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
1.1.1 H
1.1.2 M
1.1.3 B
1.1.4 A
1.1.5 K
1.1.6 L
1.1.7 E
1.1.8 C
1.1.9 J
1.1.10 G

(10 × 1) (10)

1.2
- Print faster than impact printers
- Very low noise
- Print graphics well

(Any 2 × 1) (2)

1.3 Compact disk rewritable (2)

1.4 Read-only memory (1)

1.5 10 PRINT COMPUTER PRINCIPLES (2)

1.6 Comments in a program that refresh the programmer's memory (2)

1.7
- FOR… TO…
- NEXT

(2)

1.8 Used during execution of subroutines and interruptions to store register content, flag status as well as return addresses (2)

1.9
- Exception
- Normal interrupts

(2)
[25]

QUESTION 2

2.1
- Target dates
- Many programmers
- Better program design
- Simpler error correction
- Programs in smaller modules work together at the end when combined

(5 × 2) (10)

2.2 2.2.1
- Dust should be eliminated
- Overloads air-conditioners
- Damages computer equipment
- Leads to health problems (4)

2.2.2 Plan for expanding the computer room and keeping up with changes in technology (2)

2.2.3
- Loyal
- Well-trained
- Not corruptible
- Information kept confidential and not used for own gain (4)

2.3
- Flowcharts are difficult to design, draw or change in all except the simplest situations.
- There is no easy way to debug or test a flowchart.
- Flowcharts tend to become cluttered.
- Flowcharts only show the program organisation; they do not show the organisation of data or the structure of the input/output modules.
- Flowcharts do not help with hardware or timing problems or give hints as to where these problems might occur. (5)

[25]

QUESTION 3

3.1
- RAM
- DRAM
- SRAM
- SDRAM (4)

3.2
- Content is normally permanent and cannot be altered.
- Content is not lost in event of a power failure. (2)

3.3
- Use reliable staff members.
- Use passwords.
- Keep log files to show each staff member's work.
- Keep track of files installed on each staff member's computer.
- Each employee has access to the files or content that he or she requires for the type of work that he/she does at the college.
- Set up a LAN. (Any 5 × 2) (10)

3.4 LAN:✓ A computer network that spans a relatively small area, usually confined to a single room, building or group of buildings✓✓

MAN:✓ A computer network that interconnects users with computer resources in a geographic area or region larger than that covered by even a large local area network but smaller than the area covered by a wide area network✓✓

WAN:✓ A telecommunications network or computer network that extends over a large geographical distance✓✓ (3 × 3) (9)

[25]

QUESTION 4

4.1 Peripheral devices are hardware that makes up the computer system; it can be seen and touched, while software programs are executed by a computer. (2 + 2) (4)

4.2
- Visual Basic
- Pascal
- Clipper
- Delphi
- C
- C++
- GWBASIC
- Java
- QBASIC
- FORTRAN
- C# (Any 4 × 1) (4)

4.3
- Rules are used to get the syntax correct with the least number of errors.
- Unique line numbers must be used.
- Line numbers must be in ascending order.
- Only unsigned line numbers may be used.
- Each line number must be followed by a BASIC command.
- Line numbers may not repeat or be duplicated.
- Blank spaces may be included to enhance readability. (7)

4.4
```
10 REM QUESTION 4.4✓
15 SUM = 0✓
20 FOR A = 1 TO 10✓
30 INPUT "NUMBER"✓
40 IF N<0 THEN SUM = SUM + N✓
50 NEXT A✓
60 CLS✓
70 PRINT "SUM OF ALL NEGATIVE NUMBER = "; SUM✓✓
80 END✓
```
(10)
[25]

TOTAL: 100

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