## 2005        VCE VET Information Technology GA 2: Written examination

## GENERAL COMMENTS

A total of 894 students sat the VCE VET Information Technology examinations in 2005. The number of students sitting for each of the three qualifications was: Software Applications – 413 students, General – 325 students and Network Administration – 156 students.

In general, students coped well with the format of the paper and attempted most questions. Students who did not understand a scenario or misinterpreted a question were still able to score well on the rest of the paper.

Questions that required an explanation proved challenging for students, and responses often lacked sufficient detail or were not related to the situation presented in the question. Students who repeated answers in questions that asked for more than one response were not awarded full marks. Students need to be reminded to read the information given in the stem of the question and refer appropriately to this context in their answer. Most students handled all questions from each unit of competence reasonably well. In general, questions based on 'Create user and technical documentation' and 'Provide advice to clients' were well answered. However, some improvement is needed in responses to the following units of competence:

- ICAITS020B – Install and optimise system software
- ICAITU019B – Migrate to new technology

This Assessment Report provides general information on students' performance in Sections A and B, which were common to all three examinations. Separate information is provided on each of the three case studies in Section C.

## SPECIFIC INFORMATION

## Section A – Multiple-choice questions

**The table below indicates the percentage of students who chose each option. The correct answer is indicated by shading.**

| Question | % A | % B | % C | % D |
|---|---|---|---|---|
| 1 | 6 | 1 | 92 | 1 |
| 2 | 93 | 4 | 2 | 1 |
| 3 | 9 | 32 | 45 | 13 |
| 4 | 13 | 35 | 17 | 35 |
| 5 | 29 | 12 | 29 | 30 |
| 6 | 20 | 77 | 2 | 0 |
| 7 | 2 | 3 | 79 | 16 |
| 8 | 16 | 60 | 6 | 18 |
| 9 | 80 | 5 | 8 | 7 |
| 10 | 5 | 59 | 19 | 18 |
| 11 | 75 | 5 | 5 | 15 |
| 12 | 2 | 0 | 78 | 19 |
| 13 | 3 | 71 | 21 | 6 |
| 14 | 2 | 87 | 6 | 4 |
| 15 | 91 | 5 | 1 | 3 |
| 16 | 23 | 65 | 8 | 4 |
| 17 | 49 | 41 | 8 | 1 |
| 18 | 70 | 24 | 4 | 1 |
| 19 | 4 | 7 | 79 | 10 |
| 20 | 6 | 90 | 2 | 2 |

## Section B – Short-answer questions

For each question, an outline answer (or answers) is provided. In some cases the answer given is not the only answer that could have been awarded marks. Specific comments on student performance are provided where relevant.

## Question 1

| Marks | 0 | 1 | 2 | Average |
|-------|---|---|---|---------|
| % | 9 | 47 | 44 | **1.4** |

Any two of:
- less eyestrain
- radiation exposure
- able to position the screen more easily
- distance from the screen.

## Question 2

| Marks | 0 | 1 | 2 | Average |
|-------|---|---|---|---------|
| % | 10 | 46 | 44 | **1.3** |

Any two of:
- to allow the OS to finish all HDD activity
- to allow the OS to close connections to other computers
- to allow current configurations to be saved
- so that the OS is not corrupted
- to allow any open files to be saved
- to stop file corruption.

## Question 3

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|---|---|---|---|---|---------|
| % | 4 | 5 | 21 | 40 | 30 | **2.9** |

**Advantages**

Any two of:
- they have the most recent information
- URLs are easy to record
- URLs are easy look up
- the source is readily accessible to the general public
- a large amount of data is available
- they are fast and can be downloaded from if necessary.

**Disadvantages**

Any two of:
- sites can disappear
- sites can change/alter
- sites can be wrong/biased/out of date/untimely
- information overload
- they are not able to be accessed by all people.

Students handled this question well, but need to be reminded that the question was about the Internet being used as a **reference source**. Some responses were directed to advantages and disadvantages of **using** Internet sites only.

## Question 4

| Marks | 0 | 1 | Average |
|-------|---|---|---------|
| % | 12 | 88 | **0.9** |

Any one of:
- installation information
- last minute information about a product
- troubleshooting information
- copyright information
- details of undocumented features and known bugs.

Students' answers were very precise and most knew what information is contained on readme files on installations.

**Question 5**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 16 | 34 | 50 | **1.3** |

Any two of:
- system maintenance
- rebuilding the system
- licensing
- for reference/training purposes
- installation/troubleshooting/fixing.

Some students had trouble interpreting this question. They incorrectly responded on software documentation rather than reasons for documenting application software.

**Question 6**

| Marks | 0 | 1 | 2 | 3 | Average |
|---|---|---|---|---|---|
| **%** | 17 | 23 | 38 | 23 | **1.7** |

Any three of:
- the skill/knowledge level of the audience
- the format/layout is easy to use and user friendly (clear and consistent)
- it is worded at the right level and there are diagrams/screen dumps where possible
- the instructions are for basic use, there is no computer jargon and/or detailed modification/installation instructions
- it has been pre-tested
- the information is timely.

**Question 7**

| Marks | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Average |
|---|---|---|---|---|---|---|---|---|
| **%** | 28 | 13 | 14 | 11 | 12 | 9 | 12 | **2.4** |

XML: Extensible Markup Language
- a new page language (and more) for the Internet

HTML: HyperText Markup Language
- the language for writing pages for the World Wide Web
- the code for writing Internet web pages

FTP: File Transfer Protocol
- a way of transferring files over the Internet from one computer to another
- the protocol used on the Internet for exchanging files
- used for uploading or downloading files to and from remote computer systems

IRC: Internet Relay Chat
- a chat system that enables people connected anywhere on the Internet to join in live discussions
- a world-wide 'party line' network that allows a person to converse with others in real time

SMTP: Simple Mail Transfer Protocol
- used to send e-mail on the Internet

POP3: Post Office Protocol 3
- the transport protocol used for receiving emails
- a protocol, or set of rules, by which a client's machine can retrieve mail from a mail server

Many students found this question quite difficult despite being frequent users of this technology.

**Question 8**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 13 | 28 | 59 | **1.5** |

Any two of:
- drivers
- firmware version
- compatibility with other devices
- compatibility with OS
- cable connections
- whether there is sufficient power from power supply
- power source
- check manufacturer's website for known conflicts.

Generally this question was handled well but some students missed the **hardware** focus of the question and referred to other software on the system.

**Question 9**

| Marks | 0 | 1 | 2 | Average |
|-------|-----|-----|-----|---------|
| %     | 31  | 38  | 31  | **1.0** |

Any two of:
- average time to solve issues
- number of complaints about the service
- documentation of calls (quality/quantity) – a logbook or database
- number of proactive solutions
- response time
- client feedback/surveys
- benchmarking.

Students found this question difficult to answer. A key factor missed by some students was that the answer had to be measurable.

**Question 10**

| Marks | 0 | 1 | Average |
|-------|-----|-----|---------|
| %     | 30  | 70  | **0.7** |

Copy Colin's templates from his old computer to the new computer.

Some students were confused because the computer, rather than the software, was being upgraded.

**Question 11**

| Marks | 0 | 1 | Average |
|-------|-----|-----|---------|
| %     | 38  | 62  | **0.6** |

Either of:
- close some applications and see if the new software now runs (may need to restart the computer)
- advise the user to upgrade the amount of RAM in the PC.

It was disappointing to see that students still confused RAM (memory) and hard disk (storage). Students who referred only to memory, without making it clear whether they are referring to RAM or HDD space, did not show sufficient understanding of the problem.

**Question 12**

| Marks | 0 | 1 | 2 | Average |
|-------|-----|-----|-----|---------|
| %     | 5   | 29  | 66  | **1.6** |

Any two of:
- install a pilot system – install the software on one or two users' machines and have the users test the documentation to make sure it meets the requirements and is simple and easy to follow. Changes to documentation could have been made from the feedback received
- provide group training for users of the new software
- ask for feedback
- record and categorise the types of problems so that supplements to the original documents can be issued

- write a new user manual using simpler terms and diagrams.

This question was well answered, with the popular responses being to provide training and documentation.

**Question 13**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| % | 9 | 31 | 61 | **1.5** |

The skills assessment will help to determine Rosie's range of skills and identify any gaps. Training can then be arranged for Rosie to gain the skills and knowledge required.

This question was well answered.

**Question 14**

| Marks | 0 | 1 | 2 | 3 | Average |
|---|---|---|---|---|---|
| % | 31 | 16 | 39 | 14 | **1.4** |

**14a.**
- A graphical user interface uses point and click, whereas a command line interface uses type to get information.
- GUI is easier to use than CLI.

**14b.**
It allows a single computer to run two or more different operating systems.

Both parts of this question were poorly answered. Most students did not know the difference between a GUI and a CLI. Students got confused between virtual memory and virtual operating system.

**Question 15**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|---|---|---|---|---|---|---|
| % | 3 | 3 | 23 | 36 | 36 | **3.0** |

**15a.**
Any two of:
- staff resistance or resentment, poor work ethic, job losses
- slower processing or limited output
- inaccurate processing (errors)
- poor use of the package's new features.

**15b.**
Any two of:
- provide training
- listen and **respond** to staff feedback
- rewards/incentives
- give advance notice of the change
- involve staff during the changeover
- provide documentation.

Students responded well to this question.

**Question 16**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| % | 8 | 11 | 81 | **1.7** |

No, because:
- the total disk space required is 800 MB, but there is only 400 MB available
- there is not enough HD space to install both programs
- Package 2 cannot be installed as there is not enough space; the hard disk needs to be upgraded
- the RAM is okay, as RAM is shared between applications.

Students responded very well to this question.

**Question 17**

| Marks | 0 | 1 | Average |
|---|---|---|---|
| % | 95 | 5 | **0.1** |

NX prevents code execution from data sections of memory. It prevents buffer overrun code execution.

This question was poorly answered, but was considered difficult due to the relative newness of the technology.

**Question 18**

| Marks | 0 | 1 | 2 | 3 | Average |
|---|---|---|---|---|---|
| % | 24 | 10 | 24 | 43 | **1.9** |

**18a.**

Protecting data, etc., by encoding it with a password (the text is scrambled/encoded to an algorithm).

**18b.**

When transmitting confidential or sensitive data (confidential files, emails, etc.) through public channels such as the Internet. When transmitting confidential or sensitive data that could be intercepted.

**18c.**

Either of:
- if the password is lost then the data will be lost, unless other backups are kept
- if an error occurs during encryption, the message may be corrupted and unable to be decrypted.

Most students handled all parts of this question well.

**Question 19**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|---|---|---|---|---|---|---|
| % | 4 | 13 | 25 | 33 | 25 | **2.6** |

**19a.**

Aardvark Plan B, or the 512/128 plan.

**19b.**

The connection speed is reduced/slowed to 60kbps from 256kbps.

**19c.**

Checking email for spam (junk mail) or unsolicited mail and blocking /filtering out unwanted emails and advertising mail that has not been requested.

**19d.**

You can't transfer from a dialup account – it must be from a broadband account.

This question was answered quite well. However, some students' answers were not clear as they had simply stated either Plan A or Plan B – there were two of each option.

**Question 20**

| Marks | 0 | 1 | 2 | 3 | Average |
|---|---|---|---|---|---|
| % | 2 | 5 | 14 | 79 | **2.7** |

**20a.**

Any of:
- the computer would not need to use the HDD as much for additional space, therefore it would give faster response times
- increased speed when downloading images
- can open larger images
- more multitasking
- programs run more smoothly.

**20b.**

Any of:

- less workload for the CPU
- more advanced features could be used
- faster because of greater RAM on the card
- improved image quality
- better resolution
- extra memory included with the card would mean quicker processing.

**20c.**

Either of:

- the video card, because of the improved image quality and speed (Fred's job requires graphics)
- the RAM, because of the better performance.

Students performed well on the question. The only concern was that students did not have a clear understanding of the difference between RAM (memory) and hard disk (storage).

## Section C – Case study: Software applications

**Question 1**

| Marks | 0 | 1 | Average |
|---|---|---|---|
| **%** | 53 | 47 | **0.5** |

Because it is only used by the website database – the shopping list is not available to others.

**Question 2**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 11 | 26 | 63 | **1.5** |

**2a.**

The business's needs may change, or the business's market may change (for example, different advertising campaigns).

**2b.**

Any of:

- supply documentation to staff
- train staff
- communicate the changes; for example, email a copy of any new template changes to staff.

Students found part a. more difficult than part b.

**Question 3**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 16 | 33 | 52 | **1.4** |

**3a.**

Any of:

- helpdesk
- printed documentation
- online tutorials/web-based help
- technical support
- phone in
- FAQs.

**3b.**

Either of:

- one-to-one: because they are unique jobs and it is a small company
- group: on a non-working day so does not impact on business (but need finances to afford a non-working day because of extra pay for staff). This way all staff can do each others' roles if absent.

This question was well answered.

**Question 4**

| Marks | 0 | 1 | 2 | Average |
|-------|-----|-----|-----|---------|
| **%** | 45 | 39 | 16 | **0.7** |

Adjust the security level in macros and have anti-virus protection.

Many students gave only one step and needed to provide a more detailed explanation in their responses.

**Question 5**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|-----|-----|-----|-----|-----|---------|
| **%** | 11 | 6 | 8 | 27 | 47 | **2.9** |

**5a.**
Either of:
- by calculating the price reduction for titles not sold in the last 180 days
- by calculating the new sale price, which is 50% off the original, and creating a report.

**5b.**
If difference between today & DataFile/PurchaseDate >100 days

**5c.**
Any of:
- give other staff 'read only' access to the file, but 'modify' access for Derek
- create a template containing labels and apply cell protection to the necessary cells; other cells that are unprotected can be edited
- create a password that is needed to open the file to give modified rights.

Students answered this question well.

**Question 6**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|-----|-----|-----|-----|-----|---------|
| **%** | 7 | 10 | 14 | 25 | 44 | **2.9** |

**6a.**
Save it in a common directory with 'read only' access, file permissions or share permissions.

**6b.**
Students needed to include company details, a logo, titles of CDs, prices, dates, email addresses, etc.

**6c.**
Any of:
- send a mail out to customer email addresses
- add a pop up/icon to the website
- link the templates to the company databases so that clients can place orders
- link to the front page of the website.

Students answered this question well.

**Question 7**

| Marks | 0 | 1 | 2 | 3 | 4 | 5 | Average |
|-------|-----|-----|-----|-----|-----|-----|---------|
| **%** | 23 | 10 | 16 | 21 | 14 | 17 | **2.5** |

**7a.**
Any three of:
- a macro to print mailing labels
- a macro to update stock levels
- a macro to send order details to Derek
- a macro to link customer details SS to order SS
- a macro to 'find' or 'go to' so the cursor can automatically jump to the relevant position.

Many students did not provide three different macros or did not include enough detail to discriminate between the three answers given. Students needed to elaborate more on the function of the macro in their answers.

**7b.**
Oscar could use a relational database so that the information only needs to be entered once.

Students needed to elaborate more on their ideas and provide more detail to demonstrate their understanding. Some students wrote about training in the use of macros rather than describing better ways to use them or providing an alternative to using macros.

## Section C – Case study: General
**Question 1**

| Marks | 0 | 1 | Average |
|---|---|---|---|
| **%** | 14 | 86 | **0.9** |

So that you can investigate and/or fix issues in any area of the network. It is necessary for maintaining all areas of the network.

Students handled this question well.

**Question 2**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 14 | 38 | 48 | **1.4** |

Any two of:
- to gain familiarity with the layout (wiring, servers, printers, etc.)
- to identify potential problems
- so you know where the documentation is for future reference
- to use a reference tool to look up anything you're unsure of
- for IP addresses
- for the location of equipment.

Most students were able to give at least one reason. The role of the network administrator and the reasons for network documentation need to be reviewed by students.

**Question 3**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 16 | 19 | 65 | **1.5** |

Any two of:
- passwords should not be the same as the login name
- passwords should be changed regularly
- use unique passwords that are a minimum of eight characters and a combination of letters, numbers and allowable special characters
- check Administrator privileges – these should only be given to specifically nominated people within the organisation so that others can't corrupt, delete or access files that they shouldn't
- check levels of access.

There were a number of obvious faults in the current login accounts on the system and most students easily identified some.

**Question 4**

| Marks | 0 | 1 | 2 | Average |
|---|---|---|---|---|
| **%** | 19 | 22 | 58 | **1.4** |

Any of:
- monitoring unsuccessful logins can provide information on break in and hacking attempts
- monitoring password changes can help trace illegal changes
- it indicates the time, date and access (of successful and attempted logins).

This question required more depth and detail in the students' responses.

**Question 5**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|---|---|----|----|----|---------|
| % | 7 | 9 | 20 | 34 | 31 | **2.8** |

**5a.**
Any of:
- for easy access in case of emergency and to protect them from the potential disaster of a fire
- if there is a computer crash, there is immediate access to backup, which minimises downtime
- the current backup is kept in case something is needed from previous day/night.

**5b.**
In case of damage, theft or fire. Minimum downtime and loss of information.

**5c.**
An untested plan is one that could be unworkable. By testing, any problems that arise can be planned around to make the modified plan workable. There is a need to ensure that backup tapes are not corrupted and that the recovery procedure does work. It would also provide feedback on whether employees are aware of procedures, and whether current backups are being stored correctly and done properly.

Most students were able to identify strategies and reasons behind a disaster recovery plan. Explanations needed to be clear and precise.

**Question 6**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|---|---|----|----|----|---------|
| % | 7 | 6 | 29 | 24 | 35 | **2.8** |

**6a.**
It would eliminate the need to delete the previous information and is therefore faster. A template would contain a blank layout for each publication, providing consistency and efficiency.

**6b.**
A local macro, as the information only needs to get into this magazine, not into all publications by B Rich.

**6c.**
Create a keyboard shortcut or a toolbar button (or both) to trigger the macro.

The macro/template question was handled well.

**Question 7**

| Marks | 0 | 1 | 2 | 3 | 4 | 5 | Average |
|-------|----|---|----|----|----|----|---------|
| % | 11 | 6 | 13 | 18 | 29 | 24 | **3.2** |

**7a.**
Any three of:
- educate the users about the policy and changes that need to be made with regard to licensing
- purchase more licenses
- limit the number of concurrent uses of the software
- have the application only available via a share that is set up to accept only the licensed number of connections or fewer.

**7b.**
It would slow the network speed and reduce productivity for users. Both LAN and the Internet would be slower.

Most students were able to give two responses to part a. but needed to provide more detail in part b. to obtain full marks.

## Section C – Case study: Network administration

**Question 1**

| Marks | 0 | 1 | Average |
|-------|----|----|---------|
| % | 16 | 84 | 0.9 |

Any of:
- physical protection from non-malicious tampering
- physical protection from malicious damage
- physical protection from data theft
- improved physical security of server
- humidity control.

This question was handled well by most students, who generally focused on security in one form or another. A few students picked up on the equally valid but less obvious answer that the control of dust and/or humidity would be improved.

**Question 2**

| Marks | 0 | 1 | 2 | Average |
|-------|----|----|----|---------|
| % | 28 | 49 | 23 | 1.0 |

**2a.**
Any of:
- use shielded twisted pair (STP) cable or fibre optic cable
- re-route the cable away from the interference
- move Mike's whole office to a better location.

A number of options were available here – either re-route the cable around the problem or move Mike's office. The other option was to make the connection 'surge proof'. The two acceptable answers for this option were to use STP (shielded twisted pair) or fibre optic cable. Some students misinterpreted the reference to power surges and suggested using a UPS to solve the problem; however, that would not solve a data problem.

**2b.**
Any of:
- 'electrical noise'
- RFI (radio frequency interface)
- EMI (electromagnetic interference).

Some sort of interference needed to be given here. This was a simple answer but not as well known as expected. Some students responded with 'cross talk' but this did not fit the specified situation.

**Question 3**

| Marks | 0 | 1 | 2 | Average |
|-------|----|----|----|---------|
| % | 36 | 59 | 5 | 0.7 |

| User or Group | Read | Write | Execute | Delete | Manage |
|---------------|------|-------|---------|--------|--------|
| Traders (Group) | blank | no (or blank) | blank | no (or blank) | no (or blank) |
| Mike (User) | yes | blank | yes | blank | blank |

Most students realised the need for Mike to have 'yes' for 'read' but not everyone noticed that the Auditor had been given 'yes' for both 'read' and 'execute'.

This was one of the hardest questions in Section C for Network Administration students, as many failed to notice the conflicting permissions for the Traders group that Mike is a member of.

**Question 4**

| Marks | 0 | 1 | 2 | Average |
|-------|----|----|----|---------|
| % | 9 | 41 | 50 | 1.4 |

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Any two of:
- multiple tapes, used in a daily rotation
- use of weekly or monthly tapes (preferably more than one)
- off site tape storage (security)
- whether there is a fire proof safe on site
- logs showing successful backups.

This question was fairly well answered. Many good answers identified where the tapes would be stored, whether the backups were successful and what types of backups were done. Nightly backups was not an acceptable response.

**Question 5**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|---|---|---|---|---|---------|
| % | 9 | 30 | 39 | 19 | 3 | **1.8** |

**5a.**
Dynamic Host Configuration Protocol

**5b.**
Either of:
- provides, shares or gives IP addresses to computers
- provides configuration settings to computers.

**5c.**
Any one of:
- allows the setup and management of printers to be done from a central location
- moves the task of spooling data to slow printers to a different computer, which improves workstation performance
- allows automatic installation of printers to multiple operating systems via multiple stored drivers on the print server
- centrally catches all print jobs on a LAN then directs each job to the requested printer
- allows users to share printer(s)
- creates a print queue for jobs/users.

The most common answer to part b. was that it provides IP addresses on the network. Part c. was handled well, but students needed to provide detailed explanations.

**Question 6**

| Marks | 0 | 1 | 2 | 3 | 4 | Average |
|-------|---|---|---|---|---|---------|
| % | 2 | 7 | 17 | 46 | 28 | **2.9** |

**6a.**

| Internal source of data loss | Method of preventing data loss |
|------------------------------|--------------------------------|
| 1.Poor work habits in saving files (overwriting one file with another). | Any one of:<br>• training<br>• backup tapes<br>• naming conventions<br>• file management. |
| 2. Any one of:<br>• fire, flood, etc.<br>• server hard drive failure. | good off site backups |

**6b.**

| External source of data loss | Method of preventing data loss |
|---|---|
| 1. Hacking through an Internet connection. | Any one of: <br> • good firewall <br> • anti-virus. |
| 2. Any one of: <br> • viruses <br> • a trojan arriving by email. | email scanning software |

Students also handled this question quite well, particularly for the external sources of data loss.

**Question 7**

| Marks | 0 | 1 | 2 | 3 | 4 | 5 | Average |
|---|---|---|---|---|---|---|---|
| % | 3 | 0 | 5 | 16 | 42 | 34 | **4.0** |

| Situation | Symptoms | Possible methods to fix it |
|---|---|---|
| Network login | Client received a message about checking user name and password. | Any two of: <br> • check Caps Lock (incorrect password) <br> • check spelling of user name on screen <br> • check password is 'correct' – change the password **and** ask if anyone might have known their password (and could have changed it) <br> • computer not accessing network – check cabling <br> • reset password. |
| Monitor | Any one of: <br> • black screen but the green power light is on <br> • screen is off <br> • no image. | Method 1. Check the video lead <br> Method 2. Check brightness and contrast <br> Method 3. Check for 'black' screensaver |
| Shared network storage | Client cannot view, load or save files on the shared drive. | Any two of: <br> • check the network lead <br> • check for network login compared to just local login <br> • check the server is going <br> • check the server is connected <br> • check user permissions for access to those files. |

This troubleshooting question was the most pleasing of all the questions in Section C for Network Administration because the vast majority of students demonstrated practical knowledge or experience in dealing with these types of problems. However, the reverse logic of giving the monitor's 'symptom' appeared to be more challenging for some. It was obvious that students were better prepared at providing a method than a symptom.