higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

INTRODUCTION TO COMPUTERS
NQF LEVEL 2

(10040052)

17 November 2023 (Y-paper)
13:00–16:00

This question paper consists of 5 pages.

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NATIONAL CERTIFICATE (VOCATIONAL)
INTRODUCTION TO COMPUTERS
NQF LEVEL 2
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. Use fully labelled IEC symbols when required.
5. Use only a black or blue pen.
6. Write neatly and legibly.

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QUESTION 1

1.1 Explain what is meant by the term *binary logic*. (4)

1.2 A control system is a system that is designed to control a certain device or process.

List THREE components that make up a control system. (3)

1.3 Solve the given design problem using switching logic with the aid of a PLC LAD application program.

Design instruction for a motor control application:

When the start pushbutton (Pb1) is activated, the green standby lamp (H1) will de-energise and the red run lamp (H2) will energise at the same time the MCR relay (R1) will energise, turning on the motor (M1).

When the stop pushbutton (Pb2) is activated, the green standby lamp will energise and the red run indication lamp (H2) and the MCR relay (R1) will de-energise, turning off the motor (M1). (10)

1.4 Explain the difference between *prototyping* and *deployment*. (2 × 2) (4)

1.5 Name the TWO categories of memory used in computers. (2)

1.6 Draw the gate circuit diagram for the following Boolean expression.

$$\overline{(AB + \overline{C})}\,(D) + E = Z$$ (5)

1.7 Explain the difference between a *word* and a *nibble*. (2)

[30]

QUESTION 2

2.1 List the THREE components that make up the CPU. (3)

2.2 Explain what is meant by the term *word processing.* (2)

2.3 Give the full meaning of the acronym DVI. (1)

2.4 Draw up a table to differentiate between the *system software* and the *application software*. (5 + 5) (10)

2.5 It is important to connect computer devices with the right cables, as they don't have the same capabilities and functions.

Describe the following cables:

2.5.1 S-Video cable

2.5.2 VGA cable

2.5.3 USB cable

(3 × 2) (6)

2.6 List THREE advantages of using a computer. (3)
[25]

QUESTION 3

3.1 What is meant by the acronym *EMC*? (1)

3.2 List FOUR conditions related to the computer environment that have to be considered when setting up a computer. (4)

3.3 Explain the difference between *toolbar* and *Start menu*. (2 × 2) (4)

3.4 Keyboard errors can occur when booting up a computer.

Explain what needs to be done to solve the problem when a keyboard error occurs. (4)

3.5 List FOUR of the most common faults that occur with printers. (4)

3.6 Explain THREE steps to follow when installing an application program. (3)

3.7 Explain the influence that heat, dust, magnets, power surges and electro-static have on the PC. (5)
[25]

QUESTION 4

4.1 Give the shortcut keys for each of the following:

4.1.1 Copy

4.1.2 Paste

4.1.3 Cut

(3 × 1) (3)

4.2 Give TWO disadvantages of using spreadsheets. (2)

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4.3 Give the meaning of the terms *predefined* and *cumbersome.* (2)

4.4 List THREE basic predefined functions when applying a spreadsheet formula. (3)
[10]

QUESTION 5

5.1 There are FOUR basic navigation buttons in the web browser that control your movement over the web.

Explain the function of TWO navigation buttons. (2 × 2) (4)

5.2 Explain in your own words what is meant by the term *username.* (2)

5.3 List THREE main ways to move between web pages or websites when surfing the web. (3)

5.4 When would you use a distribution list? (1)
[10]

TOTAL: 100

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