

STUDENT NUMBER           Letter

# VCE VET INFORMATION, DIGITAL MEDIA AND TECHNOLOGY

## Written examination

Thursday 9 November 2017

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	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 20 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**

When protecting emails sent via the internet, the user should

- A. encrypt the email.
- B. print the email and then delete it.
- C. delete the email after it has been sent.
- D. cc the email to another email account.

**Question 2**

Justine's family, which includes Roger, Nick, Meg and their pet dog Rover, has a new wireless router. The family needs a password for the router.

Which one of the following is the best password for the family?

- A. just07meg#\$
- B. just12MegNi
- C. rover34#nick
- D. JnMr92\$RmNj

**Question 3**

Which list contains only operating system (OS) boot media?

- A. SSD, HDD, DVD, CD, USB
- B. NTFS, USB, HDD, SSD, ERD
- C. USB, CD, DVD, SSD, FAT32
- D. ERD, SSD, DVD, CD, FAT32

**Question 4**

A computer technician at a local bank is having problems with some commercial software.

The most useful source of information for finding a solution to this problem would be

- A. reports.
- B. brochures.
- C. online help.
- D. project specifications.

**Question 5**

The most effective way to stop intruders from gaining electronic access to a specific network is

- A. a firewall.
- B. encryption.
- C. a username and password.
- D. locks and bars on windows.

**Question 6**

A large organisation wants to update its website to show clients how to use its new accounting software.

The most suitable form of user documentation would be a

- A. table of contents.
- B. Help Desk guide.
- C. quick start guide.
- D. technical manual.

**Question 7**

Why is reviewing client feedback an important part of an organisation's long-term strategy?

- A. to ensure the organisation gets paid
- B. so the client feels that the organisation cares
- C. to ensure the organisation improves its service next time
- D. it is mandated by law that the organisation provides feedback to the client

**Question 8**

Elouise wants to check the network card on a client's computer. She decides to perform a network loopback test from the command line.

Which one of the following commands should Elouise use?

- A. test -loopback
- B. ping 127.0.0.1
- C. ping local-host
- D. ping 202.131.95.30

**Question 9**

Davesh's Diner is trialling a new online ordering system for its takeaway food menu.

What form should the instructions take to help customers place an accurate order?

- A. a downloadable PDF file with written instructions
- B. an instruction booklet that can be emailed to the customer
- C. a link to a set of instructions at the beginning of the order form
- D. a step-by-step explanation of what to do at each stage of the order

**Question 10**

An advantage of using virtual memory in conjunction with physical memory is that

- A. the OS will be faster.
- B. files are stored more securely.
- C. more data can be accessed by the OS at any one time.
- D. memory is maintained when the computer is turned off.

**Question 11**

Ross runs his own ICT support business and has just won the contract to support the local hospital. His first task is to implement a new database management system.

Ross has gained approval to implement the solution.

What must he do next?

- A. Investigate and document the solution.
- B. Confirm software, hardware and/or network requirements with the client.
- C. Investigate and document the amount of technical support the client needs.
- D. Document additional requirements identified in the investigation and refer them to the client.

**Question 12**

Which one of the following will allow an ICT support business to assess the level of technical expertise needed by a client?

- A. the business hours of the client
- B. the costs associated with the support
- C. the actual tasks that will be conducted
- D. the number of holidays that are included in the support

**Question 13**

What does CAT 6 UTP refer to?

- A. Category 6 Universal Twisted Pair
- B. Category 6 Unshielded Twisted Pair
- C. Catalogue 6 Universal Twined Parity
- D. Cable and Telephone 6 Unshielded Twisted Pair

**Question 14**

The Katamatite Radio Networking Company (KRNC) maintains the communications equipment for Goulburn–Murray University’s (GMU) wide area network (WAN). The annual maintenance for the equipment is now due. It will involve a three-hour outage, during which time all WAN links between the different university campuses will not function.

Which one of the following offers the best conditions for the work to be completed?

	<b>Timing</b>	<b>Communication</b>
<b>A.</b>	between 9.00 am and midday on Thursday	after a letter of confirmation from GMU to KRNC has been received
<b>B.</b>	between 9.00 pm and midnight on Monday	after a letter notifying GMU’s ICT department has been sent
<b>C.</b>	between 9.00 am and midday on Sunday	none
<b>D.</b>	between 3.00 pm and 6.00 pm on Friday	after a letter of confirmation from the GMU Student Council has been received

**Question 15**

Mia has a computer with 1 GB of RAM. She frequently uses the following apps.

<b>App</b>	<b>Memory required (MB)</b>
word processor	150
desktop publisher	800
spreadsheet	300
database	400
Game 1	350
Game 2	250
Game 3	450

If the virtual memory is set at 512 000 KB, what is the maximum number of apps Mia can run at the same time?

- A. 4
- B. 5
- C. 6
- D. 7

**Question 16**

At 10.00 am, an ICT technician is simultaneously sent four issues to deal with:

- CEO – The CEO cannot access their social media account.
- payroll – The accountant cannot upload payroll details that are due at the bank by 2.00 pm.
- data projector – The boardroom’s data projector must be repaired before an important meeting that evening.
- fileserver – The fileserver containing the inventory database is down.

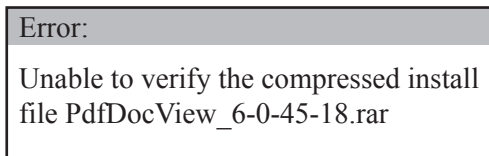
Which of the following is the best order in which to solve these issues, given that ‘1’ indicates the highest priority and ‘4’ indicates the lowest priority?

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>A.</b>	payroll	fileserver	data projector	CEO
<b>B.</b>	data projector	payroll	fileserver	CEO
<b>C.</b>	fileserver	CEO	data projector	payroll
<b>D.</b>	CEO	fileserver	data projector	payroll

**Question 17**

The PdfDocView program can open PDF documents for viewing and editing. It can check for updates over the internet, and automatically download and install them.

However, when attempting to download the latest update, the error message below appeared.



To troubleshoot this problem, the correct procedure is to

- A. uninstall the PdfDocView program and then reinstall it.
- B. reboot the computer and try to download the update again.
- C. uninstall the PdfDocView program and then install a different PDF editing program.
- D. review the Frequently Asked Questions (FAQs) on the PdfDocView program's website.

**Question 18**

Advice is being given to a client on a software solution.

What is the appropriate order of events? (Note: Not all steps are included.)

- A. Arrange a time with the client for the support to take place.  
Provide documentation to the client.  
Confirm software requirements.  
Obtain client approval.  
Provide one-on-one instruction.  
Document a solution.
- B. Investigate a solution.  
Document a solution.  
Obtain client approval.  
Arrange a time with the client for the support to take place.  
Provide one-on-one instruction.  
Provide documentation to the client.
- C. Document a solution.  
Discuss and agree on the level of technical support.  
Provide one-on-one instruction.  
Investigate technical support.  
Confirm software requirements.  
Investigate a solution.
- D. Investigate a solution.  
Provide one-on-one instruction.  
Investigate technical support.  
Document a solution.  
Obtain client approval.  
Discuss and agree on the level of technical support.

**Question 19**

Deiter has purchased a preconfigured VOIP adaptor. He plugged it into his internet router, as instructed in the documentation from the VOIP equipment provider. Next, he plugged his old phone into the VOIP adaptor. When he is making phone calls, the call often drops out if his wife is streaming internet movies on their ultra-high-definition (4K) television.

What is the cause of and the solution to this problem?

- A.** Cause: Deiter has incorrectly configured the internet packet size on the VOIP adaptor.  
Solution: Deiter needs to read the instructions again and set the correct packet size.
- B.** Cause: The VOIP adaptor is using the wrong codec to communicate with the VOIP provider's servers.  
Solution: Deiter needs to contact the VOIP provider's Help Desk for assistance with solving this problem.
- C.** Cause: The VOIP data is overwhelmed by the movie data on his internet connection.  
Solution: Deiter needs to ask his internet service provider (ISP) for a new router that supports an ultra-high-definition (4K) television.
- D.** Cause: The VOIP data is overwhelmed by the movie data on his internet connection.  
Solution: Deiter must organise Quality of Service (QoS) for his internet connection to prioritise the VOIP data over the television data from his ISP.

**Question 20**

Which of the following shows the various wi-fi security combinations in order, from the **best** security combination at the top to the **worst** security combination at the bottom?

- A.**
- |                        |              |
|------------------------|--------------|
| WPA2 + strong password | <b>Best</b>  |
| WPA + strong password  |              |
| WPA2 + weak password   |              |
| WPA + weak password    |              |
| WEP + strong password  |              |
| WEP + weak password    |              |
| none                   | <b>Worst</b> |

- B.**
- |                        |              |
|------------------------|--------------|
| WPA2 + strong password | <b>Best</b>  |
| WPA + strong password  |              |
| WEP + strong password  |              |
| WPA2 + weak password   |              |
| WPA + weak password    |              |
| WEP + weak password    |              |
| none                   | <b>Worst</b> |

- C.**
- |                        |              |
|------------------------|--------------|
| WEP + strong password  | <b>Best</b>  |
| WPA2 + strong password |              |
| WPA + strong password  |              |
| WEP + weak password    |              |
| WPA2 + weak password   |              |
| WPA + weak password    |              |
| none                   | <b>Worst</b> |

- D.**
- |                        |              |
|------------------------|--------------|
| WPA2 + strong password | <b>Best</b>  |
| WPA2 + weak password   |              |
| WEP + strong password  |              |
| WEP + weak password    |              |
| WPA + strong password  |              |
| WPA + weak password    |              |
| none                   | <b>Worst</b> |

**SECTION B – Short-answer questions**

**Instructions for Section B**

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

**Question 1** (2 marks)

Nadia has set up her smart phone to unlock with her thumbprint instead of a password. She decided not to set a password as an alternative access method.

Provide two reasons why the manufacturer of the smart phone would recommend an alternative access method.

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

**Question 2** (3 marks)

Provide three advantages of using a web proxy server for a small business.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**Question 3** (2 marks)

DHCP is a protocol that can be set up on a client's computer. This protocol allows the computer to connect to a LAN easily.

- a. Provide the full name of this protocol. 1 mark

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- b. Apart from the client's computer and its installed software, identify **one** requirement that must exist on the LAN for the DHCP protocol to function correctly. 1 mark

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**Question 4** (2 marks)

Identify one security feature and explain how it helps to maintain security on a LAN.

Security feature \_\_\_\_\_

Explanation \_\_\_\_\_

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**Question 5** (2 marks)

The Help Desk Operator is meeting with a client about a problem. The client says that the problem has occurred twice before.

- a. What has the Help Desk Operator failed to do in this situation? 1 mark

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- b. How would the response identified in **part a.** have helped the situation? 1 mark

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**Question 6** (2 marks)

Every day at 2.00 am, the accounts system at Zappo Mobile checks customers' data usage. It sends out a text to warn customers when they have exceeded 50%, 80% or 100% of their monthly data usage.

Describe a disadvantage of this for the customer.

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**Question 7** (3 marks)

A computer business provides network, hardware and software support that is aimed at businesses being run from people's homes. After a job is completed, the client receives an invoice and a feedback form by email.

Provide a sample question for the feedback form with

- a Boolean response

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- an open-ended response

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- a drop-down box (include both the question and the responses to select from).

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**Question 8** (4 marks)

Name and describe the functions of two tools that can be used to troubleshoot a network problem.

1. Name \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Name \_\_\_\_\_

Description \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Question 9** (3 marks)

Novak has installed a new operating system (OS) for one of his clients. A client evaluation should be done.

a. When should the client evaluation take place? 1 mark

\_\_\_\_\_

b. Explain why the client evaluation should take place at this time. 2 marks

\_\_\_\_\_

\_\_\_\_\_

**Question 10** (3 marks)

Terri runs a dog-walking business from her home. She has business software on her personal laptop for all business letters and accounts. Her laptop runs on the Finestra OS. Recently, the Australian Dog Registry released a database management system called Woof to store information about all registered dogs in Australia. Woof works only on the Honeycrisp OS.

- a. What issue must Terri consider if she chooses to install Woof on her laptop? 1 mark

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- b. Recommend two solutions that would enable Terri to use both her existing business software and Woof. 2 marks

1. \_\_\_\_\_

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2. \_\_\_\_\_

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**Question 11** (7 marks)

The business that Emily works for has updated its latest application and she needs to create the application's user documentation for the business's website.

- a.** List three processes that Emily must follow before she can create the application's user documentation. 3 marks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

- b.** Describe two advantages of putting the application's user documentation on the website. 2 marks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

- c.** Describe two disadvantages of putting the application's user documentation on the website. 2 marks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

**Question 12** (3 marks)

Matt has two identical portable hard disk drives (HDDs). He uses them for alternating backups. He keeps one at his aunt’s house and one in his garage. His computer’s HDD failed and was replaced with a new, empty HDD. When connected to his computer, the portable HDD with Matt’s most recent backup showed a flashing LED but it was not listed on his file manager.

Describe what Matt could do to recover his data.

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**Question 13** (6 marks)

- a.** Suggest two reasons for regularly patching an OS. 2 marks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

- b.** Many internet-connected computers are set to receive OS patches automatically over the internet. However, there are some situations when an internet-connected computer must not be automatically patched.

Use an example to explain why some computers must not be automatically patched. 2 marks

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- c.** An 'air-gapped' computer has no direct connection to the internet either by wired or wireless connection.

Explain an advantage of installing OS patches on an air-gapped computer. 2 marks

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Question 14** (3 marks)

Landscaper’s Equipment hires out tools for gardening and home maintenance. Saturday mornings can get very busy as many customers want to get their tools when the store opens at 8.00 am. To speed up the process, Landscaper’s Equipment has decided to introduce four self-service terminals where customers can:

- enter their personal information
- pay for items
- print a receipt that they pass on to the staff, who help them retrieve the hired item.

The instructions for operating the self-service terminals will be on a wall chart above each terminal.

Outline three features that the instructions should have to make them accessible for people with special needs.

1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**Question 15** (7 marks)

James is the head of ICT at Broughton Secondary College. He is interviewing Sarah for a vacant Help Desk job.

- a. James asks Sarah the first question: ‘A user calls and says, “I pressed the power button on my computer. It ‘beeped’, but the screen has been black for five minutes”. What troubleshooting questions should you ask?’

Suggest four questions that Sarah should ask.

4 marks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_

- b. James then asks Sarah another question: ‘Students using the library are complaining that the ICT equipment is not performing well. What techniques can be used to carry out an investigation into the students’ complaints?’

Describe three techniques that Sarah should suggest.

3 marks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

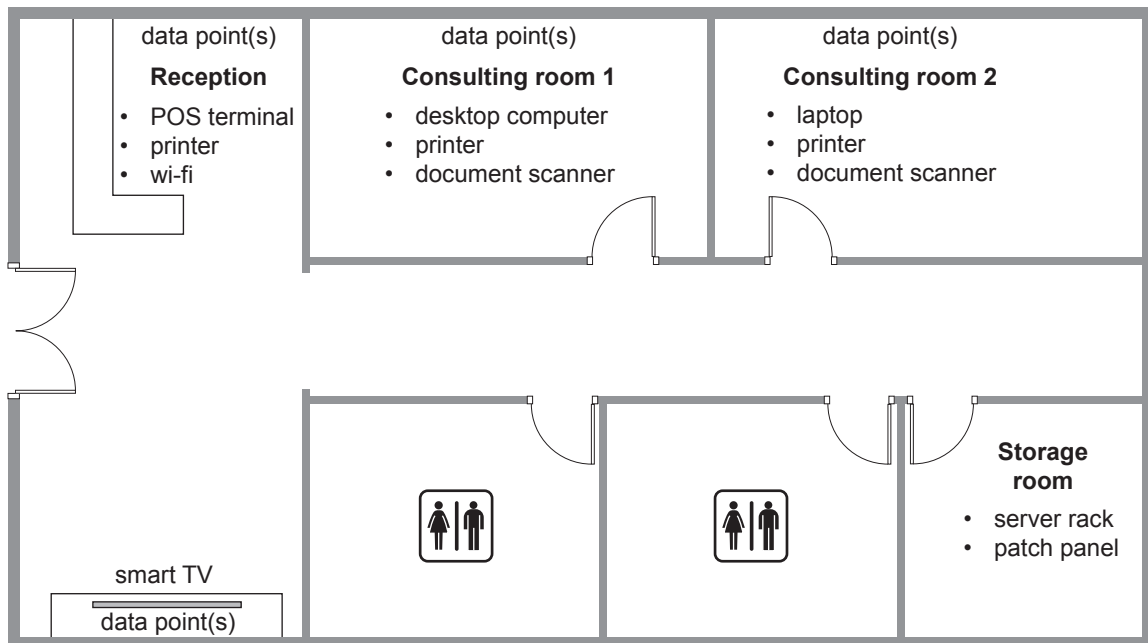
\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

**Question 16** (7 marks)

Dr Brownstein is setting up his new shared consulting rooms. He has labelled where the network data points could be and where the server equipment is on a building map. He wants to reduce some costs by re-using a wi-fi access point that he already has.



a. How many data points should be installed? Justify your answer. 2 marks

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b. What size patch panel should be installed? Justify your answer. 2 marks

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c. Identify three possible techniques to deliver the responses in **part a.** and **part b.** to Dr Brownstein. 3 marks

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**Question 17** (2 marks)

Margie has logged another job with the Help Desk about the printer in the company office.

The following is a summary of the Help Desk jobs for that printer over the last two months.

Date/Time	Logged by	Ph. #	Equip.	Issue	Tech.	Resolution
2 Nov 13:15	Margie F	115	PR printer	printer jammed – letter to local MP	SD	cleared jam and used fresh letterhead paper in tray 2
1 Nov 10:23	Nikki K	118	PR printer	printer jammed – press release	GF	cleared jam and adjusted the paper guides in tray 2
26 Oct 09:48	Margie F	115	PR printer	printer jammed – official response to freedom of information request	SD	cleared jam and fiddled with the letterhead paper
24 Oct 11:00	Margie F	115	PR printer	cyan printer toner needs replacing	SD	replaced toner
20 Oct 08:55	Michael S	122	PR printer	out of paper – need three reams of A4	GF	dispatched from stores
19 Oct 16:22	Tamzin Mc	110	PR printer	printer jammed – press release	CT	cleared jam and fanned letterhead paper in tray 2
19 Oct 14:07	Margie F	115	PR printer	printer jammed – official response to freedom of information request	JT	cleared jam and used fresh letterhead paper
19 Sep 13:46	Margie F	115	PR printer	waste toner bottle is full	JT	replaced bottle

- a. There is a high number of ‘printer jammed’ jobs on the summary list.

What is the cause of this issue?

1 mark

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- b. What needs to be done to fix the printer jamming issue permanently?

1 mark

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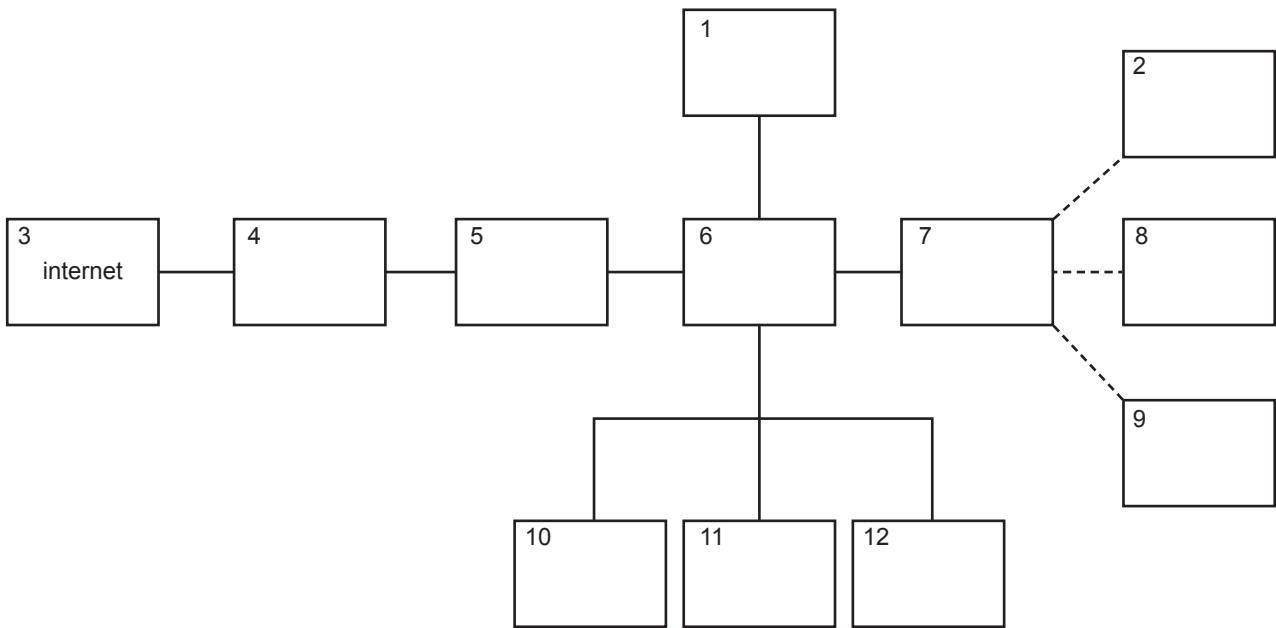
**Question 18** (9 marks)

Anita’s supervisor has asked her to create a network map of the components needed to set up a new office.

- a. Complete the skeleton of the network below by placing the appropriate components from the following list in the blank boxes. Not all components need to be used and components may be used more than once.

7 marks

- |             |         |          |         |
|-------------|---------|----------|---------|
| laptop      | desktop | modem    | WAP     |
| switch      | server  | firewall | printer |
| smart phone | NAS     | hub      | CAT 6   |
| CAT 5       |         |          |         |



- b. Explain why the internet is located in box 3.

2 marks

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