

Victorian Certificate of Education 2010

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

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Figures							
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VCE VET INFORMATION TECHNOLOGY

Written examination

Friday 12 November 2010

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 10.45 am (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

Section	Number of questions	Number of questions to be answered	Number of marks
A	20	20	20
В	23	23	70
			Total 90

- 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.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 22 pages.
- Answer sheet for multiple-choice questions.

Instructions

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- All written responses must be in English.

At the end of the examination

• Place the answer sheet for multiple-choice questions inside the front cover of this book.

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

Answer all questions in pencil on the answer sheet provided for multiple-choice questions.

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.

Ouestion 1

Rahel was correctly following standard operating procedures while repairing a computer when she sustained a minor injury. A first-aid officer attended to her injury, filled in an incident report and gave it to the Occupational Health and Safety (OH&S) manager. The OH&S manager noticed that Rahel's colleagues had also sustained similar injuries.

What is the best course of action for the OH&S manager to take next?

- A. take Rahel to a health clinic to see a doctor
- **B.** fix and update the standard operating procedures
- C. tell Rahel to fill out a Worker's Injury Claim Form
- D. review the work practices of Rahel and her colleagues

Question 2

The diagram below shows a search engine window.



The highest-ranking results of the above search will include Internet pages that have information about

- **A.** X3286 or 'printer driver'.
- **B.** X3286 or printer or driver.
- C. X3286 and 'printer driver'.
- **D.** X3286 and printer and driver.

The Help Desk of a large company received the following calls.

Job	Time	Caller	Nature of problem
W	8:45 am	Finance	The payroll software requires an update
X	8:50 am	CEO	No Intranet access, meeting with auditor
Y	9:00 am	Marketing	Replace printer cartridge for a job needed next week
Z	9:00 am	Training Manager	Presentation equipment needs setting up for this afternoon

The rapidity of the calls made it necessary to prioritise the jobs.

Which is the most appropriate order to address the jobs?

- \mathbf{A} . W, X, Y and Z
- **B.** X, W, Z and Y
- C. Z, Y, X and W
- \mathbf{D} . X, Z, W and Y

Question 4

A large firm is upgrading an existing accounting system.

It is important for the users of the upgraded system to review its new user manual

- **A.** in case there are too many changes to the upgraded system.
- **B.** to make sure that the IT staff have done the upgrade correctly.
- **C.** to check for any spelling and grammatical errors in the user manual.
- **D.** to provide feedback if any changes need to be made to the user manual.

Ouestion 5

Joshua calls the Help Desk to complain that he cannot access the network.

Which is the Help Desk's **most** appropriate first action?

- **A.** send a technician to fix the problem
- **B.** advise Joshua to power off and reboot the computer
- C. advise Joshua to try to connect using a different workstation
- **D.** advise Joshua to check that the network cable is properly connected

Question 6

When using the Internet at school a pop-up message informs you that your computer has a virus. The message also advises you to download a removal tool by clicking the included 'Download' button.

Which is the best action?

- A. click the 'Download' button and follow the instructions
- **B.** capture a screen image and email it to your systems administrator
- C. click the cancel button on the message and ignore it, as it is an advertising message
- **D.** click the 'Download' button and print out the instructions to show your systems administrator

Question 7

When assisting a friend of the family with purchasing a computer, the first thing you should check is

- **A.** what they want to do with the computer.
- **B.** their budget for the computer, software and extras.
- **C.** who provides the Internet connection and how fast it is.
- **D.** who will be using the computer and their level of experience.

Ouestion 8

Greg rings up the Help Desk complaining that he cannot print to the network printer. Rana works at the Help Desk and checks the previous logs. She notices that the print server has problems due to an upgrade and the temporary solution is to reset the print server until the supplier sends an upgrade patch.

Rana's best course of action is to reset the print server and

- **A.** tell Greg the problem is fixed, then hang up the phone.
- **B.** explain the problem, apologise to Greg, then hang up the phone.
- **C.** wait on the phone until Greg prints to see if this solves his printing problems.
- **D.** hang up the phone, then call the supplier to complain about not sending the patch.

Ouestion 9

An organisation uses a style guide when creating user documentation so that all user documents

- **A.** are written in exactly the same grammatical style.
- **B.** have consistent formatting, readability and clarity.
- **C.** can be accepted by the management of the organisation.
- **D.** can be proofread more easily by users of the organisation.

Ouestion 10

Following are two typical computer operations.

- placing several files in a password-protected compression file (e.g. ZIP or RAR file)
- a word processor checks spelling while you are typing a document

These operations are

- A. two multitasking processes.
- **B.** a batch system and a real-time process.
- **C.** a batch system and a multitasking process.
- **D.** a real-time system and a multitasking process.

Ouestion 11

Chris is a computer programmer. He is also an OH&S officer for his work area. He finished assessing the ergonomics of his office workspace and found some problems.

Chris's next action is to

- **A.** order ergonomic equipment to replace the deficient items.
- **B.** immediately fix all ergonomic problems before people hurt themselves.
- C. write a report based on his findings and submit the report to the OH&S manager.
- **D.** provide training to his colleagues on the best practice for creating an ergonomic environment.

Question 12

Tamana is a freelance document designer/writer. She is creating the user documents for a new company. The company does not have any defined standards but suggests that its documents should use either 11-point Times (serif font) or 11-point Arial (sans serif font).

What is the main reason Tamana decides to use the 11-point Times font?

- **A.** Serif fonts contain more special characters.
- **B.** Documents in serif fonts are easier to comprehend.
- C. Document style guides normally specify serif fonts.
- **D.** As Times is narrower than Arial, there will be fewer pages.

Three common forms of software licensing include

- malware, freeware and off-the-shelf.
- В. shareware, open source and off-the-shelf.
- C. closed source, open source and freeware.
- D. malware, shareware and universal serial source.

Ouestion 14

Hot-swap hard disk drives means

- **A.** mirrored drives with dual controllers.
- В. the same as RAID 5 (Redundant Array of Inexpensive Disks 5).
- C. drives will be automatically swapped-out when a server is overheating.
- failed drives can be replaced manually while the computer is still turned on. D.

Ouestion 15

Alice is implementing a new accounting system. She installed it for a small number of users to test, before implementing it company wide. She is collecting feedback from the testing staff to prepare the Help Desk for the full implementation.

В.

Which is the **most** useful feedback for this purpose?

- features working differently in the new system
- В. records containing incorrectly converted details
- C. spelling and grammatical errors in the help screens
- suggested additions to navigation buttons and menu system D.

Ouestion 16

You are the leader of a team, one of whom suffers an avoidable workplace injury.

Which is the most appropriate sequence of tasks for you to undertake after this incident?

A. advise workplace safety officer of incident check whether OH&S policies are adequate draft new OH&S policies to cover incident

submit new policies to workplace safety officer C. D. advise other team leaders of incident submit new policies to workplace safety officer

check whether OH&S policies are adequate

assess the severity of the injuries

draft new OH&S policies to cover incident advise workplace safety officer of incident assess the severity of the injuries submit new policies to workplace safety officer

assess the severity of the injuries check whether OH&S policies are adequate advise other team leaders of incident draft new OH&S policies to cover incident

Ouestion 17

Tomas decided to upgrade his RAM. He installed the RAM himself but then had trouble with his computer. It would start up but turn off after about 10 minutes.

The most likely cause of the problem is

- **A.** the power supply is not working correctly.
- **B.** he damaged the RAM during the installation.
- **C.** he damaged the motherboard during the installation.
- **D.** he used incorrect procedures when installing the RAM.

Question 18

Lee decided to create a restore (or reference) point using 'System Restore'.

What information does the restore point contain?

- **A.** the entire hard drive contents
- **B.** the operating system and recently modified data
- C. the operating system and applications only, without data
- **D.** some dynamic system and configuration files, and registry settings

Question 19

Joseph works for a large sporting organisation. It has a ten-year-old database of members and volunteers. The database system is undergoing major modifications and upgrades. Joseph's task is to update the database system's user manual.

Which is the most appropriate sequence of tasks for Joseph to undertake?

Α.

obtain user feedback on current system obtain user feedback on new system write new user documentation distribute final documentation obtain user feedback on documentation В.

obtain new system specifications update current user documentation design new documentation standard obtain user feedback on documentation submit documentation for approval

C.

obtain user feedback on current system obtain user feedback on new system write new user documentation obtain user feedback on documentation submit documentation for approval D.

design new documentation standard obtain user feedback on current system update current user documentation distribute final documentation obtain user feedback on documentation

Ouestion 20

Virtual memory is a computer system technique that gives an application program the impression that it has contiguous working memory.

Virtual memory works in a computer

- **A.** by using hard disk space to extend physical memory size.
- **B.** in the same way as RAM, because it is part of RAM itself.
- **C.** by moving little-used content from RAM to the hard drive.
- **D.** by redefining the address space with a contiguous virtual memory address.

SECTION B – Short answer questions

Instru	ctions	for	Section	R
THSU U	uuuns	1471	Section	-1)

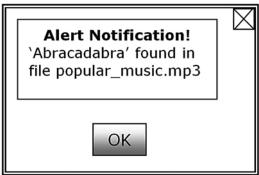
Answer all questions in the spaces provided.

Λ	~~ 4 • ~ ~	1
()11	estion	- 1

List th	nree measurable criteria that Help Desk management can use to monitor a Help Desk's performance.
1	
2	
3	
	3 marks

Question 2

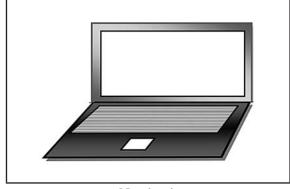
Hassan works for BCA Bookshop and backs up his work on a 2 TB USB hard disk. He also uses this disk to back up personal data. At home, he downloaded a pirated music file from the Internet. When he accessed this file at work from his USB hard disk, the following message popped up.



a.	Suggest why this message popped up on his computer.	
b.	Explain in detail the best action for Hassan to take.	1 mark
c.	How could Hassan have prevented this message from popping up in the first place?	1 mark

Choose one of the following computers.





op Notebook

Computer chosen	
State one advantage and one disadvantage of using this computer from an Occupational He (OH&S) viewpoint.	alth and Safety
Advantage	
Disadvantage	
	2 marks
Question 4	
The creator of user documentation must consider several factors.	
Tick (\checkmark) the two most appropriate boxes that describe good user documentation features.	
caters for fluent English-speaking users	
has captions used underneath screen dumps in very small font size	
is clear to the target audience	
meets most of the business and user requirements	
has consistent formatting with relevant screen dumps	
information is easier to find through the index than the table of contents	
	2 marks
Question 5	
Give a reason why an organisation uses a standard when producing user documentation.	

Cindy works for a graphic design firm and uses her computer for most of the day to edit photos, create logos and design brochures. The table below describes Cindy's computer use.

Complete the table by writing in the OH&S impact on Cindy's health.

	Computer use	OH&S health impact
Keyboard	Types continuously without a break	
Posture	Sometimes slouches over the keyboard with her feet stretched out under the desk	
	,	2 marks

2 marks

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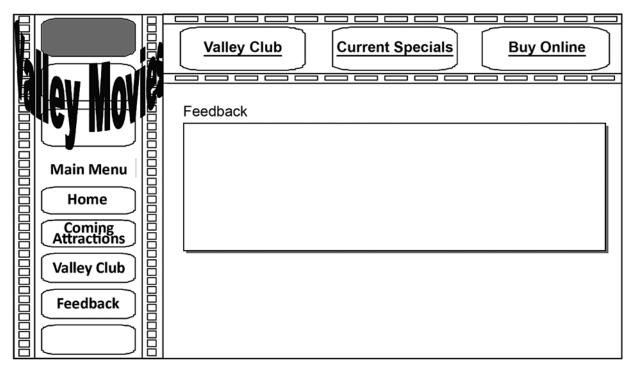
Some laptops are	available with a	Solid State Drive	(SSD) instead of	of a Hard Disk D	rive (HDD).
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Son	ne laptops are available with a Solid State Drive (SSD) instead of a Hard Disk Drive (HDD).
a.	List two advantages of using an SSD, compared to an HDD, in a laptop.
b.	2 marks List one disadvantage of using an SSD, compared to an HDD, in a laptop.
	1 mark
-	estion 8
a.	antivirus program found an infected file and offered the choices to 'Quarantine' or 'Delete' the file. Explain the purpose of quarantining an infected file.
	2 morte
b.	Explain how a worm differs from a general virus.

Valley Movies is a cinema that sells tickets online to customers. This saves customers queuing when they wish to see a particular film.

Thomas attempted to purchase his ticket online using his credit card, but halfway through the transaction his Internet browser crashed. The cinema's website has a feedback form for customer queries.

a. Add two important missing items to the following online feedback form.



2 marks

When Thomas tried to complete the feedback form, he was not sure what to do.

b. Describe one way for Valley Movies to provide help on the feedback form.

1 mark

Valley Movies also has a survey where customers answer questions and give their feedback. It publishes the results of the survey on the website.

c. Explain why the cinema went to so much trouble to do this.

1 mark

Ouestion 10

One of the OH&S rules at Ramani's workplace states, 'All employees must use a chair fitted with a gas lift seat'.

Describe the main **ergonomic** benefit of a gas lift chair.

a.	Explain the difference between operating system software and application software.	
b.	Name two functions of a computer's operating system.	1 mark

2 marks

Question 12

Complete the following table by giving an example of a device that connects to each computer connector shown.

Cross section of connection	Device

There are many types of workplace hazards, such as

- chemical
- environmental
- electrical
- manual handling
- mechanical
- psychological.

Label each of the situations in the table below with one of the hazards in the list.

Situation	Hazard
Caitlin's computer has failed, so she will need to work overtime to produce her weekly report on time.	
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.	
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.	
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.	

You are compiling a policy and procedures manual. The Workplace Safety Officer submitted the following text as part of the OH&S section.

Workplace hazards

The following common hazards: biological agents (bacteria, viruses), electrical (current, lightning), extreme temperature, falls (falling objects, people falling from height), hazardous substances (acids, asbestos, hydrocarbons, poisons), loud noise, machinery, manual handling (heavy loads, muscular strain), psychological stress (bullying, conflict, violence) and radiation (lasers, microwaves, ultraviolet light) may be classified as OH&S hazards.

In the workplace environment, the responsibility of ensuring the optimal safety of each person is shared equally by all employees, employers, contractors, suppliers and visitors.

Identify four ways of making this text comply more closely with good user documentation guidelines.

Your computer takes a very long time to open a large file that is stored on the company server. However, a copy of the same file saved locally on your computer opens much faster. You think that a 'bottleneck' might be causing the delay.

Explain what a bottleneck is in this context.
1 mari
Give two different examples of a possible bottleneck in this context.
2 mark
Select one of your answers from part b. and describe a test that will check whether it is a bottleneck.
1 marl

Leanne and Elias share the job of Accounts Payable Officer for the Mytown Council. They use the APgroup account to log on to the organisation's computer network. They both know the APgroup password.

All passwords in the organisation change every two months and are required to meet the organisation's complexity rules.

Explain an advantage of sharing the APgroup login.	
Explain a disadvantage of sharing the APgroup login.	1 ma
	1 mai
Describe why the following three email accounts are used by the Accounts Payable department.	
elias@mycouncil.vic.gov.au	
	Describe why the following three email accounts are used by the Accounts Payable department. • APgroup@mycouncil.vic.gov.au • leanne@mycouncil.vic.gov.au

Helena calls you at the Help Desk to say her computer suddenly powered off while she was updating an existing document stored on her local hard drive.

a.	ick (✓) the most appropriate first action to undertake.	
	check the Help Desk logs to see if her computer has done this previously	
	tell her to wait 30 minutes, then reboot and call again if the problem persists	
	ask her to check that power is available and the power cable is connected	
	ask her to check that the screen is properly connected (both power and data)	
	ask her to check that the network cable is properly connected	
		mark
The	commended action has no effect.	
b.	ick (\checkmark) the most appropriate next action to undertake.	
	have her connect the computer to a different power point	
	check the computer for viruses, pop-up advertisements and other malware	
	send a technician on site to investigate	
	install the latest motherboard BIOS update	
	have her computer delivered to the repair centre and replace it temporarily with a spare one	
		mark
Hel faile	a's computer is working again. However, she cannot open the document she was working on wh	ien it
c.	What is the most likely reason she cannot open her document?	
	1:	 mark
d.	What must Helena do to recover her document?	
	1	mark

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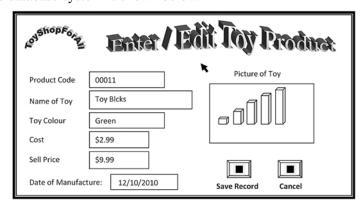
Tic	ck (✓) t	he boxes of four items that use space in a	computer's physical R	AM.				
	ope	erating system						
	vir	tual memory						
	CE	CD image data						
	pro	ograms run by the user						
	ten	nporary backup files						
	vid	leo RAM						
	rec	ently closed files						
	dat	a used by the running programs						
	ate which is is the	ch of the systems below will have the most case.	available RAM for a Ca	AD program,	2 m and explain			
		Component	System 1	System 2				
		CPU and motherboard (64-bit)	✓	✓				
		RAM (DDR3)	6 GB	4 GB				
		Video (512 MB)		✓				
		Video (1 GB)	✓					
		Operating System (32-bit OEM)	✓					
		Operating System (64-bit OEM)		✓				
_								

ToyShopForAll, a large toy company, asked an IT consultant to write a user manual for its new database system.

a. Explain the first thing the IT consultant does before writing the user manual.

1 mark

A screen dump from the database system is shown below.



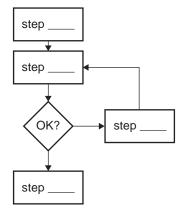
b. Describe the step(s) a user takes to alter the name of the toy, assuming a GUI interface.

1 mark

The table below describes possible steps that occur after writing the user manual.

c. Write the numbers of the appropriate steps on the flowchart provided.

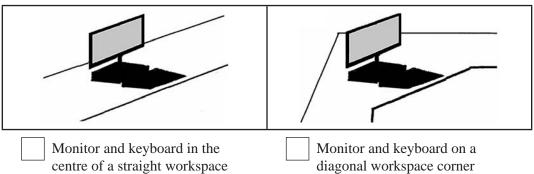
Step	Description			
1	Review system specifications			
2	2 Gather and analyse feedback			
3	3 Design documentation template			
4	Submit user manual to ToyShopForAll for approval			
5	Submit user manual to target audience for review			
6	Make changes to user manual			



a.	of people in the workforce. A large company will be installing a new stock control system in the next six months.
	Tick (\checkmark) the boxes of the four most important things you would need to determine when conducting a TNA for this company.
	budget
	current hardware
	level of help documentation required
	software skills required
	type of data to be entered on the system
	type of tasks required
	novice, intermediate or advanced users
	venue close to public transport
	2 marks
b.	Three months after the training is complete, suggest the most appropriate way to gather feedback on the training and evaluate its success.
c.	What is the best way to determine the level of technical support the users would require once the new stock control system is fully operational within the workplace?

You are assisting a workstation manufacturer to design new workstations for your office. The manufacturer offers several alternative features. You must ensure that the final design is suitable for staff members of all heights and builds.

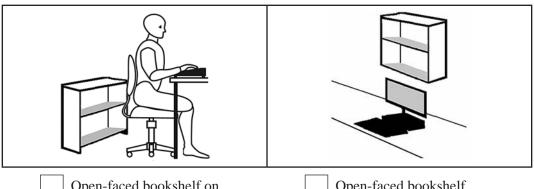
Workstation layout



a. Tick (\checkmark) the box of the preferred workstation layout and explain one advantage of your choice.

1 mark

Bookshelf placement



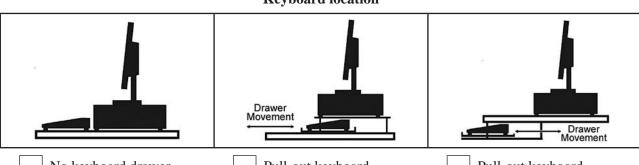
Open-faced bookshelf on floor behind chair

Open-faced bookshelf attached to the wall above the workspace and monitor

b. Tick (\checkmark) the box of the preferred **bookshelf placement** and explain **one** advantage of your choice.

Keyboard location





No keyboard drawer

Pull-out keyboard drawer on the work surface, under the computer and monitor

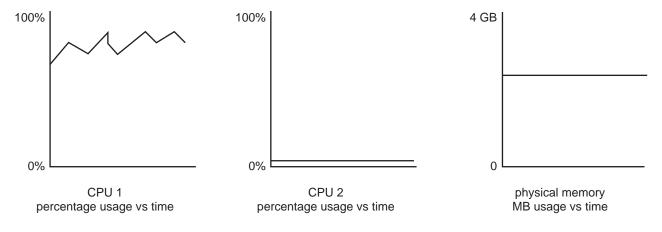
Pull-out keyboard drawer under the work surface

c. Tick (\checkmark) the box of the preferred **keyboard location** and explain **one** advantage of your choice.

Amy works for a games development company. She is testing the company's latest computer game, which has intense 3D graphics. She complains to the Help Desk that her system is running slowly. Her computer includes an Intel Core2 Duo, 4 GB RAM, a high-end 3D graphics card and a 500 GB SATA II hard disk.

The Help Desk uses a systems diagnostic tool on her computer to assess its performance while the game is running.

The following graphs show her computer's resources.



a. Why is Amy's computer running slowly?

1 mark

b. What is the best way to fix the problem?

One morning the Help Desk receives a large number of calls. Your job, as the Help Desk supervisor, is to monitor system-wide problems. Following is a summary of the information from the first few calls.

Name	Location	Issue
Alfred	В	no Internet
Bron	A	email program is not responding
Carlos	Carlos A cannot log in to network	
Dave C no Internet		no Internet
Eddy A cannot open network drive files		cannot open network drive files
Fatima B sent an email to a client but they have not received it		sent an email to a client but they have not received it
Gina	A cannot print to network printer	

You made some follow-up calls to get more information from the users, and placed the information in the following table. Unavailable information was marked with '-'.

Name	Location	Internet	Internal email	External email	Login	Network files	Network printing
Alfred	В	no	ok	no	_	ok	ok
Bron	A		ha	as gone to an	off-site meetir	ng	
Carlos	A	_	_	_	no	_	_
Dave	С	no	ok	no	_	ok	ok
Eddy	A	no	no	no	_	no	no
Fatima	В	no	ok	no	_	ok	ok
Gina	A	no	no	no	_	no	no

a.	Tick (✓) the b	Tick (\checkmark) the box for the most likely single cause of all these problems.		
	file ser	ever is not working		
	mail se	erver is not working		
	networ	ck switch is not working		
	Interne	et connection is broken		
	applica	ations server is not working		
b.	Explain how the fault you identified can produce printing, login and Internet problems.		1 mark	