



CAT 1 Takeaway - This is a revision question paper

Data Structures and Algorithms (Jomo Kenyatta University of Agriculture and Technology)



Scan to open on Studocu

ICS 2105 – Data Structures and Algorithms Cat 1(Group work 2 Members)

DATE: 22/06/23

Time: 1 Week (29/06/23)

- 1) What is an algorithm? What is the relevance of algorithms to data structures?
(3 marks)
- 2) List and explain any 6 primitive data types used in C++. Show the size in bytes allocated to each (3 marks)
- 3) Write a program that contains two functions. The first function returns the square of the integer passed to it, and the second function returns the cube (4 marks)
- 4) Write a function that returns the double-precision area of a circle, given that a double-precision radius is passed to it. The formula for calculating the area of a circle is $\text{area} = 3.14159 * (\text{radius} * \text{radius})$ (5 marks)
- 5) Write a program that utilises a function to check whether the year entered by a user is a leap year. The program then prints out an appropriate message on the screen (5 marks)