2017 VCE Information, Digital Media and Technology examination report

General comments

Overall, students performed well in the 2017 VCE Information, Digital Media and Technology examination.

The majority of students handled questions from each unit of competency very well. Students must be familiar with the performance and knowledge evidence as described in the elements, performance criteria, and assessment conditions in the following units of competency.

- ICTICT301 Create user documentation
- ICTICT302 Install and optimise operating system software
- ICTSAS305 Provide ICT advice to clients
- ICTSAS306 Maintain equipment and software
- ICTSAS307 Install, configure and secure a small office or home office network

Students needed to ensure that they read questions carefully and answered the question asked, as some students recognised a keyword or a number of keywords and presented a factual answer related to those words. These answers were often out of context and did not address the question.

Questions on the examination required students to be familiar with key terms and be able to define and explain them, identify and explain why features are beneficial, suggest strategies and know the order of steps in processes.

Specific information

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 – 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	% No Answer	Comments
1	91	1	4	4	0	
2	1	14	10	75	0	
3	69	16	11	4	0	
4	12	0	83	5	0	
5	54	12	32	1	0	
6	5	17	58	20	0	
7	0	3	95	2	0	

Question	% A	% B	% C	% D	% No Answer	Comments
8	22	38	24	15	1	Students should know the command line for checking the network card on a computer. Options A and C would not work due to the hyphen, which is not a standard address alias.
9	5	1	10	84	0	
10	17	8	63	11	0	
11	16	51	15	17	1	C is the correct answer as the question states that Ross has already gained approval to implement the system. Options A, B and D describe actions completed before obtaining approval.
12	4	4	92	0	0	
13	30	54	3	13	0	
14	21	42	12	25	0	A is the only instance where confirmation had been received by GMU. Options B, C and D describe actions that did not involve consultation with the appropriate management (GMU).
15	23	57	13	7	0	
16	75	18	4	3	0	
17	21	23	4	52	0	
18	19	70	4	7	0	
19	8	10	26	56	0	
20	46	25	7	22	0	Students need to know security combinations of a wi-fi system.

Section B

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.

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Question 1

Marks	0	1	2	Average
%	8	49	43	**1.4**

Any two of:

- if her phone needs to be accessed when she is not present, it is not possible
- if she injures her thumb she will not be able to access her phone
- if a technician/trusted friend or family member needs to access the phone a passcode maybe needed
- the thumb reader may become damaged.

Question 2

Marks	0	1	2	3	Average
%	40	37	17	5	**0.9**

Advantages of using a web proxy server for a small business include:

- provides control over what employees are looking at
- helps to save precious bandwidth. Proxy servers can compress traffic, cache files and web pages from the internet and even strip ads from websites before they reach a computer
- can improve security by blocking access to malicious websites that distribute malware, and they can also provide encryption services so that your data is not easily accessed by third parties.

Question 3a.

Marks	0	1	Average
%	88	12	**0.1**

Dynamic Host Configuration Protocol

Question 3b.

Marks	0	1	Average
%	75	25	**0.3**

Any one of the following requirements must exist on the LAN for the DHCP to function correctly:

- a DHCP device (server, NAS, router, switch, network PC)
- a DHCP scope
- a DHCP range
- client's computers configured to receive address dynamically

Question 4

Marks	0	1	2	Average
%	20	6	74	**1.6**

An acceptable security feature and explanation was required for full marks.

The following are examples of acceptable answers.

- Security feature: antivirus
  Explanation:
  Where – on a/all computer(s) or server(s)
  Security – to identify known viruses before they can act
  　　　　　– to prevent virus-like behaviour in any software, for example, taking control of a
  　　　　　　computer and then destroying data, copying data elsewhere, changing data

- Security feature: intrusion detection (including SNORT)
  Explanation:
  Where – on a central switch inside the LAN
  Security　– detection of unusual data traffic, internet attacks, successful external penetration

- Security feature: spam filter
  Explanation:
  Where – on the mail (gateway) server
  Security – spam filters can protect against phishing attacks

- Security feature: firewall
  Explanation: restricts external access to the LAN

Question 5a.

Marks	0	1	Average
%	69	32	0.3

The Help Desk Operator has failed to look at logs to see how this was handled in the past and then suggest a process to use or eliminate.

Question 5b.

Marks	0	1	Average
%	56	44	0.5

Students needed to provide an explanation of how the response identified in part a. would have helped the situation.

For example, looking at logs would have identified a pattern of activity that may help troubleshoot an identified problem.

Question 6

Marks	0	1	2	Average
%	16	18	66	1.5

Having a warning only at 2.00 am means that 24 hours' worth of data use can occur between warnings, causing cost blowout and cancellation of service.

It could be a disadvantage being woken up at 2.00 am by a text message.

Question 7

Marks	0	1	2	3	Average
%	13	11	25	51	2.2

a Boolean response
- A question requiring a yes/no, true/false response
- Were you happy with the speed that we solved your problem?
- Were we able to solve your problem?
- Is the screen blank?

an open-ended response

- Is there anything we can do to improve your satisfaction with the business?

a drop-down box

- Please rate our software:
  Very easy to use
  Easy to use

Difficult to use

Question 8

Marks	0	1	2	3	4	Average
%	47	8	23	5	18	**1.4**

- Ping: sends out an electronic signal to a specific destination, expecting a reply
- Trace route: creates a sequence of pings to trace the path to a URL
- Cable tester: checks the continuity of the cable
- DNS lookup: checks the DNS existence and the information it holds
- Speed test: provides test to IP and speed up/down to IP

Question 9a.

Marks	0	1	Average
%	36	64	**0.7**

Sometime after the client has used the software.

Question 9b.

Marks	0	1	2	Average
%	29	29	42	**1.2**

- Time is needed for users to learn the new software.
- Doing a client evaluation immediately after installation might mean that users who are accustomed to the old system will not evaluate the new software positively, as they are still learning the new system when they are experienced with the old system.
- The new system may have more advanced features that are not immediately appreciated but in time will be critical to business operations (e.g. complete a business cycle).
- Users may be stressed by the change, which also might cause them to evaluate the new product negatively.

Question 10a.

Marks	0	1	Average
%	20	80	**0.8**

It will not work as it requires a different operating system.

Question 10b.

Marks	0	1	2	Average
%	8	36	56	**1.5**

Any two of the following:

- run two separate computers with two different operating systems
- that she purchases a computer that runs on Honeycrisp and changes all her other software to suit Honeycrisp
- dual boot
- virtual boot
- uninstall Finestra and install Honeycrisp.

Question 11a.

Marks	0	1	2	3	Average
%	12	32	40	16	**1.6**

Any three of the following:

- determine documentation requirements
- investigate documentation and industry standards (style guide)
- design documentation templates
- determine the change that the update has produced
- obtain approval to produce the documentation
- determine target audience

Question 11b.

Marks	0	1	2	Average
%	8	30	62	**1.6**

Any two of:

- can be accessed anywhere there is internet
- easy to update
- less expensive to create than paper-based user documentation

Question 11c.

Marks	0	1	2	Average
%	14	39	48	**1.4**

Any two of:

- need to have the internet to use the help function
- can be difficult to find
- could facilitate use of the app by those who did not pay for it
- could facilitate plagiarism of manual
- could make changes to the documentation that are malicious or not appropriate

Question 12

Marks	0	1	2	3	Average
%	19	33	30	17	**1.5**

- swap the cables
- if the HDD now works Matt should restore his data from that backup HDD
- if still faulty Matt should restore as much data as possible from his second HDD
- install an OS on the blank HDD
- check or mount the drive to the OS on the new HDD
- if the backup HDD file system not recognised, transfer data to another device that can 'talk' to the original computer
- search online
- reboot and try again
- to attempt to regain all data he could take the faulty HDD to data recovery experts

Question 13a.

Marks	0	1	2	Average
%	5	35	60	**1.6**

Any two of the following:

- to fix vulnerabilities discovered in the OS (security bugs)
- to install improvements in the OS (remove other bugs)
- to install improvements in the OS (install new features).

Question 13b.

Marks	0	1	2	Average
%	32	34	34	**1.1**

- mission-critical servers and workstations should only have required and tested patches installed (for example, stock exchange, banking, NASA launch computers, etc.)
- computers controlling equipment that could impact on human life (for example, air traffic controllers, life support in a hospital or a robotic assembly line)
- apps may not work if the OS version is changed

Question 13c.

Marks	0	1	2	Average
%	65	16	19	**0.6**

- being 'air-gapped' does not protect a computer from USB or CD/DVD transmitted attacks
- these computers can also benefit from improvements in the OS
- it needs to be compatible with the other devices in the organisation

Question 14

Marks	0	1	2	3	Average
%	16	17	34	33	**1.9**

Any three of the following:

- large font, easy to read
- numbered, so they can talk themselves through the steps
- simple, direct, plain language
- use of images
- copies at wheelchair height
- Braille version
- on approach, audio instructions are triggered.

Question 15a.

Marks	0	1	2	3	4	Average
%	3	3	17	34	42	**3.1**

- Is there a light on on computer?
- Is there fan/HDD noise in the computer?
- Is the power switched on at the power point?
- Is the power cable attached to the monitor?
- Is the monitor on/off button on?
- Is the monitor light on?

- Is the monitor data cable attached?
- Is the HDD LED flashing?
- Are there any USBs/CDs/DVDs connected?
- Have you tried switching it on and off and rebooting?
- What were you doing last time you used the computer?
- Has it happened before so I can check the log?

Question 15b.

Marks	0	1	2	3	Average
%	11	34	37	18	**1.7**

Appropriate techniques included:

- Active listening
- On-site examination (including benchmark testing)
- Question and answer
- Login remotely and check out the library for herself
- Check system logs
- Survey

Question 16a.

Marks	0	1	2	Average
%	61	20	19	**0.6**

Appropriate numbers of data points may vary depending on the justification; a number of scenarios were possible.

Question 16b.

Marks	0	1	2	Average
%	86	7	7	**0.2**

Appropriate patch panel size may vary depending on the justification; a number of scenarios were possible.

Question 16c.

Marks	0	1	2	3	Average
%	41	5	10	43	**1.6**

Depending on responses to parts a. and b., techniques could have included:

- quote
- labelled modified plan
- report
- face to face consultation
- email
- phone
- letter

Question 17a.

Marks	0	1	Average
%	60	40	**0.4**

They all link to 'letterhead paper (some by inference, for example, in the two press release jobs only one mentioned letterhead but it is assumed that there is a standard format for press releases).
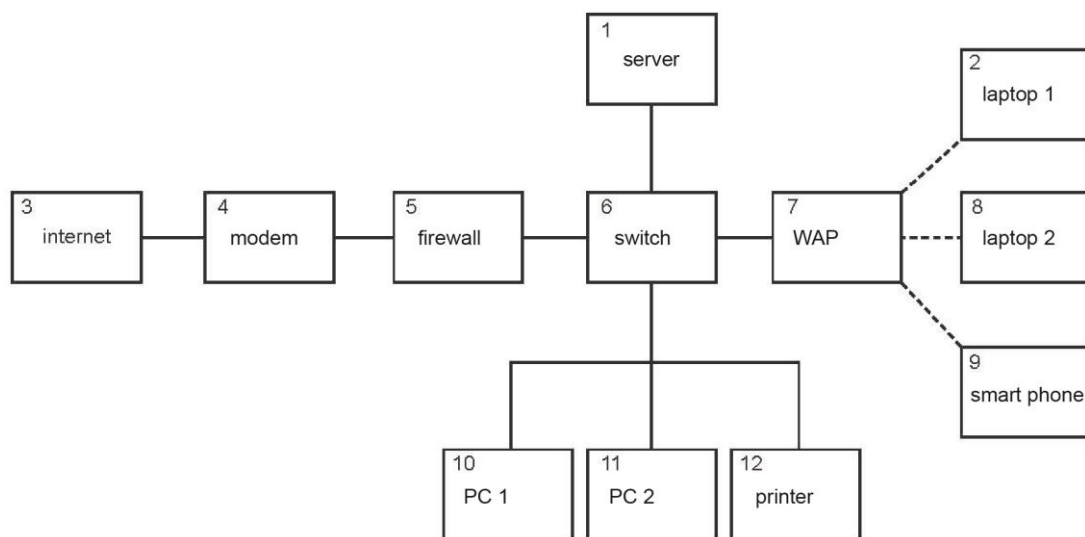
Question 17b.

Marks	0	1	Average
%	57	43	**0.5**

- buy better quality letterhead paper
- get in a repair person to check the paper guides
- put the letterhead paper in a different tray
- clean tray 2

Question 18a.

Marks	0	1	2	3	4	5	6	7	Average
%	3	2	7	15	21	16	15	21	**4.6**

Question 18b.

Marks	0	1	2	Average
%	47	36	17	**0.7**

- entry point/allows security checking both in/out
- entry/exit for data so devices are connected/online
- security made feasible to check in/out of the network