**Victorian Certificate of Education
2009**

STUDENT NUMBER

Letter

Figures

Words

VCE VET INFORMATION TECHNOLOGY

Written examination

Monday 16 November 2009

**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

Section	Number of questions	Number of questions to be answered	Number of marks
A	20	20	20
B	23	23	70
			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 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

Which of the following represents accepted safe workplace practice?

A.   eating and drinking at the workstation

B.   using diffused, ceiling-mounted lighting

C.   storing spare stationery in the nearest passageway

D.   running power and network cables in workstation knee space

Question 2

It is important for a Help Desk technician to obtain approval from a client before starting work on their computer problem so that the client

A.   can clean up their data files.

B.   has understood the process.

C.   has backed up their programs.

D.   is not interrupted during a lunch break.

Question 3

Your computer is running very slowly. A hard disk performance diagnostic tool suggests a major configuration change to make your computer perform faster.

The best decision to make is to

A.   ignore the change.

B.   perform the change after a full backup.

C.   perform the change as soon as possible.

D.   run the diagnostic tool two months later.

Question 4

The **main** use of a defragmentation utility program is to

A.   reduce data access times.

B.   increase the free disk space.

C.   delete any unused data files.

D.   detect and eliminate viruses.

Question 5

A wizard is a form of user documentation that

A. allows the user to rapidly save a document that is currently on the desktop.

B. has an automatic spelling and grammar checking utility built in to most software packages.

C. has a special cursor image that allows the user to achieve specific tasks in a software package.

D. helps the user to carry out a specific task by presenting a series of dialog boxes to customise the task.

Question 6

You are working at a Help Desk and one of your responsibilities is to respond to clients' problems over the telephone. You have just finished helping a client to solve a 'recurring error message' problem.

To be proactive and minimise possible future problems on the system, the most important action to take next is to

A. send the client a customer satisfaction form.

B. check to determine if the client has telephoned before with other problems.

C. check system error logs to see if other clients have had a similar problem and find a way to prevent it from occurring again.

D. email or telephone the client back to confirm the details and ask them to contact you if the problem occurs again over the next week.

Question 7

A driver of a car travels on a road where tolls are charged. An electronic tag is used to automatically charge the driver a fee when the car passes the electronic sensors.

This is an example of a

A. batch system.

B. policing system.

C. real-time system.

D. multitasking system.

Question 8

Which of the following contains **only** examples of user documentation?

A. brochures, flow charts, posters, quick reference cards, training materials

B. online help, posters, project specifications, pseudocode, quick reference cards

C. brochures, online help, posters, project specifications, programmers' reference manual

D. brochures, online help, project specifications, quick reference cards, training materials

Question 9

The Suburban Stationery Supply Company (SSSCO) employs about 20 new staff each year; one or two each month. New employees must learn SSSCO's Occupational Health and Safety (OH&S) policies and procedures and acquire basic first aid qualifications.

What is the most appropriate way for new employees to learn the company's OH&S policies and procedures?

A. schedule internal group training once every three months

B. have the first aid trainers provide external group training

C. tell them to read the company's policy and procedures manual

D. have the Human Resources Manager train them individually

Question 10

Sarah works for the IT Help Desk. A user rang her about a Trojan virus that could not be removed by the company's antivirus.

The most efficient way for Sarah to fix this is by

A. purchasing, installing and using an anti-spyware program.

B. purchasing, installing and using another antivirus program.

C. recording the symptoms of the virus and contacting the antivirus manufacturer.

D. recording the symptoms of the virus and searching the Internet for the name of the virus.

Question 11

A local council replaced all its 15-inch (38 cm) cathode ray tube (CRT) screens with 24-inch (61 cm) high-resolution widescreen liquid crystal display (LCD) screens. Shortly after this, a number of users complained about having sore necks and others complained about having back pain.

For the **best** solution to these problems, the new screens need to

A. have their resolution reduced to make text larger to read.

B. have their brightness and contrast reduced to eliminate glare.

C. be moved farther away from the users to reduce sideways neck movement.

D. be moved nearer to the desk's surface to ensure that users are not looking upwards.

Question 12

Documentation standards are guidelines for producing the documents used by an organisation.

When a development team uses a style guide to produce a training manual for a software package, which of the following types of documentation standards is the team using?

A. industry

B. training

C. organisational

D. developmental

Question 13

You are the IT technician on night shift at a large data centre. At 3.00 am an alert is displayed on your screen that one of the hard disk drives (HDDs) in a RAID array with hot swappable HDDs has had one of the drives fail (i.e. it stopped working).

What is the most appropriate action?

A. replace the faulty HDD in the RAID without shutting down the server

B. log the information into the Help Desk system for the day shift technicians to fix

C. ring your supervisor at home for advice on how to solve the problem with the RAID

D. shut down the server that uses the RAID, replace the faulty HDD and restart the server

Question 14

A recently advertised job for an Information Technology Officer position included in the job description 'occasional out-of-hours work may be required'.

Which of the following is the **most likely** reason for this?

A. installing and testing software upgrades

B. boosting the take-home pay with overtime

C. providing extended hours support for the retail sales staff

D. cleaning the server room as the contract cleaners are not allowed in there

Question 15

When is the **best** time to benchmark a new computer?

A.   on the test bench after the operating system is configured

B.   on the test bench after all standard software packages are installed

C.   at the user's workstation with all standard software packages installed and during standard work hours

D.   at the user's workstation with all standard software packages installed, but after hours so the user is not interrupted

Question 16

Immediately after a company-wide power failure, the Help Desk receives a number of calls complaining about users' computers taking a long time to restart.

What is the **most likely** explanation to give users for these delays?

A.   The network is slow because everyone is restarting at the same time.

B.   Your system is slow because the power failure corrupted your memory.

C.   The network is slow because it is recovering from a hard disk corruption caused by the power failure.

D.   Your system is slow because it is checking for possible file system corruption caused by the power failure.

Question 17

Simon's one-and-a-half-year-old computer is running slower than usual. He takes his computer to a repair shop to find out the problem. Jenny is the technician in charge. She scans Simon's computer with an antivirus program, and cleans up and defragments the hard disk. The computer now runs a little faster. Jenny also notices that although Simon's computer has enough hard disk space, it would perform better with more RAM.

When Simon comes to pick up his computer, Jenny's best action is to

A.   install more RAM in Simon's computer.

B.   suggest to Simon that he needs more RAM.

C.   tell Simon that his computer is working correctly.

D.   suggest to Simon that he needs a full system upgrade.

Question 18

Occupational Health and Safety (OH&S) posters are displayed around an organisation. They inform workers of their key contact points for 'day-to-day' and 'emergency' use. You are updating the list of contact points.

Select the **best** combination of people to include on the list.

A.   OH&S Manager, First Aid Officers, local OH&S contact, Evacuation Wardens

B.   First Aid Officers, Evacuation Wardens, OH&S Manager, Union Representatives

C.   local OH&S contact, First Aid Officers, Evacuation Warden, Union Representative, Canteen Manager

D.   Evacuation Wardens, local OH&S contact, OH&S Manager, First Aid Officers, Social Club Representative

Question 19

Antonio designs a Help Desk log that is used to record and report hardware problems.

Which is the **best** combination of headings for the log?

A. Nature of problem/incident
   Recommended training
   Result of suggested action
   Time lost because of incident

B. Nature of problem/incident
   Result of suggested action
   Time lost because of incident
   User name, date, time and location

C. Nature of problem/incident
   Recommended alternative hardware
   Result of suggested action
   User name, date, time and location

D. Recommended alternative hardware
   Recommended training
   Time lost because of incident
   User name, date, time and location

Question 20

The operating system of a computer allows the Systems Administrator to set **permissions** on files for individuals or groups of individuals. These permissions can be set to give users different degrees of access to the file or files. Some common permissions are described in the table below.

Permission identifier	Permission name	Permission description
r	Read	the ability to open a file and view the contents
w	Write	the ability to open a file, edit the contents and save the changed file to disk
x	Execute	the ability to run a program file

The Systems Administrator has been asked to set up the permissions for the following users who need to access the same files.

Group T – Teachers, who provide notes and assignments on the network for student use, as well as assessing student programs submitted for evaluation

Group E – Engineering students who need to access the notes and assignments

Group P – Programming students who need to access the notes and assignments, as well as test their software programs on the system

Which of the tables below **best** represents the **permissions** that the Systems Administrator will set up for groups T, E and P described above?

A.
Group T	rwx
Group E	r - -
Group P	rwx

B.
Group T	rwx
Group E	rw -
Group P	rwx

C.
Group T	rw-
Group E	rw-
Group P	r - x

D.
Group T	r - x
Group E	rwx
Group P	rw -

END OF SECTION A

SECTION B – Short answer questions

Instructions for Section B

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

Question 1

Todd is using a spreadsheet. He is having problems trying to create a macro that prints a section of his spreadsheet automatically. You are on duty at the Help Desk.

Suggest **two** ways that you could help Todd with his spreadsheet.
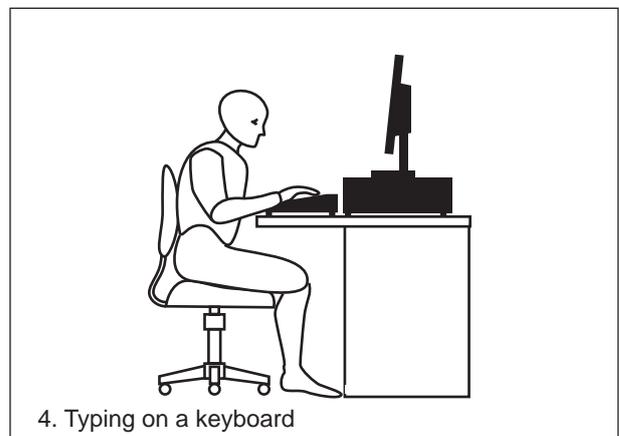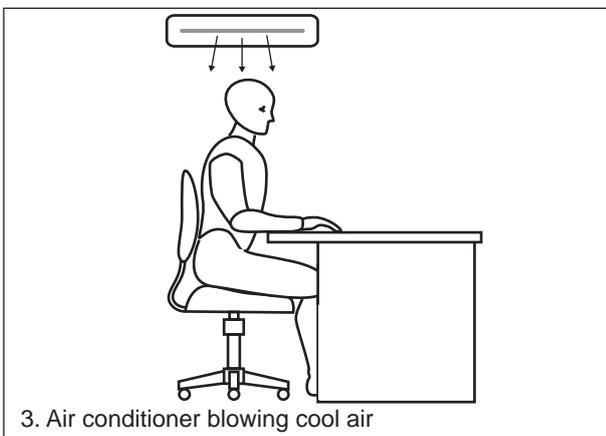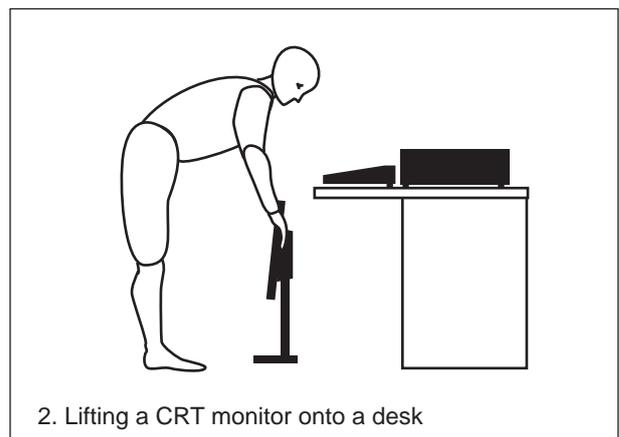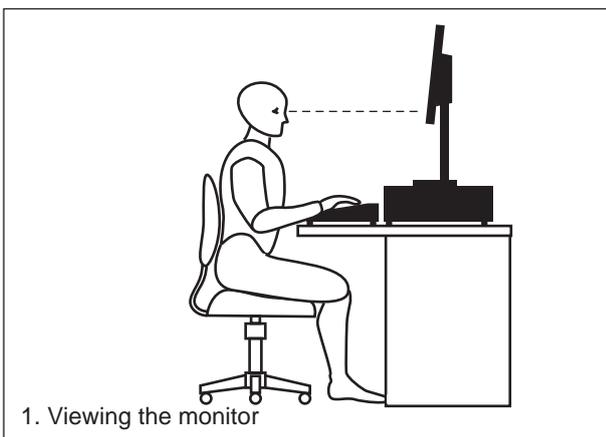
1. _____

_____

2. _____

_____

2 marks

Question 2

Underneath each of the workplace pictures below, state what is wrong from an Occupational Health and Safety point of view.

1. Viewing the monitor

2. Lifting a CRT monitor onto a desk

3. Air conditioner blowing cool air

4. Typing on a keyboard

4 marks

SECTION B – continued
TURN OVER

Question 3

List three features of good user documentation.

1. _____

2. _____

3. _____

3 marks

Question 4

Sandy has finished installing the operating system software on a new laptop computer for a manager at the accounting company where she works. The manager is new to the company and is not yet familiar with its computer systems.

From the list below, tick (✓) the boxes for the **three** most important things for Sandy to do when she delivers the laptop to the manager.

☐ ensure that the manager knows how to look up the hardware settings on the computer

☐ demonstrate how to change the image and background colours on the desktop

☐ set up a time for the training that will cause minimal disruption to the manager

☐ demonstrate how to access the software that the manager will need to use

☐ demonstrate how to copy movie files onto a disk using the DVD writer software

☐ ensure that the manager has a working login account/password and can access their email

3 marks

Question 5

Jane logs into her favourite social networking site called 'MyFace'. She receives a message from a friend who tells her to click on a fun website. Jane clicks on the website link and gets the following error message.
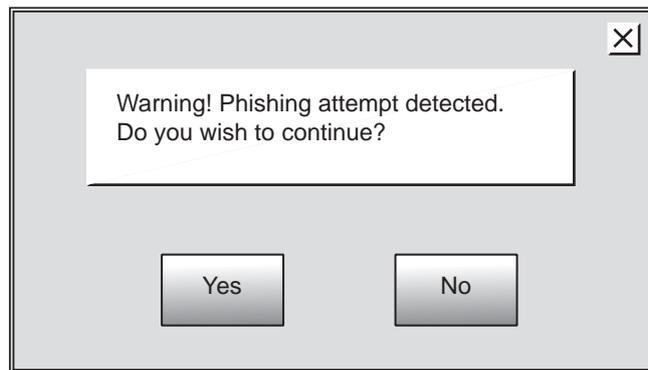
a. What is 'phishing'?

_____

1 mark

b. Jane clicked the 'No' button to cancel the message.
What should she do next?

_____

1 mark

Question 6

User documentation is normally developed for any new software application. One important consideration is the target audience.

a.   Indicate which **one** of the following **best** illustrates a typical primary intended target audience for user documentation by ticking (✓) the appropriate box.

☐   Website developer

☐   Systems designer

☐   Help Desk operator

☐   Accounts input operator

☐   Hardware support personnel

☐   Applications programmer

1 mark

After user documentation has been created, it needs to be delivered to the intended users. Several hundred staff members need to access this user documentation that is updated frequently.

b.   Select the **most** suitable way for an organisation to provide its user documentation by ticking (✓) the appropriate box.

☐   CD-ROM, held by each supervisor

☐   Hard copy at the Help Desk

☐   Link on corporate World Wide Web site

☐   Hard copy at each workstation

☐   Link on corporate intranet

☐   Quick reference cards for all staff members

1 mark

Question 7

A system tool called 'System Restore' is used to backup computer operating system settings at a predetermined time. It also restores system settings from the backup.

Describe **two** things that this tool can do to restore the system settings.

1. _____

_____

2. _____

_____

2 marks

Question 8

Angela rings the Help Desk to complain that she cannot finish printing her business report. She urgently needs the report for her management meeting.

An extract of the Help Desk database is shown below.

Name	Hardware	Age of hardware	Connection
Angela	laser printer	2 years	USB connection to computer

a. Tick (✓) the correct box.

The type of problem Angela is experiencing is

☐ hardware related.

☐ software related.

☐ network related.

1 mark

b. Outline **two** other common laser printer problems.

1. _____

_____

2. _____

_____

2 marks

Question 9

You work at the Help Desk of a company that is upgrading to a new database system in two months. The new database system is very different from, and much more complicated than, the current system. There are several training options available, including the following.

Choose the **most** appropriate of these training methods by ticking (✓) the appropriate box.

☐ issue the users with the new user manuals, quick reference cards and an intranet list of frequently asked questions

☐ run four in-house courses, spread over six weeks

☐ send all the users to the next off-site training course run by the system supplier

☐ provide one-to-one training to those staff having difficulty with the new system

Justify your choice.

_____

_____

1 mark

Question 10

There are a number of types of user documentation that can be used to support computer users in different situations.

a. Some types of user documentation include the following.

- frequently asked questions (FAQ)
- online tutorial
- installation guide
- company policy and procedures guide
- quick start guide
- context sensitive help
- user manual
- training manual

Complete the following table by inserting **one** of these types of documentation in each row.

Situation	Best type of user documentation
provides a simple reference that allows the user to start using an application and rapidly get to know the main basic features	
often found on a website where many users post common problems and solutions relating to a particular package	
used when employees need to know how to conduct a stock audit	
provides the user with help relevant to the task they are currently performing	

4 marks

b. If you were to create a user manual for a software package, name one feature to include that assists the user to find things quickly.

_____

1 mark

Question 11

a. Provide **one** reason why a liquid crystal display (LCD) monitor is safer than a cathode ray tube (CRT) monitor.

_____

1 mark

b. Why is it desirable to locate heavily used photocopiers and laser printers away from a person's regular workspace or desk?

_____

_____

1 mark

c. Explain why the base of an office chair usually has five wheels rather than four wheels.

_____

_____

1 mark

Question 12

The IT technical staff at Kevin's workplace recently sent out an email reminding staff to delete unwanted messages from their email 'Inbox' and 'Sent' folders.

a. Why did the IT section request this?

_____

1 mark

After deleting some email, Kevin decided to clean up his computer's hard drive. He found lots of items that he had never used, so he sent them all to the recycle bin. Most of the 'never used items' were found in the folders called 'System Files' and 'Program Files'. When Kevin restarted his computer, the login screen did not appear.

b. What is the most likely cause of this problem?

_____

_____

1 mark

To fix the problem, the IT technical staff followed these steps.

- took Kevin's computer to their work area
- removed the hard drive from his computer and backed up his data files into network storage
- put the hard drive back into the computer

c. What additional steps are now required to get the computer working for Kevin?

_____

_____

2 marks

Question 13

You set up a new computer at home including your favourite online game 'PeaceCraft,' an office software package and the latest protection software from 'Virus Busters,' which includes the following features.

- antivirus
- anti-spam
- firewall
- parental controls

When 'PeaceCraft' starts, you get an error message indicating that it cannot open certain ports.

a. Tick (✓) the box which indicates the component of 'Virus Busters' that controls the ports that you need to open.

☐ antivirus ☐ anti-spam ☐ firewall ☐ parental controls

1 mark

b. What type of software does the parental controls component monitor and control?

_____

1 mark

c. Give **one** example of what the parental controls component does.

_____

1 mark

Question 14

You have recently started a new job. As a team member you notice that many members of your team, and other teams, use an unsafe manual handling procedure. All employees have a policy and procedures handbook, which clearly shows the correct ways to perform manual handling and specifically states that the procedure you have observed is not allowed.

a. Tick (✓) **one** box that indicates your **best** action.

☐   talk to your supervisor

☐   contact the Union Representative

☐   discuss your observations with the OH&S Manager

☐   advise your team members to read their policy and procedures manuals

1 mark

You have been promoted to be team leader of a new team, which will be undertaking a new set of tasks. The OH&S section of the policy and procedures manual does not cover the tasks your team will perform.

b. Describe **one** thing that needs to be done.

_____

1 mark

Question 15

Joanne rings up the Help Desk complaining that she cannot play a DVD movie on her computer. Joanne mentions something about 'Blu-ray' being on the DVD movie cover. She is confused, as she has played other DVD movies before and she has also burnt CDs and DVDs with her computer.

a. Explain why the DVD movie does not play on Joanne's computer.

_____

_____

1 mark

b. What is the best way to solve this problem?

_____

_____

1 mark

Question 16

Hannah's network cable to her computer is faulty. She decides to replace it with a five-metre network cable temporarily until she can buy a shorter length cable. The cable runs along the floor across a doorway to a spare network connection port.

a. Tick (✓) the correct box.

The type of hazard in this case is

☐ mechanical ☐ chemical ☐ psychological ☐ electrical

1 mark

b. Suggest **two** alternative strategies that Hannah could use to solve the problem.

_____

_____

_____

_____

2 marks

Question 17

A technician working on a Help Desk may encounter many different user problems. Most user problems can be put into one of four main categories.

• software

• hardware

• training

• network

Match these categories to the examples of typical user problems shown in the table below.

Problem category	Example
	A user has forgotten their password and cannot log into the system and access the Internet.
	The desktop publishing package displays machine code characters instead of English characters when a document is opened.
	A 3D action strategy game is running very slowly.
	A user cannot remember how to use an advanced spreadsheet feature.
	From time to time the computer stops working due to faulty cables.

5 marks

Question 18

Geoff lives in a small country town by the beach, close to a caravan park. He has a broadband Internet connection via satellite. He uses the Internet to browse websites and usually sends about 15 emails per week. He has a wireless router set up so that he can use his notebook anywhere on his property. His notebook has the latest antivirus and anti-spyware installed.

Geoff is on a plan that allows him to download 1 GB of data per month. He is then charged extra for any additional downloads and his bandwidth is shaped to a slow speed. Geoff is puzzled, as during the summer period he gets a large bill from his ISP (Internet Service Provider). During other seasons, his Internet usage is well below 1 GB.

a.   What is the most likely problem that Geoff is experiencing?

_____

                                                                                                                                      1 mark

b.   How can this problem be solved?

_____

_____

                                                                                                                                      1 mark

Geoff rings his ISP's Help Desk to get detailed logs of his Internet access.

The Help Desk operator says that they will have to escalate the request.

c.   What is meant by 'escalate the request'?

_____

_____

                                                                                                                                      1 mark

Question 19

Charlie is buying a new computer that will be used for

- home office purposes
- website development
- database development.

He wants to spend as little as possible, but needs to make sure that he has equipment that will cope with the demands of memory intensive database development. He would also like to have two screens for the website and database development work.

Some information on two proposed systems is shown below.

Component	System 1	System 2
CPU	3.0 GHz dual core	3.0 GHz quad core
Memory	4 GB	2 GB
Hard disk drive	500 GB	640 GB
Video card	256 MB dual headed ATI	512 MB dual headed ATI
Screen	Two 20-inch wide screens	Two 20-inch wide screens

a. Give **one** advantage of using two screens for a website and database developer.

_____

_____

1 mark

b. Will a quad core computer always be faster than a dual core computer?
Explain your answer.

_____

_____

1 mark

c. What are **two** of the main categories of components within the quad core chip?

_____

_____

2 marks

d. Explain which computer system is the **best** choice for Charlie and his work.

_____

_____

1 mark

Question 20

The table below shows some definitions of common computer terms.

| Letter	Definition
A	checks for patches that have been released but are not installed and then installs them
B	moves all program files to the start of the hard drive and moves all the data files to the end of the hard drive
C	takes previously backed up copies of important files and copies them over the existing copies of those files
D	finds the parts of any files that have been deleted and recovers those files to the location they were deleted from
E	reads the data in a file and then rewrites it back over the top of the existing data to strengthen the fading magnetic pattern
F	checks the local version against the latest version on the Internet and installs the latest version if necessary
G	looks for damaged files on a hard drive, attempts to recover the damaged file onto a different section of the hard drive, and then marks the damaged section of the hard drive as unusable
H	reorganises files on a hard drive so that all the sections of individual files are together and in order

Write the letter of the matching definition next to each of the computer terms below.

Term	Letter
disk repairer	
system restore	
system updater	
application updater	
file defragmentation	

5 marks

Question 21

Flow chart of user documentation process
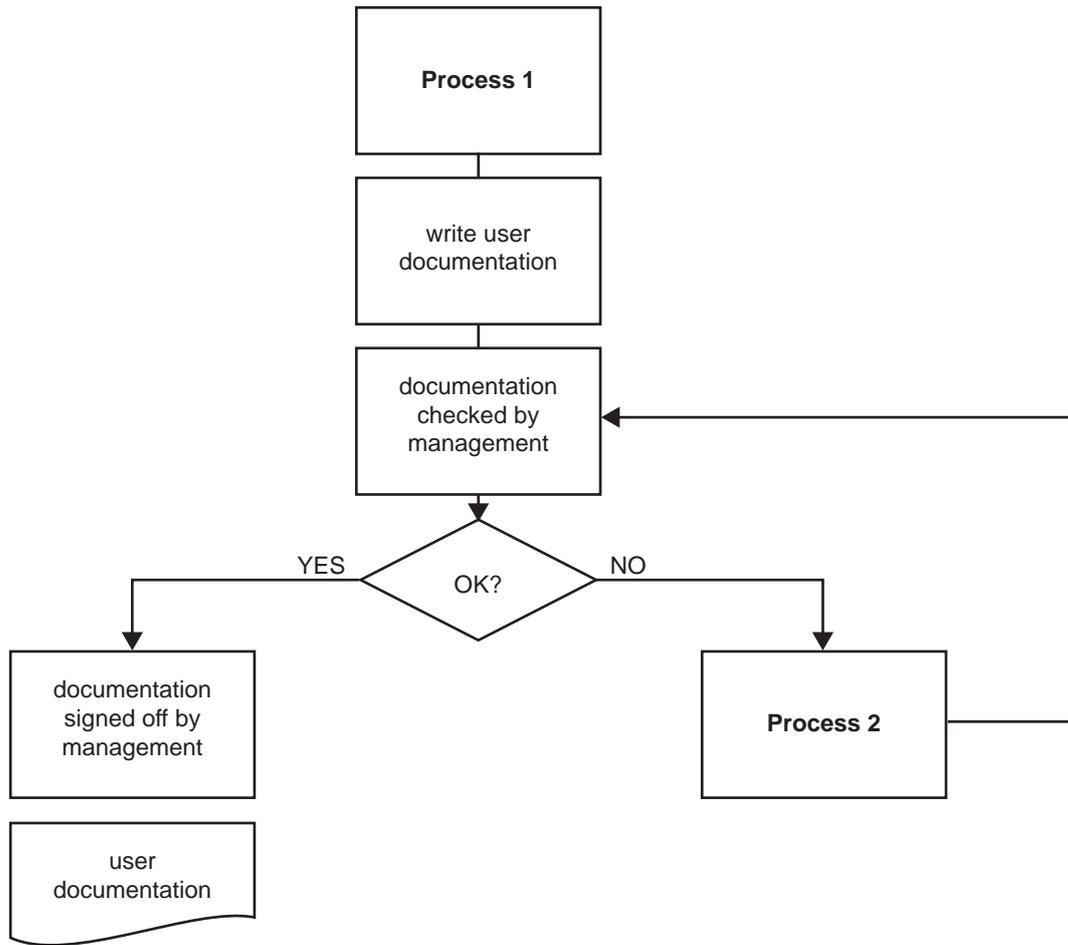
Describe Process 1 and Process 2 in the flow chart above.

Process 1 _____

_____

Process 2 _____

_____

2 marks

Question 22

Meredith's workplace operates every day except Sunday. After work finishes on Saturday, the system administrators make a full backup of all files. After work on weekdays, they back up all files that were changed or created that day.

On Wednesday, Meredith created the file Patel Proposal.

On Wednesday, Meredith modified the file Jones Proposal, which she had created on Tuesday.

On Thursday, Meredith created the file Nguyen Proposal.

On Saturday morning, an electrical storm and flash flood destroyed the computer centre. The system administrators worked hard to get a new system running by opening time on Monday. In their haste, they restored the following backups in the order shown: Saturday, Monday, Tuesday, Wednesday, Tuesday and Friday.

Comment on what Meredith finds when she attempts to open her files after they are restored.

  i.   Patel Proposal

  _____

  _____

 ii.   Jones Proposal

  _____

  _____

iii.   Nguyen Proposal

  _____

  _____

<div align="right">3 marks</div>

Question 23

A dual core computer is working very slowly. It has 4 GB of RAM, 500 MB of virtual memory and a 500 GB hard drive (with about 40% free space). The user of this computer works with very large spreadsheets and often needs to have many spreadsheets open at the same time. The system's performance was analysed and the following additional information was obtained. Each chart covers the same period of time.
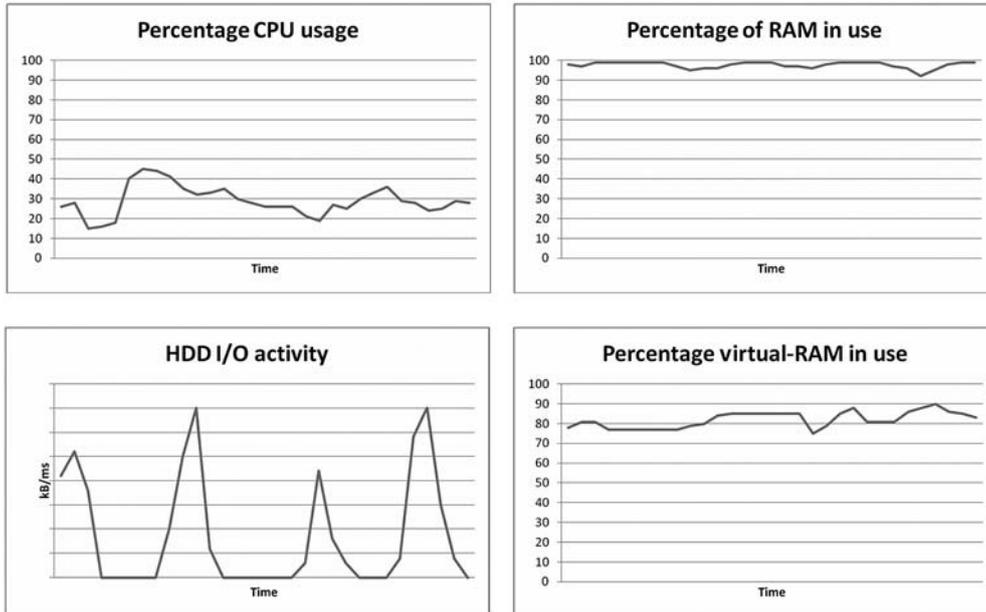
a. Identify **two** of the computer's problems from the performance graphs above.

2 marks

b. Describe how to modify the system configuration to improve this computer's performance.

1 mark

END OF QUESTION AND ANSWER BOOK