STRUCTURED PROGRAMMING (BBIT 222) (CISY 111) 2ND TRIMESTER 2015

**KENYA METHODIST UNIVERSITY**

**END OF 2ndTRIMESTER 2015 (PT) EXAMINATION**

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| **FACULTY** | |  | : | COMPUTING & INFORMATICS |
| **DEPARTMENT** | | | : | COMPUTER SCIENCE AND BUSINESS |
|  |  |  |  | INFORMATION |
| **UNIT CODE** | |  | : | BBIT 222/CISY 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 structured programming. | (2 marks) |

* Explain the advantages of functions in structured programming. (5 marks)

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| * Explain the following terms as used in structured programming. | (5 marks) |

* Pointer
* Structure
* Class
* Dynamic memory allocation
* File

|  |  |
| --- | --- |
| * Explain three control structures. | (3 marks) |

* Explain the meaning of the following operators as used with pointers

|  |  |
| --- | --- |
| * \* | (5 marks) |

* &

|  |  |
| --- | --- |
| * Explain the function of the following modes when opening a file | (6 marks) |

* r
* w
* a

|  |  |
| --- | --- |
| * Give the general format for the following data structures. | (4 marks) |
| * Structure |  |

* Class

**Question Two**

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| --- | --- |
| * Write a C++ program to store five integer numbers in an array and compute their average. | (5 marks) |
| * Explain two ways of calling function in structured programming. Illustrate your answer with C++ programs. | (10 marks) |

**Question Three**

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| --- | --- |
| * Explain the following file stream classes. | (6 marks) |

* Ifstream
* Ofstream
* Fstream

|  |  |
| --- | --- |
| * Using a C++ program discuss the concept of dynamic memory allocation as used in structured programming. | (5 marks) |
| * Write a C++ programming using the while loop to display the odd numbers between 0 and 20. | (4 marks) |

**Question Four**

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| * Using flowcharts explain the difference between for loop, while and the do while loop. | (6 marks) | |
| * Distinguish between Top-down refinement. | (4 marks) | |
| * Write a C++ program that defines a structure called student and an instance variable S1 of type student. The data members of the student structure are; Adm No. Std Name, Age, Fees Balance. (Choose appropriate data types. | (5 marks) |  |

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