higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

INTRODUCTION TO INFORMATION SYSTEMS
NQF LEVEL 2

(10041002)

7 November 2022 (Y-paper)
13:00–16:00

This question paper consists of 12 pages.

093Q1N2207

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TIME: 3 HOURS
MARKS: 200

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Start each section on a new page.
5. Use only a blue or black pen.
6. Write neatly and legibly.

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SECTION A

QUESTION 1

1.1 Various options are given possible as answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

1.1.1 … management is responsible for ensuring that employees are given the necessary training to perform their tasks.

A Top
B Middle
C Lower
D Strategic

1.1.2 Information is more useful if managers can … it to assist them in decision making.

A analyse
B save
C copy
D store

1.1.3 … provide(s) information to those who need it, when they need it, so that they can use it within the organisation.

A Information technology
B Networks
C Data
D Information systems

1.1.4 System failure controls include mechanisms such as …

A uninterruptable power supply.
B random access memory.
C read-only memory.
D password protection.

1.1.5 … systems assist managers in analysing data that had been collected.

A Collection
B Dispatch
C Analytical
D Reporting

1.1.6 … computers are designed to perform specific tasks.

A General-purpose
B Pervasive
C Special-purpose
D Convergence

1.1.7 … data compression is suited for videos, photos, and scanned documents.

A Lossless
B High
C Lossy
D Data stream

1.1.8 An example of an impact printer is a/an … printer.

A inkjet
B laser
C multifunction
D dot matrix

1.1.9 A … is used as an input device for mobile devices.

A touch screen
B speaker
C printer
D router

1.1.10 … controls are used to ensure that data are captured accurately.

A Output
B Input
C Data
D Password

(10 × 1) (10)

1.2 Complete the following sentences by choosing a word or words from the list below. Write only the answer next to the question number (1.2.1–1.2.10) in the ANSWER BOOK.

networks; Blu-ray; organisation; control total; risk; access; interact; electrical; mouse; smart

1.2.1 A/An … is a group of people working together towards a common goal.

1.2.2 … form(s) the backbone of communication between users.

1.2.3 Information systems can perform many roles within an organisation; these roles … with one another to assist the organisation.

1.2.4 The term … is categorised as a threat to business data.

1.2.5 An employee card can be used to provide ... control within an organisation.

1.2.6 An electromechanical device is a device that uses both ... and mechanical processes.

1.2.7 A/An ... optical disc is used to store large files, for example movies.

1.2.8 A/An ... is a direct-entry device used to enter data into the system.

1.2.9 Stock count can be checked for accuracy by using the ... procedure.

1.2.10 Terminals that have processing capabilities are known as ... terminals.

(10 × 1) (10)

1.3 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.3.1–1.3.10) in the ANSWER BOOK.

1.3.1 Management is responsible for ensuring that staff are trained for the position they fulfil.

1.3.2 As managers gain more experience, their decision-making skills are likely to improve.

1.3.3 Information systems are used to support businesses by providing managers with information to compare with their competitors.

1.3.4 Logic bombs are viruses that encrypt all data on the recipient computer.

1.3.5 Computer viruses automatically self-destruct from the computer if they are not executed by the user.

1.3.6 First-generation computers used a very basic set of instructions to complete a task.

1.3.7 In interactive processing mode, the computer checks to determine whether you have entered data correctly into the form.

1.3.8 Computer files are temporary storage locations for records.

1.3.9 Mobile printers do not need to be plugged in to a power outlet, as they function on batteries.

1.3.10 There are various types of keyboards, for example a roll-up keyboard.

(10 × 1) (10)

1.4 Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–J) next to the question number (1.4.1–1.4.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.4.1	The collection of related data by the information system to supply in the specific needs of a department	A	decentralised information system
1.4.2	Information that has been processed in some way to assist in making knowledgeable decisions	B	anti-virus update
1.4.3	A system that allows the collection, storage, and distribution of information	C	information needs
1.4.4	A type of information system configuration where each department uses its own information system	D	hard disk
1.4.5	The process of adding new virus definitions to the anti-virus database	E	central processing unit
1.4.6	A component of the motherboard that can be upgraded to increase processing capabilities	F	delete
1.4.7	A method of ensuring that data can be recovered if the original storage device is damaged	G	data back-up
1.4.8	A type of flat-panel display commonly used in the 90s	H	information system
1.4.9	The internal storage device on a desktop computer	I	cathode-ray tube
1.4.10	A special-purpose key used to erase characters to the right of the cursor	J	knowledge-based information

(10 × 1) (10)

1.5 Give ONE term for each of the following abbreviations by writing it next to the question number (1.5.1–1.5.10) in the ANSWER BOOK.

1.5.1 CEO

1.5.2 HR

1.5.3 HW

1.5.4 TPS

1.5.5 NOS

1.5.6 PC

1.5.7 GUI

1.5.8 CPU

1.5.9 MFP

1.5.10 CRT

(10 × 1) (10)
[50]

TOTAL SECTION A: 50

SECTION B

QUESTION 2

2.1 Describe the role of a manager in an organisation. (2 × 2) (4)

2.2 Propose any TWO decisions you would make as a manager with regard to staffing. (2 × 2) (4)

2.3 Draw and label a simple diagram to show the THREE levels of management within an organisation. (3 × 2) (6)

2.4 List, in order, the SIX steps a manager would take when making a decision based on a problem. (6)

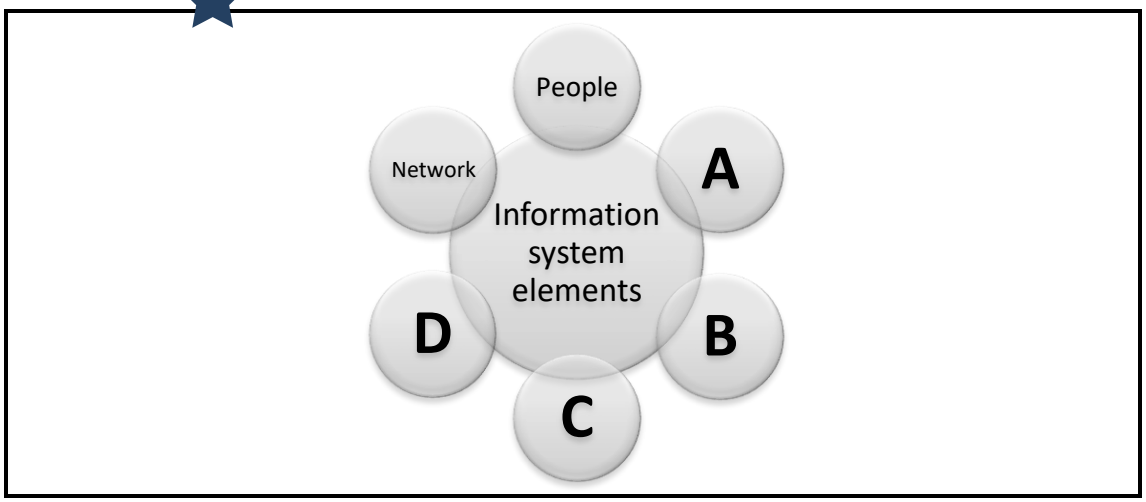
2.5 Discuss ONE method to collect information from employees during a needs analysis. (2)

[22]

QUESTION 3

3.1 Use an example to demonstrate the link between data, information, and knowledge. (7)

3.2 An information system is made up of various elements, for example people and networks.



Name FOUR other elements of an information system. (4 × 2) (8)

3.3 Recommend THREE design factors to consider when designing an information system. (3 × 2) (6)

3.4 List TWO roles of an information system in the organisation. (2)

[23]

QUESTION 4

4.1 Explain the concept of a *centralised information system.* (2)

4.2 Describe TWO benefits of using a centralised information system. (4)

4.3 Suggest a type of management information system that can be used to monitor ongoing transactions. (2)

4.4 Illustrate how mandatory access control is used to prevent unauthorised access to files. (2 × 2) (4)

4.5 Access control systems are put in place to prevent unauthorised access.

Develop a TWO-point plan to illustrate how you would prevent unauthorised access to a workstation. (2 × 2) (4)

4.6 Name TWO examples of risks to data within an organisation. (2)

4.7 Differentiate between an *internal threat* and an *external threat* to a business. (2 × 2) (4)

4.8 Suggest a way to ensure that data are captured accurately so that errors are avoided. (2)

4.9 List THREE benefits of using computers in the education sector. (3 × 2) (6)

[30]

QUESTION 5

5.1 Describe how the abacus is used to compute numbers. (4)

5.2 Differentiate between a *laptop* and a *digital tablet*. (2 × 2) (4)

5.3 Name THREE types of computer users. (6)

5.4 Recommend TWO pervasive devices that could be implemented at your campus. (2)

5.5 Suggest a type of processor that could be installed on a computer that needs to handle multiple processes at once. (2)

5.6 There are THREE categories of peripheral devices: input, output and storage.

5.6.1 Explain the difference between *input peripheral devices* and *output peripheral devices*. (2 × 2) (4)

5.6.2 Suggest a storage device that can be used as a backup for office data. (1)

[23]

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QUESTION 6

6.1 Tabulate TWO advantages and TWO disadvantages of using a computer. (8)

6.2 You have been asked to give advice on a computer purchase. The system unit comprising of a motherboard and a DVD drive has already been purchased.

6.2.1 Compile a list of the other components that would have to be purchased to make the computer fully functional. (3 × 2) (6)

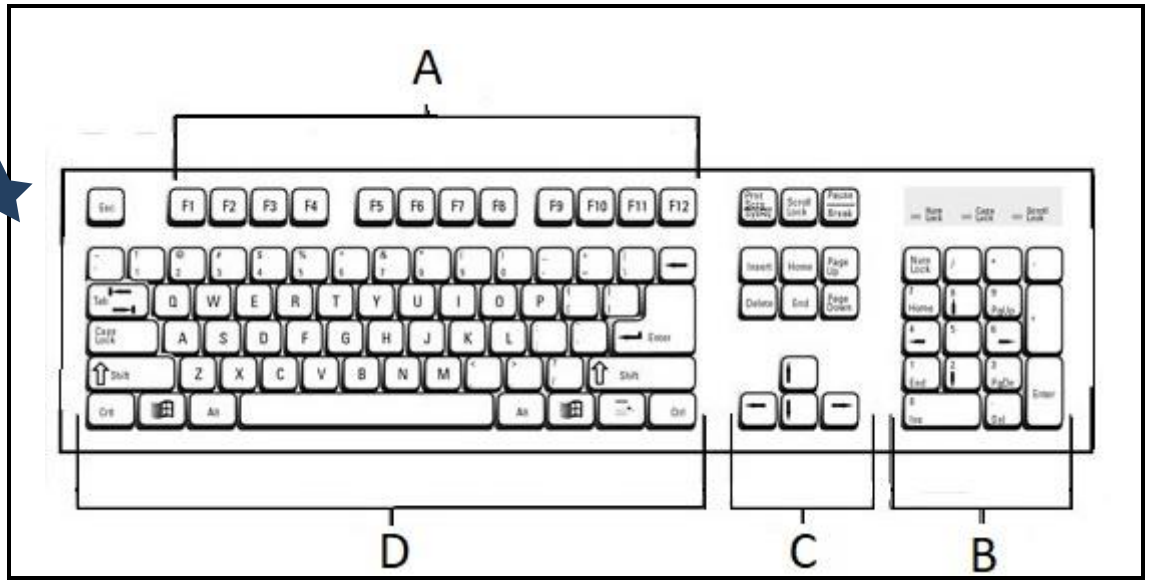
6.2.2 Suggest an upgrade that would improve the speed of the computer. (2)

6.2.3 Recommend ONE device that is capable of copying and scanning documents. (2)

6.3 Recommend a type of computer terminal that can be used by a salesperson to do point-of-sale transactions. (2)

6.4 Describe how the terminal recommended in QUESTION 6.3 works. (4)

6.5 Study the diagram of the keyboard below and answer the questions that follow.



[Source: *https://www.dummies.com/computers/pcs/keyboards/the-basic-pc-keyboard-layout/*]

6.5.1 Provide labels for A–D. (8)

6.5.2 Name the key that is used to bring up the help menu in Windows. (2)

6.5.3 Name the key used to remove characters to the right of the cursor. (2)

6.5.4 Name the key used to move the cursor to the beginning of the line. (2)

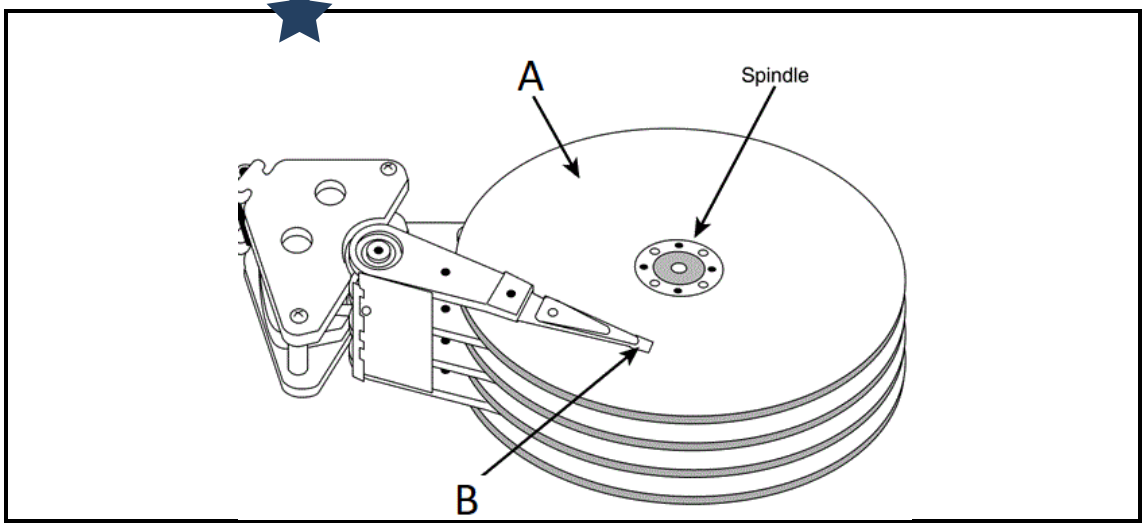
6.6 Describe how voice recognition systems work. (3)

6.7 Name the voice recognition system used on either Android or IOS mobile platforms. (2)

6.8 Suggest a voice command that could be used with the voice recognition system named in QUESTION 6.7. (1)

6.9 State TWO ways to care for mobile storage devices. (2 × 2) (4)

6.10 Study the diagram of the hard disk below and answer the question that follows.



[Source: *http://ntfs.com/hard-disk-basics.htm*]

Provide labels for parts A and B. (4)
[52]

TOTAL SECTION B: 150
GRAND TOTAL: 200

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