



**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**

A mouse wrist rest, an ergonomic keyboard and an ergonomic adjustable chair are some items used to

- A. add to the poor morale of many PC users.
- B. reduce user errors, fatigue and discomfort when using PCs.
- C. reduce the cost when employing support staff for the Help Desk.
- D. provide economical and competitive standards for many PC users.

**Question 2**

Amelia wishes to scan some photos to email them to her friends. The problem is that she does not know how to scan.

What type of documentation will help Amelia?

- A. user manual
- B. drivers manual
- C. installation manual
- D. technical reference manual

**Question 3**

A company wishes to upgrade their existing commercially available accounting system. Their IT manager has found a consultant who could customise the company's existing accounting system and provide full support, as well as training for staff, at a minimal cost.

Company management is most likely to

- A. wait until the end of the financial year before upgrading.
- B. buy better hardware before upgrading their existing system.
- C. approve the upgrade to their existing system to be customised.
- D. evaluate several different systems before making a decision to upgrade.

**Question 4**

After installing a new email system at IGM Insurance Company, you are required to collect staff feedback on the new system and to respond to any problems raised by staff before you can be paid. Only 5 out of 63 staff return the 4-page survey forms and some staff have complained that the survey was too long. The senior manager will not permit any more surveys as they stop staff doing their work.

An appropriate alternative way to get the feedback you need would be to

- A. organise interviews with individuals or a small group.
- B. send an email that provides rewards for returning existing survey forms.
- C. send an email with five questions to staff at their home email addresses.
- D. employ an observer to watch people use the product and report on any specific problems.

**Question 5**

The table below shows part of a Help Desk log for a company called SurfWax Pty Ltd.

Date	Time	Name	Problem	What was done	Outcome
20/11/2006	09:25	Sofie	Complained that she cannot log onto network	Reset network password	Still could not log in
20/11/2006	09:28	Bert	Error message received as 'domain SurfWax not found'	Pinged the main SurfWax server	No response

Combining the information from both log entries, the best explanation for the problem is

- A. the main network server is down.
- B. the users have forgotten their passwords.
- C. there is a virus on the network server or workstations.
- D. a network cable has been unplugged from Bert's computer.

**Question 6**

Rosa notices that her computer keeps rebooting every 5 minutes by itself. This happens in the morning half an hour after she first turns the computer on.

The **most** likely cause of the problem is

- A. a faulty video card.
- B. the reset button is sticky.
- C. the CPU fan has stopped working.
- D. the RAM on the motherboard is faulty.

**Question 7**

Which one of the following is **not** an example of user documentation?

- A. data dictionary
- B. online tutorial
- C. quick reference card
- D. hardware training manual

**Question 8**

Glen has installed some new software on a client's PC. A few days after the installation he emails an evaluation questionnaire to the client and asks them to complete and return the questionnaire within the next week.

The most likely reason for this would be that he

- A. requires the client's contact details for his database.
- B. needs to meet his quota of questionnaires for the week.
- C. needs to confirm that the software has been installed into the correct folder.
- D. needs to confirm that the software meets all of the user's requirements.

**Question 9**

A company has recently upgraded its financial software package. Erica works with the company's Help Desk team. After discussing the software with staff, she discovers that a large number of people are not using some of the advanced features of the software that would save them time and effort.

What should she do?

- A. tell the staff to use the Help menu that is included in the package
- B. nothing, most of the staff probably would not use the new features
- C. arrange for a training needs analysis survey and conduct some appropriate training
- D. show a few people how to use the new features and hope that they will show other people

**Question 10**

Shellie uses a simple database file to store records of training courses attended by staff. The training courses are classified as Occupational Health and Safety (OH&S) or General courses. The structure of the database table is made up of the following fields.

- StaffID
- Family name
- Given names
- Position
- Phone extension
- OH&S Training Courses
- General Training Courses

The last two fields contain the names of training courses and the dates on which particular staff members have attended. The data is in one long list separated by commas.

How would you get a list of all staff with First Aid qualifications?

- A. search for all records with 'First Aid' in the OH&S Training Courses field
- B. search for all fields with 'First Aid' in the OH&S Training Courses record
- C. search for all records with 'First Aid' in the General Training Courses field
- D. search for all records with 'First Aid' in the General Training Courses record

**Question 11**

Your company makes a full tape backup after work every Friday evening and incremental backups on Monday, Tuesday, Wednesday and Thursday evenings. You arrive at work Wednesday morning to find the hard drive has failed totally on the company file server and all the files on the drive are lost.

What do you need to do to recover the files?

- A. restore only Friday's full backup
- B. restore Friday's full backup and Tuesday's incremental backup
- C. restore Friday's full backup and Wednesday's incremental backup
- D. restore Friday's full backup and both Monday's and Tuesday's incremental backups

**Question 12**

A client has a problem with their file server. The keyboard lights occasionally flash on and off and then the file server reboots.

To assist you in solving the problem, you will need to

- A. dismantle and clean the keyboard.
- B. read the technical documentation for the server.
- C. read the user documentation for all the server applications.
- D. use the system tools for the operating system that is currently running on the server.

SECTION A – continued

**Question 13**

Modern computer operating systems still provide access to a command line interface. This is most likely so that

- A. computer experts will not complain.
- B. technicians can confuse ordinary users.
- C. technicians are able to troubleshoot problems.
- D. interested users can learn an old type of code-based interface.

**Question 14**

Which one of the following file types is a non-compressed format?

- A. jpg
- B. zip
- C. mp3
- D. txt

**Question 15**

Colin tries to log in on his computer at work but he gets the following message.

*The local domain server cannot be contacted.*

Other users have had no problem logging onto the system on their computers.

The cause of the problem is most likely that

- A. the <Caps Lock> key is in the wrong position.
- B. Colin's computer network cable is loose or unplugged.
- C. the local domain server is disconnected from the network.
- D. Colin needs to get his login code reactivated by the IT department as it has been disabled.

**Question 16**

The following calls come into your Help Desk in rapid succession.

- i. help a user to sort data in their spreadsheet for tomorrow's report to the Board of Directors
- ii. set up the data projector and laptop for the CEO's presentation that starts in one hour
- iii. connect the new colour printer to the CEO's secretary's PC so she can print the brochures for a mail-out that is due to go in the post in one hour

The **best** way to prioritise the calls would be

- A. ii, i then iii.
- B. iii, ii then i.
- C. ii, iii then i.
- D. iii, i then ii.

**Question 17**

You are asked to write some documentation. It must be in 12 point Times New Roman, have single line spacing, contain a header and footer, headings to be bolded and the left margin to be 2.5 cm.

This requirement is an example of

- A. a writing documentation template.
- B. writing documentation to a standard.
- C. writing documentation for the audience.
- D. writing documentation so it is understood.

**Question 18**

Which one of the following should **not** be included in a template?

- A. structure of a document
- B. format of a document
- C. standard text
- D. fixed date

**Question 19**

Carmel needs to send letters to 50 clients. The letters need to be personalised with the clients' details and must be sent in tonight's mail.

The **best** advanced feature for completing this task would be to

- A. use an auto filter in a spreadsheet.
- B. use a query analysis using database software.
- C. use mail merge in a word processor from a data source.
- D. make 50 copies of the word processed letter and manually edit the clients' details.

**Question 20**

A folder called 'Maintenance reports' has the following permissions set for User Groups 1, 2 and 3.

Folder permissions	Group membership
Group 1 has 'Read only'	User A is in group 1 & 3
Group 2 has 'Read Write'	User B is in group 2 & 3
Group 3 has 'No access'	User C is in group 1 only
	User D is in no groups

If the group with the highest level of access permissions overrides all other groups that a user belongs to, which user can change the files in the 'Maintenance reports' folder?

- A. User A
- B. User B
- C. User C
- D. User D

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

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

**Question 1**

Lorraine has a laptop computer because she frequently has to travel to meetings in distant towns. However, she has found the laptop keyboard to be uncomfortable when typing because the keys are smaller and closer together.

- a. What would you recommend to improve the comfort for this highly mobile computer user?

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- b. Suggest why it would be important to improve Lorraine's typing comfort.

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1 + 1 = 2 marks

**Question 2**

An angry client calls the Help Desk asking you to fix his problem. You interpret from what he says that the printer has jammed for the fourth time in a row.

What is the best way to handle this call?

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2 marks

**Question 3**

You have created and supplied a user manual for a software application for one of your clients. The client has raised a number of concerns about the manual supplied.

The client did not sign off on the user manual.

- a. Why would the client need to sign off on the user manual?

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One instruction from the user manual is shown below.

*If the numbers in subsection A, part B are not equal to the numbers in subsection C, part A, then proceed to section 4 and delete column 2 from the list and add to column 4 immediately prior to entering the numbers in section 2, otherwise the amount of GST charged will need to be calculated using numbers in table 21.*

- b. Give one reason why the client would have difficulty with this instruction.

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1 + 1 = 2 marks

**Question 4**

From the following list, select **two** items that would be part of the **minimum** requirements when installing the latest operating system on the latest desktop PC.

Tick **only two** of the boxes below to indicate your selections.

- network card
- CD/DVD drive
- wireless mouse
- floppy disk drive
- Web enabled keyboard
- amount of system RAM
- available hard disk drive space

2 marks

**Question 5**

A new server called 'NewPrintServer' has been installed at ACME Corporation. The old print server called 'PrintServer' is switched off and disconnected from the network. The next morning, the Help Desk gets many complaints from users who cannot print.

- a. Suggest a reason for the users not being able to print.

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- b. Explain how you could fix this problem.

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1 + 1 = 2 marks

**Question 6**

You receive the following error message on your screen while using your PC.

'Out of range error in line #1654'

Does the message indicate a software or a hardware problem? Explain your answer.

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2 marks

**Question 7**

David is a veterinarian who has a number of dairy farmers among his long-term clients. David regularly visits clients to check on the health of their dairy cattle. For each cow, David records its milk production statistics and makes notes for its medical record on a preprinted form. Each night he enters the data into a file on his home computer. As David’s client base has grown, record keeping in this way has become time consuming. A friend in another district has been using a hand-held device (Figure 1) to record data on site. He then uploads it when he gets back to his office.



**Figure 1 – Hand-held device**

David has asked you for some advice on finding a suitable hand-held device and setting it up for his data recording.

- a. Suggest **one** source that David could use to find information about suitable hand-held devices.

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After considering the hand-held devices available, the choice has come down to two options. Their specifications are given below.

<b>Hand-held device A</b>
312 MHz processor
320 × 480 transfective TFT colour touch screen
128 MB Flash memory
Operating system supports common office software
3.0 mega pixel camera
SD card slot with bonus 512 MB card
2 built-in games
MP3 player
Mix and match case covers
Voice recognition software
MAC and PC compatible
Office productivity package included
Docking device and synchronisation software
186.7 g
\$749

<b>Hand-held device B</b>
312 MHz processor
128 MB Flash memory
2 GB hard drive
Operating system supports common office software
MAC and PC compatible
Built-in Bluetooth wireless connection
Internet connectivity
GPS capability
In-car cradle with hands-free pack
1.3 mega pixel camera
Built-in mic and speakers
Smartphone with polyphonic ring tones
Office productivity package included
192.8 g
\$929

- b. David decided to choose device B. Give **two** reasons to justify his selection based on the information provided above.

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1 + 2 = 3 marks

**Question 8**

A large company specialises in Help Desk support for external clients. They have many staff trained for Level 1 support which involves answering calls and trying to solve initial problems. The company also has Level 2 support with more experienced technicians and Level 3 support, including specialist engineers who are experts in their field. Part of the Help Desk procedure is to get regular feedback from clients to assist in providing a quality service.

- a. A Level 1 support person told a client that the problem needed to be escalated. What does this mean?

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- b. State **two** ways in which the company could get feedback from their clients.

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- c. What is benchmarking and why is it important for a large Help Desk support company?

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1 + 2 + 2 = 5 marks

**Question 9**

Your company intends to purchase a major new piece of software to process all of its inventory control data. Below are four criteria that you could use to help decide which product to buy. Give a reason for using each of the criteria listed.

Criteria for software selection	Reason for inclusion in list
1. Operating system requirements	
2. Training available	
3. Support provisions	
4. User or special interest groups	

4 marks

**Question 10**

Dave receives a popular new 3D game for his birthday. Unfortunately, Dave cannot play the game well on his current computer, as it runs very slowly and there is a considerable lag via the Internet for the multi-player component of the game. He notices that his hard disk light flashes a lot, particularly when running the game. The table shows the specifications of Dave’s current computer and the specifications given on the game’s package.

Dave’s computer	Game specifications (minimum)
Pentium 4 3.0 GHz	Pentium 4 2.0 GHz/ AMD Athlon XP 2000+
512 MB RAM	512 MB RAM
Standard SVGA card built in on motherboard – shares 32 MB RAM	3D Video Card 64 MB (DirectX9.0c / OpenGL 2.0 card)
52× speed CD ROM drive	8× speed CD ROM drive
20 GB IDE 7200 rpm (5 GB free)	2.8 GB free hard disk space (plus 400 MB for swap file)
16-bit sound card	16-bit sound card
56 K dial-up Internet connection	Internet connection

List **two** possible upgrades, including a reason for each upgrade, that Dave could make to enable smoother game play.

Upgrade 1 \_\_\_\_\_

Reason 1 \_\_\_\_\_

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\_\_\_\_\_

Upgrade 2 \_\_\_\_\_

Reason 2 \_\_\_\_\_

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4 marks

**Question 11**

To improve security an IT manager has implemented a policy that all desktop computers have a password protected screen saver that activates after five minutes of no user input.

a. How would this policy improve security?

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b. Some staff are complaining about the screen saver. Suggest why.

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c. How would you modify the settings to minimise staff concerns?

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1 + 1 + 1 = 3 marks

**Question 12**

When a DVD writer was installed on Sally's computer, the additional software that came with it was not installed as her hard disk drive had limited free space. As she burnt her first DVD she got a message that said 'buffer underrun error' and the resulting DVD would not work.

Explain why there was an error.

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2 marks

**Question 13**

You send an email to a client at Company A but it bounces back with a message indicating that it is probably infected by a virus. The email had only one attachment: 'Minutes 14 Oct 2006.doc.doc'. When you sent the email it was scanned by your antivirus program and given the all clear.

- a. Why would the system at Company A send this message back to you?

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The following week you send an email with an attachment called 'BoardPresentationNov06.ppt' to a client at Company B with the priority 'High'. A while later you receive a message that the email is 'undeliverable' as the attachment is over 3 MB in size.

- b. Explain what you could do to overcome this problem.

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1 + 1 = 2 marks

**Question 14**

A utility program that can be used on a PC is called DEFRAG.

- a. What does DEFRAG do when it is run?

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- b. Describe **two** situations when it would be helpful to run DEFRAG.

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1 + 2 = 3 marks

**Question 15**

A large company that employs over five hundred people Australia wide is changing over their text-based database system into a new GUI-based database system.

- a. Data files need to be converted from the old system to the new one. What is the most important thing to be done after the conversion process?

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- b. Give **one** advantage for migrating to a GUI-based database system.

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- c. Management has noticed that there is some user resistance to the new system. What could the company do to overcome user resistance?

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- d. When is the best time to install the new system?

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1 + 1 + 1 + 1 = 4 marks

**Question 16**

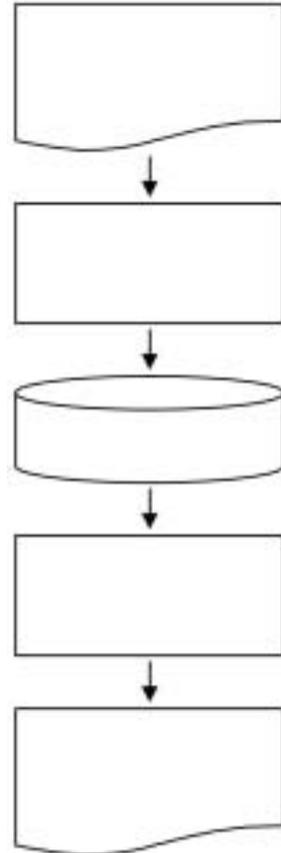
ACME Music sells the latest CD music to its customers. George works at the front counter and is responsible for CD sales. When a customer approaches George to buy a CD, he scans in the barcode of the CD, the computer calculates the cost, and then George prints out an invoice for the customer.

- a. Select from the following numbered labels to create a system flow chart for what George does.

Write the number for each label in the appropriate box in the diagram.

**Labels**

1. Scan CD barcode into computer
2. Customer invoice
3. Print an invoice for the customer
4. Music sales file
5. Barcode on CD



- b. Give **two** specific pieces of information that are stored in the CD barcode.

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

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

- c. A data dictionary is shown in the table below. A data dictionary lists the data elements in a system and their properties.

Enter the **two** specific pieces of information that could be stored for the music sales file into the data element column below. Enter the appropriate length and type for the data elements you have chosen.

Data element	Length	Type	Data store (database)
			music sales file
			music sales file

2 + 2 + 2 = 6 marks

### Question 17

Richard has been sent a complaint that claims he has passed the confidential email address of one person on to ten other people when he sent a bulk email with eleven addresses in the 'To' field.

- a. Explain how he or his company could be considered to have broken the law by doing this.

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- b. How could he prevent this occurring again?

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1 + 1 = 2 marks

Total 50 marks

**SECTION C – Case study****Instructions for Section C**

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

WER Clothier is a clothing manufacturer that supplies many exclusive clothing stores, as well as the larger department stores. Its computer network needs upgrading due to the extra demands of emerging technology and the ever-growing requirements of its own staff and customers.

Customer feedback has indicated that people now want to order and pay for goods over the Internet.

The sales and marketing staff, in particular, want to better utilise their mobile technology, such as hand-held devices and laptops used in the field. They would like to be able to connect to the network remotely using a wireless communications connection. Utilising wireless technology would allow them to record data when visiting the production warehouse.

The existing network infrastructure has a flat design and does not use subnets or VLANs. The network is running on Cat 5 UTP cable as the backbone and Cat 5 UTP cable to the desktop. 24 port 10/100 switches are also being used.

The management team has put together a two-year plan for an upgrade of the network.

The backbone cable will be upgraded to single mode fibre optic cable, connected via fibre optic switches, running at a speed of 1 gigabit. Cat 6 UTP cable will be used for connection to the desktops. 24 port 10/100/1 Gbit switches will be used for the desktops. These switches will have fibre optic ports to allow for connection to the backbone. The network will be segmented by the use of subnets and VLANs.

The company has a network demilitarised zone (DMZ) to assist in Internet traffic management. A DMZ is a computer or small sub-network that sits between a trusted (secure) internal network, such as a corporate private LAN, and an untrusted (unsecured) external network, such as the public Internet. It is an area of the network that has less security to allow for Internet traffic.

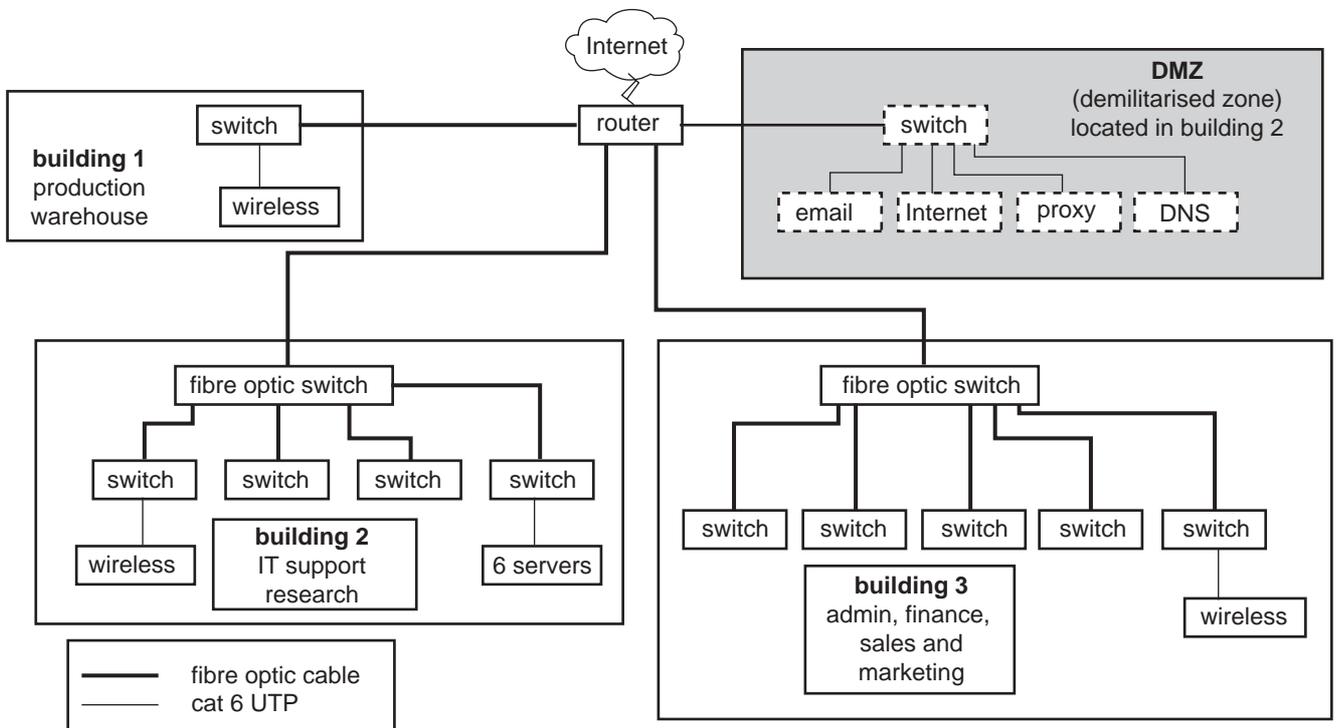
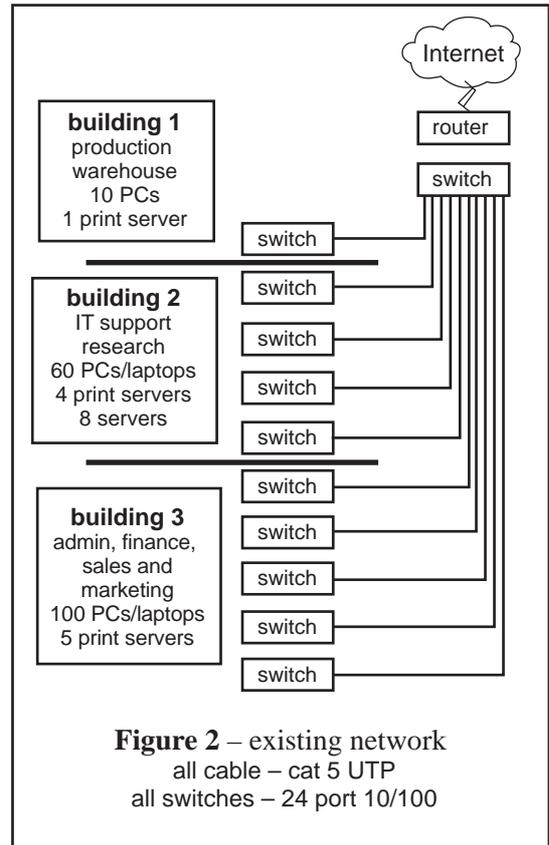
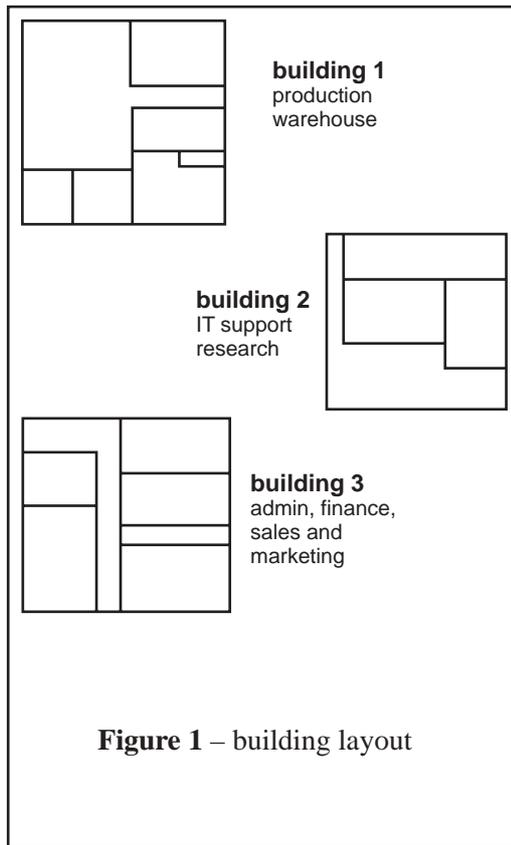
The WER Clothier DMZ contains the following servers that are accessible to Internet traffic.

- web server
- proxy server
- email server
- DNS server

All servers will be upgraded or replaced as necessary and will use 10/100/1 Gbit network cards, running at 1 gigabit. Desktop PCs will also be upgraded or replaced as necessary and will have 10/100/1 Gbit network cards installed. Initially the cards will be set to run at 100 Mbit. Network printers will be installed, as well as some network multifunction devices, such as colour capable printer/copier/scanner/fax all-in-one machines in key locations.

You, as the network manager, and Joe, the network administrator, are now faced with the challenge of implementing the two-year plan to provide a network that will meet current and future requirements.

The following diagrams show the existing network and the proposed new network.



**Question 1**

There are a number of advantages in removing the UTP backbone cable and replacing it with fibre optic cable.

Suggest **one** advantage for using fibre optic cable in this situation.

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1 mark

**Question 2**

At WER Clothier, the management team is very proactive whenever Occupational Health and Safety (OH&S) issues are raised. You recommend that all monitors should now be LCD or plasma type. Give one OH&S reason for making this recommendation and explain your answer.

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2 marks

**Question 3**

You have 25 users across the organisation needing to use a specialist software package. You purchase 15 licences that will allow the software to be used concurrently. You believe this will more than meet the organisation's needs. You install the package on 25 computers and have a software-monitoring tool on the network that monitors the software when it is being used. Occasionally, when one of the users is trying to use the software, they receive a message on the screen telling them to contact the Help Desk as they have violated the licence agreement.

Explain how the Help Desk should respond to the user.

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2 marks

**Question 4**

Currently all IP addresses are static (configured manually). You are now going to implement dynamic host configuration protocol (DHCP) to provide IP addresses. For all the servers, printers and network devices, you will still use static addresses, but for all the desktop PCs and laptops, IP addresses will be provided by DHCP.

- a. What is meant by having an IP address provided by DHCP?

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In the existing network the domain name system (DNS) service is provided by your Internet service provider (ISP). In the proposed new network you will be installing and configuring a DNS server.

- b. Why is a DNS server used?

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1 + 1 = 2 marks

**Question 5**

A disaster recovery plan should not just address computer systems, but other critical systems as well.

- a. Identify another important system that should also be covered in a disaster recovery plan.

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An area often neglected in a disaster recovery plan is the restoring of data from a backup.

- b. Why should a 'data restore' be carried out periodically, even though it may not be necessary?

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You create a new policy for login names and passwords. The following passwords all comply with the new policy.

opZK472\*b, 12Mab48#, DAK9Acd2, \*74aDKbKa

- c. Identify **two** requirements of the policy for creating new passwords.

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1 + 1 + 2 = 4 marks

**Question 6**

While configuring the new network, your Help Desk receives calls from a number of users in Building 1. The Help Desk discovers that none of the users in Building 1 can log onto the network, but they can log onto the workstations. Therefore, they do not have access to any of the network resources. The users in the other buildings do not seem to have any problems.

- a. Refer to the diagram of the proposed new network in Figure 3 (page 19). What might be the likely cause of the problem?

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An agreement you intend to put in place to better maintain the network infrastructure is a Service Level Agreement (SLA) with the supplier of all the network equipment.

- b. How will this SLA better help to maintain the network infrastructure? Give an example.

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Viruses are proving to be a major problem in all computer systems.

- c. What is the major source of viruses on a networked system?

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1 + 2 + 1 = 4 marks

**Question 7**

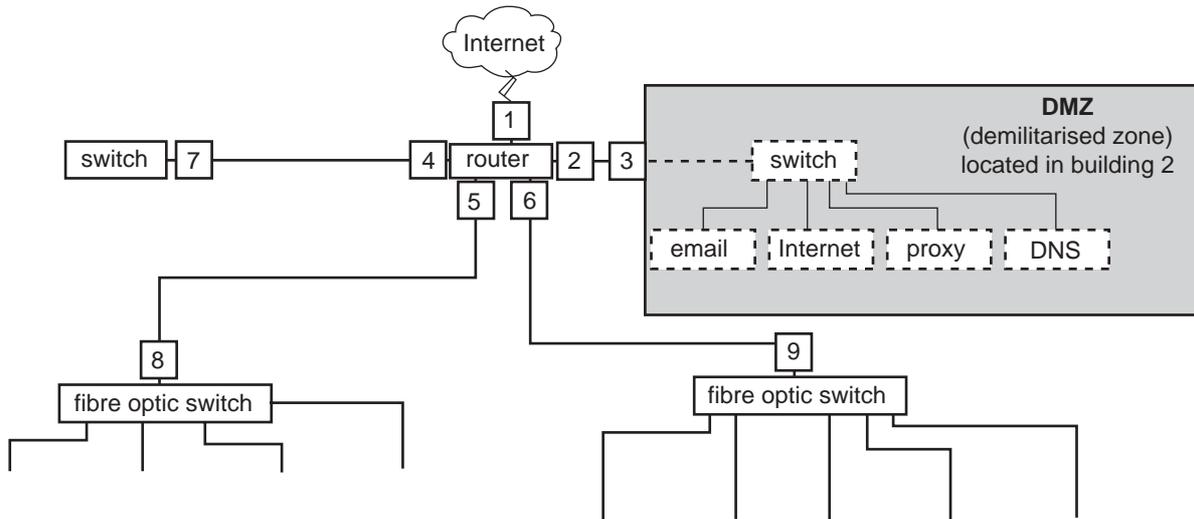
You intend to implement a number of security features in the new network. These will include a new login and password policy, limiting physical access to some areas, and the use of biometrics.

a. What is biometric security?

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An important feature of the proposed new network is a fully functional firewall. The diagram below shows part of the network of WER Clothier. The DMZ (demilitarised zone) will form an integral part of the network. A range of services for the network will originate in the DMZ. A number of servers will provide these services. All data traffic will enter and leave via the DMZ.



**Figure 4**

b. Select **two** locations from the numbers 1–9 indicated on Figure 4 that you believe would be the optimum places to install a firewall. Explain your selections.

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Changing and allocating file and folder permissions gives you greater control over how users access and manipulate data, files and folders. You and Joe have full control permissions. The other managers and department administrators have ‘modify’ permissions. All other users have ‘read’ and ‘execute’ and ‘write’ permissions.

Sherry, a data entry operator in the administration department, rings the Help Desk and says that she needs to edit some files in a folder created by Sam. When she attempts to access the folder and view the files, she gets a message that says ‘permission denied’.

- c. Put a tick in the appropriate column(s) in the table below that provides the permissions that Sherry needs to access Sams’s folder.

**File and folder permissions table**

Permissions	Full control	Modify	Read & execute	Read	Write
Traverse Folder/Execute File	✓	✓	✓		
List Folder/Read Data	✓	✓	✓	✓	
Read Attributes	✓	✓	✓	✓	
Create Files/Write Data	✓	✓			✓
Create Folders/Append Data	✓	✓			✓
Write Attributes	✓	✓			✓
Delete Subfolders and Files	✓				
Read Permissions	✓	✓	✓	✓	✓
Change Permissions	✓				

<b>Permission(s) needed by Sherry</b>	<input type="checkbox"/>				
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1 + 3 + 1 = 5 marks

Total 20 marks