



2010 VCE VET Information Technology GA 2: Written examination

GENERAL COMMENTS

In 2010, 464 students sat the VCE VET Information Technology examination. In general, students coped well with the examination format and attempted most questions.

As in previous years, a significant number of students merely reworded or rewrote questions without adding any new information. Students could have better spent their time elaborating on the answers they did know. Many students commenced their answers by copying or rephrasing the question stem. This technique wastes valuable examination time and fills up the answer space.

Students need to ensure that they read the question stem carefully. Some students recognised a key word or two and presented a factual answer related to those words that was out of context and did not address the question. Many students did not display sufficient care with their terminology; for example, many responses treated the terms ‘backup’ and ‘restore’ as synonyms. Students also need to understand that ‘data restore’ and ‘system restore’ are different.

Students displayed above-average knowledge and understanding of everyday topics such as Internet usage, games, video and safety issues. A significant number of students were unable to effectively apply their knowledge to the scenarios presented.

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 stem. In contrast, a few students produced unexpected, but well-thought-out, valid answers. In questions that ask for more than one response, repeating answers, or providing similar answers, will not gain full marks.

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 students appeared to have difficulties suggesting solutions to client problems in the competencies ‘Provide advice to clients’ and ‘Create user documentation,’ particularly when the question required application of their knowledge.

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	Comments
1	4	33	5	58	Option B (fix and update the standard operating procedures) fixes the problem causing the common injuries. Option D (review the work practices of Rahel and her colleagues) is not relevant as the Occupational Health and Safety (OH&S) manager is already aware of the problem.
2	13	3	76	9	
3	3	29	5	62	
4	41	8	2	50	In option A (in case there are too many changes to the upgraded system), the number of changes is irrelevant and will not affect the user manual. Option D is the best answer as the users can give feedback about the user manual.
5	4	13	7	76	
6	2	69	25	4	
7	67	17	0	16	
8	1	27	71	2	
9	6	86	3	5	
10	10	41	26	22	
11	4	16	75	5	
12	6	53	31	10	



Question	% A	% B	% C	% D	Comments
13	13	39	37	11	Options B and C were both accepted.
14	9	4	22	65	
15	40	35	3	22	Option A was the best answer as these are likely to give other users problems. Option B was a conversion problem, not a Help Desk problem. Option D was incorrect as changes to system design are beyond the scope of a Help Desk.
16	53	6	6	34	Option D was incorrect as it is not the team leader's role to advise other team leaders or to assess the severity of the injury.
17	12	21	19	47	Options B and C would prevent the computer from working. In option D, the computer would either fail or work, but would not react intermittently.
18	16	35	19	30	Option B was a selective backup. This is not the same as option D, which is what is included in a restore point.
19	13	28	48	11	
20	52	17	17	14	Option A did not explain how virtual memory works, only that the hard drive is used. Option D was correct because it stated how virtual memory works.

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.

Question 1

Marks	0	1	2	3	Average
%	42	21	20	17	1.1

Three of:

- number of complaints about Help Desk solutions
- average response time
- average problem solution time
- number of proactive solutions
- other measurable criteria.

A large number of students did not attempt this question. Many students who did attempt the question gave generic, unmeasurable Help Desk functions.

Question 2a–c.

Marks	0	1	2	3	Average
%	6	9	23	62	2.4

2a.

A virus was present.

2b.

Either of:

- scan his system using his antivirus software
- report the virus to his supervisor or IT Help Desk.

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2c.

Any of:

- don't break copyright – buy a legitimate music file
- use antivirus software at home to detect viruses before bringing files to work
- don't use his personal drive for work files.

On the whole, this question was handled well. However, many answers suggested that Hassan should delete and/or scan the music file without completing a full antivirus scan.

Question 3

Marks	0	1	2	Average
%	11	41	48	1.4

Desktop

Advantages: bigger screen, more ergonomic keyboard

Disadvantages: heavier than a notebook, lots of cables

Notebook

Advantages: lightweight, portable

Disadvantages: heat is generated, small screen, tendency for the user to crouch when using computer on lap

Overall, this question was answered well; however, some students provided an advantage or disadvantage that was common to both computer types, such as 'poor posture is bad for you', which did not earn any marks. Others provided generic answers that were not related to OH&S.

Question 4

Marks	0	1	2	Average
%	6	47	48	1.4

The two most appropriate features were:

- is clear to the target audience
- has consistent formatting with relevant screen dumps.

Question 5

Marks	0	1	Average
%	36	64	0.6

One of:

- to ensure minimum standards are met
- to ensure consistency of format/language
- to ensure it caters for the whole workplace
- so people know what to expect in the documentation.

This question was understood well; however, some students simply answered 'because it's a standard' and did not earn the mark.

Question 6

Marks	0	1	2	Average
%	4	22	74	1.7

- keyboard – sore wrists/Repetitive Strain Injury (RSI)/Occupational Overuse Syndrome (OOS)
- posture – sore back, neck

Students demonstrated good understanding of these OH&S issues.

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Question 7a–b.

Marks	0	1	2	3	Average
%	39	21	24	16	1.2

7a.

Two of:

- faster
- quieter
- more reliable
- lower power/battery usage.

7b.

One of:

- expensive
- smaller capacity
- limited life.

A number of students did not attempt this question. Some students seemed to confuse USB and SSD.

Question 8a–b.

Marks	0	1	2	3	Average
%	24	51	21	4	1.1

8a.

Quarantine allows the file to be kept safely where it can't be accidentally 'activated' until a method of repairing the file is found.

The concept of quarantine for viruses was not well understood.

8b.

Worms focus on replicating via networks and the Internet, whereas viruses attach to a file.

Many students were unaware of the difference between worms and viruses.

Question 9a.

Marks	0	1	2	Average
%	32	36	32	1

Two of:

- customer contact details (name, phone number, email address, home address)
- submit button
- cancel button.

Items needed to be related to the feedback form, not the page template.

Question 9b.

Marks	0	1	Average
%	27	73	0.7

Any of:

- phone number/email address on the form
- a help button that takes you to the help page
- hover text or visible text on page.

Some students repeated one of their answers to 9a. and were not awarded the mark. Overall, this question was answered well.

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Question 9c.

Marks	0	1	Average
%	21	79	0.8

Either of:

- get feedback for improvement/identify improvement opportunities
- show how good their service is as an advertising feature, assuming that most feedback was good.

This question was answered well.

Question 10

Marks	0	1	Average
%	37	63	0.6

Adjusts the user's arm height appropriately to level of table/keyboard.

This question was mostly answered well. However, a few students thought that the ease of raising/lowering the seat was appropriate, but this was insufficient.

Question 11a–b.

Marks	0	1	2	3	Average
%	19	30	40	11	1.4

11a.

Operating system software provides support for all applications, compared with application software, which focuses on user-specific tasks.

Many students were unable to give a clear distinction between operating system software and application software.

11b.





Two of:

- file management
- provides user interface
- memory management
- process scheduling
- hardware interface/support.

The majority of students were able to provide one or two functions.

Question 12

Marks	0	1	2	3	4	Average
%	17	28	28	16	10	1.7

	Device
	video camera, storage device, hard drive (any firewire device)
	hard disk drive, mouse, keyboard, camera, scanner (any USB device)
	monitor, data projector (any VGA device)
	hard disk drive, DVD (any SATA device)

Many students did not read the question carefully and gave the type of connector instead of a device as asked for in the question.

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Question 13

Marks	0	1	2	3	4	Average
%	4	20	37	29	9	2.2

Situation	Hazard
Caitlin's computer has failed, so she will need to work overtime to produce her weekly report on time.	psychological (time pressure)
A new enclosed printer and photocopier room is being built in a corner of an open-plan office. While the room is being built, the printer and photocopier are working in an unused workspace, where paper is also stored.	environmental (noise, light)
The carpenters building a printer and photocopier room leave their tools and materials stacked outside the room in a passageway that leads to the lunchroom.	mechanical (tripping)
A printer and photocopier room contains several photocopiers. One is an older model. Its toner is in bottles, which the operator opens manually and pours into the copier.	chemical (carcinogenic toner)

Most students correctly identified the psychological and chemical hazards. However, students struggled to identify the environmental and mechanical hazards.

Question 14

Marks	0	1	2	3	4	Average
%	25	31	39	4	0	1.2

Four of:

- change the style of the title (font, bold, spacing, size, colour)
- change the first paragraph into dot-points/a bulleted list
- make hazards and examples clearer (examples in italic, bold, on the next line)
- change the passive voice to active voice
- the last sentence is too long and wordy – break it up or simplify it
- don't indent the first paragraph after the heading.

This question was not well answered by students. Many students identified a change to the heading only. A large number of students listed rules for good documentation that were either already implemented (Times New Roman font, no hyphenation) or that were irrelevant or incorrect. Others attempted to rewrite the text.

Question 15a–c.

Marks	0	1	2	3	4	Average
%	48	23	15	11	3	1

15a.

In this context, a bottleneck is where one component of a system is slower (the slowest) than the rest and holds up the process.

This proved to be a difficult question for some students.

15b.

Two of:

- network equipment is faulty or slow (for example, cable, switch, NIC)
- components of the server cause delays (for example, CPU, RAM, HDD)
- load on the server causes delays (multiple users/requests).

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15c.

Network

- replace the existing equipment with proven equipment
- re-route to the server (for example, move the PC or the server closer).

Components

- put the file on a different server
- upgrade the components of the server.

Load

- test the load after hours or at lunch time
- ask other uses to stop using the server so a test can be performed.

Many students found this question to be challenging.

Question 16a–c.

Marks	0	1	2	3	4	Average
%	11	17	30	33	10	2.1

16a.

Either of:

- both users have access to the resources needed for the job
- simplifies changes if there is a staff change.

16b.

Either of:

- no auditing of who does what
- password sharing does not provide good security.

16c.

Both of:

- a generic account is needed for use on public forms or for a general contact point
- ‘private’ accounts allow staff to deal with individual clients or receive private emails.

Overall, this question was answered well, although many students suggested that an advantage of the shared account was that someone else could tell you the password when you forgot it – password sharing does not provide good security.

Question 17a.

Marks	0	1	Average
%	41	59	0.6

Ask her to check that power is available and the power cable is connected.

Question 17b.

Marks	0	1	Average
%	52	48	0.5

Have her connect the computer to a different power point.

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Question 17c–d.

Marks	0	1	2	Average
%	17	42	41	1.2

17c.

The document or folder was corrupted during the power failure.

Some students appeared to ignore the phrase ‘existing document’. Some wrote about ‘restarting the upgrade’ or said ‘the document has not been saved.’

17d.

One of:

- reload from backup and redo the day’s work
- auto-recover and redo the work from that point
- re-create the document.

Some students wanted to ‘perform/do/run a backup’, when an acceptable answer included ‘to restore from a backup’. The terms ‘back up’ and ‘restore’ are opposites and are not interchangeable.

Question 18a.

Marks	0	1	2	Average
%	1	91	7	1.1

All of:

- operating system
- programs run by the user
- video RAM
- data in use by the current programs.

Question 18b.

Marks	0	1	2	Average
%	68	29	3	0.4

System 2 has 64-bit hardware and a 64-bit operating system, so it can map much more than 4 GB of total memory. The video RAM is added to the 4 GB DDR3 RAM to give 4.5 GB total, from which the standard operating overheads are then removed – video RAM increases the total usable RAM above 4 GB.

System 1 has a 32-bit operating system so the maximum RAM it can map is 4 GB, from which the standard operational overhead and the video RAM must be removed – video RAM decreases the available total below 4 GB.

One mark was awarded for answers that showed awareness of the limits of a 32-bit operating system. The second mark was gained by answers that explained how the video RAM affected the memory available to applications.

Question 19a–b.

Marks	0	1	2	Average
%	23	44	34	1.1

19a.

Either of:

- reviews the database system
- gathers documents/information on database system specifications.

19b.

Click on (or tab down to) the ‘Name of Toy’ field, type in (or edit) the change and then click on the ‘Save Record’ button.

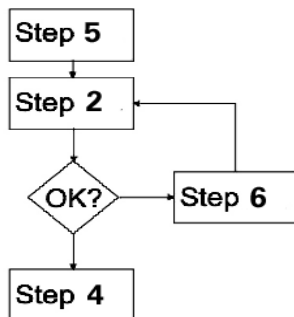
Students who neglected to ‘save record’ did not gain the mark. Apart from this error, most students handled this question well.

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Question 19c.

Marks	0	1	2	Average
%	14	78	8	0.9



Some students appear to have difficulty dealing with the logic of a flowchart.

Question 20a.

Marks	0	1	2	Average
%	2	73	25	1.2

All of:

- level of help documentation required
- software skills required
- type of tasks required
- novice, intermediate or advanced users.

Many students identified most of the items required.

Question 20b–c.

Marks	0	1	2	Average
%	23	65	13	0.9

Responses to these questions suggested that some students have difficulty in applying their knowledge to real-life scenarios.

20b.

Any of:

- email
- feedback form
- website and/or paper-based survey.

20c.

Either of:

- check the help desk call log
- use evaluation feedback.

Question 21a–c.

Marks	0	1	2	3	Average
%	13	34	35	18	1.6

21a.

Left option: suits staff, regardless of their size or build.

Right option: more workspace in easy reach (without moving the chair), more leg room.

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21b.

Left option: books are in easy reach without stretching, books cannot fall onto workspace/operator.

Right option: allows clear access to the desk, without obstacles on the floor.

21c.

Left option: provides a firm surface for keyboard.

Centre option: drawer can be pushed back to provide more workspace without reducing knee space.

Right option: places keyboard lower for better OH&S.

Students needed to provide an advantage that was unique to the configuration chosen. Students provided a wide range of acceptable answers, showing a good understanding of the OH&S principles involved.

Question 22a–b.

Marks	0	1	2	Average
%	38	41	21	0.8

22a.

CPU 1 is working too close to its maximum capacity.

22b.

Submit her findings to the company so it can alter and optimise the game's code.

Unacceptable answers included upgrade RAM (RAM usage is still well below capacity) or upgrade graphics card (it already is a high-end card).

Question 23a.

Marks	0	1	Average
%	42	58	0.6

A network switch is not working.

Question 23b.

Marks	0	1	Average
%	58	42	0.4

Loss of connection to multiple items such as the Internet gateway or a whole section of the organisation.

This question was answered reasonably well by those who attempted it. Some students suggested that printing and login could only occur via the Internet. These students appear to have confused the terms network (or LAN) and Internet.