



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

*Faculty of Engineering & Technology*

DEPARTMENT COMPUTER SCIENCE & INFORMATION TECHNOLOGY

**DIPLOMA IN INFORMATION TECHNOLOGY (DIT10M)**

**ECS 2203: 4GL Programming/ DATABASE FOX PRO PROGRAMMING**

SPECIAL/SUPPLEMENTARY EXAMINATION

**SERIES: FEBRUARY/MARCH 2012**

**TIME: 2 HOURS**

## **Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **FOUR** printed pages

## SECTION A (COMPULSORY)

### Question 1

a) With aid of suitable examples, explain the following Visual FoxPro set command:

- i) Append Blank
- ii) Replace
- iii) Seek
- iv) Display
- v) Pack

[10 Marks]

b) With aid of examples explain the use of the following operators:

- i) %
- ii) &

[4 Marks]

c) Write FoxPro procedure to display the following on the screen:

```
1
12
123
1234
12345
123456
```

[4 Marks]

d) Distinguish between Message() and MessageBox() as used in Visual FoxPro

[4 Marks]

e) Distinguish between 'scan.....enddo' and 'do while ..... enddo' loop

[4 Marks]

f) List any for FoxPro field data types

[2 Marks]

g) Explain the use of found() function

[2 Marks]

## SECTION B (ANSWER ANY TWO QUESTIONS)

### Question 2

a) Records of student performance are stored in a data file called 'marks.dbf'. The data file contains the following information:

<u>Field Name</u>	<u>Description</u>
StudentName	Name of student
ChemMarks	Marks in chemistry
PhyMarks	Marks in Physics
MathsMarks	Marks in Maths

Write a FoxPro program that would read data from the marks. dbf compute average mark of each student and display the student name and grade of each student according to the following criteria.

The students are graded as shown in the table below.

Your program should include a function to find grade.

**Average marks      Grade**

Less than 40	F
Less than 50	D
Less than 60	C
Less than 70	B
70 and above	A

Use DO While and Do Case control structures.

**[8 Marks]**

**b)** List any **three** Data Definition Language (DDL) and any four Data Manipulation Language statements used by SQL

**[7 Marks]**

**Question 3**

a) Explain the following concepts:

- i) Entity integrity
- ii) Referential integrity
- iii) Foreign key

**[6 Marks]**

b) Explain advantages of indexing over sorting commands

**[2 Marks]**

c) List any **four** aggregate SQL functions

**[4 Marks]**

d) Write FoxPro program stub that assigns a value 40 to all elements of a 2 x 3 array

**[2 Marks]**

e) Interpret the output of the following FoxPro statements:

? Str1 + Str2 and ? str1 – str 2  
Where  
Str1 = 'Hellow'    Str2 = 'World'

**[1 Mark]**

**Question 4**

<b>CUSTNO</b>	<b>CUSTNAME</b>	<b>CITY</b>	<b>ORDERNO</b>
C1001	BARAZA	MOMBASA	03
C1002	ZIPY	NAIROBI	04
C1003	OMURWA	MOLO	05
C1004	SIMIYU	KIMILILI	06
C1005	CHESCAH	KIMININI	07

For the table above named tblTable2.dbf write a SQL statement to do the following:

- i. Give out all city names that end with the letter 'i'
- ii. Give out custname names that end with 'a'
- iii. Give out all city names that end with 'asa'.
- iv. Output only 50% of the records
- v. Delete records of employees in Mombasa
- vi. List number of orders for every city
- vii. Change name of custno 'C1003' to 'Juma'

**[15 Marks]**

### **Question 5**

- a) Describe the use of Trace and Debug windows ad used in FoxPro **[3 Marks]**
- b) Write a Visual FoxPro procedure that would accept numbers less than 100, test whether it is an odd or even number and output the result on the screen. The program will exit if a negative number is input. **[6 Marks]**
- c) Distinguish between procedure call by value and procedure call by reference **[4 Marks]**
- d) Explain the use of General data type in FoxPro. **[2 Marks]**