



Victorian Certificate of Education 2002

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Figures

Words

Letter

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VCE VET INFORMATION TECHNOLOGY (Network Administration)

Written examination

Friday 1 November 2002

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

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	20	20	20
B	18	18	52
C	7	7	20
		Total	92

- 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 electronic communication devices into the examination room.

SECTION A – Multiple-choice questions**Instructions for Section A**

Answer all questions in pencil on the answer sheet for multiple-choice questions. A correct answer scores 1, an incorrect answer scores 0. Marks will **not** be deducted for incorrect answers. No mark will be given if more than one answer is completed for any question.

Question 1

Amardeep has a small financial advisory business. He is mainly concerned with the effect of changing interest rates on clients' investments. He wishes to use a package that will allow him to manipulate figures and predict future returns on investment.

He would be best advised to use a

- A. database package.
- B. publishing package.
- C. spreadsheet package.
- D. word processing package.

Question 2

For a birthday present, Tyler received a CD-ROM game. The table below outlines the PC system requirements to run the CD-ROM game and provides specifications for Tyler's existing personal computer.

PC minimum requirements	Tyler's PC specifications
<ul style="list-style-type: none"> • Pentium 120 MHz • 32 MB RAM • VGA monitor • Double CD-ROM speed 	<ul style="list-style-type: none"> • Pentium 133 MHz • 16 MB RAM • SVGA monitor • Quad CD-ROM speed

What upgrade does Tyler need to make to his PC to successfully run the CD-ROM game?

- A. RAM
- B. CPU
- C. screen display
- D. CD-ROM speed

Question 3

The ability of the monitor to operate at various display standards depends on

- A. the video card.
- B. the sound card.
- C. the network card.
- D. the memory card.

Question 4

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

Call 1 – The training coordinator needs to urgently download photos from a digital camera, for a training manual due for printing next week, but does not know how to download them.

Call 2 – A secretary cannot access email. She needs to send a message to all employees about the Christmas function to be held in three months time.

Call 3 – The inventory clerk needs to print out invoices that need to be sent to clients by the end of the day. The printer seems to be jammed with paper.

The three calls should be prioritised from highest to lowest in the order

- A. call 2, call 1, call 3
- B. call 2, call 3, call 1
- C. call 3, call 2, call 1
- D. call 3, call 1, call 2

Question 5

You are a Help Desk operator. A client has rung the Help Desk for assistance.

Which **three** essential pieces of information do you need from the client in order to log the call?

- A. problem, name of client, date logged
- B. name of client, problem, phone contact
- C. date logged, name of client, advice offered
- D. name of client, name of Help Desk operator, problem

Question 6

A medical centre has installed a new software system to keep track of the immunisation schedules for their child patients. The software system is supposed to send out letters when immunisations are both due and overdue. However, the software system keeps printing out letters to patients who are up-to-date with their immunisations. The medical receptionist has contacted you, the Help Desk operator.

The **best** explanation of the possible problem that you could give is

- A. the software has a virus and needs to be debugged.
- B. the operating system has not been configured to handle the software.
- C. the printer software has been installed incorrectly. You need to reinstall it.
- D. the software needs to be tested in accordance with the organisational requirements.

Question 7

An equipment register should **not** contain

- A. an ID number.
- B. a product (code) number.
- C. an asset register number.
- D. a workstation serial number.

Question 8

What does an instructional manual **best** describe?

- A. the maintenance of a system
- B. the organisational rules and guidelines
- C. the information for the user on how to use the system
- D. the construction of the hardware and software that runs a system

Question 9

The testing stage for developing computer system documentation involves

- A. creating the documentation, whether printed or online.
- B. checking the document for content, accuracy and grammar.
- C. identifying all the pieces of documentation and how they are related.
- D. trying out the documentation and providing feedback on areas that need improvement.

Question 10

Which evaluation criterion would be **best** suited to test the **accuracy** of online documentation?

- A. clarity of purpose
- B. ease of use
- C. degree of interactivity
- D. use of graphics

Question 11

You have opened a file on the command line using a basic editor such as Notepad. You are able to edit this file and save the changes.

This file will be a

- A. text file.
- B. binary file.
- C. spreadsheet file.
- D. word processing file.

Question 12

File fragmentation will

- A. increase the efficiency of disk caching.
- B. improve poor performance of the drive.
- C. allow the system to minimise disk usage.
- D. cause applications to take longer to load.

Question 13

Toula's workplace has recently upgraded its computers to the latest Pentium PCs. Toula has gone into the directory structure and cannot find her document files.

A probable reason for this is

- A. her screen resolution is faulty.
- B. her upgrade cannot read her current files.
- C. her files were not backed up and restored.
- D. the RAM on her upgrade is not sufficient to run her applications.

Question 14

On a particular laptop, careless management of system resources has led to poor performance. Applications need to be closed down before other applications can be used.

The performance status, for the usage of system resources, should be

- A. at 50% free.
- B. at 100% free.
- C. below 50% free.
- D. above 50% free.

Question 15

The template for Mail Merge letters is stored as

- A. a database file.
- B. an executable file.
- C. a spreadsheet file.
- D. a word processing file.

Question 16

Which of the following **best** describes the use of a database package?

- A. an expert system
- B. a decision support system
- C. a transaction processing system
- D. a management information system

Question 17

A data flow diagram may be used in documentation for

- A. maintaining the design of system software.
- B. updating the RAM capabilities of a system.
- C. maintaining the peripheral devices of a system.
- D. understanding the layout of the user interfaces.

Question 18

A supermarket warehouse business would **best** keep track of its stock levels through

- A. a manual system.
- B. a bar coding system.
- C. a touch screen system.
- D. an Optical Character Reader (OCR).

Question 19

A cost that cannot be measured is the cost of

- A. software.
- B. lower staff morale.
- C. increase in maintenance personnel.
- D. lower incidence of sick days taken by staff.

Question 20

The Autoexec function refers to

- A. a template to replace the default template.
- B. a template that loads when an application is opened.
- C. a macro that contains instructions to detect viruses.
- D. a macro that runs when an application is opened.

SECTION B – Short-answer questions**Instructions for Section B**

Answer **all** questions in the spaces provided.

Question 1

Where are the details of computer software usually recorded?

1 mark

Question 2

A dialogue box appears on the screen every time a client tries to print. The text ‘Abracadabra’ appears in the box. The machine then has to be reset. From this description, what is the most likely problem?

1 mark

Question 3

a. A computer programmer needs to update her skills to complete a project for her employer. There is a limited time to complete this project. The project is so important that the employer decides to invest a large part of the budget on training the programmer. List **two** advantages of using one-on-one training for this company.

1. _____

2. _____

b. List **two** reasons why a trainer should ask a trainee to evaluate a training program.

1. _____

2. _____

2 + 2 = 4 marks

Question 4

a. What is the function of a GUI (Graphical User Interface)?

b. Name **two** standard navigation tools in a GUI.

1. _____

2. _____

2 + 2 = 4 marks

Question 5

A fairly recent technology is Plug and Play (PnP).

a. What is the purpose of PnP?

b. Name a PnP device.

1 + 1 = 2 marks

Question 6

List **two** common causes of data loss from a file directory in a client's PC.

1. _____

2. _____

2 marks

Question 7

List **two** reasons for documenting a software system.

1. _____

2. _____

2 marks

SECTION B – continued
TURN OVER

Question 8

List **two** problems that a client could experience as a result of implementing a new software package that will involve changes to current work practices.

1. _____
2. _____

2 marks

Question 9

Describe **two** of the types of documentation listed below.

- system flow chart
- maintenance history logbook
- user manual

1. _____

2. _____

2 + 2 = 4 marks

Question 10

What is the difference between a local macro and a global macro?

2 marks

Question 11

List **three** business issues that need to be explored when considering the introduction of new technology.

1. _____
2. _____
3. _____

3 marks

Question 12

Fly By Night is a small business that supplies skilled labourers to companies. It employs twenty people from many cultural backgrounds. All employees have access to their own PC and the PCs have been recently networked into a small LAN. The receptionist is the only employee confident with her computer skills.

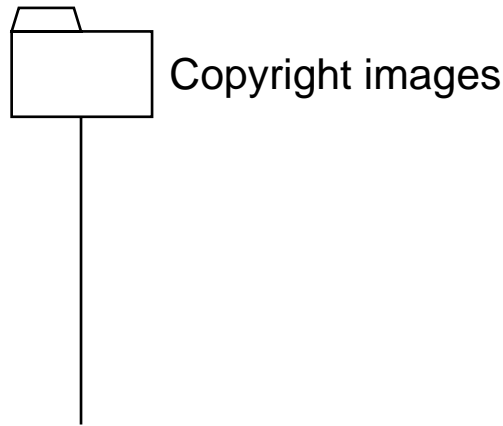
You have set up email accounts for all the employees and have been asked to create user documentation to assist the users with the email technology. List **two** employee differences that need to be considered when creating user documentation for Fly By Night.

1. _____
2. _____

2 marks

Question 13

The IT Manager of a publishing company has set up a directory for copyright images, with subdirectories for scanned, digital and web images. The publishing company has a policy document called ‘Use of Copyright Images’. This document is stored at the root of the copyright images directory. Complete the directory structure diagram.



2 marks

Question 14

Name **two** multi-user operating systems that would be used in a client-server environment.

1. _____
2. _____

2 marks

Question 15

Planning, testing and distributing are some stages of the standard documentation process for developing computer system documentation. List **three** other stages that make up this process.

1. _____
2. _____
3. _____

3 marks

Question 16

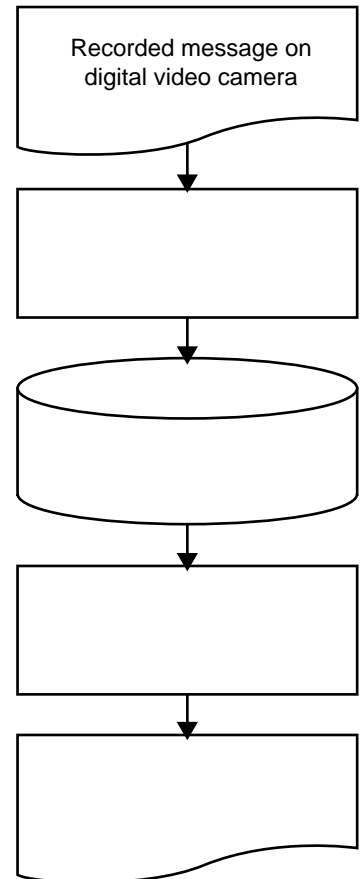
Messages 4 U is a small business that allows clients to record a message using a digital video camera. The message is then downloaded on to a PC as a file into a message directory. This file can then be burned onto a writable CD-ROM for the use of the client.

a. Apart from the PC and digital video camera, what other hardware is needed for this business?

b. Complete the simple system flow chart of the Messages 4 U computer system by writing in the labels for the blank symbols.

Select from the following labels:

- Copy message to CD-ROM
- Message file on PC
- Download message from digital video camera
- CD-ROM message



c. What are the **three** main hardware system requirements that must be taken into account in the selection of a PC that can be used at Messages 4 U?

d. What is a USB port?

Question 17

Munchie Food Catering supplies and prepares food for several airline companies. The company depends on a networked computing system linking each of the company operations. One of the computers has been designated as the server, which has a tape backup drive. A simple system backup schedule for the business is as follows:

- A complete backup of the entire hard drive of the main computer system is made each week on a Wednesday night. A copy of this backup tape is produced and stored offsite.
- Partial backups are taken on the other nights, at the end of each day.

a. What type of backup system is being used?

b. Why is only new or modified data backed up every day?

c. How could a file be recovered if a file created on Monday became corrupted on Thursday?

d. How could a file be recovered if a file created on Tuesday was accidentally deleted on the same day?

e. Why is a second copy of the entire data made each week and stored offsite?

f. If the tape backup drive failed to work, suggest an alternative way the company could back up their system.

1 + 1 + 1 + 1 + 1 + 1 = 6 marks

Question 18

A database with the following two tables, Customer and Order, is given below.

Customer table			Order table		
Field name	Type	Length	Field name	Type	Length
fldFName	alphanumeric	30	fldOrderID	numeric	integer
fldLName	alphanumeric	30	fldOrdCustID	alphanumeric	5
fldCustomerID	alphanumeric	5	fldOrderDate	date	
fldCustAddress	alphanumeric	40			
fldCustSuburb	alphanumeric	30			
fldPostcode	alphanumeric	4			

- a. Identify a suitable primary key for the customer table and give the reason for your choice.

- b. Identify a suitable foreign key to reference the customer table and give the reason for your choice.

2 + 2 = 4 marks

SECTION C – Case study

Instructions for Section C

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

JEP Stockbrokers is a stockbroking firm that trades shares on the stockmarket for registered clients. It employs thirty office staff who all have access to their own PC. The PCs are all networked into a small LAN and connected to a WAN. The smooth operation of the company depends upon the LAN linking each of the company operations. JEP has employed you to act as the network administrator.

A custom-built database and spreadsheet package has been recently purchased as part of the software used at JEP. It was written to meet the organisation’s specifications. The software package has in-built security in the form of an authentication database (username and password activated). All office staff depend on the database and spreadsheet information being kept as current as possible.

Jack, a new employee, has commenced work in the Accounts Department at JEP. Current firm policy places all new employees on six months probation. You have created the following user groups: Share Trading, Share Sales and Accounts. All users in the Accounts Department have full access rights to the Accounts volume on the server. Trainee employees should have read-only access rights to the directories and files stored on this particular volume.

Marta, from the Share Trading Department, has submitted a request to the Help Desk. She is concerned that her hard disk drive is reaching full capacity. She has suggested that a Jaz or CD-R drive should be purchased to assist with the storage problem. The Trading Department has \$700 left in the budget for Information Technology. This budget must not be exceeded in the remaining eight months of the financial year.

JEP is a growing company and management is considering developing an online trading service. It has been noted that email is slow to be received and database response time is slow. Using a Performance Monitor, over an extended period of time, you have discovered that the Processor–Time is continually running at 3–5%, Network Queue Length is 4 and Memory in pages/second is running at 3%.

Question 1

Management at JEP has expressed concerns over security issues related to the use of the Internet. What can be used to minimise security threats from external networks?

1 mark

Question 2

Staff have mentioned that they are concerned about 'authentication' processes with a new network. Explain what authentication is.

2 marks

Question 3

JEP Stockbrokers have a bus network design based on thin coaxial cable. Would a star network be more appropriate? Explain.

2 marks

Question 4

A Jaz drive requires a SCSI (Small Computers System Interface) interface card. The capacity of a Jaz drive is 2 Gb while the capacity of the IDE CD-R is 650 Mb. Marta’s PC has the following specifications: Celeron 667 Mhz CPU, 10.4 Gb IDE hard drive, 64 Mb RAM.

- a. What storage device would you recommend for Marta’s PC?

- b. Give **three** reasons for your selection in part a.

1 + 3 = 4 marks

Question 5

- a. Provide management with **two** examples of diagnostic tests which you would perform as network administrator to check on network performance.

- b. The Human Resources (HR) Manager mentioned that it will be necessary to audit the LAN. Give **two** reasons why this would be a necessary process.

2 + 2 = 4 marks

Question 6

List **two** measures that you could put in place as part of a disaster recovery plan to ensure that the company's internal and confidential information is secure on the new database.

2 marks

Question 7

Users have reported the following problems to the Help Desk. The problems have been logged as outlined in the log below. Complete the log by correctly identifying the causes of problems or possible solutions for each network problem.

Network problem	Cause of problem	Solution to problem
Connection problem with workstation using the Internet across the network.		Connect to a network, dial-up settings are not established at a workstation.
Workstation is slow to operate. Operating system software and cabling can handle load.	Busy network. Users transferring data.	
Printer will not print out copy of your file when colleague's files print easily.	Driver (printer) not installed.	
Workstation can connect to server but a user cannot log on.		Clarify with user the logon process requirements for password.
Server is running but only some workstations can access it. Operating system software and cabling are working correctly.		Correct the installation or replace the device.

5 marks