

**QUESTION PAPER**

|  |
| --- |
| 2024 TEST 1 BUFFALO CITY CAMPUS    DEPARTMENT : Dept of Business and Application Development  SUBJECT : DEVELOPMENT SOFTWARE 1 MAINSTREAM  : DEVELOPMENT SOFTWARE 1 EXTENDED YEAR 2    SUBJECT CODE : DES15W0, DEV15W0    EXAMINER/S : MS S TWETWA DUBE, DR E CHINDENGA, MS S VIJAYALEKSHMI & MR F ELEGBELEYE    MODERATOR : MR S NIKANI    DURATION : 90 minutes    MARKS : 50 |
| TEST INSTRUCTIONS    This test is for marks and test conditions for a closed book test apply.  During the test:  All cellphones must be switched off and placed out of reach.  You may not consult notes, slides, videos etc.; you may not photograph or record the test; you may not communicate with anyone in any way; you may not use email, cell phones, etc.    Make sure you answer all questions.  YOU HAVE 60 MINUTES TO ANSWER ALL QUESTIONS  You may not leave the venue until the 60 minutes have elapsed.    FOR EACH QUESTION CHOOSE ONE ANSWER ONLY.  Place an X in the box next to the correct answer. |

FILL IN YOUR DETAILS

STUDENT NUMBER:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ LAST NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ INITIALS: \_\_\_

Place an X in the box next to the specialisation that you are registered for:

󠄀W60011 Business Analysis 󠄀W60009 Application Development

󠄀W60012 Business Analysis (ECP) 󠄀W60010 Application Development (ECP)

**DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO DO SO**

**SECTION A [26 MARKS]**

1. The main components of a computer software system are (1)
   1. Hardware and software
   2. Peripherals and external storage
   3. System Software and Application Software
   4. All of these

1. Some of the advantages of using electronic digital computers are (1)
   1. Processing speed
   2. Storage capacity
   3. Accuracy
   4. All of these

1. An algorithm can be defined as (1)
   1. A set of finite instructions
   2. A heuristic solution based on experience
   3. A collection of diagrams representing a solution
   4. None of these

1. A program written in a high-level language is called (1)
   1. Object code
   2. Assembled Program
   3. Machine code
   4. Source code

1. The programming language R is an example of a (1)
   1. Second Generation Language
   2. Fourth Generation Language
   3. Fifth Generation Language
   4. Third Generation Language

1. The second stage of the Program Development Cycle is (1)
   1. Maintenance
   2. Design
   3. Analysis
   4. Testing

1. A software compiler is a person who writes all of the program documentation (1)
   1. TRUE
   2. FALSE

1. In the UNICODE coding system, only letters of the English alphabet are allowed (1)
   1. TRUE
   2. FALSE

1. A variable can only hold one value at any time (1)
   1. TRUE
   2. FALSE

1. The following pseudocode instruction is the correct way to assign a literal value to a string variable called

STUD\_NO (2)

Stud\_no = “240030032”

STUD\_NO = 240030032 STUDENTNO = “240030032”

None of these

1. The following pseudocode instruction is the correct way to display the message VAT\_AMT on the screen

(2)

1. DISPLAY VAT\_AMT
2. DISPLAY“VAT IS”
3. DISPLAY “VAT\_AMT”
4. None of these

1. When a variable is declared as STRING, it has the following value (2)
2. 0
3. null
4. spaces
5. None of these

1. The name of a variable (1)
   1. May start with a number
   2. May include spaces
   3. May include upper- case and lower-case characters
   4. All of these

1. The following pseudocode instruction is the correct way to assign a literal value to a numeric variable called

TOTALPRICE (2)

1. TOTALPRICE = “250”
2. TOTALPRICE = 250,00
3. TOTALPRICE = R250.00
4. None of these

1. The following instruction contains illegal syntax (1)
2. ACCEPT “NAME”
3. ACCEPT NAME, “TAKALANE”
4. TAKALANE = ACCEPT NAME
5. All of these

1. Which instruction should be used to assign the value input by the user to the variable GENDER? (2)
2. ACCEPT GENDER
3. ACCEPT GENDER 󠄀
4. ACCEPT GENDER = “MALE”
5. None of these

1. The correct instruction to display the value in the string variable CITY is (1)
2. DISPLAY CITY
3. DISPLAY “CITY “
4. ACCEPT CITY
5. None of these

1. The X symbol is used to multiply a value to a variable (1)
   1. TRUE
   2. FALSE

1. AVERAGE = AVERAGE \ 2 is a valid calculation (1)
   1. TRUE
   2. FALSE

1. DISCOUNT = DISCOUNT \* 10% is a valid calculation (2)
2. TRUE
3. FALSE

**SECTION B [10 MARKS]**

State whether the following variables are **VALID OR INVALID**, if it is INVALID explain your answer.

|  |  |  |
| --- | --- | --- |
| **STATEMENT** | **VALID /INVALID** | **EXPLAINATION** |
| 1. cust-name |  |  |
| 2. 2nd\_person |  |  |
| 3. vatAmount% |  |  |
| 4. averageMarksForStudent |  |  |
| 5. test Mark |  |  |

**SECTION C [14 MARKS]**

* + 1. Explain the seven stages of Program Development Cycle

|  |  |
| --- | --- |
| **STAGE** | **EXPLAINATION** |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |
| 6. |  |
| 7. |  |