



MURANG'A UNIVERSITY OF TECHNOLOGY
SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

UNIVERSITY ORDINARY EXAMINATION

2017/2018 ACADEMIC YEAR

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DIPLOMA IN
ELECTRICAL AND ELECTRONICS ENGINEERING AND DIPLOMA IN
CRIMINOLOGY AND CRIMINAL JUSTICE**

SCS 050 – INTRODUCTION TO COMPUTER PROGRAMMING

DURATION: 2 HOURS

DATE: 8TH DECEMBER, 2017

TIME: 2.00 – 4.00 P.M.

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 - COMPULSORY

QUESTION ONE

- (a) Define the following terms: (5 Marks)
- i. Source code
 - ii. Object code
 - iii. Translator
 - iv. Compiler
 - v. Program
- (b) Explain TWO tools used when programming (4 Marks)
- Draw a flow chart that will prompt the student to enter their age. If the age is greater than 20
Output “adult” else young person (6 Marks)
- (c) Outline FOUR rules of naming an identifier (4 Marks)
- (d) With the aid of an example, illustrate TWO types of variables (6 Marks)
- (e) Distinguish the following as used in programming: (4 Marks)
- i. Array and Structure
 - ii. Operator and Operand
- (f) Outline TWO reasons for using functions when writing a program (1 Mark)

SECTION TWO – ANSWER ANY TWO QUESTIONS

QUESTION TWO

- (a) Control Structures are categorized into three kinds. Identify the THREE categories of Control Structures (3 Marks)
- (b) With the aid of flow chart, differentiate between while and if statement (6 Marks)
- (c) Using nested if....else statement, write a program that requires user to enter marks if students and grade them as follows: (10 Marks)

Marks	Grade
70 – 100	A
60 – 69	B
50 – 59	C
40 – 49	D
39 and Below	E

(d) Write the syntax for after loop

(1 Mark)

QUESTION THREE

(a) Explain TWO reasons of using constants in c programming language (2 Marks)

(b) Explain the function of below commands as used in c programming (5 Marks)

i. #include < std >

ii. int main ()

iii. Printf

iv. ReturnO

v. ScanF

(c) Explain FOUR characteristics of good algorithm (4 Marks)

(d) Write a program that will prompt the user to enter two numbers. Calculate the sum and average of the two numbers and produce output (9 Marks)

QUESTION FOUR

(a) Discuss SIX stages that a program goes through to be executed

(12 Marks)

(b) Write a program that will output the below table on the screen

(4 Marks)

Parrots	Rams	Kings
2	5	2
3	5	1

(c) Outline FOUR advantages of using flow charts

(4 Marks)