

STUDENT NUMBER Letter

VCE VET INFORMATION, DIGITAL MEDIA AND TECHNOLOGY

Written examination

Monday 11 November 2019

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

<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	16	16	70
			Total 90

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers and one scientific calculator.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.

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.

Question 1

Disk management, device control and running applications are major functions of the

- A. OS.
- B. NOS.
- C. DNS.
- D. DHCP.

Question 2

Four desktop computers, a printer and a scanner are to be connected to a network in a small office.

Which one of the following is the cheapest and most appropriate cabling to connect these devices to the network?

- A. wireless
- B. HDMI cable
- C. coaxial cable
- D. unshielded twisted pair (UTP)

Question 3

Which one of the following forms of security is a biometric technology?

- A. fingerprint scanner
- B. encryption software
- C. wi-fi firewall software
- D. username and password

Question 4

Which of the following disk boot orders is best when installing an OS on a new laptop equipped with a solid state drive (SSD)?

- A. SSD, DVD, USB, CD
- B. CD, DVD, USB, SSD
- C. CD, SSD, USB, DVD
- D. SSD, DVD, CD, USB

Question 5

The **most** important purpose of feedback is to

- A. gain information that will lead to improvements.
- B. provide an opportunity to explain a system update.
- C. avoid the expense of legal action for a business and its customers.
- D. provide an opportunity for a dissatisfied customer to request a refund.

Question 6

A farming family is upgrading the internet at their home. The family's home is one kilometre from the nearest communication pit.

Which one of the following is the best type of cable to use?

- A. CAT 6
- B. optic fibre
- C. CAT 5e UTP
- D. coaxial

Question 7

APFS, FAT32, JFS, HFS, NTFS and XFS are examples of

- A. file systems.
- B. boot utility tools.
- C. virtual memory settings.
- D. process scheduling acronyms.

Question 8

A router

- A. is a software package that controls a network.
- B. forwards data between two or more networks.
- C. enables the use of CAT 6 cabling in a network.
- D. controls the storage and retrieval of data for a network.

Question 9

After solving Help Desk issues, Sharon emails clients an evaluation form, requesting a star rating from 0 (unresolved) to 5 (working perfectly). Clients are to return the evaluation form to Sharon via email.

What is one problem with using a star rating as the only method of evaluation?

- A. It can be easily changed by hackers.
- B. The person who sends the email is unknown.
- C. Management may use the star rating against the client.
- D. There is no place for the client to comment on what problems still exist.

Question 10

When producing a quick start guide, the **most** important criterion that the user documentation must meet is that

- A. it looks attractive.
- B. it has colour and images.
- C. everything is spelt correctly.
- D. it caters for a diverse audience.

Question 11

Eddie is planning to buy a new desktop computer with an SSD, an HDD and 32 GB of RAM. His OS will need 25 GB, and he will put the virtual memory and the OS on the SSD.

What is the minimum size of the SSD that Eddie will need to purchase?

- A. 32 GB
- B. 64 GB
- C. 128 GB
- D. 256 GB

Question 12

A Vietnamese supermarket is installing self-service check-outs. After producing user documentation for customers to use when purchasing goods, Binh, the technician carrying out the installation, decided to get feedback from the following people: the supermarket owner, a friend who is also a documentation designer, a language expert and a group of customers.

Why is it important that Binh consult with a language expert?

- A. to ensure the information meets industry standards
- B. because the language expert will give Binh work in the future
- C. to ensure the information is written in a way that can be clearly understood by users
- D. to ensure diagrams and the use of background colours are clear for people with impaired vision

Question 13

Each system on a TCP/IPv4 network is identified by

- A. one unique identifier.
- B. two unique identifiers.
- C. three unique identifiers.
- D. four unique identifiers.

Question 14

Bronwyn has been asked by her manager to create an online user manual for a piece of software she has created.

Which one of the following standards should Bronwyn follow?

- A. British Standards (BS)
- B. Victorian Standards (VS)
- C. International Electrotechnical Commission (IEC)
- D. International Organization for Standardization (ISO)

Question 15

An IT consultancy company has provided advice on software and hardware for a network. The level of technical support has also been discussed and agreed upon.

What is the next step that a technician from the IT consultancy company should take?

- A. Investigate and document a solution.
- B. Provide manuals and user documentation to the client.
- C. Obtain approval from the client to implement the solution.
- D. Arrange a time and date with the client for support to take place.

Question 16

Which one of the following is a protection measure for a wireless home network?

- A. use of ipconfig /all
- B. use of anti-wi-fi paint
- C. use of duplex fibre-optic cabling
- D. broadcasting of packets from the network interface cards (NICs)

Question 17

Stephanie has reported to the ICT Help Desk that the office printer is leaving black streaks on printouts and it needs to be fixed as soon as possible.

The best way for the Help Desk staff to promptly resolve this issue is to

- A. send a local technician to replace the black toner.
- B. send black toner to Stephanie so she can replace the toner.
- C. notify the supplier to send a technician to service the printer.
- D. send a local technician to replace the black toner and clean the printer.

Question 18

A technician, Steve, is preparing for a major upgrade of the accounting package at Little Hill Council. He receives news that a neighbouring council has decided to postpone the same upgrade because the upgrade failed during testing.

What is the **most** appropriate action Steve should take in this situation?

- A. Postpone the upgrade for Little Hill Council and inform his manager of this decision.
- B. Postpone the upgrade for Little Hill Council until the neighbouring council has successfully completed its upgrade.
- C. Contact his manager with this information and ask the neighbouring council for more details about the failure during testing.
- D. Proceed with the plans for the upgrade but increase the amount of testing that Little Hill Council will do before moving the upgrade into the live accounting system.

Question 19

Staff, students and parents have been given a username and password to access certain information about the day-to-day running of a school on the school's website. A parent has recently called the Help Desk to complain that she has not been able to find the bell times.

What would be the best way for the Help Desk to provide advice to this parent?

- A. Walk through the issue over the phone.
- B. Tell the parent to ask their child to help them.
- C. Ask the parent to visit the school's Help Desk.
- D. Send the parent a large user manual for the school's website.

Question 20

Upon checking the Help Desk log on Wednesday morning, Hamish found the following message: 'My name is Erica and I started as the new sales clerk on Monday. My voicemail still has a greeting message from Maxwell, who I replaced. Can someone please show me how to change the greeting message?'

Which one of the following strategies would be the most appropriate to resolve Erica's problem?

- A.** 1. Delete Maxwell's voicemail and allocate a new voicemail inbox.
2. Confirm with the Business Manager that Erica is allowed to set a new greeting message.
3. Enrol Erica in a voicemail course.
- B.** 1. Delete Maxwell's greeting message and create a greeting message for Erica.
2. Send Erica an email with instructions on how to change the greeting message.
3. Check with Erica on Friday to see if she has any further problems.
- C.** 1. Check the greeting message on Erica's extension number.
2. Confirm with the Business Manager that Erica is allowed to set a new greeting message.
3. Set a time with Erica to show her how to change the voicemail message.
- D.** 1. Send Erica an evaluation form to complete.
2. Send the results of the evaluation to the Business Manager.
3. Invite Maxwell back so he can show Erica how to change the greeting message.

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

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

Question 1 (2 marks)

a. What does DNS stand for?

1 mark

b. What is the function of the DNS?

1 mark

Question 2 (2 marks)

Pat works for a newspaper and is reporting on a multistage bike race. She has a tablet PC and a smartphone. Race reports are typed up on the tablet PC and transferred to her newspaper via the smartphone. Pat rings the newspaper's Help Desk, requesting assistance because her reports are not being received.

What is **one** possible cause of Pat's problem? Describe a test that the Help Desk could run to identify this problem.

Question 3 (2 marks)

Wen works at the Help Desk at a local school. A student contacts the Help Desk, complaining that his account has been locked due to his password being weak.

What would be the best way for Wen to deliver advice to the student? Provide an example of the advice Wen would give to the student.

Question 4 (3 marks)

Describe the following functions of an OS.

- Batch system _____

- Real-time system _____

- Multi-tasking system _____

Question 5 (4 marks)

ICT Help Desk service request jobs are regularly logged and recorded.

- a. List six key pieces of information that must be recorded about ICT Help Desk service request jobs. 3 marks

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

- b. What is a benefit of reviewing Help Desk logs for service request jobs on a regular basis? 1 mark

Question 6 (3 marks)

The barcode scanner on the point-of-sale (POS) computer at a local newsagency stopped sending barcode information to the computer. The scanner still beeped when a barcode was scanned, but the scanned object did not get added to the current sale.

Peta provides technical support to the newsagency. She first replaced the USB cable connecting the computer and the barcode scanner, but this did not solve the problem.

Next Peta downloaded and installed the latest drivers for the barcode scanner. This solved the problem.

- a. Explain what the drivers would do for the computer and the barcode scanner. 1 mark

- b. Why is there a need to update drivers on an OS? 1 mark

- c. Peta first replaced the USB cable connecting the computer and the barcode scanner.
What was Peta checking by replacing the USB cable? 1 mark

Question 7 (5 marks)

Brochures, user guides, user manuals, tutorials, quick start guides, context-sensitive help and technical documentation are all forms of user documentation.

- a. Select two forms of user documentation from the list above. Explain what type of user each is for and briefly describe the documentation.

4 marks

User documentation 1 _____

User documentation 2 _____

- b. Why is it important to use a template when creating user documentation?

1 mark

Question 8 (6 marks)

Ronnie is a sound and lighting engineer for big musical concerts. He operates a sound board that is programmed with the lighting and sound effects for concerts. The sound board is connected as a peripheral to a computer, where the programming is run. The sound board uses large data files.

- a.** What role does the computer's OS play in connecting the sound board to the computer? 2 marks

- b.** Why would virtual memory need to be used when connecting the sound board to the computer? 2 marks

- c.** Lately a pop-up has been appearing on the computer screen, asking Ronnie to install updates.

- i.** Why are updates important? 1 mark

- ii.** When should Ronnie install the updates? 1 mark

Question 9 (4 marks)

A veterinary clinic is updating its animal registration software from AniReg Version 3.71 to AniReg Version 4.0. Version 4.0 has many new features.

Data is entered initially by the receptionist, and then it can be accessed and updated by the veterinarian during a consultation.

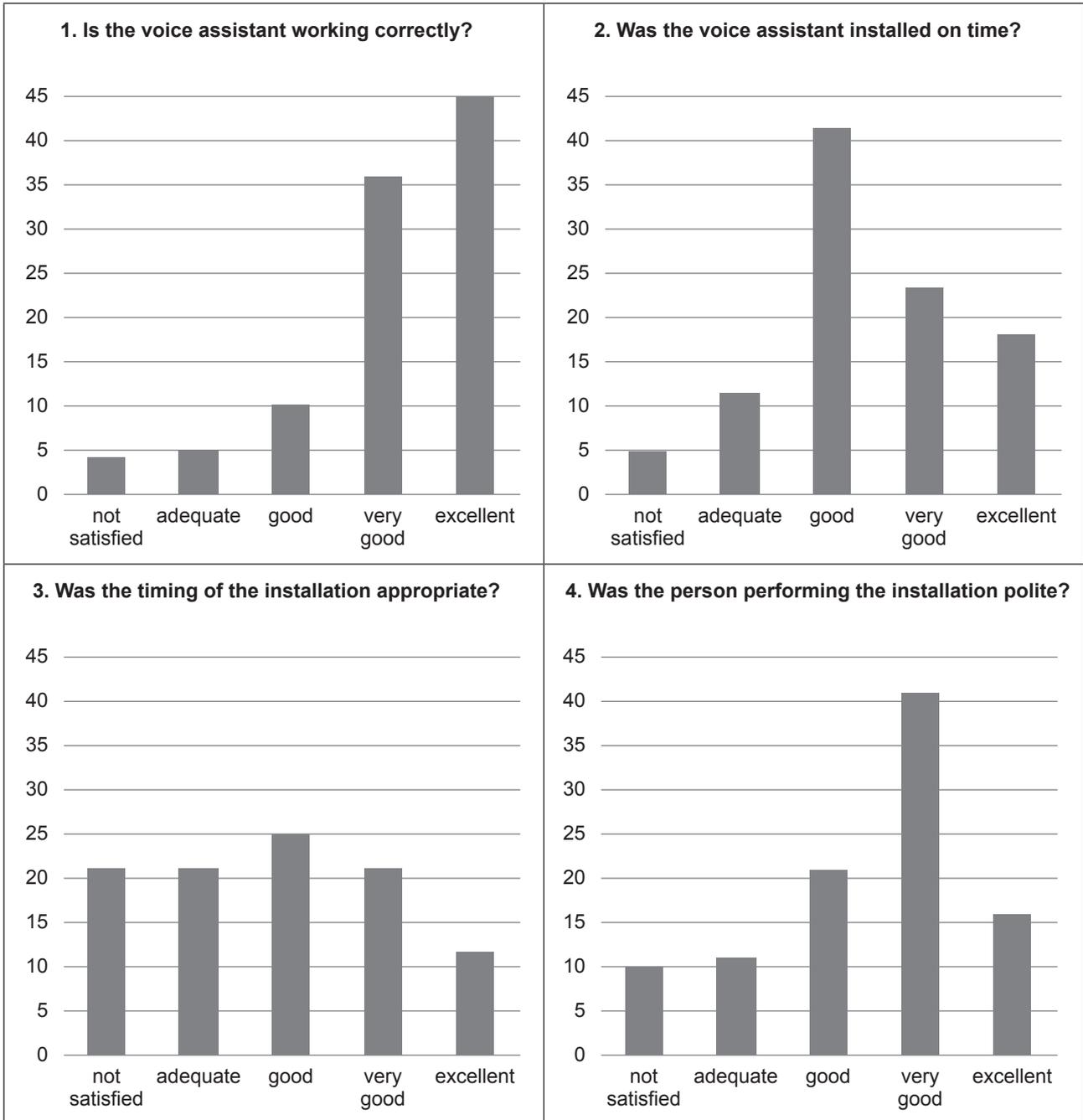
The same user documentation is used by both the receptionist and the veterinarian. Jerome, the ICT technician, needs to update the existing user documentation for Version 3.71 so that it reflects the operation of Version 4.0.

- a. Describe a method by which Jerome can establish what changes to the user documentation are required. 2 marks

- b. How can Jerome check that the changes to the user documentation meet the requirements of the target audience? 2 marks

Question 10 (2 marks)

TalkRUS is installing voice assistants in offices across Victoria. The business recently conducted a survey of 100 customers and collated the following results.



a. Which graph indicates the area most in need of improvement? 1 mark

b. Recommend what TalkRUS can do to improve the results in this area. 1 mark

Question 11 (4 marks)

Mohan's mother asked him why the images on her TV screen were often unclear and why her internet TV service was frequently interrupted and difficult to watch. His reply was: 'The bandwidth from your ISP has been maxed out, which is causing your streamed TV service to continually lag while buffering fresh data. You need to get your device to cache the entire show before you try to watch it.'

Convert Mohan's response into jargon-free advice.

Question 12 (11 marks)

Smiling Hills Village is a large, self-contained community with over 100 residents who live in their own apartments, scattered around a hilly area. The village has many community facilities, including a well-stocked library. Sarah, the librarian, has noticed that many of the residents do not visit the library in person. Often, they send her messages on the library's social media page, requesting books. She then sends the books to the residents by drone.

Sarah has observed that some residents have been making conclusions about other residents' health or interests based on the messages sent to the library's social media page. She wonders if there is a way to communicate book requests in a more private and professional manner.

- a.** Suggest an alternative method by which residents can send their book requests to Sarah. Explain why this method would be more private and professional in this context. 2 marks

- b.** Suggest **three** actions that Sarah needs to consider before implementing the method suggested in **part a.** 3 marks

Following the implementation of the solution, Sarah's manager has requested feedback from the residents.

- c. In the space provided below, design an online evaluation form that Sarah can use to obtain feedback from the residents.

5 marks



- d. When should Sarah conduct the evaluation?

1 mark

Question 13 (3 marks)

Lin is the owner of a small business with 10 employees. She is concerned about an increase in unauthorised logins to her business network. She is worried that someone may be able to access information about her business.

A friend has suggested that Lin implement a policy that requires that all staff change their employee password every 90 days and states that staff cannot use any of their last four passwords.

- a.** Suggest **one** way this policy would resolve the concern that Lin has regarding unauthorised logins. 1 mark

- b.** Describe **two** issues that could arise from implementing this policy. 2 marks

Question 14 (3 marks)

A large accounting firm plans to have a web proxy server installed.

- a.** Explain why the accounting firm should use a web proxy server. 2 marks

- b.** State **one** disadvantage of installing the web proxy server at the accounting firm. 1 mark

Question 15 (8 marks)

A tax agent’s office at Wyelangi is next door to the Wyelangi campus of Otway University. The tax agent recently discovered a massive increase in the tax agency’s internet access and data transfer, so the agent employed an independent computer forensics company, Mincheton, to review the network. Mincheton provided the following report of its discoveries.

- Firewall security
 - The security on network traffic from internet to internal is optimal.
 - Network traffic from internal to internet is not restricted.
 - The firmware version on the firewall is up to date.
- Wireless Access Point (WAP)
 - WPA2 security has been configured.
 - The custom password (Pa\$\$w0RD)
 - is not complex enough
 - was either cracked or guessed by the university students.
 - The firmware version is old and it is vulnerable to the latest attacks.
- Network server
 - The OS patch level is up to date.
 - There are 18 shared folders on the server.
 - 16 folders have restricted access.
 - 2 folders have no security checks.
 - Each of these folders has also been used to store multiple GB of non-work-related music, videos, etc.
 - The administrator account does not appear to have been compromised.

a. The current WAP password needs to be changed.

Other than changing the WAP password regularly or not allowing the re-use of past passwords, provide **two** rules that would help ensure the password is more secure.

2 marks

The report mentions that the firmware on the WAP is outdated.

- b.** What is firmware? 1 mark

- c.** List the steps required to update the firmware on the WAP in the order in which they must be taken. 3 marks

- d.** There are unsecured shared folders on the server.
Describe a type of security that could be set up on these shared folders to make the system more secure. 1 mark

- e.** The report also included comments about the firewall.
How could security on the firewall be improved? 1 mark

Question 16 (8 marks)

A coffee-making machine uses raw green beans that are packaged and delivered direct to customers from plantations around the world. The machine roasts the beans and produces a cup of coffee.

Farmers package the beans and attach radiofrequency identification (RFID) tags to each package.

When a customer receives the beans and scans the package on the coffee-making machine, the farmer and the machine maker are paid electronically.

The beans are roasted by an infra-red burner using a roasting profile that was tailored to the particular beans and added to the RFID tag. The customer, using a smartphone app, can log in, operate and make adjustments to the whole coffee-making process, selecting their preferred roast and grind.

Keith buys the coffee-making machine for his household and it becomes a part of his home network.

- a. List and describe the purpose of **three** devices that must be in place for the farmer and machine maker to be paid.

6 marks

- b. Explain a method that the smartphone app could use to communicate with the coffee-making machine.

2 marks
