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**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS
FIRST YEAR FIRST SEMESTER**

**FOR THE DIPLOMA IN
(INFORMATION TECHNOLOGY)**

COURSE CODE: DIT 052

COURSE TITLE: RAPID APPLICATION DEVELOPMENT

DATE: 07¹⁰/08/2023

TIME: 11.00 A.M- 1.00P.M^{2 52}

INSTRUCTIONS

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE [COMPULSORY] (24 MARKS)

- a) Define the following terms [5 marks]
- RAD
 - Visual Basic
 - data type
 - Variable
 - Array
- b) Give advantages of RAD that make it stand out better than other programming languages. [4 Marks]
- c) Using examples differentiate global and local variables [6 Marks]
- d) Study the nested loop below and give its output [5 Marks]
- ```
Private Sub Form Activate ()
For firstCounter= 1to 5
Print "Hello"
For secondCounter= 1 to 4
Print "Welcome to .Net frameworks"
Next secondCounter
Next firstCounter
Print "Thank you"
End Sub
```
- e) Explain two phases of building visual basic application [4 Marks]

### QUESTION TWO (18 MARKS)

- a) Differentiate between prototyping and incremental models [4 Marks]
- b) Explain the four stages of the RAD model. [8 Marks]
- c) List the various elements of visual basic tool box [6 Marks]

### QUESTION THREE (18 MARKS)

- a) Compiling and executing VB.Net Program needs one to take several steps. Outline the steps followed. [6 Marks]
- b) Give the difference between the jagged arrays, multi-dimensional arrays and dynamic arrays. [6 Marks]
- c) What does SDLC stand for? What are some of the stages involved in SDLC? [6 Marks]

### QUESTION FOUR (18 MARKS)

- a) A loop statement allows us to execute a statement or group of statements multiple times. Draw a flowchart to represent a true/false state of a loop. [4 Marks]
- b) Explain five reasons why we should program [5 Marks]
- c) Define the following terms:- [5 Marks]
- Syntax
  - User

- iii. Logic
  - iv. One dimensional array
  - v. Two dimensional arrays
- d) Describe four rules of naming the visual basic variables **[4 Marks]**

**QUESTION FIVE (18 MARKS)**

- a) Explain four phases of building a visual basic application **[8 Marks]**
- b) Explain various differences that exist between arrays and records **[6 Marks]**
- c) Give two advantages and two disadvantages of decision trees **[4 Marks]**