



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY ORDINARY EXAMINATION

2017/2018 ACADEMIC YEAR

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE ACTUARIAL SCIENCE**

BACHELOR OF SCIENCE IN MATHEMATICS & ECONOMICS

SCS101 301 – INTRODUCTION TO COMPUTER PROGRAMMING

DURATION: 2 HOURS

DATE: 18TH APRIL 2018

TIME: 2.00-4.00PM

Instructions to Candidates:

1. Answer **Question 1** 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.

SECTION ONE – ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE: (30 MARKS)

- a)
- i. State two advantages and two disadvantages of machine language (4 marks)
 - ii. Define the term programming paradigm (2 marks)
- b) Describe any two types of errors in programming (4 marks)
- c) Write C program for calculating the area of a triangle given the height and the base (4 marks)
- d) Explain three advantages of structured programming (6 marks)
- e) With aid of a flowchart describe the For.....loop as used in c programming (4 marks)
- f)
- i. State any three rules of naming variable in C (3 marks)
 - ii. Briefly describe the term array and state two characteristics of an any (3 marks)

SECTION TWO – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO: (20 MARKS)

- a) Differentiate between the following terms as used in c programming
- i. Object code and source mode (2 marks)
 - ii. Compiler and interpreter (2 marks)
 - iii. Print f() and scanf() functions (2 marks)
- b) Write a program to add ten numbers using for statement (6 marks)
- c) Explain four drawbacks of structured programming (4 marks)
- d) Describe four basic data types of c programming (4 marks)

QUESTION THREE: (20 MARKS)

- a).Table 1. Shows east Africa countries with their corresponding stable foods.

Use it to answer the question that follows

COUNTRY	NAME	STABLE FOOD
1	Tanzania	Rice
2	Kenya	Ugali
3	Uganda	Matoke
Any number	Sudan	Bread

Table 1.

- i. Draw a flowchart to represent the logic displaying the name of the country and its stable food when supplied with the country number (7 marks)
 - ii. Write a C program to accept the country number. The program should display the name and the stable food for the country based on the number entered. Use switch statement (8 marks)
- b) State five advantages of high level languages (5 marks)

QUESTION FOUR: (20 MARKS)

- a) Describe the six main stages of program development (6 marks)
- b) Explain three of portability in programming (6 marks)
- c) Write a C program that prompts the user to enter an integer should then determine whether the input is odd or even and output an appropriate message (4 marks)
- d) Explain any two uses of pointers in programming (4 marks)