2022 VCE VET Information and Communications Technology external assessment report

General comments

The VCE VET Information and Communication Technology (ICT) end-of-year examination examines the five VET units of competence included in the VCE VET ICT scored Unit 3-4 sequence. Students need to be familiar with all five of the units and with the performance criteria outlined in these units.

The examination included questions about tasks that need to be done before, during or after an event. Student responses often indicated a lack of understanding about where the question was in this timeline.

Student responses needed to be specific to the scenarios provided in the stem of the question. Students sometimes answered the questions too broadly and outside the scope of the scenario. Students often did not take into consideration the role of the person in the question.

Responses sometimes indicated a lack of understanding of key [command terms](https://www.vcaa.vic.edu.au/assessment/vce-assessment/Pages/GlossaryofCommandTerms.aspx) in questions (such as list, describe, explain), which meant students were not able to receive full marks for certain questions. Where a question required a specified number of answers, students often gave one detailed answer, which was not enough to obtain more than one mark.

Specific information

Note: This report provides sample answers or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding resulting in a total more or less than 100 per cent.

Section A

The table below indicates the percentage of students who chose each option. Shading indicates the correct answers.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Question** | **Correct answer** | **A%** | **B%** | **C%** | **D%** |  |
| 1 | A | **80** | 9 | 4 | 7 |  |
| 2 | C | 4 | 0.8 | **92** | 3 |  |
| 3 | B | 22 | **53** | 5.3 | 20 |  |
| 4 | D | 2 | 0.4 | 1 | **96** |  |
| 5 | B | 3 | **80** | 0.8 | 17 |  |
| 6 | D | 0 | 0.8 | 2 | **97** |  |
| 7 | D | 27 | 8 | 19 | **47** |  |
| 8 | A | **28** | 5 | 59 | 8 | Many students chose ‘developing a plan’ but the question stem indicated that the fault had already been identified and the technician had been asked to replace the RAM. |
| 9 | C | 4 | 11 | **80** | 5 |  |
| 10 | D | 7 | 9 | 21 | **63** |  |
| 11 | A | **21** | 9 | 69 | 1 | Many students chose to seek approval but the stem of the question implied approval had already been gained. |
| 12 | C | 0.4 | 51 | **37** | 11 | Item C was the only option not related directly to using the software. |
| 13 | C | 38 | 7 | **32** | 23 | Students needed to recognise at what stage they were in the process when the question was asked. |
| 14 | A | **58** | 12 | 18 | 13 |  |
| 15 | B | 1 | **86** | 10 | 2 |  |
| 16 | A | **23** | 24 | 27 | 25 | Students needed include all three dot points for the correct answer to this question. |
| 17 | B | 12 | **40** | 26 | 22 | The range of answers suggested students confused traceroute with other diagnostic tools. |
| 18 | A | **57** | 4 | 0.4 | 39 |  |
| 19 | D | 3 | 3 | 42 | **52** |  |
| 20 | B | 7 | **53** | 9 | 31 |  |

Section B

Question 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 32 | 42 | 26 | 0.9 |

Responses were awarded one mark for any of the following, to a maximum of two marks:

* Check that the software has been paid for.
* Check that the licence has not expired.
* Check that the organisation is compliant.
* Check the correct number of licences are purchased.
* Check licences are up to date.
* Comply with terms and conditions.

As indicated in the question, the expected responses were about software licensing.

Question 2a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 21 | 79 | 0.8 |

Responses were awarded one mark for one of the following:

* Wear gloves.
* Wear safety glasses.
* Turn off the power before opening the printer.
* Clean up any spilt toner with a dry cloth (not a vacuum cleaner).
* Use PPE (personal protective equipment).

Question 2b.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 69 | 31 | 0.3 |

Responses were awarded one mark for one of the following

* Return to supplier for recycling if possible.
* Return to alternative recyclers.
* Use E-waste programs.

Responses such as ‘put in the garbage or a regular recycling bin’ were not accepted. Students also needed to be careful with their choice of words, as ‘dispose of’ and ‘recycle’ do not mean the same thing.

Question 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 7 | 52 | 41 | 1.3 |

Responses were awarded one mark for each suggestion, to a maximum of two marks. Two clearly different issues were required.

* It makes auditing staff access impossible.
* Carmen may not be allowed the level of access that Rafael has, thus causing a threat to the data.
* Passwords can easily be stolen or seen by other people.
* Passwords should not be written down.

Question 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 7 | 41 | 52 | 1.4 |

Responses were awarded one mark for each suggestion, to a maximum of two marks. Two clearly different solutions were required.

* Introduce a booking-in system for computer faults needed to be attended to by the technicians.
* Schedule a time to see the technician.
* Create user documentation for common faults encountered by users and ask that all teachers refer to this before booking the time with the technician.
* Appoint a supervisor position to oversee the entire process and to prioritise the technician’s time.
* Set up a hot-desk computer.
* Employ additional support staff.

Question 5a.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 38 | 26 | 36 | 1.0 |

Responses were awarded one mark for the definition and one mark for the example.

Relates to creations of the mind (or exclusive knowledge), including inventions, literature and creative expression (for example, designs, prototypes, symbols, names and images).

A small number of students confused IP meaning internet protocol address (for example, 192.168.0.1) with IP meaning intellectual property.

Question 5b.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 75 | 25 | 0.2 |

A document that details how information from customers and employees is collected, stored and used. Students needed to mention collected (or managed) and stored to gain the mark.

Question 6a.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 28 | 41 | 30 | 1.0 |

Responses were awarded one mark for each suggestion. Correct responses included but were not limited to:

* the data can be secured
* the network provides convenient access from tablets in the salon
* easy access to data
* easy access to the internet
* sharing files
* easy printing.

Question 6b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 43 | 28 | 28 | 0.9 |

Responses were awarded one mark for describing a modem and one mark for describing a router. The answer needed to be written so Nikki could understand it.

* A modem encodes and decodes data so it can pass between a computer and your internet service provider.
* A router directs the information collected by the modem to devices within your network and allows multiple devices to talk to each other and to use the internet connection provided by the modem.

Many households have a device that they call a ‘router’. This may contain a router, a modem, a firewall, a switch and possibly more. Students are expected to understand the basic functionality of each component.

Question 6c.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 7 | 52 | 41 | 1.3 |

Correct responses included:

* detect and block malicious network requests
* protect sensitive client data.

Responses were awarded one mark for detection and one mark for blocking.

Question 7

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | 3 | Average |
| % | 24 | 35 | 28 | 12 | 1.3 |

Responses were awarded three marks for any three of the following.

* need to provide instant instructions (not email/phone)
* hover text when mousing over prompts or answer spaces
* clickable link(s) that go to a help page or a popup help message
* instructions included as part of the form
* error checking of inputs with an assistance message if invalid data is entered
* drop-down box
* pre-fill fields
* range check
* chat functionality
* other accessibility options (for example, spoken text for visually impaired people).

The question related to a feedback form. Students needed to consider that a person completing a feedback form is doing so willingly and will therefore not go to excessive lengths for assistance.

Question 8a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 61 | 40 | 0.4 |

Responses were awarded one mark for any of the following:

* top-level or highest level of access
* ability to take over control of the computer
* access by technicians or ICT staff.

Question 8b.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | 3 | Average |
| % | 32 | 29 | 28 | 11 | 1.2 |

Responses were awarded one mark for each ‘unique answer’ that met any of the below criteria.

* Report problems to required personnel.
* Identify faulty ICT equipment and software.
* Test faulty ICT equipment and software according to manufacturing guidelines and task requirements.
* Analyse test results.
* Develop plans, with prioritised tasks and contingency arrangements for repair and replacement of faulty equipment and software.
* Liaise with required personnel and obtain plan approvals.
* Obtain ICT components and repair equipment and software in a timely, organised manner, following work health and safety (WHS) standards.
* Record maintenance, fault data and equipment modifications according to organisational standards.
* Identify and report instances where preventive measures were required.
* Check for updates and mitigations.
* Identify possible target software.
* Contact suppliers for more information.

Question 9a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 90 | 10 | 0.1 |

The correct answer was *Copyright Act 1968* (must have included the date to gain mark).

Question 9b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 30 | 39 | 31 | 1.0 |

Responses were awarded one mark for each correct requirement.

* Gain approval from original source.
* Ask the writers to fill in a form indicating whether an image is original material, and if not original, list the source.
* Ban all non-original images.
* Encourage the use of original materials by using financial incentives and have a listing of all non-original images found in use by the company and their original source.
* Use only public domain sources.
* Check with Legal or Compliance.

Some students sought approval from Kyla or others within the organisation. Approval needs to come from owners of the image.

Question 10a.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 31 | 47 | 23 | 0.9 |

Correct responses included:

* to allow restores to occur for each day of the week, allowing for errors in the most recent backup to be corrected using a previous backup
* policy of the company to keep data for no longer than one week
* allow answers that discuss an appropriate backup strategy if they answer the question.

Responses were awarded one mark for a statement along the lines of allows for easy restoration, in the case of a disaster. Responses were awarded one mark for benefit of the restoration.

Some students suggested in case they overwrite a backup, which would not be an adequate reason.

Question 10b.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 38 | 62 | 0.6 |

Responses were awarded one mark for stating the data on the day 1 removable drive will be overwritten on eighth day. (Seven days was also accepted, as was one week.)

Question 11

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | 3 | 4 | Average |
| % | 30 | 21 | 4 | 24 | 22 | 1.9 |

Responses were awarded three marks for three correct responses plus one mark for being in logical order.

* Confirm software, hardware or network requirements with client.
* Investigate and document a solution.
* Document additional requirements identified in the investigation and refer them to the client.
* Obtain approval from client to implement the solution.
* Investigate and document amount of technical support client may require.
* Discuss and agree level of technical support identified with client.
* Arrange time with client when support will take place.
* Provide technical support as part of group or one-to-one instruction to the client.
* Provide manuals and help documentation to client.

Points needed to be about providing advice. If the order did not match the above, but made sense, it was accepted.

Question 12a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 35 | 65 | 0.6 |

Responses were awarded one mark for one reason.

* Client needs to always be kept in the loop, must make sure that the plans are exactly what the client wants, there may be some alterations once the plans have been created.
* Possible interference and effect it might have.

Question 12b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 21 | 44 | 35 | 1.1 |

Responses were awarded one mark for each correct factor:

* number of users / bandwidth required
* physical placement (ceiling, power over ethernet)
* proximity to power / data points
* coverage or range of wi-fi
* interference with other WAPS or devices or structures
* appropriate wireless security.

Some students referred vaguely to ‘location’. This was not sufficient without an explanation of what location they were referring to.

Question 13a.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 44 | 31 | 25 | 0.8 |

Responses were awarded one mark for identifying the dilemma and one mark for stating why it is a dilemma.

The dilemma is that Wendy would like to have the money, but she knows she would not be doing the right thing by her customers. Illegality is not an ethical dilemma and so this was not an acceptable answer. It was insufficient to say ‘against the Privacy Act’.

An important factor in the new unit ICTICT313 is that students need to be able to recognise that some things are wrong but legal, and good business, is to do the right thing.

Question 13b.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 52 | 48 | 0.5 |

Responses were awarded one mark for mentioning needing permission or consent.

Wendy does not have permission (consent) from her customers.

Question 13c.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 55 | 31 | 14 | 0.6 |

Responses were awarded one mark for mentioning that Wendy needs to create a consent/permission form, and one mark for getting customers to fill it in. Verbal consent was deemed insufficient.

When students mentioned only that it could be included in the Privacy Policy, one mark was given.

Question 14a.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 21 | 49 | 30 | 1.1 |

Responses needed to include any two of the following points.

* Check for new problems logged by client.
* Check previous logs for similar problems or requests from client.
* Investigate and document support issues affecting client.
* Notify client of the results of the investigation and provide advice and support on findings.
* Obtain client feedback and make changes.
* Acknowledge receipt of request.
* Run a ping test, print a page.
* Remote access for computer.

Responses were awarded one mark for each of two tasks. Responses needed to relate to the printing issue to gain the marks.

Question 14b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 11 | 55 | 34 | 1.2 |

The correct order was as follows.

|  |  |
| --- | --- |
| **Step** | **Number** |
| Provide client with instructions on how to complete form or use other means of providing feedback. | 2 |
| Review feedback from client to identify areas for improvement. | 4 |
| Distribute evaluation or feedback to the client. | 3 |
| Create or use an existing appropriate evaluation or feedback form or other mechanism to gather feedback about the solution and support provided. | 1 |

Responses received two marks for four correct answers.

Question 15a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 19 | 81 | 0.8 |

Responses were awarded one mark for the statement to exclude another business from making or selling your product or ensure you don’t infringe on IP rights.

Question 15b.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 22 | 78 | 0.8 |

Responses were awarded one mark for mentioning breaching the agreement or IP.

Question 15c.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 67 | 33 | 0.3 |

Responses were awarded one mark for mentioning ‘band that lights up’ or ‘light-up band’.

Many students responded that the foam tops were the unique feature, which was incorrect.

Question 16a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 19 | 81 | 0.8 |

Responses were awarded one mark for mentioning either safety or cleanliness.

Question 16b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 21 | 25 | 54 | 1.3 |

The correct answer was speed or safety. Both are rated 3 or below, which indicated that there is room for improvement. Responses were awarded one mark for stating the area, and one mark for saying why.

Many students gave responses suggesting they were confusing the teams and others confused the ranking, believing 1 was low. Students were expected to be able to decipher data tables.

Question 17

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 36 | 29 | 35 | 1.0 |

Access control is a broad term that describes policies and methods that ensure only verified individuals can physically or virtually touch items that they have permission to access. An example was any relevant response relating to a network. Responses were awarded one mark for the definition and one mark for a related example.

Question 18a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 29 | 71 | 0.7 |

Responses were awarded one mark for solutions that prevent the mouse cable being damaged, for example, cable ties, wireless mouse, touch screen or redirecting cable.

Responses such as making the cable longer did not solve the problem.

Question 18b.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 44 | 56 | 0.6 |

Responses were awarded one mark for saying that checking for ‘similar problems’ is a standard part of managing a help desk and indicates a pattern.

Question 19a.

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | 0 | 1 | Average |
| % | 73 | 27 | 0.3 |

Responses were awarded one mark for Dynamic Host Configuration Protocol (DHCP).

Question 19b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 76 | 20 | 4 | 0.3 |

* The Subnet Mask defines/specifies which IP addresses are part of the LAN.
* Divides IP address in two parts.
* The Gateway Address is one of these:
* the destination address to be used for an address that is not part of the LAN
* the exit for LAN traffic going to the internet (or another network).

Responses were awarded one mark for each correct response.

The standard of responses for this question indicated poor understanding of the DHCP by students.

Question 19c.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 78 | 5 | 17 | 0.4 |

The DNS converts the URL (domain name) into its corresponding IP address. Responses were awarded one mark for mentioning converts URL / domain name and one mark for IP address.

Question 20a.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 48 | 48 | 4 | 0.6 |

Responses were awarded one mark for identifying (by annotation) the web server and indicating the issue, and one mark for identifying (by annotation) the public WAP and indicating the issue.

* Web server (no. 6): where the online ordering form is stored; may not have appropriate encryption.
* Public WAP (no. 7): where the customers can gain access to the network; may not have appropriate login/username and password credentials or high enough wireless security; there is public access to multiple devices.

Question 20b.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 34 | 32 | 34 | 1.0 |

Threats include:

* theft of sensitive information
* hardware failure or damage
* malware and virus
* compromised security credentials.

Responses were awarded one mark for listing the threat, and one mark for explaining how it relates to the question.

Swapping firewall and router was not accepted.

Question 20c.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | 3 | Average |
| % | 32 | 26 | 22 | 19 | 1.3 |

Responses were awarded one mark each for the following points or similar statements, to a maximum of three marks:

* contain the breach where possible
* assess if the breach is likely to result in serious harm
* notify privacy commission and people affected
* review to prevent further breaches
* apologise to the customer
* enable the action plan.

Question 21

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark | 0 | 1 | 2 | Average |
| % | 25 | 53 | 22 | 1.0 |

Responses were awarded one mark each for the following points, to a maximum of two marks:

* alert to a potential threat
* find unauthorised network traffic
* network sniffing
* monitors a network for malicious activity
* SIEM (security information and event management system).