higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

INTRODUCTION TO INFORMATION SYSTEMS
NQF LEVEL 2

2 March 2020

This marking guideline consists of 7 pages.

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SECTION A

QUESTION 1

1.1	1.1.1	A
	1.1.2	B
	1.1.3	C
	1.1.4	D
	1.1.5	A
	1.1.6	B
	1.1.7	C
	1.1.8	C
	1.1.9	D
	1.1.10	A

(10 × 1) **[10]**

1.2	1.2.1	Support
	1.2.2	Accurate
	1.2.3	Mobile
	12.4	Antivirus
	1.2.5	Encrypted
	1.2.6	Interactive
	1.2.7	Optical
	1.2.8	Laptop
	1.2.9	Flash
	1.2.10	Plotters

(10 × 1) **[10]**

1.3	1.3.1	True
	1.3.2	False
	1.3.3	False
	1.3.4	True
	1.3.5	True
	1.3.6	False
	1.3.7	True
	1.3.8	True
	1.3.9	False
	1.3.10	True

(10 × 1) **[10]**

1.4	1.4.1	J
	1.4.2	G
	1.4.3	A
	1.4.4	B
	1.4.5	H
	1.4.6	C
	1.4.7	D
	1.4.8	E
	1.4.9	F
	1.4.10	I

(10 × 1) **[10]**

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1.5 1.5.1 Managing Director
1.5.2 Management Information System
1.5.3 Hardware
1.5.4 Information Technology
1.5.5 Information and Communications Technology
1.5.6 Central Processing Unit
1.5.7 Universal Serial Bus
1.5.8 Point-of-sale
1.5.9 Redundent Array of Independent Disks
1.5.10 Hard Disk Drive

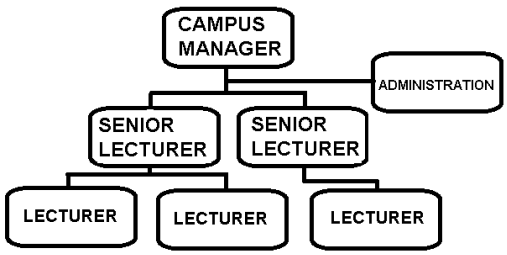
(10 × 1) **[10]**

TOTAL SECTION A: 50

SECTION B

QUESTION 2

2.1



- Campus manager – top level.
- Senior lecturers under Campus Manager – middle level.
- Lecturer under Senior Lecturer – lower level.
- Administration – separate function.
- Headings as per instructions. (5 × 2) (10)

2.2
- Planning
- Organising
- Staffing
- Controlling
- Leading
- Directing
- Co-ordinating (Any 3 × 2) (6)

2.3
- Past experiences form a basis for an event.
- If the same or similar event occurs again, the manager can use the past experience to assist in decision making. (2 × 2) (4)

2.4
- Evaluating a solution will highlight the solution strengths or weaknesses.
- The solution may need to be fine-tuned; evaluation will raise awareness to any flaws.
- The solution needs to be evaluated to see if it works or not. (Any 1 × 2) (2)

[22]

QUESTION 3

3.1 Candidate free to use any relevant example.

Guide:

- The sales department looks at sales figures for the month.
  - This is in the form of raw data.
- The sales figures are analysed and compared to the previous month.
  - This has now become information the department can use.
- The sales department will use the information gained to improve their sales figures in the coming months based on the statistics gathered from analysis.
  - The information is put into use as knowledge.
- Example used is tied in to data, information and knowledge. (8)

3.2
- The purpose of an information system is to turn raw data into useful information.
- The data can be used for decision making in an organisation. (2 × 2) (4)

3.3
- Support business processes.
- Support business operations.
- Support decision-making.
- Support competitive strategies.
- Keeping records. (Any 3 × 2) (6)

3.4
- Businesses are able to track, collect and analyse online data about their customers by storing information on their likes and dislikes.
- This information can then be used to offer personalised marketing to the customer on their mobile devices. (2 × 2) (4)

3.5 People – Without people there would be no personnel to utilise the system. (1)
[23]

QUESTION 4

4.1

CENTRALISED	DECENTRALISED
• All computes are connected to a central point.	• Computers are distributed.
• Decisions need to be consultative with all departments.	• Decisions can be made independently.
• Better suited to large organisations.	• Better suited to small to medium organisations.

(Any 2 × 2) (4)

4.2 4.2.1 Mandatory access control (MAC) can be implemented to authenticate users. (2)

4.2.2
- A firewall can be used to block online intruders.
- Antivirus software can protect against online threats and malware. (2 × 2) (4)

4.2.3
- Do not click on links in emails.
- Do not open emails from unknown senders.
- Do not provide confidential information over the phone or emails. (Any 2 × 2) (4)

4.3
- Tasks can be completed faster.
- Computers have a lot of storage space.
- There is more security on a computer than a manual system.
- Response time is faster for communication.
- Typing errors can be easily corrected.
- Productivity can be increased. (Any 2 × 2) (4)

4.4
- Worm
- Trojan
- Boot sector virus
- Adware
- Ransomware
- Logic bomb (Any 1 × 2) (2)

4.5
- Viruses can be spread by using an infected flash drive.
- Viruses can be spread by using pirated software which has malware attached to it.
- Sharing virus infected files on a network.
- Storing virus infected files on the device. (Any 3 × 2) (6)

4.6
- Develop a software policy.
- Students to sign an anti-piracy undertaking.
- Educate students on the consequence of software piracy.
- Promote shareware or freeware software to avoid piracy. (Any 2 × 2) (4)

[30]

QUESTION 5

5.1
- The Abacus is made from a frame with wires or grooves.
- Beads are used to do calculations.
- An abacus can only do addition. (Any 2 × 2) (4)

5.2
- Tablet.
- Smart phone.
- Laptop.
- Personal computer.
- Personal digital assistant. (Any 3 × 2) (6)

5.3 5.3.1 The server would be used in a small to medium business.

5.3.2
- Servers are used in small to medium sized businesses.
- They have sufficient processing power and can handle high workloads.
- The mainframe would be too costly for a small to medium sized business. (Any 2 × 1)

(2 × 2) (4)

5.4 An end user is the user who uses the computer to perform a specific task or uses the computer for leisure. (2)

5.5
- A multi-core processor is a processor which has more than one core.
- This type of processor is able to carry out computations faster than a single core processor.
- Multi-core processors allow for multi-processing.
- Multiple cores are on a single chip. (Any 2 × 2) (4)

5.6 Storage peripheral device. (2)

5.7
- External hard disk.
- Fixed hard disk. (Any 1 × 1) (1)

[23]

QUESTION 6

6.1 A – Central processing unit/Intel Microprocessor
B – VGA adapter
C – CPU fan/System fan
D – RAM chips (4 × 2) (8)

6.2
- Fetch: The computer fetches the next instruction to be executed from memory.
- Execute: The ALU performs the arithmetic or logical operation as needed.

(2 × 2) (4)

6.3 Candidate not required to show method.

128	64	32	16	8	4	2	1
0	0	0	0	0	0	1	1

- 2 + 1
- = 3 (2)

6.4 The system needs more Random Access Memory to be installed. (2)

6.5 6.5.1
- Speakers need to be set up.
- An amplifier and speakers needs to be set up.

6.5.2 A data projector would allow all the students to view the screen.

(2 × 2) (4)

6.6

HAND-HELD SCANNER ENTRY	KEYBOARD ENTRY
• Transfers data directly from the device to the computer. • Data entry is more accurate.	• Transfers data from a user to the computer. • Errors are more likely as a result of typing in data.

(4 × 2) (8)

6.7
- FILE A – Microsoft word.
- FILE B – Sumatra PDF/Adobe Acrobat Reader/Nitro Reader.
- FILE C – Winamp/Windows media player/Google play. (3 × 2) (6)

6.8
- Dedicated graphics cards have their own RAM and do not share the system RAM.
- Dedicated graphics cards have their own processor and do not share the system processor, therefore the system will not be slowed down.
- They are made specifically to handle graphics intense workloads.

(Any 2 × 2) (4)

6.9
- She needs to download a codec to play the video file.
- Install a codec.
- Upgrade to a player that has the necessary codec. (Any 1 × 2) (2)

6.10
- This type of terminal does not do any processing.
- A Dumb terminal consists of a keyboard for the user to capture data and a monitor for visual feedback.
- A dumb terminals processing is done at a central server. (Any 2 × 2) (4)

6.11
- DEVICE A – Electronic video camera.
- DEVICE B – Still electronic camera/Digital camera.
- DEVICE C – Mobile digital camera. (3 × 2) (6)

6.12
- Multifunction printers save floor space.
- Certain functions can be used without the computer being turned on.
- They provide an all in one solution.
- Cost effective when compared to buying multiple machines. (Any 1 × 2) (2)

[52]

TOTAL SECTION B: 150
GRAND TOTAL: 200

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