STRUCTRTED PROGRAMING (BBIT 222) (CISY 111) 2ND TRIMESTER 2014

**KENYA METHODIST UNIVERSITY**

**END OF 2'***ND '***TRIMESTER 2014 (DAY) EXAMINATION**

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| **FACULTY** |   | : | COMPUTING & INFORMATICS |
| **DEPARTMENT** | : | COMPUTER SCIENCE AND BUSINESS |
|  |   |   |   | INFORMATION |
| **UNIT CODE** |   | : | BBIT 222/DCIS 111 |
| **UNIT TITLE** | : | STRUCTURED PROGRAMMING |
| **TIME** |   |   | : | 2 HOURS |

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Instructions: Answer question one and any other two questions

**Question One**

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| * Define the following terms, illustrate with examples.
 |   | (6mks) |

* Array
* Class
* Structure

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| * With the help of a C++ program describe the concept of an overloaded function.
 |   |   |   |   |   |   |   |   | (6mks) |
| * Describe three class member visibility options.
 |   |   | (6mks) |
| * What is the purpose of the dereferencing operator in C++
 |   | (2mks) |
| * How would you assign the address of the floating point variable salary to a points called pt-sal?
 |   |   |   |   |   |   |   | (2mks) |

* With a function that counts the number of times it is called. Name the function count: it (). Do not pass if anything in the body of count-it () print the following message: the number of times this function has been called is where ## is the number (hint: because the variable must be local make it static and initialize it to zero when you first dying it)

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| * Differentiate between passing a variable by value and passing a variable by reference.
 |   |   |   |   |   |   |   |   | (2mks) |

**Question Two**

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| * Using an inline function, with a C++ program that stores an array of friends names, phone number, and addresses and prints them in two ways with their name address and phone number or with only their name and phone number for a phone listing.
 |   |   |   |   | (10mks) |
| * (i) Define an object.
 |   |   |   |   |   |   |   | (1mk) |

ii) Distinguish between a constructor and a destructor in C++ (4mks)

**Question Three**

* Construct a class to hold personal records. Use the following data members and keep them private.
* Char name (25)
* Float salary
* Char date of birth (9)

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| Circle two constructors, one to initialize the record with its necessary values and another to create an unutilized record. Create member functions to alter the individuals name, salary and date of birth. Test the class. | (9mks) |
| * Outline the function of the following C++ functions.
 |   |   | (6mks) |

* <fstream>
* Eof()
* Ios::out

**Question Four**

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| * Write a C++ program that asks the user for a filename and prints the contents of the file to the screen. If the file does not exist the program should display an error message.
 |   |   |   |   | (10mks) |

* Suppose you work for a mail-order company that sells disk drives. You are given the task of writing a tracking program for the 125 different drives you sell. you must keep track of the following information
* Storage capacity in megabytes
* Access time in milliseconds
* Vendor code (A,B,C or D)

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| Write an array of structures that defines the list above. | (5mks) |

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