



# **MURANG'A UNIVERSITY OF TECHNOLOGY**

## **SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY**

**UNIVERSITY ORDINARY EXAMINATION**

**2021/2022 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR  
OF SCIENCE IN SOFTWARE ENGINEERING**

**SCS055– OBJECT ORIENTED PROGRAMMING**

**DURATION: 2 HOURS**

### **INSTRUCTIONS TO CANDIDATES:**

1. Answer question One and Any Other Two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

### QUESTION ONE (30 MARKS)

- a) Define the following terms. (6 mks)
  - i. Polymorphism
  - ii. Inheritance
  - iii. Abstraction
- b) State four different types of Arithmetic Operators in C++ with their symbols. (4 mks)
- c) Differentiate between the following three programming languages. (6 mks)
  - i. Machine Low Language
  - ii. Assembly Low Language
  - iii. High Low Language
- d) Highlight five features of the object Oriented Programming. (5 mks)
- e) Highlight five benefits of Object Oriented Programming (OOPS). (5 mks)
- f) State four characteristics of C++ Program. (4 mks)

### QUESTION TWO (20 MARKS)

- a) With help of a diagram, explain the steps of translating /executing a C++ program. (10 mks).
- b) Read the following C++ code and answer part (i), (ii) and (iii).

```
#include<iostream>
Using namespace
Int Main () [
Cont <<" Hallow World" return);
]
```

- i. Explain each line of the above Code. (5 mks)
- ii. Rewrite the above code omitting the keyword "Using Namespace" and replacing it with the appropriate keyword and operator. (3 mks)
- iii. What will be the output of the Code. (2 mks)

### QUESTION THREE (20 MARKS)

- a) Write a programme in C++ that can add two numbers and print the sum on the screen.(8marks)
- b) Explain the purpose of a " Compiler in a C++ program). (2 mks)
- c) Explain the meaning/use of the following as used in C++
  - i. /b. (2 mks)
  - ii. /n. (2 mks)
  - iii. <<endl. (2 mks)
  - iv. //. (2 mks)
  - v. /\*....\*/ (2 mks)

### QUESTION FOUR (20 MARKS)

- a) With an example, identify five types of operators used in C++ (5 mks)
- b) State and Explain the four conditions statements used in C++ (8 mks)
- c) With examples, distinguish between "Arrays" and Variables" as used in C++ Programming. (4 mks)
- d) State three different types of datatypes with examples as used in C++. (3 mks)