higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

COMPUTER PRINCIPLES N4

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This marking guideline consists of 5 pages.

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QUESTION 1

1.1 D
1.2 A
1.3 C
1.4 B
1.5 C

(5 × 1) **[5]**

QUESTION 2

2.1 True
2.2 True
2.3 False
2.4 True
2.5 False

(5 × 1) **[5]**

QUESTION 3

3.1 I
3.2 D
3.3 F
3.4 B
3.5 M
3.6 H
3.7 C
3.8 A
3.9 G
3.10 E

(10 × 1) **[10]**

QUESTION 4

4.1
- Syntax error
- Runtime error
- Logical error (3)

4.2 Syntax error (1)

4.3 Syntax error (1)

4.4 Logical error (1)

4.5 Beginner's All-purpose Symbolic Instruction Code (2)

4.6
- WHILE-WEND statement
- FOR-NEXT statement (2)

[10]

QUESTION 5

5.1 5.1.1 A bit is a binary digit.

5.1.2 A byte equals eight bits.

5.1.3 A nibble is half of a byte.

5.1.4 A computer is an electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program.

(4 × 2) (8)

5.2 BODMAS or {(), /, *, +, -} (4)

5.3 The content cannot be altered, so it is permanent. (2)

[14]

QUESTION 6

6.1 6.1.1 Sequential access storage
6.1.2 Stored data
6.1.3 Terminator
6.1.4 Manual input
6.1.5 Magnetic disk
6.1.6 Decision
6.1.7 Predefined process
6.1.8 Direct access storage

(8 × 1) (8)

6.2
- Define the problem.
- Write an algorithm.
- Draw a flowchart.
- Write a program.
- Test the program.
- Debug the program.
- Compile documentation. (7)

6.3 In computer programming, a subroutine is a sequence of program instructions that performs a specific task, packaged as a unit.✓✓ This unit can then be used in programs wherever that particular task should be performed.✓✓ (4)

[19]

QUESTION 7

7.1 Central processing unit (1)

7.2 The purpose of RAM is to provide quick read and write access to a storage device. (2)

7.3 Read-only memory is a type of non-volatile memory used in computers and other electronic devices. (2)

7.4 Non-volatile memory or non-volatile storage is a type of computer memory that can retrieve stored information even after having been power-cycled. (2)

7.5
- Does not require a connection to a power source to retain information
- Does not lose contents when electricity goes off
- Cheaper compared to volatile memory
- Longer-term retention of information (Any 3 × 1) (3)

7.6
- Low reliability
- Low capacity
- Low speed
- Modern computers no longer have floppy disk drives
- Files are easily corrupted
- They can be affected by magnets
- They can be affected by heat (Any 6 × 1) (6)

[16]

QUESTION 8

8.1
- Supercomputer
- Mainframe computer
- Minicomputer
- Microcomputer
- Mobile computer (5)

8.2
- Parallel communication devices are faster than their serial counterparts.✓
- Serial communication uses fewer connections and cables than parallel communication.✓
- A serial communication device transfers data in bits in the same direction.✓
- A parallel communication device sends data in multiple bits to the same direction.✓
- Serial communication has a single port with a connector,✓ while a parallel port is usually connected to eight wires.✓ (6)

[11]

QUESTION 9

```
10 REM QUESTION 9✓
20 CLS✓
30 INPUT "L, B, D in cm"; L, B, D✓
40 VOLUME = L * B * D✓
50 METERS = VOLUME/1 000    '1 000 cm = ONE METER✓✓
60 CLS✓
70 PRINT "VOLUME OF CLASSROOM ="; VOLUME✓
80 PRINT "METERS = "; METERS✓
90 END✓
```

[10]

TOTAL: 100

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