higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T410**(E)**(A8)T

NATIONAL CERTIFICATE

COMPUTER PRINCIPLES N4

(6040034)

8 August 2018 (X-Paper)
09:00–12:00

This question paper consists of 6 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
COMPUTER PRINCIPLES N4
TIME: 3 HOURS
MARKS: 100

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. Keep subsections of question together.
5. Write neatly and legibly.

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QUESTION 1

1.1 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.5) in the ANSWER BOOK.

1.1.1 A microprocessor is located in the …

A monitor.
B hard disk.
C system unit.
D keyboard.

1.1.2 A computer is made up of hardware and …

A data.
B information.
C software.
D instructions.

1.1.3 It is a circuit board that connects all the components of a computer together:

A Motherboard
B Peripheral devices
C Expansion slots
D Keyboard

1.1.4 The most often used … devices are printers, monitors and speakers.

A storage
B input
C communication
D output

1.1.5 Multi-function printing technology combines a printer, scanner, copier and …

A fax machine.
B washing machine.
C cell phone.
D none of the above-mentioned.

(5 × 1) (5)

1.2 State TWO advantages of impact printers. (2)

1.3 What does the acronym *CD-R* stands for? (2)

1.4 What does the acronym *RAM* stand for? (2)

[11]

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QUESTION 2

2.1 Name THREE permanent memory devices available on the market. Include the acronym for each of these memory devices in the answer. (6)

2.2 Name FIVE timing units for storing data that is available in the modern era of computer use. (5)
[11]

QUESTION 3

Make a neat labelled block diagram of a central processing unit (CPU) that you have studied. **[10]**

QUESTION 4

4.1 Write brief notes on a minicomputer found in industry. (4)

4.2 High temperatures can cause serious damage in a computer room.

Explain how you would control the temperature in a computer room. (5)

4.3 Why would you consider a floppy disk as a permanent means of storing data? (2)
[11]

QUESTION 5

5.1 Operating systems are considered the most important software installed on a computer.

List FOUR functions performed by an operating system. (4)

5.2 Subroutines play a role in program execution.

Discuss the architecture of a subroutine and give TWO basic instructions associated with subroutines. (7)
[11]

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QUESTION 6

6.1 Printouts are important during program execution.

Name FOUR types of possible printouts found in the college sector. (4)

6.2 Describe the following programming structure methods as applied to the computer industry:

6.2.1 Modular program structure

6.2.2 Monolithic program structure

(2 × 2) (4)

6.3 Computers and microprocessors still play a role in industry, each servicing a sector of the market.

Differentiate between the two when considering the execution of programs. (4)
[12]

QUESTION 7

7.1 Standard flow chart symbols are used by the computer programmer in the initial phase of programming development.

Name each of the following flowchart symbols:

7.1.1

7.1.2

7.1.3

7.1.4

7.1.5

7.1.6

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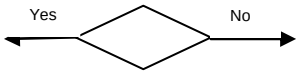
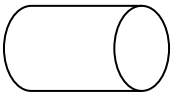
7.1.7 

7.1.8 

7.1.9 

(9 ×1) (9)

7.2 List SEVEN steps to follow when writing BASIC programs. (7)
[16]

QUESTION 8

8.1 List FOUR types of error found during program testing and debugging. (4)

8.2 Differentiate between a *compiler* and an *interpreter.* (4)
[8]

QUESTION 9

Make use of BASIC programming language to write a statement or a series of statements to determine the average of any ten numbers. **[10]**

TOTAL: 100

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