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UNIVERSITY OF DAR ES SALAAM  
COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

IS 136: TEST TWO

Date: Friday 6<sup>th</sup> June, 2014

Instructions:

- Time: 50 Minutes
- Attempt all questions. This test carries a total of 15 marks.

Question One: (4.5 marks)

With examples briefly explain the difference between the following terminologies as applied to C programming, provide example to support your explanation.

- a) Primary data type vs. Secondary data types
- b) Passing by Value vs Passing by reference
- c) Automatic storage class vs external storage class

Question Two: (5.5 marks )

- a) How are the elements of an array stored in memory?
- b) Write a programme which declares two-dimensional array called **subjects** with seven rows and two columns. Assuming that these columns represent subjects, **physics** and **mathematics**, the code fragment should accept marks for these two subjects from the keyboard. For **Physics**, the program has to check, if the marks entered is less than 40, it should assign it to 40.

Question Three: (5 marks)

Write a program which takes in the value of a radius and an integer value for choice. If choice is 1 then the program should call a function to compute and return an area of a circle. If choice is 2, the program should call a function to compute and return a circumference.