higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

INTRODUCTION TO COMPUTER
NQF LEVEL 2

13 November 2024

This marking guideline consists of 6 pages.

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QUESTION 1

1.1 **Inputs:** the data entered into a computer system✓✓
Outputs: the data resulting from the operation of a computer✓✓ (2 × 2) (4)

1.2 1.2.1 An OR gate can have two or more inputs, and the output of an OR gate is true when any one or more its inputs are true.✓✓

1.2.2 A NAND gate can have two or more inputs, and the output of a NAND is true when any one of its inputs is false.✓✓

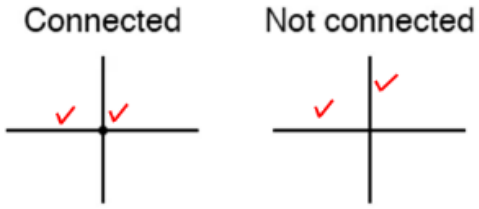
1.2.3 A NOT gate can only have one input. The '0' on the output is the inverse or opposite of the input so that the output is true when the inputs is false.✓✓

(3 × 2) (6)

1.3 Digital switches inside the computer can only be set on either ON or OFF,✓ which are represented by a '1' (ON) or '0' (OFF).✓ Though the binary system consists of only ones and zeros, the two digits can be used to represent any number.✓ (3 × 1) (3)

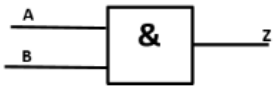
1.4 Least Significant Bit✓ (1)

1.5



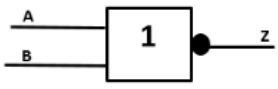
(2 × 2) (4)

1.6 1.6.1



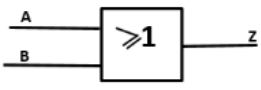
✓

1.6.2



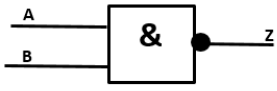
✓

1.6.3



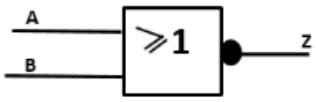
✓

1.6.4



✓

1.6.5



✓

(5 × 1) (5)

1.7 1.7.1 $37_{10} = 100101_2$ ✓✓ (2 × 1) (2)

1.7.2 $72_{10} = 1001000_2$✓, $181_{10} = 10110101_2$✓

$1001000_2 + 10110101_2$ ✓

11111101_2 ✓✓ (5 × 1) (5)

[30]

QUESTION 2

2.1 The motherboard is the main printed circuit board in a computer system.✓ It connects all the internal computers,✓ like memory, processor, graphics card and other hardware.✓ It also provides power to each computer✓ and allows them to communicate with each other. ✓ (5 × 1) (5)

2.2
- ROM✓
- CPU✓
- RAM✓
- PCI slots✓
- USB ports✓ (Any relevant answer) (5 × 1) (5)

2.3

Categories	Analogue Computer	Digital Computer
Operation	• Process continuous signals✓	• Process discrete binary data (0s and 1s)✓
Speed and Accuracy	• Limited accuracy due to signal noise✓	• High accuracy and repeatability✓
Cost and Complexity	• Generally simpler and cheaper to build✓	• More complex and costly to manufacture and maintain.✓

(3 + 3) (6)

2.4
- Generally fast✓
- Can solve complex equations✓
- Minimise noise within the system✓ (3 × 1) (3)

2.5
- Environment should not be excessively dirty.✓
- Place the computer on a stable, solid surface.✓
- Make sure that none of the vents are blocked or covered.✓
- Position the computer as close as possible to a suitable power supply.✓
- Static electricity can damage your hard drive.✓
- Make sure it is protected from surge.✓ (Any 5 × 1) (5)

2.6 Line Print Terminal✓ (1)
[25]

QUESTION 3

3.1.1 The layout of the visual elements that enables users to interact with a system✓✓ (2 × 1) (2)

3.1.2 A window is a separate viewing area on a computer display screen in a system that allows multiple viewing areas as part of a graphic user interface.✓✓ (2 × 1) (2)

3.2 Desktop customisation is the process of changing a desktop computer's appearance and functionality.✓ This can include changing the desktop wallpaper, theme, icons, and other visual elements.✓ It allows users to personalise their computing experience and make their desktop computer work more efficiently for their specific requirements.✓ (3 × 1) (3)

3.3 Drag-and-drop is a process of moving icons or files or folders by clicking on the icon with the left mouse button,✓ holding the button down and moving the mouse until the cursor is at the new spot✓ where you want to place the icon, and then releasing the button.✓ (3 × 1) (3)

3.4
- Remove temporary internet files (5)
- Remove downloaded program files
- Empty the recycle bin
- Remove Windows temporary files
- Remove optional Windows components that is not used
- Remove installed programs that you no longer use
- Compress files that have not been accessed over a particular period of time (Any 5 × 1)

3.5 3.5.1 The boot-up portion of the disk is corrupted or has a virus.✓ Another cause could be that you are using hard-disk management software that has failed. In either case, the boot sector is damaged.✓

3.5.2 It is caused by a program loading a DDL into the memory at an address that is already used.✓ It might also be the hardware that is at fault. (2 × 2) (4)

3.6 Bottleneck is a narrow area that becomes congested as things try to pass through it.✓ The RAM is the bottleneck, since it is too small or narrow to cope with the amount of information it has to process.✓

Stalling means freezing up and not wanting to work.✓ This means that the operating system has an application running which is caught in a loop.✓
(2 × 2) (4)

3.7 If the installation was done properly, but now one of the executable files is corrupted, or a necessary file is missing. The best solution is to reinstall the program.✓✓ (2 × 1) (2)
[25]

QUESTION 4

4.1 A word processor is a device or software program capable of creating, storing and printing text documents.✓ It allows users to write and modify text, display it on a screen,✓ save it electronically✓ and print it out.✓ (4 × 1) (4)

4.2 The Help tab provides access to the help file, which can also be accessed at any time by pressing the F1 key.✓✓ (2 × 1) (2)

4.3

Function	Description
SUM	Adds the numbers in a range of cells✓
AVERAGE	Returns the average of the arguments✓
MAX	Returns the largest value in a set of values✓
MIN	Returns the smallest value in a set of values✓

(4 x 1) (4)
[10]

QUESTION 5

5.1
- Dial-up
- Wireless
- Fixed-line
- Cable
- ISDN
- ADSL

(Any 4 × 1) (4)

5.2 Electronic mail✓ (1)

5.3
- E-mail could potentially cause information overload.
- E-mail lacks a personal touch.
- E-mail can be disruptive.
- E-mail can be ignored for a long time.
- E-mail can cause misunderstandings.
- E-mail messages can contain viruses.

(Any 3 × 1) (3)

5.4 5.4.1 By pressing F5✓
5.4.2 By pressing SHIFT + F5✓

(2 × 1) (2)
[10]

TOTAL: 100

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