The Management University of Africa
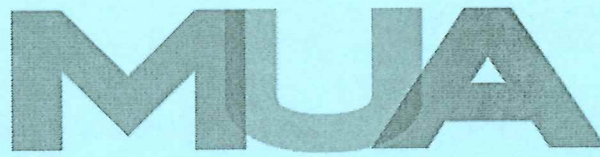
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DIPLOMA UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

DIT 200 :   FUNDAMENTALS OF VISUAL PROGRAMMING

DATE: 29TH MARCH 2022

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **FOUR** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **10 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Consider this. You work as a developer for a leading software company in the country. Several projects do come up and you are called upon to deliver the projects as the lead developer. Recently, an upcoming supermarket has contracted your company to develop an inhouse Point-of-Sale (POS) system for use across its several branches.

You need to assemble your tools and start working on the project as soon as possible. The POS software will be integrated with a Microsoft SQL Server running within the supermarket's datacenter.

Required:

a) Name an appropriate programming language you can use in this project. **[2 Marks]**

b) List 3 tools of the Integrated Development Environment (IDE) you will use. **[6 Marks]**

c) Name an example of the IDE you will use in this project. **[2 Marks]**

d) Explain THREE types of programming errors you would encounter while creating the project. **[9 Marks]**

e) Differentiate between an exception and an error which you would encounter in the project. **[2 Marks]**

f) Identify the construct you would use to store the list of all the branches of the supermarket. **[2 Marks]**

g) List 5 common windows forms components that your user interface may use in this project. **[5 Marks]**

h) Identify the technology Microsoft provides for connecting to the MSSQL database that you will use in the project. **[2 Marks]**

QUESTION TWO:

a) List FIVE data types used in Visual Basic (.NET) **[5 Marks]**

b) Name FIVE operators used in Visual Basic (.NET) **[5 Marks]**

QUESTION THREE:

a) List the FOUR levels of scopes of a variable in VB programming.   [4 Marks]

b) Name the 6 types of access modifiers used in VB programming   [6 Marks]

QUESTION FOUR:

a) State the 4 types of loops in VB programming   [4 Marks]

b) List and illustrate THREE decision making control structures   [6 Marks]

QUESTION FIVE:

a) Differentiate between a class and an object giving relevant examples as used in VB programming.   [6 Marks]

b) Differentiate between constructors and destructors as used in VB programming.[2 Marks]

c) Define polymorphism as used in VB object-oriented programming.   [2 Marks]

QUESTION SIX:

a) Define the following terms as used in Object-Oriented Visual Basic programming

   i.   Method   [2Marks]

   ii.   Event   [2Marks]

   iii.   Property/Field   [2Marks]

b) List FOUR relational operators used in VB programming.   [4 Marks]