

B O A R D O F S T U D I E S
NEW SOUTH WALES

2012

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Information Technology

General Instructions

- Reading time – 5 minutes
- Working time – 2 hours
- Write using black or blue pen
Black pen is preferred
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of pages 9, 11, 13 and 15

Total marks – 80

Section I Pages 2–6

15 marks

- Attempt Questions 1–15
- Allow about 20 minutes for this section

Section II Pages 9–15

35 marks

- Attempt Questions 16–19
- Allow about 50 minutes for this section

Section III Page 17

15 marks

- Attempt Question 20
- Allow about 25 minutes for this section

Section IV Page 18

15 marks

- Attempt Question 21
- Allow about 25 minutes for this section

Section I

15 marks

Attempt Questions 1–15

Allow about 20 minutes for this section

Use the multiple-choice answer sheet for Questions 1–15.

- 1 Which list contains ONLY input peripheral devices?
 - (A) Speakers, scanners, mouse, modem
 - (B) Keyboard, projector, mouse, flash drive
 - (C) Microphones, track-ball mouse, scanner, touch screen
 - (D) Laser printer, graphic tablet, barcode reader, hard disk

- 2 What is the study of the interaction of workers with their environment called?
 - (A) RSI
 - (B) OHS
 - (C) Ergonomics
 - (D) Environomics

- 3 Which statement best describes *cache memory*?
 - (A) USB memory connected to a computer to increase its storage space
 - (B) An area of memory that contains settings for operating the computer
 - (C) An area of the hard disk that is used when there is insufficient RAM
 - (D) High-speed memory that is included in devices to improve response time

- 4 Chris operates her own IT support business and has no other employees. She has agreed to carry out repairs for several organisations.

Which of the following best describes her type of employment?

 - (A) Contract
 - (B) Industrial award
 - (C) Enterprise agreement
 - (D) Workplace agreement

- 5 A bakery business uses the following spreadsheet template to create invoices.

	A	B	C	D	E
1	Invoice				
2	Date	Quantity	Description	Price	Cost
3	25/8/2012	10	Cup cakes	\$2.90	\$29.00
4	26/8/2012	28	Party pies	\$0.50	\$14.00
5					
6					
7					
8				Total cost	\$43.00

What formula would be found in cell E8?

- (A) =\$(E3+E7)
 (B) =SUM(E3:E7)
 (C) =ADD(E1;E7)
 (D) =TOTAL E3+E4+E5+E6+E7
- 6 An application icon was accidentally deleted from the desktop of a stand-alone computer. How would this affect the application?
- (A) The application would have been uninstalled.
 (B) Data files relating to that application would have been deleted.
 (C) The icon will automatically change to a “red X” after rebooting.
 (D) The application will run normally when accessed from another path.
- 7 A file called ‘install’ is located in the setup directory on a CD-ROM. The computer has a single partitioned hard drive, an optical disk drive and a USB flash memory device attached.

What is the correct file path to locate the ‘install’ file?

- (A) C:\install.exe
 (B) D:\setup\install.exe
 (C) D:\CD-ROM\install.exe
 (D) C:\CD-ROM\setup\install.exe

8 What information is required by emergency services when responding to a workplace accident?

- (A) Location, nearest cross street, number of casualties
- (B) Location, age of casualties, number of ambulances required
- (C) Number of casualties, number of employees, nature of incident
- (D) Nearest cross street, workers compensation contact, first aid officer

9 A utility was run on a computer and detected that 40% of the files were fragmented.

What would be the correct response to this diagnosis?

- (A) Install a faster CPU to reduce fragmented files.
- (B) Run a partition utility to improve processing performance.
- (C) Defragment the hard disk in order to reduce file access time.
- (D) Take no action since fragmented files have no impact on computer performance.

10 A courier business is an existing client of an IT company. It requires technical assistance from the IT company to set up a new web server.

What type of client would the courier business be?

- (A) Online
- (B) Internal
- (C) External
- (D) Outsourced

11 Alex performed an upgrade of the RAM on his new laptop. It was later discovered that the RAM was not compatible and the computer was damaged.

Considering standard warranty conditions, which is the most likely scenario for the repair of Alex's laptop?

- (A) Alex would have to pay for all repairs as the warranty would be void.
- (B) A complete repair would be carried out under warranty at no cost to Alex.
- (C) The warranty would cover the cost of parts and Alex would have to pay for labour.
- (D) The warranty would cover the cost of labour and Alex would have to pay for new parts.

12 While operating her computer, Maree noticed that she could no longer access the internet.

After an investigation, she discovered that all other computers in the same room had also lost internet connection but could still print and retrieve files from the server.

Which device failure was most likely to have caused the loss of connection to the internet?

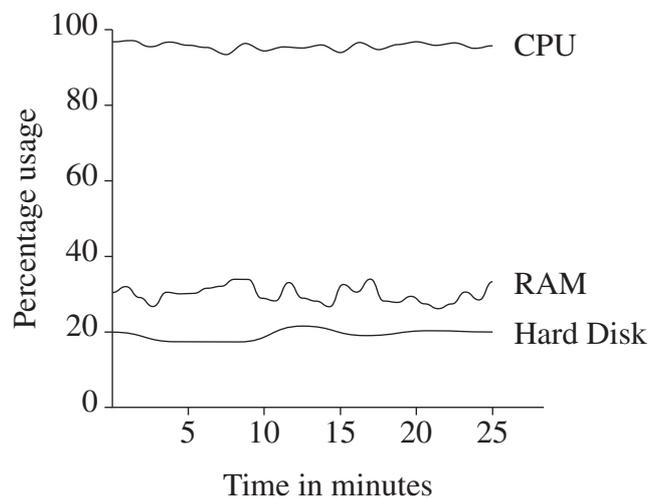
- (A) Hub
- (B) Router
- (C) LAN card
- (D) Hard disk

13 An employee has been downloading movies using company computers during work time.

Which of the following does this breach?

- (A) Code of conduct
- (B) Award agreement
- (C) Mission statement
- (D) Workplace agreement

14 The graph displays the result of monitoring software run on a computer.



Which of the following describes the performance of this computer?

- (A) High performance because of low RAM usage
- (B) Poor performance because of low RAM usage
- (C) High performance because of high CPU usage
- (D) Poor performance because of high CPU usage

BLANK PAGE

BLANK PAGE



--	--	--	--	--

Centre Number

Section II

35 marks

Attempt Questions 16–19

Allow about 50 minutes for this section

--	--	--	--	--	--	--	--	--

Student Number

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

Question 16 (7 marks)

- (a) (i) Physical and psychological abuse are two types of harassment in the workplace. 2

Identify ONE example of EACH of these types of harassment.

.....

.....

.....

.....

.....

- (ii) What are TWO appropriate actions an employee could take to deal with workplace harassment? 2

.....

.....

.....

.....

.....

.....

Question 16 continues on page 10

Question 16 (continued)

(b) Name and justify THREE items which would be included in a hardware audit.

3

.....

.....

.....

.....

.....

.....

End of Question 16



--	--	--	--	--

Centre Number

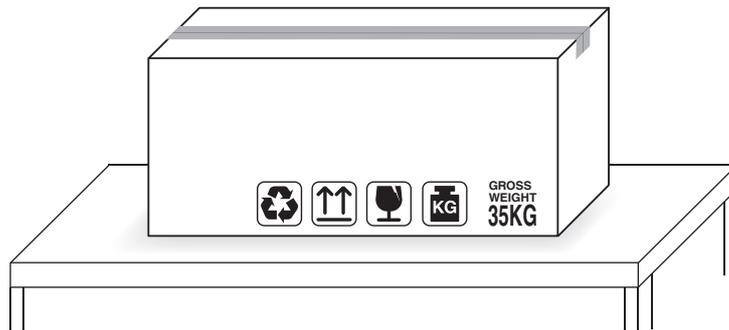
Section II (continued)

--	--	--	--	--	--	--	--	--	--

Student Number

Question 17 (10 marks)

(a) The diagram shows a carton containing computer hardware.



(i) What are THREE precautions to consider when moving this carton from the table to another room? Justify your response with reference to the diagram. 3

.....

.....

.....

.....

.....

.....

.....

.....

.....

Question 17 continues on page 12

Question 17 (continued)

- (ii) While moving the carton, Chris trips over a cable, drops the box and injures himself. 3

What should Chris and his employer do as a result of this incident?

.....

.....

.....

.....

.....

.....

.....

.....

- (b) Explain how a workstation can be set up to minimise workplace injuries. 4

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

End of Question 17

--	--	--	--	--

Centre Number

Section II (continued)

--	--	--	--	--	--	--	--	--

Student Number

Question 18 (11 marks)

- (a) A user was storing files on a USB flash storage device. When the device was removed, a message appeared indicating that there was a write error and that files may have been lost or corrupted. **2**

How should the device have been removed to prevent the message appearing?

.....

.....

.....

.....

.....

.....

- (b) A USB flash storage device is to be used to store files from two computers which have different operating systems. The files on the USB need to be able to be accessed by either computer. **2**

What TWO factors should be considered in this situation?

.....

.....

.....

.....

.....

.....

Question 18 continues on page 14

Question 18 (continued)

(c) What is the purpose of each of the following items that are located on a motherboard?

(i) System bus **1**

.....
.....

(ii) Expansion slots **1**

.....
.....

(iii) Chipset **1**

.....
.....

(d) What are TWO advantages and TWO disadvantages of upgrading a computer operating system? **4**

.....
.....
.....
.....
.....
.....
.....

End of Question 18

--	--	--	--	--

Centre Number

Section II (continued)

--	--	--	--	--	--	--	--	--

Student Number

Question 19 (7 marks)

- (a) What is the difference between ‘real-time’ and ‘scheduled’ anti-virus scanning? **2**

.....

.....

.....

.....

- (b) Other than using and installing anti-virus software, what are TWO precautions that could be taken to minimise virus infections? **2**

.....

.....

.....

.....

- (c) Explain how a computer that has been installed with anti-virus software can be infected with a virus. **3**

.....

.....

.....

.....

.....

.....

BLANK PAGE

Information Technology

Section III

15 marks

Attempt Question 20

Allow about 25 minutes for this section

Answer the question in a writing booklet. Extra writing booklets are available.

In your answer you will be assessed on how well you:

- demonstrate knowledge and understanding relevant to the question
 - communicate ideas and information using relevant workplace examples and industry terminology
 - present a logical and cohesive response
-

Question 20 (15 marks)

A small business employs a number of staff members who share an old and outdated computer. Some are required to save confidential files which should not be accessible by others.

Prepare a written recommendation to the manager outlining the installation and configuration of a replacement computer. In your response, consider the company's needs for security, data back up, file management and software licensing.

Please turn over

Section IV

15 marks

Attempt Question 21

Allow about 25 minutes for this section

Answer the question in a SEPARATE writing booklet. Extra writing booklets are available.

Question 21 (15 marks)

A business has recently experienced a number of computer maintenance problems which have affected workplace efficiency. Management has decided to improve procedures and documentation to minimise the impact of these problems on workplace efficiency.

- (a) Describe the tasks that should be included in a regular hardware maintenance schedule. **4**
- (b) Write a procedure for cleaning the inside of a desktop computer. **3**
- (c) The diagram shows a maintenance card that is currently used by the business.

ACME Industries
Date: <u>20/06/2012</u>
Problem: <u>Computer won't work</u>
Comments: <u>Computer fixed</u>
.....
.....
.....
.....
.....

- Explain how this maintenance card could be improved to help meet management's expectations of workplace efficiency. **8**

End of paper