



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

## **2011 Information Technology HSC Examination 'Sample Answers'**

When examination committees develop questions for the examination, they may write 'sample answers' or, in the case of some questions, 'answers could include'. The committees do this to ensure that the questions will effectively assess students' knowledge and skills.

This material is also provided to the Supervisor of Marking, to give some guidance about the nature and scope of the responses the committee expected students would produce. How sample answers are used at marking centres varies. Sample answers may be used extensively and even modified at the marking centre OR they may be considered only briefly at the beginning of marking. In a few cases, the sample answers may not be used at all at marking.

The Board publishes this information to assist in understanding how the marking guidelines were implemented.

The 'sample answers' or similar advice contained in this document are not intended to be exemplary or even complete answers or responses. As they are part of the examination committee's 'working document', they may contain typographical errors, omissions, or only some of the possible correct answers.

## Section II

### Question 16 (a) (i)

*Sample answer:*

Software that performs all the basic tasks required to run other software, eg accessing drives and reading the keyboard.

### Question 16 (a) (ii)

*Answers could include:*

- Linux
- Debian
- Ubuntu
- Mandrake
- Redhat
- Suse
- FreeBSD

### Question 16 (b) (i)

*Sample answer:*

Commercial operating system software must be purchased, while open source is free.

### Question 16 (b) (ii)

*Sample answer:*

Commercial licences do not normally permit the source code of the operating system to be edited, whereas open source relies on the ability to edit the source code.

*Answers could include:*

- Commercial licences are more restricted, due to intellectual property and copyright laws, whereas open-source relies on the ability to edit the source code.
- Commercial licences can limit the number of computers on which the operating system can be installed. Often, there are no limits with open source.

**Question 17 (a)***Sample answer:*

<b>Component</b>	<b>Function</b>
Motherboard	Key component; holds all other components
CMOS battery	Allows system bios settings and clock to remain functioning while power is off
RAM	Volatile storage; stores currently running programs
CPU	Processes and calculates data

**Question 17(b) (i)***Sample answer:*

- Check that the power and UGA cables are firmly connected.
- Move the monitor to another computer and retest it.

**Question 17 (b) (ii)***Sample answer:*

- Set up the work area.
- Disconnect the power from the peripherals.
- Remove the peripherals.
- Apply an antistatic strip or ground user.
- Remove the graphics card with a suitable tool.

**Question 18 (a) (i)***Sample answer:*

Allows a computer to connect to the internet.

**Question 18 (a) (ii)***Sample answer:*

Allows mobile devices to connect to the network.

**Question 18 (a) (iii)***Sample answer:*

Allows for documents and/or images to be converted into a digital format.

**Question 18 (b) (i)*****Sample answer:***

The help desk operator receives calls from clients and inputs call information into the help desk system.

***Answers could include:***

- Monitors the progress of help desk jobs.
- Escalates jobs as required.
- Looks for patterns in problems/equipment failures.
- Refers hardware for warranty repair.
- Signs off completed jobs.

**Question 18 (b) (ii)*****Sample answer:***

The network administrator adds new users to the system and resets passwords.

***Answers could include:***

- Assigns rights/permissions.
- Administers security.
- Installs applications.
- Manages desktops.
- Manages servers.

**Question 18 (c)*****Sample answer:***

Device manager – checks if hardware is operating correctly.

***Answers could include:***

- Hard disk check tool – checks for cross-linked files on the hard disk.
- Specialised hardware diagnostic software – checks the performance of specific hardware.

**Question 19 (a) (i)*****Sample answer:***

Launching an application from the desktop by clicking on an icon.

**Question 19 (a) (ii)*****Answers could include:***

- IPConfig to check configuration of IP.
- Chkdsk to check hard disk for errors.
- Ping.
- Run a command line application.

**Question 19 (b) (i)*****Sample answer:***

Upgrading an operating system maintains compatibility with newer applications and hardware.

***Answers could include:***

- Maintains hardware compatibility.
- Adds additional features.
- Improves performance/security.
- Reduces costs.

**Question 19 (b) (ii)*****Sample answer:***

Optimising an operating system improves the performance of the system and can free up more disk space for file storage.

***Answers could include:***

- Allows more applications to be installed.

**Question 19 (c)*****Sample answer:***

Many operating systems contain generic drivers that can operate with many different devices. If a printer was installed using one of these generic drivers, it may not allow the printer to run at its highest speed or it may not allow all of the features of the printer to be used, eg duplex printing. Using the vendor-supplied driver ensures that all of the features of the printer are available and that it will operate at the highest speed.

***Answers could include:***

- A vendor driver is provided by the manufacturer and is designed to use all of the features of the hardware.
- A vendor driver provides greater compatibility and performance.

Examples will vary.

## **Section IV**

### **Question 21 (a)**

*Sample answer:*

Anything (including work practices and procedures) that has the potential to harm the health or safety of a person.

### **Question 21 (b)**

*Sample answer:*

A number of environmental factors have a significant impact on the occupational health of a workforce. These can include adequate lighting, ventilation, noise, and wet or slippery floors. Failure to consider these items can lead to personal injury and lost productivity.

Ergonomic factors include the correct adjustment of desks and chairs in order to minimise fatigue and injury.