**Victorian Certificate of Education
2005**

STUDENT NUMBER

Letter

Figures

Words

VCE VET INFORMATION TECHNOLOGY
(Network Administration)
Written examination

Friday 28 October 2005

**Reading time: 3.00 pm to 3.15 pm (15 minutes)
Writing time: 3.15 pm to 4.45 pm (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
B	20	20	50
C	7	7	20
			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 18 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

<div style="border:1px solid black;">

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.

</div>

Question 1

Which of the following is **not** an image file format?

A. tif

B. gif

C. mp3

D. jpeg

Question 2

For a user to save time, a quick and easy way to start or run a computer application would be to

A. create a shortcut on the desktop.

B. create a batch file that runs the application.

C. add an entry to the system configuration file.

D. copy the executable file into the user's home directory.

Question 3

Which tool is the **most** appropriate for producing **online** documentation?

A tool that generates

A. Help files.

B. online tutorials.

C. web-based authoring.

D. word-processing documents.

Question 4

'All documentation should use Times New Roman font with 11 point size' is an extract taken from which type of standard?

A. a project standard

B. a template standard

C. an industry standard

D. an organisational standard

Question 5

While on duty at 8.00 am as the Help Desk operator, you receive the following three calls for support in quick succession.

Call 1 – The advertising manager is unable to log onto the shared network drive to immediately check page proofs for the advertising brochures to be sent to the print room.

Call 2 – A graphic display artist cannot access email. He needs to send page proofs for the advertising brochure to the print room for a print run in two hours.

Call 3 – The despatch clerk needs to print out delivery dockets for orders to be delivered this morning. The printer seems to be out of toner.

The correct order of the three calls, from highest to lowest priority, is

A. call 3, call 2, call 1.

B. call 2, call 3, call 1.

C. call 1, call 3, call 2.

D. call 1, call 2, call 3.

Question 6

Jack runs a money-lending advisory business. He is mainly concerned with the changes of lending conditions and interest rates of the major financial institutions. He needs to use a program that would allow him to compare the impact of interest rates on clients' loans, late figures and to predict future returns on investment.

What package would he be best advised to use?

A. database

B. spreadsheet

C. web authoring

D. word processing

Question 7

A computer technician needs to repair a faulty power supply out of a main frame computer.

What type of documentation does he require to complete the task?

A. user reference guide

B. quick reference guide

C. technical documentation

D. configuration and installation documentation

Question 8

Irene, the business manager, wants the new blank Corporate Letterhead document accessible to all staff for use in correspondence.

How can the original be protected from accidental alteration?

A. store the original on floppy disk

B. convert the document to a template

C. give a copy of the original to each user

D. store the original on the Hard Disk Drive (HDD) of Irene's PC

Question 9

What type of information does user documentation describe?

A. the operation of a system

B. the maintenance of a system

C. the organisational rules and guidelines

D. the construction of the hardware and software that runs a system

Question 10

Habib has received a picture file sent by email that he is unable to open.

Which one of the following could **not** be a reason for this problem?

A. The picture file has become corrupted.

B. The picture file has a macro virus attached.

C. The picture file has been saved without the correct file extension.

D. The picture file is missing the required graphic program needed to open it.

Question 11

A sales representative has accidentally sent **two** identical emails advertising new products in a text message to the **same address**: one email has been accepted and the other email has been refused by the mail server.

From this description, what is the **most likely** problem?

A. The destination email account is full.

B. The destination email address is incorrect.

C. The text of the email breaches company guidelines.

D. The Graphical User Interface (GUI) is running a self-test for dialogue box generation.
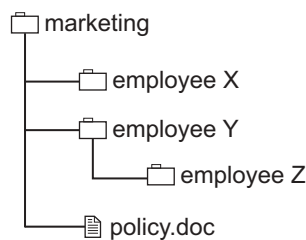
Question 12

The marketing manager has requested that a directory for marketing be created with subdirectories for employees X, Y and Z. The marketing policy statement should be stored in the **root** of the marketing directory.

Which one of the following directories shows the correct file structure?
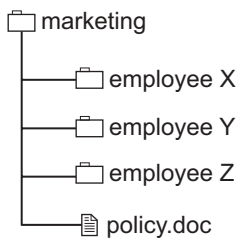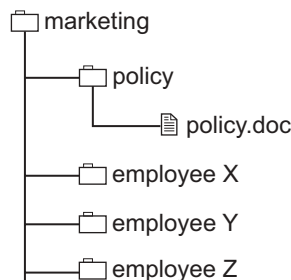
A.
```
marketing
    employee X
        employee Y
            employee Z
    policy.doc
```

B.
```
marketing
    employee X
    employee Y
        employee Z
    policy.doc
```

C.
```
marketing
    employee X
    employee Y
    employee Z
    policy.doc
```

D.
```
marketing
    policy
        policy.doc
    employee X
    employee Y
    employee Z
```
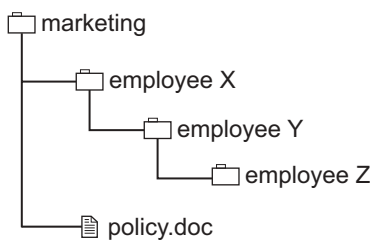
Question 13

Lucy is editing a document that is stored on another computer on the network. The other computer stops working because someone tripped over its power cord but Lucy's computer is fine. Lucy rings you up to find out how she can save her work.

What should you advise her to do?

A. reboot her computer then save the work as normal

B. wait for the other computer to restart and both computers to reconnect and then save her work as normal

C. wait for the other computer to restart and both computers to reconnect then recover the file from the backup tape

D. reboot her computer then wait for the other computer to restart and both computers to reconnect then save the work as normal

Question 14

A new computer has been connected to a LAN (Local Area Network) for the first time. When the user tries to connect to shared file storage on the network, the computer cannot find it. In fact this computer cannot 'see' any of the other computers on the LAN at all.

What could be the source of this problem?

A. spam filtering

B. firewall settings

C. spyware blocking

D. antivirus configuration

Question 15

Why is it necessary for Mark to check the hardware compatibility list (HCL) on the Internet before installing an upgraded operating system (OS) on his company's computer?

A. to confirm that the existing hardware in the computer is compatible with the new OS

B. to confirm that the licensed database software is compatible with the new OS

C. to confirm that the licensed antivirus software is compatible with the new OS

D. to confirm that the warranty on the computer would not be voided by the change of OS

Question 16

Reliability is a selection criterion for new technology.

What is reliability measured against?

A. the operational performance

B. the stability of performance

C. the gains a business may expect

D. the future trends of the business

Question 17

Which procedure is used as a **physical barrier** to secure data against unauthorised access in an organisation?

A. restrict user access to computers

B. enforce password logon

C. keep the firewall up to date

D. keep the antivirus software up to date

Question 18

A travelling sales team needs to be up to date with the availability of stock while dealing with clients.

The most suitable device to store and retrieve this data would be

A.   a personal digital assistant (PDA) device.

B.   a memory stick.

C.   a portable zip drive.

D.   a portable CD–RW writer.

Question 19

As the system administrator, you have determined that fifteen desktops in the purchasing department are capable of being upgraded to the latest operating system. Budgeting approval has also been given and the licences and installation media have been purchased.

What is the next task to be completed?

A.   go to each user's machine, delete the old operating system and run scandisk

B.   notify each of the users and ask them to bring their computer to the service desk

C.   notify the users of the proposed timelines and organise training for the affected users

D.   send the operating system CD to each of the users with instructions on how to install it

Question 20

Your manager has asked you to **upgrade** the operating systems on **all** of the organisation's desktop PCs. You are not sure when the operating systems were last upgraded.

What is the **first** task that you should carry out before upgrading the operating systems?

A.   ask users to provide feedback on any email messages they may have received

B.   research and locate all the software licensing documentation for the organisation

C.   destroy all copies of previous versions of the operating system and documentation

D.   contact the suppliers and ask if they will give a refund for all the previous versions

END OF SECTION A

SECTION B – Short-answer questions

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Instructions for Section B

Answer all questions in the spaces provided.
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Question 1

Teresa works most of the day in front of a computer and would like to get a new LCD screen monitor. List **two** valid occupational health and safety (OH&S) reasons that Teresa could use to convince her manager that she requires a new LCD screen monitor.

1. _____

2. _____

2 marks

Question 2

Give **two** reasons why a modern computer should always be 'shut down' correctly.

1. _____

2. _____

2 marks

Question 3

List **two** advantages and **two** disadvantages of using **Internet sites as a reference source**.

Advantages

1. _____

2. _____

Disadvantages

1. _____

2. _____

2 + 2 = 4 marks

Question 4

What information is provided by the 'readme' file on installation disks of new software applications?

_____

_____

1 mark

Question 5

List **two** reasons for documenting application software.

1. _____

2. _____

                                                                    2 marks

Question 6

When writing user documentation, what are **three** features of good practice that you should consider?

1. _____

2. _____

3. _____

                                                                    3 marks

Question 7

Select **three** of the following acronyms.

                    XML, HTML, FTP, IRC, SMTP, POP3

State what each of the selected acronyms stands for **and** explain briefly what each does.

1. _____

_____

_____

2. _____

_____

_____

3. _____

_____

_____

                                                            2 + 2 + 2 = 6 marks

Question 8

A client is experiencing unusual problems installing and configuring a new hardware product.

What **two** hardware-related checks should you make?

1. _____

2. _____

                                                                    2 marks

Question 9

What **two** measures would you use to demonstrate improvements to a Help Desk service?

1. _____

2. _____

2 marks

Question 10

Colin phones the computer technician and complains that all his 'auto text' in his word processor was lost when his new computer was upgraded. He had created many auto text shortcuts, like *pz* for please, that made his work faster, and now he wants them back. The computer technician has not yet reformatted his old computer.

What should the computer technician do to fix Colin's problem?

_____

_____

_____

_____

1 mark

Question 11

James from payroll has called you at the Help Desk. He has just had a new database software package installed and when he runs the application he receives the error message 'insufficient memory'.

What advice would you give James so he can successfully run the application?

_____

_____

1 mark

Question 12

Baby Blue Beds has installed an invoicing software package on their computers. User manuals have been sent to all the users after installation. The Help Desk has received a number of calls from users asking for help because the user manual is very technical and they are having difficulty running the software.

List **two** tasks Baby Blue Beds should now do to assist their users.

1. _____

_____

2. _____

_____

2 marks

Question 13

Rosie is the new database administrator in your organisation. Rosie is a highly skilled database administrator who learns quickly, but she has had only limited experience with your organisation's database. When Rosie accepted the position it was agreed that she would be given support to help her administer the database. As part of Rosie's induction into the organisation, she must undergo a skills assessment.

Explain why Rosie needs to undergo the skills assessment.

_____

_____

_____

_____

_____

2 marks

Question 14

a. What are **two** differences between a command line interface and a graphical user interface?

_____

_____

_____

b. What is the function of a virtual machine operating system?

_____

_____

_____

2 + 1 = 3 marks

Question 15

A business has recently implemented a new software package that has significantly changed the current work practices.

a. List **two** problems that a business could experience with staff as a result of implementing a new software package.

1. _____

2. _____

b. List **two** ways that the business could overcome these problems.

1. _____

2. _____

2 + 2 = 4 marks

SECTION B – continued

Question 16

The requirements for two new software packages to be installed are

Software package	RAM	Available hard disk space
1.	256 MB	300 MB
2.	256 MB	500 MB

Current computer specifications are 384 MB RAM and 400 MB available hard disk space.

Can both packages be successfully installed on the current system? Explain your answer.

_____

_____

_____

2 marks

Question 17

A new feature in most modern CPUs is often abbreviated to No Execute (NX). This feature can prevent some virus-like activity occurring in computers.

Some viruses that were stopped by NX were 'Blaster' and 'Sasser'. How does the NX feature stop these viruses?

_____

_____

1 mark

Question 18

a.   What is encryption when related to computer technology?

_____

_____

b.   When is it appropriate for a user to use encryption?

_____

_____

c.   Outline **one** problem that could result from the use of encryption on a computer.

_____

_____

1 + 1 + 1 = 3 marks

Question 19

Your client, WaxHead Surf Wear, currently uses a **dialup Internet account**. The company wants a **broadband connection** to the Internet but they found that the number of providers, plans and options are too confusing. Their business partners have advised that they should choose from Ardvark IT or Emu Internet and they have provided the following information.

Provider	Ardvark IT plan A	Ardvark IT plan B	Emu Internet plan A	Emu Internet plan B
Speeds	256/64	512/128	256/64	256/64
New connection setup cost	$88.00	$88.00	$149.00	$109.00
Rapid transfer setup cost	$35.00	$35.00	$59.00	$39.00
Monthly fee	$40.00	$42.00	$29.95	$29.95
Included GB	no limit	8 GB	5 GB	5 GB
Charge per excess GB	no limit	$3.00/GB	shaped to 60 kbps	shaped to 60 kbps
Spam filtering	free	free	$1.00/month	$1.00/month

a. Which plan offers the fastest connection?

_____

_____

b. What does 'shaped to 60 kbps' mean?

_____

_____

c. What is spam filtering?

_____

_____

d. Why can WaxHead Surf Wear **not** use the cheaper Rapid transfer setup option?

_____

_____

1 + 1 + 1 + 1 = 4 marks

Question 20

Fred is a 3D-graphic designer and tells you his computer is too slow and the image quality on the screen is poor. You check out his computer and agree that it is too slow and the image quality needs improvement.

His current setup is

- 800 MHz CPU
- 512 MB RAM
- 8 GB HDD
- 4 × AGP video card

With the current computer budget, Fred can only afford to upgrade **either** the video card to an 8 × AGP **or** the RAM to 1.5 GB, but not both.

a. What advantage would there be in upgrading the RAM?

_____

_____

b. What advantage would there be in upgrading the video card?

_____

_____

c. Which upgrade would you advise Fred to purchase and why?

_____

_____

1 + 1 + 1 = 3 marks

Total 50 marks

END OF SECTION B
**TURN OVER**

SECTION C – Case study

Instructions for Section C

Read the case study below and answer the following questions in the spaces provided.

Ralph Howard has recently been appointed as computer manager for the share-trading firm Smyth & Son Trading Inc. He has become aware of a number of issues since starting, including performance problems on the computer network and security concerns.

The layout of the company work space is mostly 'open plan' with very few enclosed areas. The computer servers are located in an area that has only a partition (a wall from floor to head height only) to separate it from a major walkway.

A layout of the work space at Smyth & Son Trading Inc.
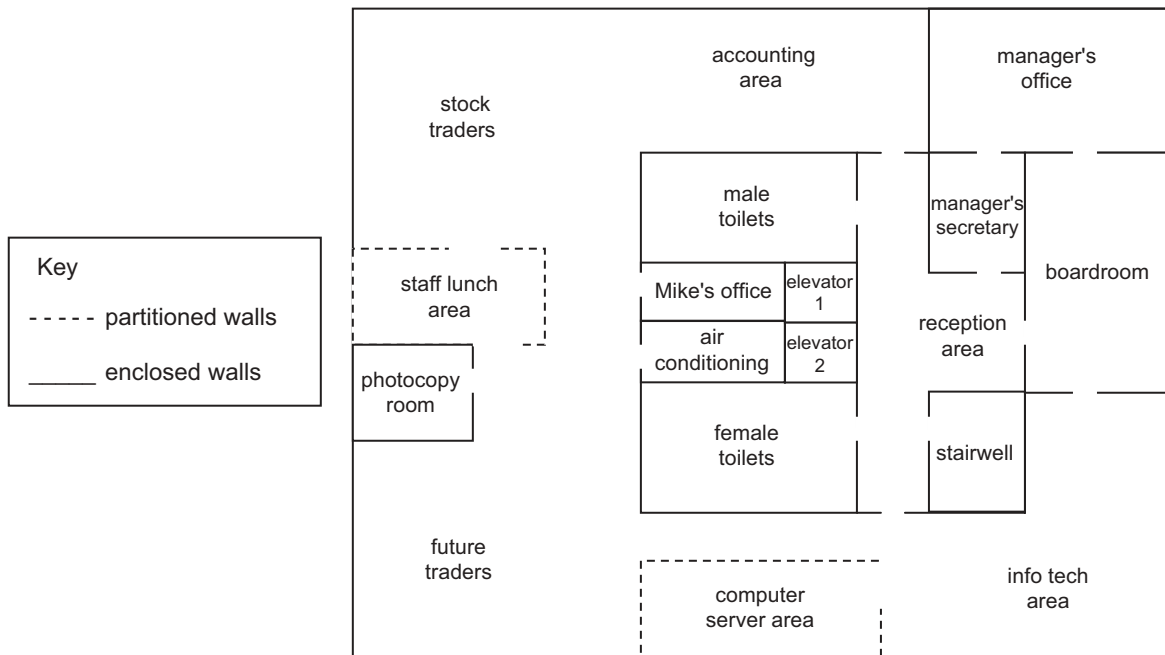
Figure 1

Question 1

There is evidence that one of the computer servers is overheating on hot days. Ralph would like to enclose the server area in a room that has better temperature control. Give **one** additional reason, apart from temperature control, that Ralph could give to the manager for enclosing the server area.

_____

_____

1 mark

Question 2

Mike Reynolds is the project manager. His office is a small room that was once used as a cleaner's storeroom. His room is next to the air-conditioning fan room. The noise does not worry him, however he has complained often that his files are being corrupted on the server. He wants to save his files on his local hard drive. This is against company policy as the files would not be part of the nightly backup.

After investigating Mike's complaint Ralph discovers that the network wiring to Mike's computer passes above the air-conditioning fan room. Ralph suspects the power surges from the motors switching on and off are affecting the signals in the computer wiring.

a. Assuming the power surges are the cause, how can the network problem be solved so that Mike's files are safely saved on the server and not corrupted?

_____

_____

_____

b. What name is given to this type of corruption of signals in network cabling?

_____

<div align="right">1 + 1 = 2 marks</div>

Question 3

Mike is a member of the traders group. He needs to be given permission to open files, but not modify them, in the accounting directory/folder. The current access permissions for the accounting directory/folder are as follows.

User or Group	Read	Write	Execute	Delete	Manage
Administrator (Group)	yes	yes	yes	yes	yes
Management (Group)	yes	yes	yes	yes	
Accountants (Group)	yes	yes	yes	yes	
Traders (Group)	no	no	no	no	
Auditor (User)	yes		yes		
Mike (User)					

Access permissions for the users or groups provide three options.

- 'Yes' gives permission to do a task which could possibly be blocked by membership of another group.
- 'No' blocks permission to do a task even if permission is given via membership of another group.
- No statement (that is, a blank) for a task blocks permission but does not block permission given via membership of another group.

What additions and/or changes will be required to the table for Mike to do his work?

_____

_____

_____

_____

<div align="right">2 marks
SECTION C – continued
TURN OVER</div>

Question 4

Smyth & Son Trading Inc. uses a nightly backup of their important data onto computer tapes. The auditors have asked Ralph to provide details of how the tape system works.

List **two** procedures the auditors will be looking for to be reassured that Smyth & Son Trading Inc. have a good system for backup tapes.

1. _____

_____

2. _____

_____

2 marks

Question 5

Ralph has determined that the computer which performs the two functions of DHCP and Printer Server is at the end of its useful life. He has requested a replacement for this server.

a. What is the meaning of this acronym DHCP?

_____

_____

b. What is the purpose of a DHCP server on a LAN?

_____

_____

c. Explain how a Print Server can improve the function of a computer network.

_____

_____

1 + 1 + 2 = 4 marks

Question 6

Theft, unauthorised use or deliberate corruption of confidential business data, is part of the company's security concern. This type of data loss can occur from internal or external methods.

Complete the following table by identifying an internal/external source of data loss or method of preventing the data loss.

Internal source of data loss	Method of preventing data loss
1. Poor work habits in saving files (overwriting one file with another)	
2.	good offsite backups

External source of data loss	Method of preventing data loss
1. Hacking through an Internet connection	
2.	email scanning software

4 marks

Question 7

Some of the problems that came to the Help Desk this morning are shown in the table below.

Complete the table by providing **two** possible methods to fix each problem and **one** possible symptom.

Problem	Symptom	Possible methods to fix it
Network login	Client received a message about checking user name and password	Method 1. Method 2.
Monitor	Symptom	Method 1. Check the video lead Method 2. Check brightness and contrast Method 3. Check for 'black' screensaver
Shared network storage	Client cannot view, load or save files on the shared drive	Method 1. Method 2.

2 + 1 + 2 = 5 marks

Total 20 marks

END OF QUESTION AND ANSWER BOOK