

**QUESTION PAPER**

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| 2024 TEST 3 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  MR F ELEGBELEYE  MRS S VIJAYALEKSHMI    MODERATOR : MR A.MABOVANA    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 90 MINUTES TO ANSWER ALL QUESTIONS  You may not leave the venue until the 90 minutes have elapsed.    FOR EACH QUESTION CHOOSE ONE ANSWER ONLY.  Place an X in the box next to the correct answer. |

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

**QUESTION 1** **[ 4 marks]**

DECLARE X, Y AS INTEGER

FOR X = 5 TO 1 STEP -1

Y = X + 3

NEXT X

DISPLAY X,Y

a. 4 3

b. 0 4

c. 1 5

d. 0 2

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**QUESTION 2**  **[ 4 marks]**

What is displayed on the screen by the following code if the input is: 6 4 5

DECLARE K, BAGS, OVER, UNDER AS REAL

FOR K = 1 to 3

ACCEPT BAGS

IF BAGS < 5 THEN

UNDER = UNDER + 1

ELSE

OVER = OVER + 1

END IF

NEXT K

DISPLAY OVER

a. 0

b. 1

c. 3

d. NONE OF THESE

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**QUESTION 3**  **[ 4 marks]**

What is displayed on the screen by the following code:

DECLARE I,A AS INTEGER

FOR I= 8 TO 1 step -2

A = I + 4

NEXT I

DISPLAY I, A

a. 0 6

b. 6 0

c. K, A

d. none of the above

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**QUESTION 4**  **[ 4 marks]**

What is displayed on the screen by the following code

DECLARE K,A AS INTEGER

FOR K = 6 TO 2 STEP -3

A= K + A

NEXT K

DISPLAY K, A

a. K, A

b. 0 9

c. 4 1

d. 4 4

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What is displayed on the screen by the following code:

DECLARE NUM, SUM AS REAL

NUM = 3

SUM = NUM + 2

IF SUM - NUM < 4 OR NUM < SUM THEN

DISPLAY NUM

SUM = SUM \* 3

ELSE

DISPLAY SUM

ENDIF

a. SUM

b. 10

c. 3

d. NUM

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**QUESTION 6**  **[ 3 marks]**

IF TEMP > = 12 OR TEMP < = 25 THEN

Is the correct condition to check if the temperature is between 12 and 25 degrees Celsius?

a. True

b. False

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**QUESTION 7**  **[ 3 marks]**

Given that A = 4, B = 2, and C = 1.5, the following code will display FALSE on the screen:

IF (A < B) AND (C > A) THEN

DISPLAY “TRUE”

ELSE

DISPLAY “FALSE”

END IF

a. True

b. False

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**QUESTION 8**  **[ 3 marks]**

The following code correctly accumulates the total beds in the variable CNT1

DECLARE K, BEDS, TOTALBEDS, CNT1 AS INTEGER

FOR K = 1 TO 30

ACCEPT BEDS

IF BEDS < > 200 THEN

CNT1 = CNT1 + 1

ENDIF

NEXT K

a.TRUE

b FALSE

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**QUESTION 9**  **[ 3 marks]**

The following code correctly counts the number of students who achieved distinctions with marks over **74** which is a distinction in the variable cntDst

DECLARE K, mark, cntDst AS REAL

FOR K = 1 TO 10

ACCEPT mark

IF mark >=74 THEN

cntDst = cntDst + 1

ENDIF

NEXT K

a. True

b. False

**QUESTION 10** **[ 18 marks]**

Draw a trace table for the following pseudocode using 10, 20 and 30 as the input

DECLARE A, P, Q, T, R AS INTEGER

DECLARE S AS STRING

ACCEPT A, P, Q

IF A <> 10 THEN

T = 5

R = 7

A = A + 1

ELSE

T = Q – P + P MOD 3

R = P MOD 5 + Q / A

S = “A”

END IF

DISPLAY S , A

DISPLAY “R, R”

END