



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN INFORMATION
TECHNOLOGY (BSc IT 11M/BSc IT 12J)

YR II SEM I

BIT 2105: APPLICATION PROGRAMMING

END OF SEMESTER EXAMINATION

SERIES: APRIL 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- Answer Booklet

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

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

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question One (30 Marks)

- Explain at least **FIVE** features of Integrated Development Environment (IDE) of Visual Basic (5 marks)
- What is the difference between arguments “call by value” and “call by reference” to a procedure? (4 marks)
- Differentiate between standard EXE and ActiveX EXE projects in VB (2 marks)
- Explain “option explicit” as used in VB (3 marks)
- List and briefly explain **FOUR** ADO Cursor types (4 marks)
- Define VB control structures (1 mark)
 - With the aid of diagram, differentiate between posttest and pretest loops (4 marks)
- What is a database? (1 mark)
 - Write and explain a VB Database ADO Connection String (6 marks)

SECTION B (Attempt any TWO sections)

Question Two (20 marks)

- a) Explain how Variables are declared in VB. (2 marks)
- b) Describe the scope of variables in Visual Basic, giving suitable example for each case (4 marks)
- c) (i) Define Array
(ii) Differentiate between Fixed and Dynamic Array with example (5 marks)
- d) Write a simple grading application (from user input) to display with the following options
Above 70 is grade A
60 – 69 is grade B
50 – 59 is grade C
40 – 49 is grade D
Below 40 is F
- Include the following:
- Error trapping code
 - A close form button
 - A procedure for grading
- (9 marks)

Question Three (20 marks)

- a) With the use of an example, explain how the Do....while loop is executed? (4 marks)
- b) Explain the following:
(i) On Error Go To Label
(ii) On Error Go To 0
(iii) Resume Next (6 marks)
- c) One large company pays its salespeople on a commission basis. The salespeople receive \$200 per week plus 9% of their gross sales for that week. For example, a salesperson who sells \$500 worth of chemicals in a week receives \$200 plus 9% of \$5000 or a total of \$650. Develop a program that will input each salesperson name and gross sales for the week and will calculate and display the salesperson's name and earnings. The code should process the earnings of not less than five salesperson. Process one person figure at a time. (10 marks)

Question Four (20 marks)

- a) (i) Define a function
(ii) How does one pass arguments in function (4 marks)
- b) Mention **FOUR** differences suffix characters used to specify variables of a data type. Explain, how suffix are useful in VB programming. (6 marks)
- c) Develop a program that uses a programmer's defined Sub procedure Minimum to determine the smallest of three integers input by a user textboxes. The smallest value should be displayed in a label. (10 marks)

Question Five (20 marks)

- a) Develop a program that accepts an array of 20 students' marks. It then gets the sum and average if the 20 students, compares how many are above and how many are below average and then displays from a message box the number of students who have failed and the number of students who have passed. (10 marks)
- b) Explain the following VB function with examples (10 marks)
- (i) ABS ()
 - (ii) Chr ()
 - (iii) IsDate ()
 - (iv) LCase ()
 - (v) Val ()