



**2007 ICA99 VCE VET Information Technology GA 2: Written examination**

**GENERAL COMMENTS**

A total of 707 students sat the ICA99 VCE VET Information Technology examinations in 2007. The number of students sitting for each of the three qualifications was: Software Applications – 343 students, General – 240 students and Network Administration – 124 students. Please note that there is a separate assessment report for the VCE VET IT examination based on the ICA05 training package. In 2008 all students will sit the ICA05 revised version of the program.

In general, students coped well with 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 many students, and responses often lacked sufficient detail or were not related to the situation presented in the question. Students who repeated their answers to 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 the questions from each unit of competence reasonably well. In general, questions based on ‘User and Technical Documentation’ and ‘Provide Advice to Clients’ were well answered. However, students’ responses indicated that they were more often challenged by questions relating to ‘Install and Optimise Operating System Software’ and ‘Use Advanced Features of Computer Applications’.

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	Comments
1	15	3	51	30	
2	4	0	5	91	
3	16	10	7	67	The version of operating system required is a more important factor than the cost when purchasing new software.
4	74	6	2	18	
5	0	13	80	8	
6	6	7	86	1	
7	10	1	83	6	
8	4	67	4	24	
9	43	13	35	9	Students needed to recognise ‘tracking’ (option A) as the most appropriate advanced feature for an editor to keep track of editing changes. Option C, ‘comments’ would be a less appropriate feature as they would have to be put in manually. Tracking automatically marks the changes as they are made.
10	63	8	10	19	
11	85	5	8	2	
12	24	64	7	5	
13	1	92	2	5	
14	5	87	3	5	
15	2	4	10	84	
16	15	2	82	1	
17	7	21	12	61	
18	87	3	6	5	



Question	% A	% B	% C	% D	Comments
19	2	32	25	42	According to the question stem, the client database stores each parent's name and address, the baby's name and date of birth, and whether it is a boy or a girl. The database does not store 'the appropriate text' for each gender, so this could not be merged by a macro from the database (or source) file.
20	5	24	66	5	

## Section B – Short-answer questions

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

### Question 1

Marks	0	1	Average
%	36	64	0.6

Any one of:

- assign shortcut keys
- create toolbar entries/icons
- create a menu item.

### Question 2

Marks	0	1	2	Average
%	51	16	33	0.8

#### Question 2a.

Either of:

- a computer which, at start up, allows the user to choose which operating system to use
- a computer that has two self contained operating systems installed to separate partitions on the hard disk drive.

#### Question 2b.

Any one of:

- it allows the user to run a program that is incompatible or unavailable on the other operating system
- it allows testing of other operating systems or software
- it allows for an alternative operating system in case of a failure in the other.

While some students were unable to explain the term 'dual boot', many were able to give an advantage for using such a system.

### Question 3

Marks	0	1	2	3	Average
%	15	28	7	50	1.9

- Processing the weekly payroll – batch
- Servicing page requests to a busy website – multitasking
- Monitoring the building's security system – real time

### Question 4

Marks	0	1	2	3	Average
%	1	5	34	61	2.5

#### Question 4a.

Any one of:

- to improve customer satisfaction/service
- to identify areas for improvement.

#### Question 4b.

Any one of:

- a survey

# 2007 Assessment Report



- feedback forms
- interviews.

## Question 4c.

Any one of:

- advertising, if results are favourable
- it motivates its staff to do better.

## Question 5

Marks	0	1	2	3	Average
%	11	35	46	7	1.5

Items classified as technical documentation are:

- installation procedures manual
- hierarchy chart
- maintenance history logbook
- data dictionary.

Students were given full marks for selecting all of the above.

## Question 6

Marks	0	1	Average
%	20	80	0.8

Any one of:

- use the package's online help
- read the package's manual
- reboot and try it again
- since the job is urgent, call your supervisor.

## Question 7

Marks	0	1	2	Average
%	83	11	6	0.2

Any of:

- The original files were already in a compressed format, or files cannot be compressed any further.
- The file is bigger because additional data is needed in the compressed file to identify the original files.
- The compression algorithm adds overheads or extra elements or additional compression folder.

Few students recognised that compressed files do not further compress, or that the compression process adds file identification and/or check information to the output file. Two marks were awarded for two ideas.

## Question 8

Marks	0	1	2	Average
%	12	33	56	1.5

### Question 8a.

Either of:

- the text is difficult to read because the hyphenation is inappropriate and/or excessive
- the text is difficult to read because the words are split over lines.

### Question 8b.

Either of:

- the line is too long
- the font is too small.

## Question 9

Marks	0	1	2	Average
%	20	48	32	1.1

# 2007 Assessment Report



## Question 9a.

One of:

- digital drawing tablet
- digital camera
- digital drawing device.

## Question 9b.

A high or better resolution scanner would be likely to give a better quality image and/or include character recognition software.

Answers that merely rephrased the question stem were not awarded marks.

## Question 10

Marks	0	1	2	3	Average
%	35	38	22	5	1.0

## Question 10a.

Any of:

- ASCII
- txt
- CSV.

## Question 10b.

Any of:

- PDF
- XML
- HTML
- TXT
- ODT
- ODF.

## Question 10c.

Cross platform is where data can be transferred between one operating system environment to another; for example, from a PC to a MAC or PC to Linux.

A number of students found Question 10 challenging and were not able to demonstrate an understanding of cross platform formats, although many students suggested .txt as a common format.

## Question 11

Marks	0	1	2	3	4	Average
%	16	21	27	24	13	2.0

## Question 11a.

Any two of:

- efficiency in making a booking – quicker, easier, more convenient if you can add details, each booking is given its own timeslot
- calendar leads to more accurate recording of time and date – fewer errors
- better productivity because less time is spent online making bookings
- bookings cannot be overwritten.

## Question 11b.

Any two of:

- drop down lists that lead to more accurate data entry
- multi-user access to allow file sharing
- ensure only the owner can edit/delete their particular booking
- query/reporting facility to produce summary reports.

The general level of expression in student responses to this question was disappointing. It is important for students to be able to describe the features used in common software applications and to explain their advantages.

# 2007 Assessment Report



## Question 12

Marks	0	1	2	3	4	Average
%	9	25	38	22	6	1.9

### Question 12a.

Any two of:

- the type of training and user documentation to be provided
- whether hardware upgrades are required
- compatibility of software and/or hardware with the new operating system
- cost of installation and ongoing maintenance.

### Question 12b.

Two marks were awarded for any two reasonable strategies, such as:

- set up a spare PC under the new OS and do backups in both formats for a full backup cycle, prior to switching over
- acquire a utility to convert old format backups to the new format
- buy a new backup system that will import the old files.

Most students found this question challenging. Many students offered answers that just restated the question and gave insufficient or no explanation. Some students gave well thought-out, inventive strategies, but many did not handle part b. well. Hardware issues appeared to be poorly understood by many students in this and other questions.

## Question 13

Marks	0	1	2	Average
%	5	19	76	1.7

### Question 13a.

Home users who use only basic email, browsing and word processing.

### Question 13b.

A home or office user who would do a range of standard office type tasks or home entertainment tasks, such as online games.

## Question 14

Marks	0	1	2	3	Average
%	27	29	31	13	1.3

### Question 14a.

Two marks were awarded for any two of:

- drop down lists to select parts
- a macro to check the compatibility of items chosen
- a macro to complete and total orders
- a confirmation page to check orders.

### Question 14b.

Any one of:

- provide help screens
- undertake data validation at the time of entry
- have an error message that alerts the user to the problem.

Although part a. was handled well by most students, a number of answers given for part b. were not appropriate for an online client.

## Question 15

Marks	0	1	2	3	4	Average
%	12	20	25	25	18	2.2

### Question 15a.

In-house course with a consultant

# 2007 Assessment Report



## Question 15b.

Three marks were awarded for any three of:

- it is personalised to Tuckers' needs
- it is cheaper than the commercial course
- it guarantees a degree of success with mentoring
- it is easier for a cohesive group to interact with the presenter
- staff are trained using their own hardware/software.

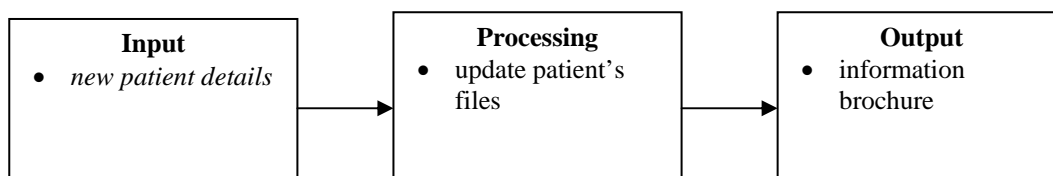
Some students gave broad and irrelevant responses to part b. while others demonstrated a good understanding of the issues involved. Students could still achieve marks for appropriate reasons given even if they had chosen the non-preferred option in part a.

## Question 16

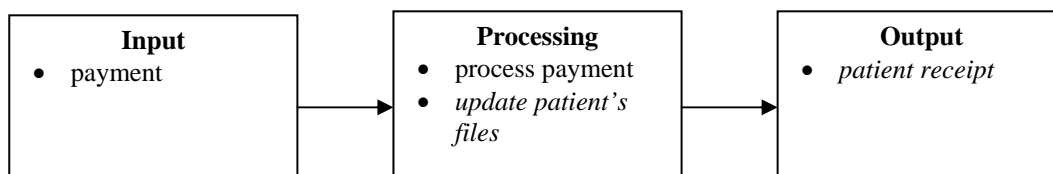
Marks	0	1	2	3	4	5	Average
%	15	21	26	19	15	4	2.1

### Question 16a.

Process 2



Process 3



One mark was awarded for each of the three missing entries (in italics).

### Question 16b.

Any one of:

- context diagram
- system flow chart
- hierarchy chart
- data flow diagram
- log book or maintenance log
- data dictionary.

### Question 16c.

Any one of:

- quick reference card/poster or guide
- online help
- user manual
- training manual.

Question 16 was either answered very well or rather poorly, indicating that some students did not understand IPO charts. Statements for Input or Output that described a process, such as 'submit patient details' instead of simply 'patient details' were not accepted.

# 2007 Assessment Report



## Question 17

Marks	0	1	2	3	4	5	6	Average
%	8	5	9	11	14	31	23	4.0

## Question 17a.

Line number	Explanation for code
6	Selects the entire document
7	Sets the font name of the selected text to Arial
10	Sets the page orientation to landscape

## Question 17b.

- line 9
- Selection.ParagraphFormat.Alignment = wdAlignParagraphCenter

One mark was awarded for the line number and one mark for the correct code.

## Question 17c.

One mark was awarded for a suggestion to use the styles or template feature.

Responses to Question 17 were reasonably good, although some students did not recognise that line 6 selects the entire document; they mistakenly thought that it referred to some text or a text field called 'Wholestory'.

## Section C – Case Study: Software applications

### Question 1

Marks	0	1	Average
%	15	85	0.9

She could use a template to make sure that each brochure she produces is consistent in quality and content. It is more efficient, easier to use and faster.

### Question 2

Marks	0	1	2	Average
%	15	47	37	1.2

Any two of:

- training or user documentation
- create/use a template spreadsheet with formulas already there
- create/use macros (for example, fill in a form which uses formulas embedded in the spreadsheet)
- use validation techniques to prevent incorrect data entry
- study formulas to improve understanding of what they do.

### Question 3

Marks	0	1	2	Average
%	8	34	58	1.5

### Question 3a.

Any one of:

- to make changes if needed
- to make sure that client requirements are met
- to know whether there are any problems that should be fixed
- to receive positive feedback or check that the client is happy with it.

### Question 3b.

Any one of:

- user documents are used to train users
- technical documents are used for modifying macros/templates
- you can re-implement the macros and templates if they are lost.

A number of students were not able to explain why having the new disaster recovery plan documented would help the club when it moves or that during a move there is more risk.

# 2007 Assessment Report



## Question 4

Marks	0	1	2	Average
%	61	27	12	0.5

Students had to sketch a report layout that allowed for job selection and included some of the following features:

- drop down menu for sorting options
- date range of jobs to print
- jobs completed/not completed
- report/screen title.

This question resulted in a range of responses. While some students handled the question very well, it was clear that many others had little idea of how to design a report form and sketched a data entry form instead. Marks were not awarded for a non-report format.

## Question 5

Marks	0	1	2	3	4	Average
%	10	15	27	32	16	2.3

### Question 5a.

Any one of:

- create input screen macro to database
- macro to send cost data to Malcolm
- macro for automatic print after each job.

### Question 5b.

Either of:

- test the macro
- get client feedback.

### Question 5c.

A global macro is a macro that can be accessed from any file or subroutine within an application.

One mark was awarded for a definition of a global macro.

### Question 5d.

Because it is necessary for all twenty designers to have access.

Some students struggled with parts b. and c. of this question and seemed unfamiliar with the concept of a global macro.

## Question 6

Marks	0	1	2	3	4	Average
%	15	20	24	24	17	2.1

### Question 6a.

Either of:

- the cost is calculated and/or projected job profit is calculated and the job is printed
- the macro will calculate the cost but will not flag the job as closed and lock the job.

### Question 6b.

Either of:

- "Print job details" to be inserted after row 3 or after row 4
- switch lines 8 and 9.

### Question 6c.

To make sure all documentation is consistent and clear.

### Question 6d.

By providing:

- training



# 2007 Assessment Report



- memos/emails/website information.

## Question 7

Marks	0	1	2	3	4	5	Average
%	9	16	20	26	24	6	2.6

## Question 7a.

Number 4

## Question 7b.

Students were expected to label an appropriate folder structure – either a folder for each of images and logos, or a folder for each customer who has a brochure completed.

## Question 7c.

Any two of:

- create a shortcut on the desktop
- create a menu screen and put links for the database and other commonly used programs
- make the file accessible in a shared folder on the network.

Parts a. and b. were handled well by most students, but some students found it difficult to describe two ways to make the database more accessible to users.

## Section C – Case Study: General

### Question 1

Marks	0	1	Average
%	42	58	0.6

Any one of:

- guide them through the steps
- ensure all data is captured
- provide error checking
- reduce the time needed for data entry.

### Question 2

Marks	0	1	2	Average
%	24	26	50	1.3

Students were expected to include two or more fixed items, such as the logo, club name and address or standard text, and two or more variable items, such as the purchaser's name/address, date or ticket details.

### Question 3

Marks	0	1	2	Average
%	12	64	24	1.1

## Question 3a.

To validate it and make sure that all steps have been included.

## Question 3b.

Because new PCs means a total reinstallation which is equivalent to a disaster recovery and it must work, and there is a greater risk when moving premises.

Most students were able to explain why it is important to test a new disaster recovery plan; however, a number of students were not able to apply this knowledge to the case study, where there was a greater risk involved as they were moving premises.

### Question 4

Marks	0	1	2	Average
%	10	30	59	1.5

# 2007 Assessment Report



## Cable: Advantages

- faster
- more secure
- no new support issues

## Disadvantages

- more difficult to install cable
- more expensive as they will be moving in the future

## Wireless: Advantages

- quick and easy to install
- allows network or Internet access across the workplace
- wireless is only short term until the move and can be relocated

## Disadvantages

- can be slower
- less secure if not set up properly
- low signal or signal dropout is possible

One mark was awarded for an appropriate advantage and one mark for a disadvantage, regardless of which option was chosen.

## Question 5

Marks	0	1	2	3	4	Average
%	16	10	29	34	10	2.1

Database access						
	Merchandise	Membership	Player statistics	Player medical records	Game statistics	Group number
1	read only	read only	read/write	none	read/write	4
2	read only	read only	read only	read/write	read only	3
3	read/write	read/write	read/write	read/write	read/write	
4	read/write	read/write	read/write	none	read/write	1
5	read only	read only	read/write	none	read only	
6	read/write	read/write	read only	none	read only	2

## Justification

- line 1: group 4, Samuel (the scorer), updates scores and statistics, no access to medical, read for the rest
- line 2: group 3, Rina/Ryan (medical staff), are the only ones to access medical information
- line 3: no one (would be the administrator)
- line 4: group 1, Lucas (the manager), access to all except medical (for privacy reasons)
- line 6: group 2, Elias (membership), full access to merchandise/membership

## Question 6

Marks	0	1	2	3	4	Average
%	33	46	17	4	0	0.9

## Question 6a.

Any two of:

- put medical records and members' details on a different server
- install a firewall
- encrypt files for extra security
- use password sensitive files.

## Question 6b.

- Line number: 4

# 2007 Assessment Report



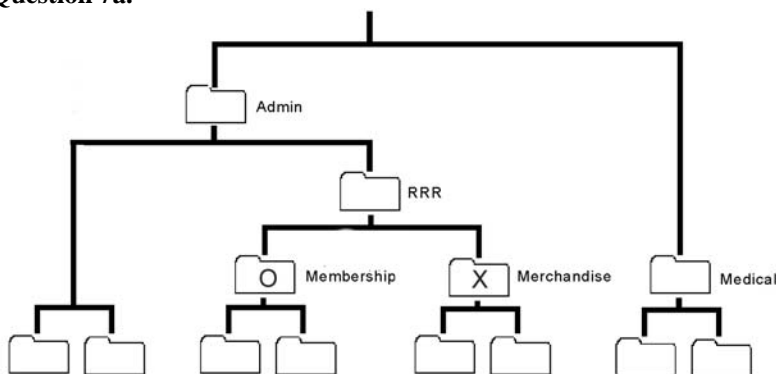
- Correct code: `gst_multiplier = 1.1` OR `= 1 + 0.1`

A number of students were not able to suggest the correct code for part b., indicating that they did not understand the pseudo code algorithm.

### Question 7

Marks	0	1	2	3	4	5	Average
%	31	27	19	19	4	0	1.4

### Question 7a.



### Question 7b.

Either of:

- create support documents for FAQs, online help, etc
- provide training.

### Question 7c.

One-on-one training

### Question 7d.

Obtain approval from Elias/RRR manager

A number of students missed the issue of needing to seek approval from a supervisor before going ahead with the changes for part d.

## Section C – Case Study: Network Administration

### Question 1

Marks	0	1	Average
%	32	68	0.7

Any one of:

- user resistance
- users would write them down
- too many forgotten password problems at the help desk
- password too hard to remember.

### Question 2

Marks	0	1	2	Average
%	24	41	35	1.1

Any two of:

- security checks on staff when leaving the centre
- biometric logins
- ensure that logins are recorded in logs and that the logs are monitored
- password protected screen savers after a certain number of minutes
- additional passwords on important files
- limit times of access to computers

# 2007 Assessment Report



- run a security audit on the current passwords/the current staff.

Some students made suggestions related to the physical security of the centre rather than security of access of computers. The cleaners would have to get into the building to do their job.

### Question 3

Marks	0	1	2	Average
%	8	16	76	1.7

Advantages

- no wires needed to connect (less wiring costs)
- can be upgraded easily
- allows access to locations that cannot be wired (that is, provides access 'almost anywhere')

Disadvantages

- susceptible to interference
- susceptible to being hacked
- security must be set up, maintained and updated regularly
- slower than copper (and fibre)
- limited range

### Question 4

Marks	0	1	2	Average
%	44	33	23	0.8

#### Question 4a.

The Monday file server data restore only needs the 'full backup' from Friday, unless the restoration occurred after the Monday 'incremental backup' occurred (for example, in the afternoon), then the Monday tape would be needed too.

#### Question 4b.

The Thursday mail server data restore needs the Friday, Monday, Tuesday and Wednesday tapes in that order.

A few students appeared to have a poor understanding of backup procedures and suggested broad answers such as 'full backup' or 'incremental backup' without specifying the tape's specific day.

### Question 5

Marks	0	1	2	3	4	Average
%	11	10	24	38	16	2.4

#### Question 5a.

Step 1, either of:

- install operating system (and backup program)
- use emergency recovery disk for the backup program.

Step 2:

- restore the appropriate backup tapes.

#### Question 5b.

Answers needed to include at least two of the following ideas:

- test that the computer works
- test that the data is accessible
- test that the data is correct.

### Question 6

Marks	0	1	2	3	4	Average
%	14	22	35	15	13	1.9

#### Question 6a.

WiFi Protected Access (WPA) would be best because:

- WPA has a 256 bit key versus a 40 or 104 bit key with the 64/128 bit versions of WEP

# 2007 Assessment Report



- WPA uses stronger encryption
- WPA can be used with certificates or RADIUS (Remote Authentication Dial In User Service – an authentication, authorisation and accounting protocol)
- WPA has a series of dynamic keys.

Students were awarded one mark for stating that WPA would be better and one mark for an appropriate reason. A response of simply 'better security' was not acceptable.

## Question 6b.

Any two of:

- DHCP logs (dates and times)
- login security logs for success/failure (unexpected login attempts on the weekend)
- firewall/router logs (unexpected weekend traffic).

Some students found part b. more challenging and suggested items that were not logs, as was required by the question stem. Students are advised to read questions carefully and make sure that they give appropriate responses.

## Question 7

Marks	0	1	2	3	4	5	Average
%	8	8	21	30	16	17	2.9

## Question 7a.

Method	Acceptable reasons
WiFi	None – not acceptable
Land line	Cheap, available almost everywhere
3G/NextG	Available most places, known company, speed
Satellite	Available everywhere

No marks were awarded if a student suggested WiFi. For any other method suggested, one mark was awarded for a reasonable explanation.

## Question 7b.

Any two of:

- an account
- a card for the laptop or a connection to a mobile phone for the laptop
- a 3G/NextG SIM for the card or phone
- a booster aerial.

## Question 7c.

Any two of:

- loss of confidential data
- loss of access to business data via the VPN link
- increase in insurance premiums
- if the connection passwords are saved there is potential for someone to use the VPN to access/damage the main business data
- it does not cover physical faults or damage.