Question 1

The order of the stages of the problem-solving methodology is

- A. Acquisition, Input, Validation, Processing, Storage, Retrieval, Output, Communication, Disposal
- B. Evaluation, design, development, testing, implementation and analysis
- C. Analysis, design, implementation, development, testing, and evaluation
- D. Analysis, design, development, testing, implementation and evaluation

Use the following table for the Questions 2 and 3.

Task	Dependencies	Monday 1st	Tuesday 2nd	Wednesday 3rd	Thursday 4th
A	None				
B	None				
C	Tasks A, B				

## Task

**Question 2**

How many days' slack time does Task B have?

- A. None
- B. One
- C. Two
- D. Three

**Question 3**

The critical path of the project consists of Tasks

- A. B and C
- B. A and C
- C. A and B
- D. A, B and C.

**Question 4**

An IPO chart would most likely be used when designing

- A. Networks
- B. Web sites
- C. Spreadsheets
- D. Organisational structures

**Question 5**

To successfully create relationships between tables in a database, each table requires

- A. At least one relational field
- B. A lookup field
- C. An index
- D. A key field

**Question 6**

If an employee in a national supermarket chain decided to advertise for plumbers to work on a new store they were planning to open, the decision would be best described as

- A. Operational
- B. Strategic
- C. Managerial
- D. Tactical

# Task

## Question 7

Refer to the following screenshot

	A	B	C	D	E
1	Name	Test 1	Test 2	Test 3	RESULT
2	Ajax	50	34	50	NO
3	Bertie	72	45	33	NO
4	Cookie	55	56	50	YES

The formula in cell E2 is most likely to be

- A. =IF(AND(B2>=50, C2>=50, D2>=50), "YES", "NO")
- B. =IF(AND(B2>=50, C2>=50, D2>=50), "NO", "YES")
- C. =AND(IF(B2>50, C2>50, D2>50), "YES", "NO")
- D. =IF(B2>50 AND C2>50 AND D2>50, "YES", "NO")

## Question 8

A format that is often used when presenting statistics is

- A. A mandatory format
- B. Right-justified numbers
- C. Graphs or charts
- D. Aggregated data

## Question 9

When transmitting files over the internet, using most common method is

- A. FTP
- B. SSL
- C. IMAP
- D. PGP

## Question 10

A database needs to store data about whether or not people own a pet. The best data entry control to use on the interface for this data would be

- A. A query
- B. A text box
- C. A set of check boxes
- D. A set of radio buttons

## Task

### Question 11

You would be liable for prosecution for copyright infringement if

- A. Your friend tells you he plans to write a song about space-going gorillas. You write a song using the same idea, publish it, and earn \$15 million.
- B. You convert your friend's copy of an old Beatles vinyl LP to MP3 so you can listen to it on the train.
- C. You set up your own hamburger restaurant called "McDonalds".
- D. You fail to put the © symbol and the year on your published piece of intellectual property.

### Question 12

To connect a file server to a workstation 30 metres away, the most suitable cable would be

- A. UTP
- B. Coaxial
- C. Fibre Optic
- D. USB

### Question 13

An advertisement for a computer system mentions "a massive 500G HDD". This means the most it could store would be about

- A. 500 Gigabits
- B. 5000 average songs in MP3 format
- C. The contents of nearly 100 full Blu-Ray DVDs
- D. The contents of about 700 full CDs

### Question 14

A manager writes that "We aim to reduce the number of errors made in our payroll system by 7% in the next year." This would be an example of

- A. An organisational objective
- B. A system objective
- C. An organisational goal
- D. A system goal

## Task

### Question 15

A small, local lawn mowing service has many celebrity customers and publicly boasts its ability to preserve its customers' privacy. In a recent local newspaper advertisement, the service included an unauthorised photograph of one of their film star customers sunbaking on a freshly-mown lawn in front of her house. Any local resident could easily determine the address of the star by carefully inspecting the house in the ad. The lawn mowing service could face:

- A. Criminal prosecution under the federal Privacy Act
- B. Being sued by the star under the Copyright Act
- C. No legal punishment
- D. Civil and criminal prosecution under the Privacy and Copyright Acts

### Question 16

The hard disk in a computer system fails and needs to be replaced. It would best be done using

- A. Pilot conversion
- B. Direct conversion
- C. Parallel conversion
- D. Phased conversion

### Question 17

A task in a project cannot be delayed or take up extra time without affecting a task that follows it. This indicates that

- A. The task is critical and has slack
- B. The task may be critical and it has a successor
- C. The task must by definition be on the critical path
- D. The task is dependent on the following task

### Question 18

The personnel manager of a state-wide chain store uses software that shows him what would likely happen if the company reduced its non-management staffing by 10%. The software would be

- A. Management Information System
- B. Executive Information System
- C. Decision Support Software
- D. Transaction Processing System

## Task

**Question 19**

A software developer is asked by a client to demonstrate how a radical new software interface would look and feel, but will not be fully functional. The software would be an example of

- A. Logical design
- B. An evaluation tool
- C. A virtual tool
- D. A prototype

**Question 20**

Several months after a new accounting system has been installed and rolled out to its users, the management decides to examine its error log, interview its users, and work out how much money they have saved compared to using the old accounting system. They are carrying out

- A. A feasibility study
- B. Testing
- C. Evaluation
- D. Analysis

(20 marks)

# Task

## Section B – Short Answer

### Instructions

Answer all questions in English in the spaces provided in this booklet.

### Question 1

Refer to the following screenshot of a webpage.

**QATs**  
Quality Assessment Tasks

- Home
- NSW/HSC
- VIC/VCE
- How to Order
- Contact Us
- Updates
- About Us

**NEW PRODUCT FOR 2008**

**NSW Year 11 Exams  
VCE Units 2 and 4**

**FOR ALL YOUR CLASSROOM ASSESSMENT NEEDS**

QATs (Quality Assessment Tasks) are an invaluable teachers' resource used for assessment within the VCE (Victoria) and the HSC (NSW).

Developed by experienced teachers QATs are the ideal assessment tools for internal assessment and end of year examinations.

Professionally designed and delivered by email as PDF and Word files (HSC Examinations only) QATs save teachers time and effort while providing confidence that assessment is reliable, accurate and consistent with requirements specified by education authorities.

QATs have been used by hundreds of schools throughout Victoria and NSW.

QATs orders are delivered by email.  
**No actual assessment materials are located on this site**

Website by [Digital Bridge](#)

- a. Identify **one** preferred convention visible on this webpage.

(1 mark)



## Task

- b. Give the **complete** URL at which this page might have been found. Explain your reasoning.

---

---

---

---

(2 marks)

- c. What file format was probably used to save the image in the top left corner of the site?  
Give one justification.

Format:

---

Justification:

---

---

(2 marks)

- d. Give **one** suggestion to Digital Bridge, the website's developers, that would improve this webpage. Explain your reasoning.

---

---

---

---

(2 marks)

# Task

## Question 2

Discuss **one significant** problem that a virtual team might face that a normal team probably would not face. Suggest a way to prevent or solve the problem.

---



---



---



---



---



---

(4 marks)

## Question 3

As a young medical student, Harry Shipman earned some money fixing computer problems for his friends and neighbours. To keep records of his income, he created a simple database.

Name	Date	\$	Address	Phone	Problem
Pedro Lopez	13 mar	25	2 Milt Rd, 3956	0402 394 283	Video card dead
Ted Bandy	2/8	55	1/3 Dupa Rd, 3958	(03) 5967 3945	Messed up Windows
John Wayne	4 nov	80	55 Ripper Av, 2956	3945 1029 ext 5	Fix registry
Luis Marmito	7-9	10.50	136 Corp St	94853945	PC hanging
John Wayne	9-9	45	55 Ripper Av, 3956	3945 1029 ext 5	Fix registry AGAIN!
John Wayne	13-9	15	55 Ripper Av, 3956	3945 1029 ext 5	Repair axe damage to PC

## Task

- a. Identify **one** problem with Harry's choice of fields, and give **one** reason why it is a problem.

---

---

(1 mark)

- b. Give **one** specific example of how it would be beneficial to convert this database into a relational database.

---

---

(1 mark)

- c. Harry decides to make the database relational. He draws two shapes to represent tables. In each table shape, add a suitable **name**, add **key fields** to the tables, and draw a line between the tables showing how they are **related**.

Table Name:

Table Name:

(3 marks)

# Task

## Question 4

Refer to the following screenshot.

- a. Identify **three** different types of controls used for **data entry** on this interface. For each one, explain why it was used in that situation.

i) Control \_\_\_\_\_

Why it was used?

---



---

## Task

ii) Control \_\_\_\_\_

Why it was used?

---



---

iii) Control \_\_\_\_\_

Why it was used?

---



---

(3 x 1 = 3 marks)

b. Recommend **one** improvement that could be made to the interface.

---



---



---



---

(2 marks)

### Question 5

*Bunny's Child Care Centre*, has just started business in a Melbourne suburb. Frederick and Rosemary North, the owners, are keen to get the centre open and earning money soon. They plan to keep paper records, but Rosemary's niece, Myra Henderson, suggests they'd be better off with a software system to manage all of the necessary customer information, medical information on the children, and payment records. Myra knows that Frederick and Rosemary are not confident computer operators.

a. Frederick suggests they use the internet to search for suitable software. Rosemary prefers to visit the nearby electronic chain store and ask for advice there. Who is right? Give **one** main reason.

---



---

(1 mark)

## Task

- b. If Frederick decided to use the internet to find suitable software, what *exact* search term should he use to get the maximum number of most-relevant hits?

---

(1 mark)

- c. They find a site with specifications of a product that looks like it might suit them. Rosemary is keen to buy it straight away, but Frederick insists on looking at the specifications of the product. He looks at three important topics. For each topic below, give a specification that would make him want to **reject** the product.

- i) Country of origin:

---

---

- ii) Hardware requirements:

---

---

- iii) Features:

---

---

(3 x 1 = 3 marks)

- d. Unable to find a suitable “off the shelf” product for sale, they decide to find a software developer to create a custom solution for them. They telephone two local software companies.
- Peter Smith Software* asks Fred for a one-line summary of his needs and promises to finish a spreadsheet solution for \$100 within 2 days.
- Jeffrey Dam Software Solutions* insists on visiting Fred and Rosemary and discussing their needs for an entire afternoon. They say it would take about two weeks to do the job, it would cost about \$2,000 and they refuse to commit themselves about what software they would use to produce the solution.

## Task

Based just on this information, which developer would you hire, and why?

---

---

---

---

(2 marks)

- e. *Bunny's Child Care Centre* opens and Rosemary's niece, Myra, is hired to help in the centre after school. Having done well in IT Applications, Myra automatically asks for a password to get into the centre's customer management software. "How did you know you'd need to give a password to get into the software?" Rosemary asks. "Well, it's a Federal law. You know – it's something about the data you store about the children," Myra replies. "You'd be in trouble if anyone could get into that data."

- i) Name the Federal law (and its year) to which Myra is referring.

---

---

(1 mark)

- ii) What data held by *Bunny's Child Care Centre* makes the owners subject to that law?

---

---

(1 mark)

- iii) How does password-protecting the software help the centre avoid being prosecuted under that law?

---

---

(1 mark)

## Task

- f. One day, Myra overhears Fred and Rosemary complaining about the extra money that the software developer wanted to charge for preparing user documentation for the software. “You’d be wise to pay it!” Myra says.  
“Why?” Fred demands. Give him **two good** reasons.

Reason 1

---

---

Reason 2

---

---

(2 marks)

- iii) How does password-protecting the software help the centre avoid being prosecuted under that law?

---

---

(1 mark)

- g. The software developer prepares the documentation. As well as a user manual, he provides a wall chart, and a technical manual.

- i) Give one example of information that might appear on the wall chart.

---

---

(1 mark)



## Task

ii) Give one example of information that might appear in the technical manual.

---

---

(1 mark)

- h. *Bunny's Child Care Centre* has become profitable and popular for parents of pre-school children. Myra suggests they lease the building next door and set up an after-school centre for children in grades 4, 5 and 6.
- “But we’d at least one other computer over there as well,” she says. “We’d need to set up a network.”

Give **two** reasons why would they want to set up a network.

Reason 1

---

---

Reason 2

---

---

(2 marks)

- i. The computer system at the centre is used for many purposes, and many different decisions are being made in the organisation. What sorts of decisions are being made when:

i) someone decides to phone a parent whose child has been ill?

---

## Task

ii) they decide to branch out and start producing and selling early childhood development software.

---

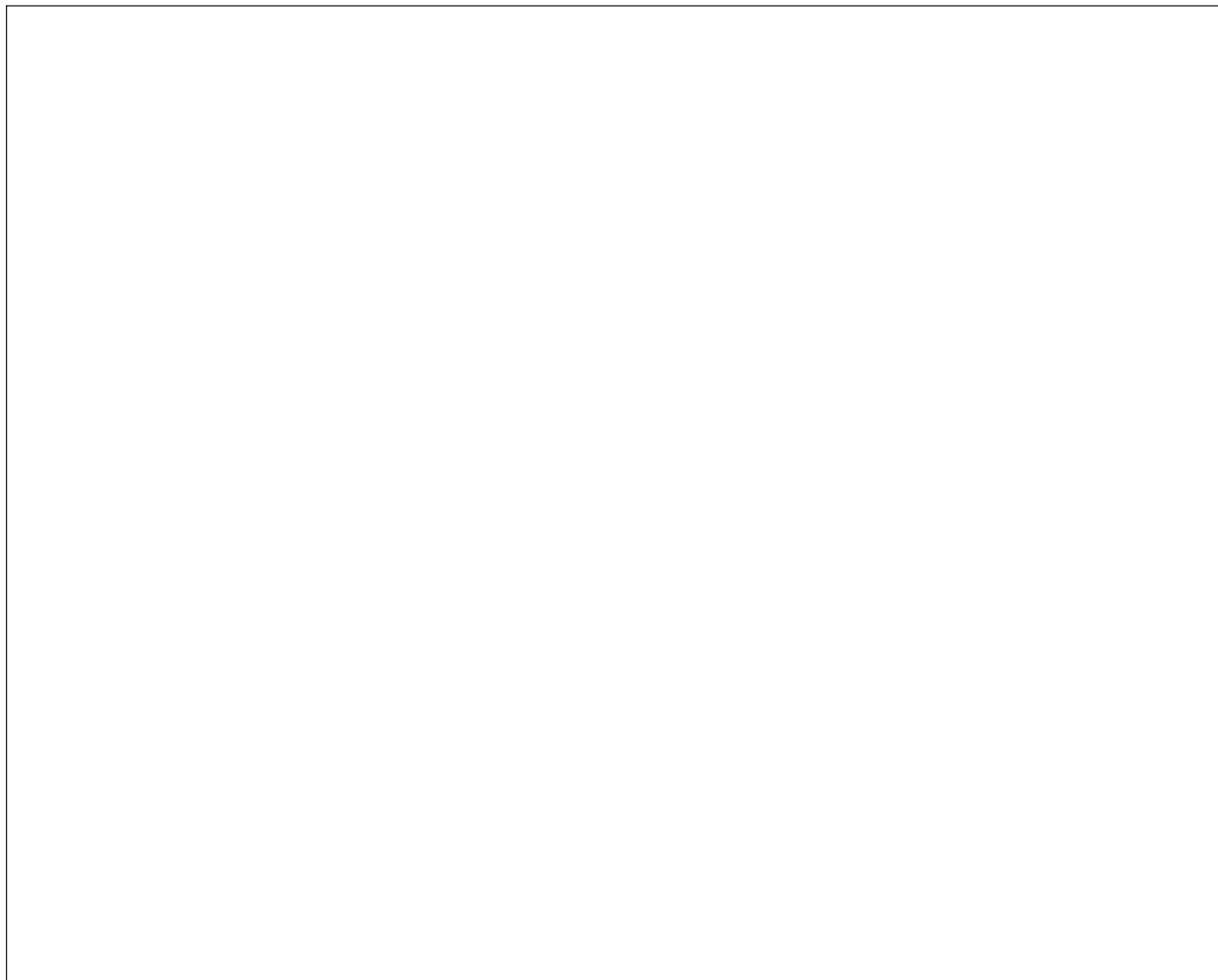
iii) they hire a programmer, 'Buffalo' Bill Gumm to work with Myra on their new software.

---

(3 x 1= 3 marks)

## Task

- j. In the space below, **visually** represent the thinking Myra might have used when creating an effective backup strategy for the centre's data. Include the options she had, the decisions she reached, and the reasons for those decisions.



(4 marks)

## Task

### Question 6

Mudbrick Corporation, a large Australian company, spends a lot of time, money and effort in building top-quality, prestigious software products and enjoys their reputation for creating software that is innovative, reliable and powerful. They have noticed, however, that smaller startup companies are stealing away their customers by offering “copycat” software that is less powerful and less creative, but cheaper and quicker to produce. Mudbrick’s turnover has dropped from \$12 million to \$10 million in the last financial year.

They decide to create a new wholly-owned subsidiary company called *Terracotta Bytes!* (or just *Terracotta*) which will aggressively compete in the “cheap” end of the software market. Terracotta’s first products will be a DivX editor and a personal encryption tool. Their aim is that Terracotta will capture 10% of global sales of those software types within the first 18 months of operation.

- a. Identify one organisational goal of Mudbrick Corporation.

---

---

(1 mark)

- b. Identify one organisational objective in the case study.

---

---

(1 mark)

- c. Terracotta is keen to quickly regain customers lost by its parent company to competing organisations. Terracotta asks the Mudbrick Corporation for a list of all customers who bought software costing less than \$300 in the past 3 years so they can be individually targeted with high-pressure direct advertising. Is this request legal? Explain, with reference to relevant legislation.

---

---



## Task

---

---

---

---

(3 marks)

- d. In an attempt to maximise income, Terracotta has done a deal with the Motion Picture Institute of Australia (MPIA) which fights video piracy. Terracotta's new DivX editor will contain an unadvertised feature that sends messages to the MPIA if users of the software try to copy copyrighted movies from DVD. The message includes the user's IP address so the user can be identified, located and prosecuted. The MPIA will pay Terracotta a fee for each message they receive through the software.

- i) Name the law that allows the MPIA to prosecute users who copy movies. Be precise.

---

(1 mark)

- ii) Why would users want to convert movies from DVD to DivX format?

---

(1 mark)

- iii) The state branches of Terracotta need to collaborate on a website which will support their software. One task is to create an online user manual for the DivX editor. Give **three** reasons why would they choose to create an onscreen user manual rather than a printed one.

Reason 1:

---

---

---

## Task

Reason 2:

---

---

---

Reason 3:

---

---

---

(3 marks)

iv) Give a specific **example** of how the team could use a **wiki** to help them develop the user manual.

---

---

---

---

(2 marks)

v) The website team wants to create an area on the site where people can buy and immediately download software. The team creates an online form where customers can enter their details. How can the team ensure that customers' credit card details will not be stolen and misused while the details are being sent to the site?

---

---

---

---

(2 marks)

## Task

- e. For each of the following threats to the team's data and information, recommend a strategy to minimise their data loss. Do not use a strategy more than once.

THREAT	STRATEGY
Hard disk failure	
Hackers communicating with Trojan horses that have already got into their computers	
Unskilled team members accidentally deleting all the data in their database	
Theft of a file server	
Power failure	

(5 x 1= 5 marks)

- f. When creating their relational customer database, the developers realise the need to create a key field. Suggest the most important validation rule that would be applied to the key field and explain why it is important.
- i) Validation Rule
- 

(1 mark)

## Task

- ii) Why the rule is important.

---

---

---

---

(2 marks)

- g. The developers decide to use customers' tax file numbers as their unique identifiers in the database.

- i) Name the law that prohibits them doing this. Be precise.

---

(1 mark)

- ii) Explain why Terracotta is subject to this law.

---

---

(2 marks)

**END OF QUESTION AND ANSWER BOOK**



## Solution Pathway

### Section A

#### Question 1

D. Analysis, design, development, testing, implementation and evaluation

This is VCAA's model for the problem solving methodology.

#### Question 2

B. One

Task B can extend for one additional day before affecting the following dependent task C.

#### Question 3

B. A and C

B has slack, so it cannot be part of the critical path, which is the series of tasks from beginning to end that takes the longest time of all the possible paths.

#### Question 4

C. Spreadsheets

An IPO chart designs calculations, formulas, algorithms.

#### Question 5

D. A key field

Key fields must be unique within a table to unambiguously identify each record.

#### Question 6

D. Tactical

They are implementing a higher-order strategic decision.

#### Question 7

A. =IF(AND(B2>=50, C2>=50, D2>=50), "YES", "NO")

Yes, the syntax is definitely Excel, but most students would use Excel or a clone.

#### Question 8

C. Graphs or charts

The format is the chosen method of representing the data. A *convention* is a rule relating to the chosen format.

#### Question 9

A. FTP

## Solution Pathway

### Question 10

D. A set of radio buttons

Since the answer must be is a mutually-exclusive yes/no, radio buttons are ideal.

### Question 11

B. You convert your friend's copy of an old Beatles vinyl LP to MP3 so you can listen to it on the train

You cannot copyright an idea (option A), company names are not regulated by copyright laws, and putting (C) and the date is a preferred convention, not a law.

### Question 12

A. UTP

Unshielded twisted pair is the standard type of cable for short distances. Fibre optic is reserved for long distances or large bandwidth needs.

### Question 13

D. The contents of about 700 full CDs

GB = gigabytes, not gigabits. 5000 songs would add up to about  $5000 \times 6\text{M} = 30\text{G}$ . 100 Blu-Ray disks would be about  $100 \times 50\text{G} = 5000\text{G}$ .  $700 \times 700\text{M} = \text{about } 490,000\text{M}$ ; about 500G.

### Question 14

B. A system objective

It's related to a system rather than the organisation, and it's a specific objective rather than a broad, vague goal.

### Question 15

C. No legal punishment

The organisation does not turn over more than \$3 million a year, trade in personal information, and does not store medical information on customers. Therefore it is not subject to the Privacy Act. Copyright is irrelevant.

### Question 16

B. Direct conversion

The change-over happens in one move rather than in phased stages. Neither pilot nor parallel are possible.

### Question 17

B. The task may be critical and it has a successor

The following task is dependent on the task in question, so the task may be (but does not have to be) on the critical path. It definitely has a successor.

## Solution Pathway

### Question 18

C. Decision Support Software

It's an example of modelling.

### Question 19

D. A prototype

A prototype looks and feels like the finished product but may not be complete or actually calculate answers like a real product would.

### Question 20

C. Evaluation

Testing is proving that answers are accurate. Evaluation is confirming that the finished product has achieved the ambitions that were defined during analysis, when the product was originally commissioned.

## Section B

### Question 1

a.

- Underlined hyperlinks
- Using a navbar
- Providing a general introduction to the organisation on the opening screen
- Having a company logo at the top of the screen
- A “Home” and “Contact” link.

b. <http://www.qats.com.au>

They should include the ‘http://’. The ‘www’ is often optional and may be omitted. ‘QATs’ is a short and memorable top level domain. ‘com’ is more desirable to most people than org, net etc. Since the site is Australian, it could well be registered in the ‘.au’ domain.

c. Preferably GIF, but accept JPG. GIF handles solid colours better than JPG. Don't accept BMP, TIFF, PSD etc.

d. They could underline the links in the navbar to make it clearer that they are clickable links. Accept other sensible suggestion.

## Solution Pathway

### Question 2

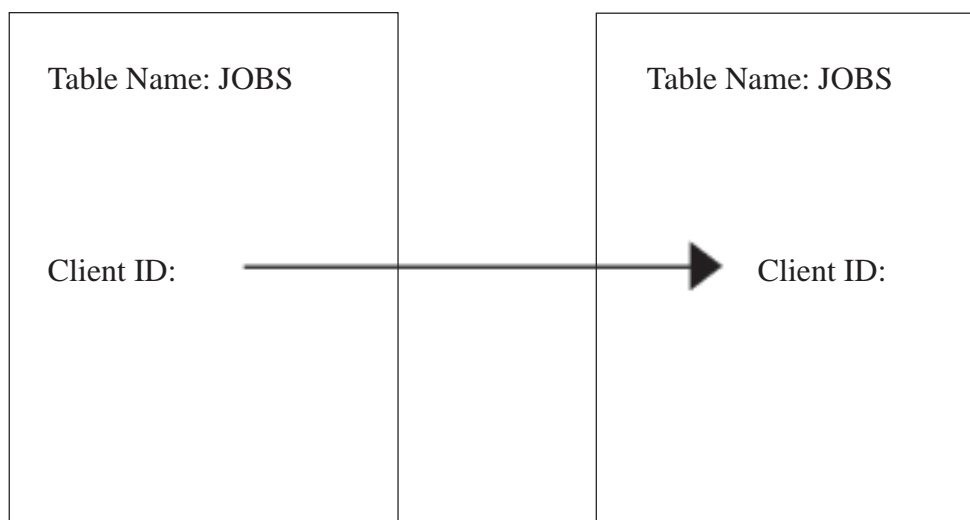
There are several acceptable answers, for example:

- Lack of body language in communications – use videoconferencing
- Time-zone differences – use asynchronous communications like email rather than real-time methods like instant messaging or telephone calls
- Managing the progress of people you never meet – set up online program management to monitor team members' work
- Difficulty to edit documents as a collaborative team – use tools like Google Docs.

Accept other sensible options if they have solutions attached.

### Question 3

- One problem is the combined first name and surname. It would make sorting by surname impossible.
  - The combined address field would make it hard to position the postcode properly if printing envelopes.
- b. It would reduce repetition of customers' address & phone information.
- c.



## Solution Pathway

### Question 4

- a.
  - Text box – allows the entry of any value
  - Checkbox – turns options on or off
  - Radio button – forces a decision between mutually-exclusive options
  - Drop-down menu- standardises data entry by forcing a selection from a limited list
  - Calendar control – enter a date in an easy, predictable manner
- b. The large, blank area at the bottom could be better used and the height of the dialogue box could be reduced. The control at the top are rather crowded and could be spaced further apart. Some labels (e.g. 'Temp Assign Class' could be more meaningfully worded.

### Question 5

- a. Using the internet would give a far broader source of opinion and facts compared to a single (perhaps unreliable) source. However, talking to a knowledgeable person would allow them to ask specific questions.
- b. *database “childcare centre” Australia*  
Assuming students use Google, they should use quotation marks around multiple-world phrases.
- c.
  - i. Country of origin: if not Australian, it might not suit Australian conditions such as child:staff ratios or GST.
  - ii. Hardware requirements: it might require more hard disk space or RAM than they have. It might come on a CD or DVD and they might lack that type of drive.
  - iii. Features: it might lack a key feature they need.
- d. They should choose Dahmer because he’s more likely to find out what they need and create a solution that gives them what they require. The Sutcliffe spreadsheet would not be good at storing data, and his lack of knowledge of their needs could lead to a product that simply does not do what they require of it.
- e.
  - i. The Privacy Act (1988) [Commonwealth]
  - ii. Medical information on the children.
  - iii. It helps satisfy their obligations under the National Privacy Principle 4: **Data Security**, which says that an organisation must take reasonable steps to ensure that the personal information that it collects is protected from misuse such as unauthorised access, modification or disclosure, or loss.
- f.
  - It will help new staff members learn to use the database.
  - It will let them get maximum value and power out of the database if they fully understand all of its features.
  - If they forget how to carry out rarely-used functions, the documentation can remind them what to do.

## Solution Pathway

g.

i. How to start it, very basic operations, things a beginner might need to get started.

ii. How to fix problems, extend the product, file formats, troubleshooting tips.

h.

- They would save money by sharing expensive equipment like printers.
- They could communicate by email with each other and with customers.
- They could use the internet to look up professional information.
- They could share documents.

i.

i. Operational – it's an everyday, immediate decision.

ii. Strategic – a major decision that affects the long-term nature of the organisation.

iii. Tactical – implements the strategic decision.

j

There are no rules for visualising thinking, as long as the thinking is clearly illustrated. Sample content might include:

What media to use? – options like USB hard disk, USB key, DAT tape, floppy disk, showing each pro and con. Maybe settle on USB hard disk for its size, speed and capacity.

When to backup – Daily? Weekly? Full? Incremental? Grandfather-father-son? Don't accept impulsive decisions with no forethought and consideration of options and consequences.

Who will do the backups? When? How will it be documented? Does it need to be tested?

How? Where to store the backups? Onsite? Offsite? Consequences of each option. Etc.

### Question 6

- a. To develop a reputation for developing software that is innovative, reliable and powerful.
- b. To capture 10% of global sales of those software types within the first 18 months of operation.
- c. This could be a complex answer. Students should show an understanding that this may constitute a breach of the Privacy Act (1988), specifically the 'Use and Disclosure' National Privacy Principle, unless the person gave permission to use their information in such a way when they agreed to the EULA. The 'Transborder data flow' NPP is not relevant here because the information does not cross national borders, and it's restricted to the one company (since Terracotta is a subsidiary of MC.)
- d.
  - i. Copyright Act (1968). Don't accept the 'Digital Agenda amendment'.
  - ii. It takes far less storage space and is more easily copied and shared.
  - iii. Onscreen documentation allows: easier updating; cheap colour; animation; hyperlinks; search features; huge capacity in a small space; easier to prevent unauthorised copying; cheaper to ship etc.
  - iv. A wiki allows simultaneous editing access to multiple users. Several team members could be working on the manual from different locations at the same time, adding content, correcting or editing other member's additions.

## Solution Pathway

- v. SSL (Secure Socket Layer) which encrypts internet transmissions. Note the protection is needed “while the details are being sent to the site” – not before or afterwards.
- e. For each of the following threats to the team’s data, recommend a strategy to minimise their data loss. Do not use a strategy more than once.

(5 x 1 mark)

THREAT	STRATEGY
Hard disk failure	Backups. (Also accept any RAID version that includes mirroring or striping [eg. RAID 1, RAID 5])
Hackers communicating with Trojan horses that have already got into their computers	Software firewall. (Some students may realise that most routers do not check <i>outgoing</i> traffic, only incoming traffic, and so are not useful in protecting systems that are already infected and are transmitting key logs, spam or financial information)
Unskilled team members accidentally deleting all the data in their database	Proper training
Theft of a file server	Locked doors, barred windows etc
Power failure	UPS

- f.
- i. Must be unique.
- ii. Key fields must uniquely identify each record because other field values (such as name, address etc) could easily be duplicated and lead to ambiguous identification of records.
- g.
- i. Privacy Act 1988, specifically the ‘Identifiers’ privacy principle.
- ii. They belong to a private company that turns over more than \$3 million per annum.