



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

MAIN EXAM

2021/2022 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER EXAMINATION

FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

COURSE CODE: DIT 077.

COURSE TITLE: OBJECT ORIENTED PROGRAMMING

DATE: 02/08/2022

TIME: 2PM – 4PM

INSTRUCTIONS TO CANDIDATES:

Answer Question **ONE** and any Other **TWO** questions

Answer -----

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

Paper Consists of 3 Printed Pages. Please Turn Over



QUESTION ONE 24 MARKS

- a. Explain any five concepts of object-oriented programming. 10mks
- b. State at least five reasons as to why java programming language is preferred over other object-oriented programming. 5mk
- c. Write a java code that compares two numbers entered by the user and outputs **number1** is greater than **number2**, **number2** is greater than **number1** or **number1** is equal two **number2** depending on the outcome. 6mks
- d. With an appropriate syntax, explain the types of comments in java. 3mks

QUESTION TWO (18 MARKS).

- a. A class three pupil wanted to identify all even numbers between 0 and 100. Write a java program that will help him solve the problem. 5mks
- b. Write a java code that gets an input integer from the user and computes its factorial 5mks.
- c. You have been contacted to develop a student management system by your former secondary school. Develop a java program that will assign student grades and comments based on the marks entered in the range below. 8mks

Marks range	grade	comment
Above 100	I	Invalid marks
70-100	A	Excellent
69-60	B	Good
59-50	C	Average
49-40	D	Pass
39-0	E	fail
Below 0	I	Invalid marks

QUESTION THREE (18 MARKS).

- a. Giving the types of arrays, explain the term array? 4mks
- b. Explain how we declared and initialize the two types of arrays 2mks
- c. Using a code, declare an array in java that takes the names of five students from the user and displays them when the program is compiled 6MKS
- d. Differentiate the following terms as used in java programming
 - i. Comment and statement 2mks
 - ii. Expression and method. 2mks
 - iii. Method overloading and method overriding. 2mks

QUESTION FOUR (18 MARKS).

- a. Using appropriate examples explain the term java key ward. 3mks
- b. Explain the types of variables used in java programming. 3mks
- c. Explain how the following statements are used in java programming. 2mks
 - i. Break;
 - ii. Continue;
- d. Java access specifiers are utilized in java codes to the define variable access limit in a program. Discuss the various access specifiers used in java 6mks
- e. Identifiers naming is governed by clearly stipulated rules. Explain. 4mks

QUESTION FIVE (18 MARKS).

- a. Explain different operators used in java programming language. 5mks
- b. Give the values A=33 and B =2 C=5 what will be the output of the following computations.
 - i. $A\%B$ 1mks
 - ii. $A+=C+B$ 2mks
 - iii. $A-=C+B$ 2mks
 - iv. $C*=(B+A)$ 2mks
- c. Using an appropriate example of a java code, illustrate the flow chart of a for loop 6mks