



# VCE VET Information and Communications Technology

## Written examination – End of year

### Examination specifications

#### Overall conditions

The examination will be sat at a time and date to be set annually by the Victorian Curriculum and Assessment Authority (VCAA). VCAA examination rules will apply. Details of these rules are published annually in the *VCE and VCAL Administrative Handbook*.

There will be 15 minutes reading time and 1 hour and 30 minutes writing time.

The examination will be marked by a panel appointed by the VCAA.

The examination will contribute 34 per cent to the study score.

#### Content

The VCE VET Information and Communications Technology examination will be based on the following compulsory units of competency from Units 3 and 4.

ICAICT301A	Create user documentation	Release 1	20 hours
ICAICT302A	Install and optimise operating system software	Release 1	20 hours
BSBSUS301A	Implement and monitor environmentally sustainable work practices	Release 2	40 hours
ICASAS305A	Provide IT advice to clients	Release 1	40 hours
ICASAS306A	Maintain equipment and software	Release 1	20 hours

The weighting of marks on the examination will approximately reflect the proportion of nominal delivery hours of each unit of competency that is examinable for this program. The electives will not be examined.

The examination will focus on the essential knowledge and an understanding of the essential skills as outlined in the elements and performance criteria of the relevant units of competency.

#### Format

The examination will be in the form of a question and answer book.

The examination will consist of two sections.

**Section A** will consist of 20 multiple-choice questions worth 1 mark each and will be worth a total of 20 marks.

**Section B** will consist of a number of short- and some extended-answer questions worth a total of 70 marks. Students may also be required to respond in the form of diagrams and to complete flow charts and tables.

All questions will be compulsory. The total marks for the examination will be 90.

Answers to Section A are to be recorded on the answer sheet provided for multiple-choice questions.

Answers to Section B are to be recorded in the spaces provided in the question and answer book.

#### Approved materials and equipment

Pens, pencils, highlighters, erasers, sharpeners and rulers

## Relevant references

The following publications should be referred to in relation to the VCE VET Information and Communications Technology examination.

- *VCE VET Information and Communications Technology Program Booklet* (published November 2012) and replacement pages 9–16 in *Program Summary: Revised Program Structure for VCE VET Information and Communications Technology* (published December 2013)
- *VCE VET Assessment Guide* (published February 2010)
- *VCAA Bulletin VCE, VCAL and VET*

## Advice

The following sample questions provide an indication of the types of questions that teachers and students can expect.

The sample questions relate to the units of competency **BSBSUS301A Implement and monitor environmentally sustainable work practices** and **ICASAS306A Maintain equipment and software**.

Teachers should refer to past examination papers for examples of questions from units of competency equivalent to **ICAICT301A Create user documentation**, **ICAICT302A Install and optimise operating system software** and **ICASAS305A Provide IT advice to clients**.

Answers to multiple-choice questions are provided on page 12.

Answers to other questions are not provided.

## Sample questions

### SECTION A – Multiple-choice questions

#### Question 1

The Finance Manager contacts Suzie at the Help Desk and complains that his computer is very slow to start up in the mornings. He asks Suzie to be available at his normal start time of 10.00 am tomorrow morning to help solve the problem.

Which one of the following is the most likely cause of this problem?

- A. Everyone else is logging in at the same time.
- B. There is insufficient system RAM and the hard drive is almost full.
- C. There is insufficient video RAM and, therefore, use of virtual memory is slowing the computer down.
- D. The circuit board in the Finance Manager's computer has not yet warmed up, so the thermal expansion in the connections to the hard drive has not yet created a good electrical connection.

#### Question 2

Joel rings you at the Help Desk and reports that his computer has just turned itself off again in the middle of the work he was doing. He says this is the third time the problem has been reported.

The best way to respond to this problem is to

- A. check the Help Desk log to find out how to solve the problem, then go fix it.
- B. go to Joel's workstation, inspect the computer, solve the problem and record what you did in the Help Desk log.
- C. check the entries in the Help Desk log for previous solutions and any patterns, then go to Joel's workstation and solve the problem.
- D. look for any pattern in the incidents, then go to Joel's workstation, inspect the computer, solve the problem and record what you did in the Help Desk log.

#### Question 3

Maddy was directed to fix Megan's computer, which has a dual-monitor display. After a power failure, the right-hand monitor showed no display, but the power light was on. Swapping the video cables only altered the information on the left-hand monitor.

What will Maddy need to do to overcome the problem?

- A. Replace the video card.
- B. Replace the power supply.
- C. Replace the right-hand monitor.
- D. Replace the right-hand video cable.

#### Question 4

John, the system administrator, had received complaints from users about word processor files opening up in an older version of the word processor. John had previously installed the new version without removing the old version.

The correct action for John to follow is to

- A. immediately remove the older version.
- B. immediately update the word processor software.
- C. plan to remove the older version after office hours.
- D. plan to update the word processor software after office hours.

### Question 5

Before setting targets for improving an organisation's environmentally sustainable work practices, input is needed from the organisation's stakeholders.

Which of the following are stakeholders?

- A. community, customers, suppliers, employees, auditors
- B. auditors, government, community, customers, suppliers
- C. employees, auditors, government, community, customers
- D. government, community, customers, suppliers, employees

### Question 6

Most organisations have some staff who feel the cold more than others do. These people will often be found in winter with a fan heater under their desk. However, these heaters commonly trip circuit breakers, causing IT workstations to crash and resulting in the loss of data.

Which one of the following will allow the organisation to reduce both data loss and unsustainable energy use?

- A. Plug the fan heaters into an uninterruptible power supply (UPS) to protect the circuit breakers.
- B. Provide radiant heaters for placement under staff members' desks and tell them to take their fan heaters home.
- C. Ensure the dress code permits warm clothing options for staff and tell them to take their fan heaters home.
- D. Raise the temperature on the central heating by three degrees and tell staff to take their fan heaters home.

### Question 7

Henry was asked to improve the efficiency of energy use in his office.

He can improve efficiency by

- A. using paper from plantation forests.
- B. using electricity sourced from wind power.
- C. replacing the inkjet printers with laser printers.
- D. configuring the computers to sleep after five minutes instead of 15 minutes.

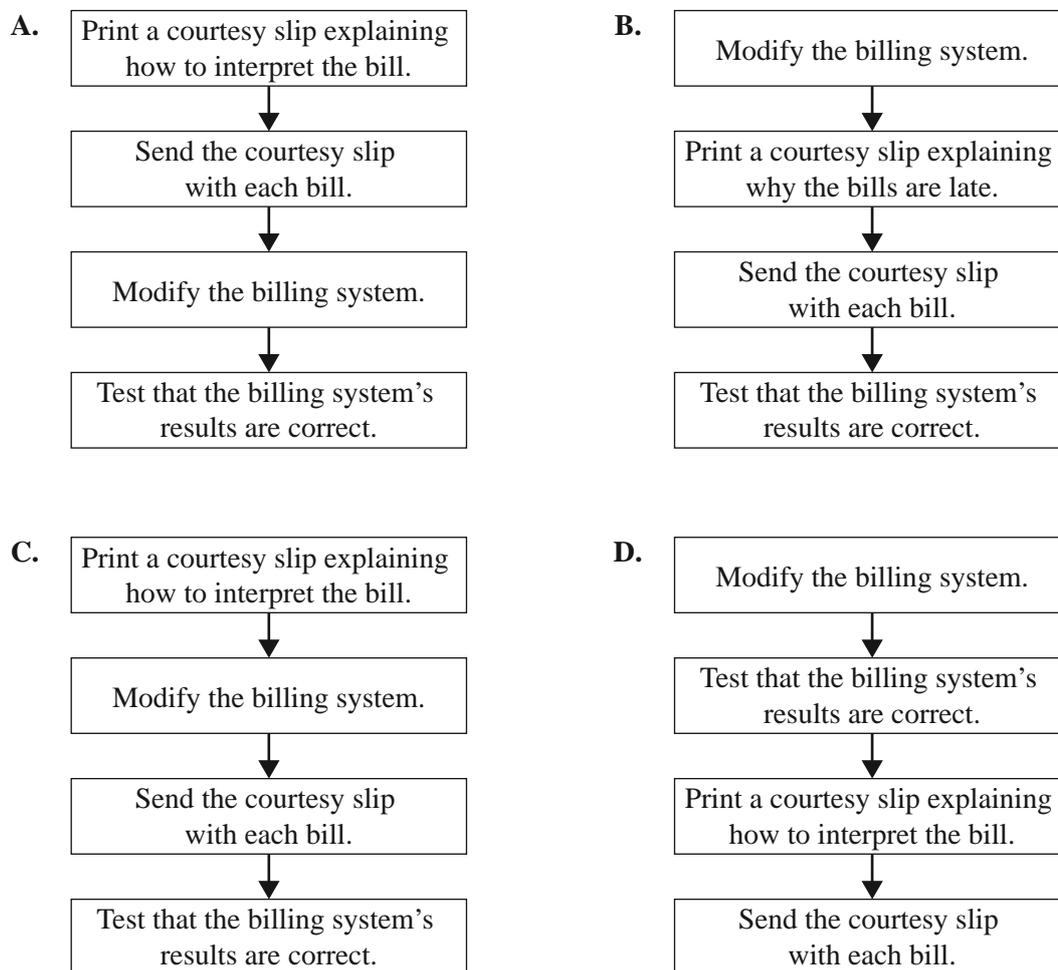
### Question 8

Following a change in government regulations, a business needed to quickly modify its billing system for its 3000 customers. After the bills had been printed, an error was detected. It was found that all customer account balances were overcharged by \$5.00.

Management wants to achieve the following goals in solving this problem:

1. Make sure the problem does not happen again next month.
2. Avoid reprinting the bills:
  - a. because the scheduled date for sending them is today
  - b. to minimise wasting paper and energy.
3. Help customers to understand:
  - a. the correct amount that they need to pay
  - b. this was a one-off event caused by changes in government regulations
  - c. this will not happen again.

Which of these solutions meets all of these goals in an appropriate order?



## SECTION B

### Question 1 (4 marks)

Liza is about to clean the interior of a computer that has been in a dusty environment.

- a. List two pieces of equipment that will make this job safe. 2 marks

- \_\_\_\_\_
- \_\_\_\_\_

- b. Where will most of the dust have accumulated inside the computer? 1 mark

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- c. Why is it important to remove dust from inside the computer regularly? 1 mark

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### Question 2 (5 marks)

Justin has been instructed by his manager to cut IT running costs by 5 per cent for this coming year. He can make some savings by using the free antivirus software 'Blue Blah-Blah' rather than paying the licensing fee for the 'Red Yak-Yak' antivirus software that has been used for the last five years.

- a. List **one** advantage of free antivirus software, apart from the cost. 1 mark

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- b. Explain **one** disadvantage of free antivirus software. 2 marks

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- c. Suggest **one** other way in which Justin could cut IT running costs. 1 mark

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**d.** Briefly explain **one** negative effect of the cost-cutting suggestion that you provided in **part c.** 1 mark

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**Question 3** (4 marks)

Leonard works at a Help Desk. He is contacted by Linh, who says she is unable to save files to a network drive.

Describe what Leonard needs to do to discover why Linh cannot save files.

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**Question 4** (6 marks)

The following sequence of steps outlines the process for upgrading an organisation's payroll system.

1.
2.
3. Read the release notes.
4.
5. Install the upgrade into the Test payroll system.
6.
7. If no problems occur, record successful testing of the upgrade and go to step 9.
8.
9. Plan a time in the future that is between payroll cycles for the live upgrade date.
10.
11. Record the completion of the upgrade.

**a.** The following steps are missing from the sequence above.

Write the letter of each step in the boxes above to complete the sequence in the correct order.

3 marks

- A. If any problems occur in testing, stop the upgrade and submit the issue to external support.
- B. Copy the current Live payroll system to the Test payroll system.
- C. Test the upgrade in the Test payroll system using the local data.
- D. Receive notification that the upgrade is available.
- E. Install the upgrade to the Live payroll system.
- F. Download the upgrade.

**b.** Why is step 3 undertaken before step 5?

1 mark

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**c.** Why is an up-to-date copy of the payroll system required for testing?

1 mark

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**d.** Why is step 9 required?

1 mark

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**Question 5** (6 marks)

Jake has been appointed to a role that requires him to plan sustainable use of resources in the IT department.

- a. Describe **two** ways in which Jake can investigate current resource use in the IT department. 2 marks

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- b. Suggest and explain **two** strategies to reduce resource use in the IT department. 4 marks

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**Question 6** (4 marks)

Taylor printed out the report from the new printing system. She read that her company had been using an amount of paper equivalent to 23.5 trees per month.

Suggest **four** strategies to reduce her company's paper use.

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**Question 7** (7 marks)

Dora has been appointed to a new position at East Bank. She has been given the task of implementing a new environmental sustainability program.

- a. How can Dora find the appropriate environmental regulations that apply to her industry? 1 mark

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- b. List **two** tools that Dora can use to identify target areas in which environmental sustainability can be improved. 2 marks

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- c. Identify **two** stakeholders Dora can consult for suggestions on how to implement her program. 2 marks

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- d. You are one of the stakeholders Dora consulted in **part c**. Provide **two** suggestions for Dora. 2 marks

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**Question 8** (9 marks)

You are the head of the IT department at a hospital and have been given the task of reviewing the use of electricity in the hospital. Your goal is to reduce overall energy consumption and the hospital's carbon footprint without compromising health services or occupational health and safety (OH&S) for staff, patients and visitors.

Some of the main uses of electricity at the hospital are in:

- computing
- health monitoring systems.

You are considering implementing compulsory power-saving and security measures. The options you have are in the tables below.

Power-saving and security options
A. Power down the monitor.
B. Lock the desktop and power down the monitor.
C. Put the computer to sleep (requires unlock).
D. Hibernate the computer (requires unlock).

Power-saving timeframes
I. 10 minutes
II. 15 minutes
III. 20 minutes

- a. For each of the following locations where computers are used in the hospital, provide the best power-saving and security option, and the relevant power-saving timeframe. 5 marks

<b>Computer location</b>	<b>Power-saving and security option (A., B. C. or D.)</b>	<b>Power-saving timeframe (I., II. or III.)</b>
computer server room		
nurses' station in the Emergency department (open 24 hours a day, over three shifts)		
finance department (works Monday to Friday, 9.00 am to 5.30 pm)		
general office (administration staff) (works Monday to Friday, 8.30 am to 5.30 pm)		
patient enquiries desk (phone and counter service) (works seven days a week, 7.00 am to 10.00 pm)		

- b. Explain why the answers for the nurses' station in the Emergency department are not the same as those for the patient enquiries desk. 2 marks

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- c. Explain why the answers for the finance department are not the same as those for the computer server room. 2 marks

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## Answers to multiple-choice questions

Question	Answer
1	B
2	D
3	C
4	C
5	D
6	C
7	D
8	A