Letter

STUDENT NUMBER

VCE VET INFORMATION, DIGITAL MEDIA AND TECHNOLOGY
Written examination

Thursday 19 November 2020

Reading time: **11.45 am to 12.00 noon (15 minutes)**
Writing time: **12.00 noon to 1.30 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	18	18	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 23 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

Malicious software that encrypts data and only unencrypts the data for a fee is known as

A. adware.

B. spyware.

C. greyware.

D. ransomware.

Question 2

Which protocol is used to send email from one server to another?

A. FTP

B. TCP

C. POP

D. SMTP

Question 3

Juan has contacted his internet service provider as his computer cannot connect to the internet on his back porch, but his smartphone can.

What should the internet service provider's Help Desk Operator suggest that Juan do first?

A. Restart the modem.

B. Restart the computer.

C. Restart the smartphone.

D. Unplug the modem and then plug it back in.

Question 4

A disadvantage of one-to-one support when compared to group support is that

A. it is time consuming.

B. feedback is harder to obtain.

C. it can be provided only at fixed times.

D. everyone wants different levels of support.

Question 5

What is one advantage of using a wireless LAN in a small business?

A.   It allows for easy sharing of multiple devices.

B.   The wireless LAN will cover an extensive area.

C.   All devices in the small business will be compatible.

D.   No technical knowledge is required to set up the wireless LAN.

Question 6

What information does the Dynamic Host Configuration Protocol (DHCP) provide to computers on a network?

A.   the address of the nearest printer

B.   the address of the nearest gateway

C.   the address of the nearest upstream neighbour

D.   the name of the connected internet service provider

Question 7

What is the most appropriate reason to notify a client about the results of an ICT investigation?

A.   to justify being paid by the client

B.   to close the file on the client support issue

C.   to be able to obtain feedback from the client and make required changes

D.   to ensure that the client knows that something is being done about their issue

Question 8

Which one of the following is the first action to take after receiving a Help Desk request?

A.   Obtain approval for a solution from the client.

B.   Provide manuals and user documentation to the client.

C.   Investigate and document support issues affecting the client.

D.   Check previous logs for similar problems or requests from the client.

Question 9

Which one of the following methods can be used to optimise an OS?

A.   running a ping test

B.   following licensing requirements

C.   creating step-by-step user documentation

D.   uninstalling and deleting any unused programs

Question 10

After feedback has been gathered for new user documentation, the next step is to

A.   make all recommended changes.

B.   have the user documentation signed off by management.

C.   replace the old user documentation file with the new file.

D.   analyse the feedback and make changes where necessary.

Question 11

Bridget wanted to create user documentation for a new printer.

She should first investigate the existing documentation for other companies' printers in order to

A. compare the running costs.

B. find similar documentation that she can copy.

C. investigate how industry standards are applied.

D. check for functionality that could be installed on her printer.

Question 12

Which one of the following best describes DNS?

A. Domain Name Server   – converts an IPv4 or IPv6 address into a URL

B. Domain Network Service – converts an IPv4 or IPv6 address into a URL

C. Domain Name System   – converts an internet name or URL into an IPv4 or IPv6 address

D. Domain Network Server – converts an internet name or URL into an IPv4 or IPv6 address

Question 13

Marianne is ordering a new laptop to watch movies. The OS is on a 64 GB SSD and the computer has 64 GB of RAM. She will regularly download up to half a TB of data onto the laptop's HDD.

What is the minimum size the HDD needs to be?

A. 500 GB

B. 600 GB

C. 700 GB

D. 800 GB

Question 14

Shelly took a large number of photographs at a wedding. She now needs to run the same set of commands on a large number of image files. These commands include filtering, resolution changes and stamping her business logo on the bottom left-hand corner of each image.

Shelly schedules this process to occur at night, when she is asleep, because these tasks will use a lot of memory and may prevent her from completing other tasks if the process occurs during the day.

This type of process scheduling is an example of a

A. batch system.

B. virtual memory.

C. real-time system.

D. memory management.

Question 15

Nimmo is a technician in an ICT department and his desktop computer will not start. After troubleshooting, he discovers that the power supply is not working.

Which one of the following is Nimmo's best course of action?

A. Notify the ICT Help Desk.

B. Order a new power supply and install it.

C. Remove the power supply, open it and replace the fuse, and then reinstall the power supply into the computer.

D. Purchase a new computer and then dispose of the old computer in the correct manner for broken electronic equipment.

Question 16

A staff member rings Clare at the ICT Help Desk, complaining that they can never print on a Thursday morning. An analysis of error logs indicates similar complaints have been made over the last three months. The business tends to print weekly graphic portfolios every Thursday morning.

How should Clare respond to the staff member?

A. Ask the staff member to report the issue to the General Manager.

B. Suggest that the staff member reconfigure the print queue so that they get priority.

C. Apologise to the staff member and explain that the print queue is busy every Thursday morning.

D. Tell the staff member that nothing can be done about it, stop complaining and check the FAQs on the intranet.

Question 17

Mobile Accounting Team is a business that has recently equipped its staff with new, lightweight but powerful 10-inch tablets.

The business's Help Desk has reviewed the support calls that were received during the first month of the tablets' use and the results are summarised below.

Call issue	Call count	Breakdown
reset password	5	forgot password
car charger	8	tablet flat on long trips
electronic pen	18	3 calls – stopped working 11 calls – lost 4 calls – flat battery in pen
change carry bag	1	backpack to replace briefcase
dock power supply	6	4 calls – broken cable 2 calls – power plug broken
install additional apps	25	16 calls – games 9 calls – music

Given the information above, which one of the following lists contains the three highest-priority issues for the business to resolve if it wants to maintain its productivity?

A. electronic pen, change carry bag, reset password

B. car charger, dock power supply, electronic pen

C. install additional apps, electronic pen, car charger

D. install additional apps, car charger, dock power supply

Question 18

Mrs Stephanidis was surprised when her internet usage suddenly increased. Her son Luke has come over to help her identify the problem and has asked her what she is doing differently on the internet now.

Mrs Stephanidis tells Luke that she still only uses her tablet to check emails. She particularly likes watching the short videos of her grandchildren that her daughter Alexandria sends by email. Alexandria recently upgraded to a new smartphone, which she uses to create the videos of her children.

What is the most likely cause of this increase in Mrs Stephanidis's internet usage?

A. her internet browsing history

B. the size of the emailed videos

C. the configuration of her tablet

D. the configuration of her wi-fi router

Question 19

The following feedback form has been designed for Meac Computing. Meac Computing's staff mainly work at the main office but some also work from home.

Meac Computing Feedback Form

Please complete the following information and click the 'Submit' button.

Name _____

Contact number (internal or mobile) _____

Age _____   **Password** _____

Issue type ☐ hardware ☐ software ☐ firmware ☐ training ☐ advice

	Unsatisfactory	**Satisfactory**	**Very good**	**Excellent**
Quality of result	☐	☐	☐	☐
Speed of result	☐	☐	☐	☐
Customer service	☐	☐	☐	☐

Additional comments _____

_____

_____

Submit

Which of the following improvements must be made to this feedback form before it is approved for use?

A. The password requirement needs to be removed.

B. The staff mobile phone number requirement needs to be removed.

C. The number of issue types should be reduced and the list should be simplified.

D. The table needs an additional row for a response to 'Quality of equipment provided'.

Question 20

Henry is a user documentation writer for a large accounting firm and he has been asked to write a user guide for a new accounting software package.

Which one of the following lists gives the tasks that Henry will perform in the correct order?

A. Investigate industry standards.

   Design documentation templates.

   Conduct a review of the new accounting software package to understand how it works.

   Create the user documentation based on templates.

   Obtain approval from his supervisor for the use of the templates.

B. Design documentation templates.

   Investigate industry standards.

   Conduct a review of the new accounting software package to understand how it works.

   Create the user documentation based on templates.

   Obtain approval from his supervisor for the use of the templates.

C. Design documentation templates.

   Obtain approval from his supervisor for the use of the templates.

   Investigate industry standards.

   Conduct a review of the new accounting software package to understand how it works.

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D. Conduct a review of the new accounting software package to understand how it works.

   Investigate industry standards.

   Design documentation templates.

   Obtain approval from his supervisor for the use of the templates.

   Create the user documentation based on templates.

DO NOT WRITE IN THIS AREA

SECTION B – Short-answer questions

Instructions for Section B

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

Question 1 (2 marks)

User manuals are a type of user documentation.

Identify a feature of a user manual and explain why this feature is useful to the end user.

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Question 2 (2 marks)

Commercial beekeepers Eric and Ashley often set up their beehives hundreds of kilometres from their base in remote bushland. Solar-powered hive-weighing devices have been developed so that Eric and Ashley do not have to visit the hives to find out how heavy the hives are.

Describe how these devices could send the weight data back to base.

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Question 3 (2 marks)

A pop-up message on Samara's computer says that an OS security update is available.

What should Samara do next and why?

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Question 4 (1 mark)

A photocopier with a service-level agreement (SLA) has been reported to have a jammed print queue and streaks/lines on the paper printouts. Restarting the photocopier and checking the printer drum and toner cartridge did not fix the issue.

Explain what action an ICT Help Desk Operator should take in this situation.

_____

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_____

Question 5 (3 marks)

What are three tasks that must be carried out following the production of user documentation?

Task 1 _____

Task 2 _____

Task 3 _____

Question 6 (1 mark)

Why would an organisation use two-factor authentication?

_____

_____

Question 7 (3 marks)

a.   Give **one** example of when virtual memory would be used.   1 mark

_____

b.   A technician has set up virtual memory on Michelle's computer.

When and how would the operation of Michelle's virtual memory be evaluated?   2 marks

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Question 8 (2 marks)

The following points are part of an ICT induction document for new employees at an office:

- Make sure your username and password are kept private.
- Please use a complex password.
- Remember to lock your computer when you leave your desk.
- Bring Your Own Device (BYOD) is supported but only if you have your device configured by ICT.

Rewrite two of the points above so that each can be easily understood by non-ICT staff members.

1. _____

_____

2. _____

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Question 9 (3 marks)

The Intelligent Washing Machine Company provides washing machines to exclusive fashion companies. Staff at these companies scan a QR code (a machine-readable barcode) on the clothing, which ensures that the item is washed using the correct settings.

Istvan has been evaluating the washing machine to find out if it has been working correctly. He has provided customers with the following two questions.

1. Rank (from one star to five stars) how consistently the washing machine has followed the correct washing program.

☆   ☆   ☆   ☆   ☆

2. What problems did you experience with the washing program?

_____

_____

a.   Describe **one** benefit of a star ranking.   1 mark

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b.   Describe **one** benefit of an open-ended question.   1 mark

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c.   Describe **one** disadvantage of an open-ended question.   1 mark

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Question 10 (3 marks)

The ping and traceroute commands are part of the 'toolbox' for network troubleshooting.

a. What is tested by the ping command?   1 mark

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b. Give **one** example of a ping command.   1 mark

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c. What does the traceroute command test?   1 mark

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Question 11 (6 marks)

The Finchurch Secondary College ICT Help Desk has received a phone call from a teacher, explaining that they are unable to connect their laptop to the data projector in their classroom.

a.   Identify two methods the Help Desk can use to investigate the teacher's issue.   2 marks

Method 1 _____

Method 2 _____

b.   Describe each of the methods identified in **part a.**   2 marks

Method 1 _____

_____

Method 2 _____

_____

c.   Describe how the results for each of the methods identified in **part a.** would be documented.   2 marks

Method 1 _____

_____

Method 2 _____

_____

Question 12 (6 marks)

Xi provides ICT support in a local secondary school. He has been asked to replace the old scanners in four classrooms as they no longer work with the school's OS.

Identify and describe three of the actions that Xi should take to replace the old scanners.

1. _____

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2. _____

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3. _____

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Question 13 (6 marks)

Dario is a computer technician at Sliding Plains Secondary College. He has decided to update all the school computers to the newest Multomah 10.3 OS, which has an improved user interface. The new interface has different default icons and colours than the previous version. These can be changed by Dario.

a.   Suggest a way in which Dario can optimise the new OS interface to cause minimal disruption and confusion among users.   1 mark

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b.   **i.**   Why might Dario need to restrict certain features of the OS for different users?   1 mark

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   ii.   Give **two** examples of restrictions that Dario will need to put in place.   2 marks

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c.   The licensing agreement covers all student, teacher and administrative machines in the school. The licensing agreement also states that Dario can provide a unique licence code to each teacher so that they can install the Multomah OS on their computer at home.

   It is likely that Dario will be audited to ensure he has issued the licence codes according to the contract.

   Describe a procedure for Dario to help keep track of his distribution of licence codes.   2 marks

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Question 14 (4 marks)

Emily is a librarian at Platypus Ranges Library. She recently read about Quokka Valley Village Library, which uses drones to deliver books to clients. She has approached Wilson to see if this system can be installed at Platypus Ranges Library. Emily has already established that the drones are suitable and she wants Wilson to look at their integration with the computer-based borrowing system.

a. State **two** factors that Wilson will need to consider when investigating the integration. 2 marks

_____

_____

b. After the investigation, Wilson made an appointment with Emily to outline his findings.

What factors does Wilson need to consider when communicating his findings to Emily to ensure that she understands the findings and can reflect on them after the meeting? 2 marks

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_____

Question 15 (7 marks)

An online gamers' cafe participating in worldwide massively multiplayer online role-playing game (MMORPG) competitions has 10 computers set up for its clients. The cafe needs to identify and monitor its clients.

a. Suggest specifications for the following four components for use in the cafe.   4 marks

• Internet connection _____

_____

_____

• Cabling _____

_____

_____

• Desktop computers _____

_____

_____

• Cameras _____

_____

_____

b. Describe **two** procedures that the cafe could use to identify its clients.   2 marks

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_____

_____

_____

c. Describe **one** procedure that the cafe could use to monitor its clients.   1 mark

_____

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DO NOT WRITE IN THIS AREA

Question 16 (4 marks)

TimeNav produces a range of wristwatches that not only tell the time but provide very accurate navigation information and maps. The watches interact with a smartphone app. They are marketed to people who travel in remote locations.

Captain Ivanov, an army captain, has evaluated TimeNav to find out if it suits the army's needs. A summary of Captain Ivanov's report is shown below.

Evaluation of TimeNav device

From: Captain Mischa Ivanov

To: Eric Da Re (TimeNav Navigation Systems)

The product suited our needs; however, the user documentation had the following issues:

- Not all symbols were explained.
- Steps seemed to be missing or assumptions were made that the user knew how to perform these steps.
- Confusing and unclear language made the document hard to follow.

Recommendation: Until changes are made to the user documentation, the device should not be issued to the army.

Eric wants the army to use the TimeNav device. He passes the report to his manager, who suggests that Eric investigate Captain Ivanov's report further.

Eric decides to make changes to the user documentation.

a. Why is it important that Eric adhere to a template when creating the user documentation? 1 mark

b. Identify and describe **one** method that Eric can use to test the suitability of the user documentation. 2 marks

c. What action should Eric take before officially releasing the new user documentation? 1 mark

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Question 17 (7 marks)

The level of importance assigned to a problem by Outback Flats Council is determined according to a range of factors, including the number of people the problem has an impact on and the urgency due to the time of day/week that the problem occurs.

a. For each of the following three problems, identify the levels of impact on and urgency for the council by ticking (✓) the appropriate boxes, and explain each of your responses.   6 marks

- Problem 1 – The council's email server stops working at 10.00 am on a business day.

  Business impact (tick one box) ☐ low   ☐ medium   ☐ high

  _____

  _____

  Urgency (tick one box) ☐ low   ☐ medium   ☐ high

  _____

  _____

- Problem 2 – The software used by the Finance Department has an error at 10.00 am on the day that a tax file needs to be sent to the tax office. If the file is not submitted by 2.00 pm, there will be a penalty to be paid by the council to the tax office.

  Business impact (tick one box) ☐ low   ☐ medium   ☐ high

  _____

  _____

  Urgency (tick one box) ☐ low   ☐ medium   ☐ high

  _____

  _____

- Problem 3 – The data projector in the boardroom is not working. The state premier is visiting the council to see a presentation by the CEO for a $350 million project. The presentation is due to start in 90 minutes.

  Business impact (tick one box) ☐ low   ☐ medium   ☐ high

  _____

  _____

  Urgency (tick one box) ☐ low   ☐ medium   ☐ high

  _____

  _____

b.   Assume that all three problems from **part a.** were reported at the same time and on the same day.

In the table below, number the problems in the order that the ICT Help Desk should solve them, using the numbers 1, 2 and 3.   1 mark
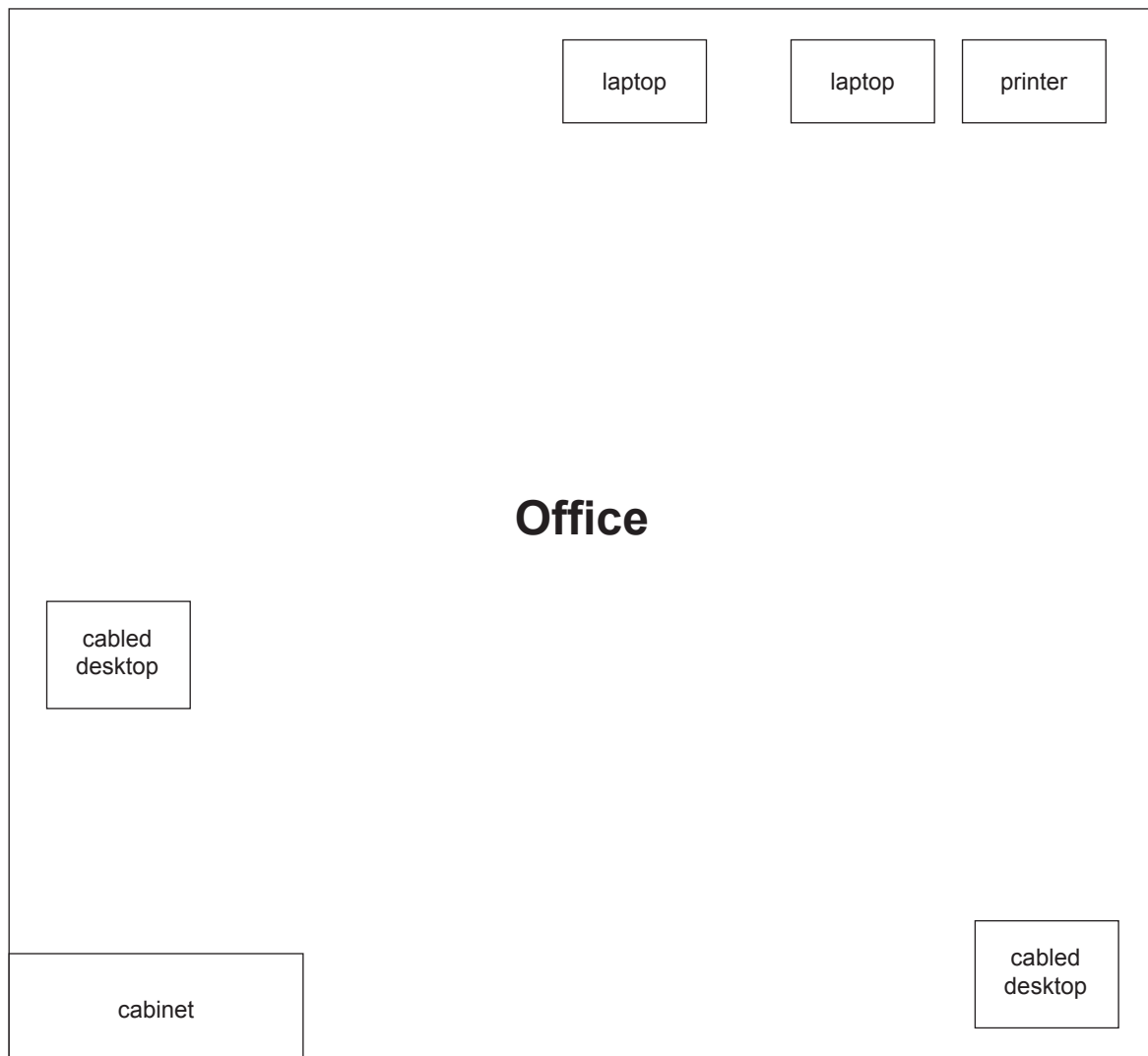
	Order
Problem 1	
Problem 2	
Problem 3	

Question 18 (8 marks)

Justin, an online insurance broker, has just started his own small business. He has asked Andy from MWX Computing to draw a network diagram for his new office space.

The layout of the new office space is shown in the diagram below.

a. Complete the diagram on page 22 by adding the components required for the network to function and label each component.   4 marks

b. Justify four of your additions to the diagram on page 22.   4 marks

1. _____

_____

2. _____

_____

3. _____

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4. _____

_____

END OF QUESTION AND ANSWER BOOK