



**2008 VCE VET Information Technology GA 2: Written examination**

**GENERAL COMMENTS**

A total of 574 students sat the VCE VET Information Technology examination in 2008. In general, students coped well with the examination format and attempted most questions.

Questions that required analysis proved challenging for students, and a number of responses lacked sufficient detail or were only vaguely related to the situation presented in the question. Students who repeated answers in questions that asked for more than one response were not awarded full marks. Students who merely reworded the question stem as their answer and did not demonstrate their understanding were not awarded marks. Students need to be reminded to read the information given in the stem of the question carefully and refer appropriately to this context in their answer. The majority of students handled the questions from each unit of competence reasonably well. In general, questions based on ‘Apply Occupational Health and Safety Procedures’ and ‘Install and Optimise Operating System Software’ were well answered. However, some improvement is needed in responses to the following units of competence where students were asked to suggest solutions to client problems:

- ‘Provide Advice to Clients’
- ‘Create User Documentation’.

There was still a significant number of students who merely reworded or rewrote the question without adding any new information. Students could better spend their time by elaborating on the answers they do know.

Students should ensure that their writing is legible in the examination. If the assessor cannot decipher what has been written, it is very difficult to award marks. Students are encouraged to practise handwriting in class as part of their examination preparation. Students are strongly recommended to use pen for their responses to Section B.

**SPECIFIC INFORMATION**

**Section A – Multiple-choice questions**

The table below indicates the percentage of students who chose each option. The correct answer is indicated by shading.

| Question | % A | % B | % C | % D | % No Answer | Comments  |
|----------|-----|-----|-----|-----|-------------|---|
| 1        | 52  | 1   | 2   | 46  | 0           | The best answer was option D, ‘intermediate’ user. As described in the question stem, Jane has already had some introductory level training in using other software, so she is not a ‘novice’ user. She has not had extensive training and experience, so she is not an ‘expert’ user. ‘Casual’ user is not a term used when discussing level of experience and training. It merely refers to how often software is used. |
| 2        | 1   | 5   | 94  | 0   | 0           |   |
| 3        | 5   | 3   | 2   | 90  | 0           |   |
| 4        | 15  | 68  | 12  | 5   | 0           |   |
| 5        | 3   | 10  | 19  | 68  | 0           |   |
| 6        | 3   | 28  | 51  | 17  | 1           |   |
| 7        | 37  | 52  | 5   | 5   | 0           |   |



|    |    |    |    |    |   |  |
|----|----|----|----|----|---|--|
| 8  | 1  | 94 | 2  | 4  | 0 |  |
| 9  | 2  | 88 | 9  | 1  | 0 |  |
| 10 | 1  | 2  | 94 | 3  | 0 |  |
| 11 | 75 | 4  | 16 | 5  | 0 |  |
| 12 | 5  | 8  | 1  | 86 | 0 |  |
| 13 | 28 | 7  | 5  | 61 | 0 |  |
| 14 | 17 | 17 | 52 | 14 | 0 |  |
| 15 | 56 | 2  | 26 | 16 | 0 |  |
| 16 | 71 | 12 | 8  | 8  | 0 |  |
| 17 | 23 | 2  | 24 | 50 | 0 | The best answer was option D, 'pre-configured equipment with point-by-point instructions and enrolment in a beginner's Internet class.' Option C differs with only 'some instructions provided by Rosemary' instead of 'enrolment in a beginners' Internet class. It would be better to advise the grandparents to attend a class where they could receive training from a qualified trainer. There was not enough information given to indicate Rosemary's age, experience or level of knowledge. |
| 18 | 75 | 3  | 14 | 8  | 0 |  |
| 19 | 35 | 24 | 26 | 14 | 1 | Option A was the best answer as all other alternatives contained less essential forms of documentation for a help desk. Option B, 'backup logs' would not be kept at the help desk. Option C, it would be very unusual for the help desk to need to refer to the 'owner manuals'. Option D, 'industry standard contacts' and 'training records' would be less likely to be necessary on a help desk.   |
| 20 | 8  | 7  | 37 | 48 | 0 | Option D is the best alternative. Option A, 'ignoring the problem' will not fix it. Option B, 'sending a passworded zip file' would take a while and may not solve the problem anyway. Option C does not involve 'quarantining' the computer and would not help in this situation.   |

## Section B – Short answer questions

For each question, an outline answer (or answers) is provided. In some cases the answer given is not the only answer that could have been awarded marks. Specific comments on student performance are provided where relevant.

### Question 1

| Marks | 0  | 1  | Average |
|-------|----|----|---------|
| %     | 17 | 83 | 0.9     |

Either of:

- enables documentation to be adjusted to better suit the target audience's needs
- to check that the documentation provided is appropriate.

### Question 2

| Marks | 0  | 1  | Average |
|-------|----|----|---------|
| %     | 43 | 57 | 0.6     |

One of:

- time allowed
- resources required
- hardware and software needed
- equipment needed
- personnel required
- file storage capacity needed.

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A few students gave answers that were not constraints but types of software.

## Question 3

### Question 3a-b.

| Marks | 0 | 1 | 2 | 3  | 4  | Average |
|-------|---|---|---|----|----|---------|
| %     | 1 | 2 | 7 | 37 | 53 | 3.4     |

#### 3a.

Three of:

- the monitor is too high/neck is angled up
- arms are angled up/keyboard is too high
- the chair is too high/thighs and feet are angled down
- feet are not flat on the floor
- the chair does not adequately support the person's back, the person is not sitting correctly, they have bad posture
- not a five-wheel chair.

#### 3b.

A track ball or touch pad moves the pointer with either finger or thumb movement so the arm and elbow do not have to move as much.

This question was well handled by most students, indicating that students had a strong understanding of the OH&S issues involved in a typical office workplace.

### Question 4a-b.

| Marks | 0  | 1  | 2  | 3  | 4 | Average |
|-------|----|----|----|----|---|---------|
| %     | 43 | 17 | 19 | 14 | 7 | 1.3     |

#### 4a.

Two of:

- how data is collected – live data versus data collected and stored for later processing
- how data is processed – one file at a time or set of files processed together.

For example, a real time system responds to live external events and processes data instantly as it comes in. A batch system collects data, and then processing is done together at a time scheduled later.

#### 4b.

Two of:

- security monitoring system
- process control system
- traffic control system
- medical monitoring system
- multi-user computer game.

It was disappointing that few students were able to demonstrate a sound understanding of the differences between real time and batch systems. A number of students simply compared a single aspect for each of the two systems instead of indicating two distinct differences. Many of the students' examples of real time systems were interactive systems, such as a computer game.

### Question 5a-c.

| Marks | 0 | 1 | 2  | 3  | Average |
|-------|---|---|----|----|---------|
| %     | 1 | 6 | 33 | 60 | 2.5     |

#### 5a.

Either of:

- online survey, put a 'poll' on the site
- send feedback form (by mail/email).

#### 5b.

A help button on its website, phone support, FAQ

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5c.

Help improve its system, cater to the client's needs

Some students did not read the question stem carefully and their answer for Question 5b. was not relevant to a web environment.

## Question 6

| Marks | 0  | 1  | 2  | 3  | Average |
|-------|----|----|----|----|---------|
| %     | 21 | 33 | 35 | 12 | 1.4     |

Three of:

- back up their data files
- provide training on the new O/S
- provide an avenue for feedback/questions
- extra help desk support
- communication with management advising that they will temporarily reduce productivity during the transition
- provide a quick reference guide.

Responses of 'user documentation' were not deemed as in-depth as required, as the unit title is 'Create User Documentation'. Students should be able to describe a range of types of user documentation and match them to appropriate situations where they would be likely to be used in a workplace setting.

## Question 7a-b.

| Marks | 0  | 1  | 2 | Average |
|-------|----|----|---|---------|
| %     | 67 | 24 | 9 | 0.4     |

7a.

A backup that contains only new items and/or items changed since the previous back up

7b.

One of:

- need to restore more backups for a certain period of time (for example, over a week)
- takes longer as it is more tedious to find specific files when restoring incremental backups
- danger of missing the increment if not set up as an automatic procedure
- danger of restoring files in the wrong order.

This question was generally poorly answered. Some students demonstrated a basic knowledge of incremental backups, but few students showed that they understood the disadvantages and/or the rigours of the restore process required for incremental backup systems. A number of students appeared to have little understanding of how file backups occur in many IT industry sites, while others stood out with their clear responses to this question.

## Question 8a-c.

| Marks | 0  | 1  | 2  | 3  | 4 | Average |
|-------|----|----|----|----|---|---------|
| %     | 21 | 20 | 28 | 22 | 9 | 1.8     |

8a.

The process 'Optimise' is using up most of the CPU time (not memory – there is not enough data supplied to determine this) causing other processes to be slow.

8b.

End the process 'Optimise' immediately, close the account access for Nick and investigate further.

8c.

Two of:

- install/tighten firewall
- change passwords
- scan server for viruses/Trojans
- cancel/restrict Nick's account
- discipline Nick

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- place limits or restrictions on all accounts
- set alarms or notifications for excess CPU use.

Some students erroneously seemed more concerned with the bandwidth available rather than the CPU or memory usage on the server. Some students did not appear to have experience with a shared server environment, where multiple users use resources on the same server.

## Question 9a-b.

| Marks | 0  | 1  | 2  | 3 | Average |
|-------|----|----|----|---|---------|
| %     | 17 | 53 | 25 | 5 | 1.2     |

### 9a.

It is a dangerous thing to do as the beam emitted from a laser pointer can damage a person's eyesight if it is shone into their eyes.

Some students only referred to Ashley's 'distracting behaviour' and did not mention the potential to damage someone's eyesight.

### 9b.

The policy would need to have a section added (if not already present) on the protection of eyesight from physical harm (dust, debris, obstructions) and optical harm (radiation of all sorts – IR, UV, Visible, etc.).

This question required reference to policy statements about general hazards, not simply statements about laser pointers in particular. Policy documents should give general procedural guidelines for employees to follow, for example, guidelines for appropriate behaviour in the workplace.

It was pleasing that most students could explain the problem, however, few students actually referred to how the policy should be updated. Recognising what should be included in a policy statement to cover potential visual impairment from multiple possible sources was a noticeable problem for many students.

## Question 10a-c.

| Marks | 0 | 1  | 2  | 3  | 4  | Average |
|-------|---|----|----|----|----|---------|
| %     | 6 | 19 | 35 | 30 | 11 | 2.2     |

### 10a.

Network

### 10b.

Two of:

- the Internet is down
- network switch is faulty
- faulty network cables
- cable is disconnected
- faulty phone line
- ISP is having problems
- power problems with communications equipment, for example, the router
- not merely a network card as it is not an individual PC problem.

### 10c.

User documentation, training, telephone support or online support

## Question 11

| Marks | 0 | 1  | 2  | 3  | Average |
|-------|---|----|----|----|---------|
| %     | 4 | 54 | 25 | 17 | 1.6     |

Three marks were awarded for four items correct, two marks were awarded for three items correct, and one mark was awarded for one or two items correct:

- installation guide
- posters
- quick-reference card

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- wall chart.

## Question 12

| Marks | 0 | 1  | 2  | 3  | Average    |
|-------|---|----|----|----|------------|
| %     | 4 | 20 | 61 | 15 | <b>1.9</b> |

Make headings a different font and larger size than the body text – to make the information contained in the website easier to read.

Use clear, well-labelled images and maps where appropriate:

- to help in communicating web page content
- to help sell the product
- to convey information concisely
- to illustrate the destinations.

Use 'alt' tags on all images:

- to provide a text alternative for vision impaired people
- for browsers when images turned off
- for search engines
- to provide information about the image even if it can not be loaded.

The first two parts of this question were answered well. However, there were many incorrect answers to the third part of the question, indicating that the function of 'alt' tags was poorly understood by many students.

## Question 13a-d.

| Marks | 0  | 1  | 2  | 3  | 4 | Average    |
|-------|----|----|----|----|---|------------|
| %     | 20 | 32 | 30 | 15 | 2 | <b>1.5</b> |

Students needed to have a clear definition of 'defragging'. Defragging does **not** repair the disk.

### 13a.

Convert fragmented files into contiguous files and usually arrange files into groups depending on the frequency of the file changing.

### 13b.

No, as the level of fragmentation is insignificant.

Yes was an acceptable answer **if** students justified the answer by saying regular defragging is beneficial.

### 13c.

- find damaged sectors on the disc and attempt to move data from them to other non damaged sectors
- then the damaged sector is marked as unusable

### 13d.

One of:

- to remove sensitive or confidential files
- to ensure that deleted files cannot be recovered
- suspect email with a virus needs to be removed.

Many students still appeared to have a poor understanding of the defragmentation process. Very few students gave a satisfactory answer to the Disc Repairer part of the question. Most gave a satisfactory (and some very inventive and acceptable) answers to the part on the Secure File Eraser.

## Question 14a-b.

| Marks | 0  | 1  | 2  | 3  | Average    |
|-------|----|----|----|----|------------|
| %     | 18 | 20 | 31 | 30 | <b>1.8</b> |

### 14a.

One of:

- they test the capability of the cards to their limits

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- the higher the frame rate the better the video card.

This part was not always clearly answered as some students appeared to answer a different question – ‘Why do the latest computer games need 3D graphics cards?’

## 14b.

One mark each was awarded for suggesting a possible cause and a plausible explanation.

Suggestions:

- too much detail is shown on the games screen (alter the games settings to remove most visual options – less for the card to do so it can be faster)
- too high a resolution (i.e. screen size is too big), (alter the games settings to lower quality/lower resolution – less for the card to do so it can be faster)
- underpowered video card (get a new high quality video card – able to do the work faster)
- incorrect or out of date video drivers (update the video drivers – optimised code, i.e. faster processing)
- not enough video RAM (upgrade the amount of video RAM – able to process the signal more efficiently).

Many students appeared to have enjoyed this question and clearly showed personal knowledge in this area.

## Question 15

| Marks | 0  | 1  | 2  | 3  | 4  | Average |
|-------|----|----|----|----|----|---------|
| %     | 28 | 11 | 22 | 16 | 23 | 2       |

Accounting package users – **not** simply ‘user manual’ as this was too general.

- training manual, instruction manual, tutorials or online documentation (one mark)
- justification: provides not only instructions on how to use the new package, but exercises on the features included in the package (one mark)

New employees

- policy and procedures documents, wall chart, booklet, quick reference card or online help (one mark)
- justification: to give them a guide to how the company works and how they should do their job (one mark)

A wide range of answers were given for this question. Some students gave very strong answers, while others demonstrated a poor understanding of the various types of user documentation and their purpose. Students missed the focus of the question and referred to training types instead of documentation types.

## Question 16

| Marks | 0  | 1  | 2  | 3  | 4  | Average |
|-------|----|----|----|----|----|---------|
| %     | 10 | 11 | 21 | 30 | 28 | 2.6     |

| Advantage of LCDs   | Ergonomic reason for the advantage   |
|---|--|
| Freedom from flicker and image distortions at the screen edges              | Reduce eye strain. People with epilepsy may be sensitive to flickering lights or certain patterns that occur with CRT screens. LCDs should not affect epilepsy sufferers as they do not flicker. Less eye strain due to distortion or flicker.     |
| Less electromagnetic radiation emissions                                    | CRTs emit electromagnetic radiation (EMR) including radio waves, infrared (heat), ultraviolet and x-rays. LCD screens only emit visual radiation and would be less likely to damage the user’s eyes. Some radiation can damage eyes, cause cancer. |
| Thinner and lighter displays that require less space and are easier to move | Less likely to cause back strain injuries.   |
| Uniform screen brightness and substantially less glare                      | Less likely to cause eye strain, can use the screen for longer periods.  |

This question was reasonably well handled, but answers such as ‘less electromagnetic radiation is good for you’ were insufficiently convincing to be awarded full marks. Some students impressed the assessors with their knowledge that a flickering screen can be a problem for people with epilepsy. The general understanding of the term ‘electromagnetic

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radiation' was, however, quite poor. Students are reminded that not all such radiation is dangerous, as heat and ordinary light are also 'electromagnetic radiation'.

## Question 17a-c.

| Marks | 0  | 1  | 2  | 3  | Average |
|-------|----|----|----|----|---------|
| %     | 20 | 21 | 26 | 33 | 1.7     |

### 17a.

Banking details, credit/debit card information, pin numbers. Financial information (**not** just 'personal information'), passwords (one mark).

### 17b.

A **fake** bank or commercial website (students needed to indicate that it was not a real website)

### 17c.

They would lose the money in their bank accounts and/or their credit card information would be used to buy lots of stuff. Monetary misappropriation.

Some students struggled to demonstrate their knowledge of 'phishing'. The term 'phishing' is common in the computer world for an email containing links to a fake website that tries to obtain your user name and password to the real website. This information is then used to 'rip off' the victim. A significant number of students referred to virus and key logger websites, which was not accepted.

## Question 18

| Marks | 0  | 1  | 2  | 3 | 4 | Average |
|-------|----|----|----|---|---|---------|
| %     | 25 | 38 | 25 | 9 | 2 | 1.3     |

| Date      | Time  | User  | Incident   | Suggested action  | Date      |
|-----------|-------|-------|--|---|-----------|
| 1/10/2008 | 10:09 | Novak | Novak returned from a meeting to find his computer's screen blank (due to power-saver) but nothing happened when he moved the mouse or pressed a key. The screen's power indicator was on. | Reboot computer/take the computer out of hibernation  | 1/10/2008 |
| 1/10/2008 | 10:13 | Novak | The last action had no effect. Determined there is an identical computer nearby.   | Swap screen with other PC (does fault stay with PC or screen?), check the video cable or data cable.  | 1/10/2008 |
| 1/10/2008 | 10:41 | Novak | Novak's computer is still not displaying anything.   | Send technician to check/replace video card or motherboard (or other relevant hardware answer) or escalate the problem to a technician who can help | 1/10/2008 |
| 1/10/2008 | 12:55 | Novak | Novak's computer now displays correctly. However, the application that was open before the incident displays an error message 'invalid data file structure'.                               | Restore application data files from latest backup or attempt to recover lost data or files.   | 1/10/2008 |
| 1/10/2008 | 13:33 | Novak | Everything is OK.  | Incident closed.  | 1/10/2008 |



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To gain mark(s) other plausible answers had to fit into the total scenario. Students were given some clues in the elapsed time between calls.

Students appeared to have great difficulty seeing themselves in the help desk role and completing the log as someone working on a help desk would. Many students failed to use all of the information provided.

## Question 19a-c.

| Marks | 0  | 1  | 2  | 3  | 4  | Average |
|-------|----|----|----|----|----|---------|
| %     | 14 | 16 | 25 | 27 | 18 | 2.2     |

### 19a.

Prolonged and/or incorrect use of a keyboard or mouse or laptop could cause hand/wrist strain injuries (one mark).

### 19b.

Two marks were awarded for describing one reasonable preventative measure, such as:

- take regular breaks
- never work for long periods without a break
- stretch and relax wrists/hands regularly
- use an ergonomic wrist rest or ergonomically designed mouse
- use voice recognition software
- use trackball or other alternative pointing device.

### 19c.

The OH&S Coordinator/representative/Manager/Officer

This question was generally answered satisfactorily; however, there were a disappointing number of answers that were general OH&S statements, not specific to the question, and many students did not mention RSI or Carpel Tunnel Syndrome. Students are advised to read the question carefully before formulating an answer to ensure that they do not miss any parts of the question.

## Question 20

| Marks | 0  | 1  | 2  | 3 | Average |
|-------|----|----|----|---|---------|
| %     | 34 | 33 | 25 | 8 | 1.1     |

| Type        | Licence Fee                                      | Number of copies or users               | Redistribution/Modification Rights                                      |
|-------------|--|---|---|
| Commercial  | Paid on purchase                                 | Defined by licence                      | None  |
| Open Source | None/zero/free                                   | Usually unlimited or many as they like  | All rights (additional licence requirements can apply, for example GNU) |
| Shareware   | Defined by terms of use or Paid after user trial | Defined by licence                      | Defined by terms, but mostly free to share                              |
| Freeware    | None/zero/free                                   | Unlimited, many or as many as they like | Anything the developer decides  |

One mark was awarded for each fully correct row in the table.

Most students demonstrated that they understood the concept of 'Freeware', but many struggled with 'Open Source' and 'Shareware'. Responses to this question clearly showed that many students do not have a clear understanding of the types of licensing that are commonly available for software. It was pleasing to see some students gave excellent responses for this question.

## Question 21a-c.

| Marks | 0  | 1  | 2  | 3  | Average |
|-------|----|----|----|----|---------|
| %     | 15 | 33 | 15 | 36 | 1.7     |

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## 21a.

Bluetooth driver is buggy or not working properly, corrupted driver or driver, interpreted as malicious by the computer, incompatible or not loading

## 21b.

Downloading the latest driver or reinstalling the driver, adjust security settings

## 21c.

One of:

- USB cable
- memory card
- use a different computer, then email it
- card reader.

Many students demonstrated their awareness that this was a driver issue and suggested reinstalling the drivers. Some simply suggested reinstalling the 'software', which was not accepted.

The answers accepted for Question 21c. were far more varied, but vague answers like 'use a cable' were not accepted.

## Question 22a-b.

| Marks | 0  | 1  | 2  | 3 | Average |
|-------|----|----|----|---|---------|
| %     | 50 | 23 | 18 | 9 | 0.9     |

## 22a.

Both the payroll and the sports results programs are running in either the foreground or background each time (one mark).

Explanation: it could be that the programs are incompatible with each other or there are multiple programs running that overload the computer (one mark).

A reasonable number of students recognised that both the Payroll and the Sports results programs were always running when the system crashed. Fewer students only picked up one of these programs as always running. To get the second mark they needed to comment about a conflict between the programs or a resource issue.

Some other students approached this question from the number of programs that were running on the PC when the crash occurred. To get the second mark they needed to make it clear that the PC could be short of resources due to this.

## 22b.

Any of:

- do not run these two programs at the same time or only run one program at a time or close all other applications
- remove the sports results program from the PC
- check with the Payroll program company for any known solutions
- check with the sports results Program Company for any known solutions
- run the sports results program in a virtual PC within the principal's PC.

The simplest answer was to ensure that only one program ran on the system at a time, but a better answer was to make sure that the payroll and the Sports programs never ran at the same time.

Many students performed poorly on this question and did not appear to have read the information provided carefully.