



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF INFORMATION
AND COMMUNICATION TECHNOLOGY/BUSINESS INFORMATION

SYSTEMS/COMPUTER SECURITY AND FORENSIC

1 YEAR 1 SEMESTER 2018/2019 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: IIT 3112

COURSE TITLE: INTRODUCTION TO PROGRAMMING

EXAM VENUE: STREAM: ICT/BIS/CSF

DATE: EXAM SESSION:

TIME: 2.00 HOURS

INSTRUCTIONS:

1. Answer Question 1 (Compulsory) and ANY other two questions
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination room

QUESTION ONE

(5x6=30 marks)

- a) Write short notes on the following translators
 - i) assembler
 - ii) compiler
 - iii) Interpreter (5 MARKS)
- b) High level language was to correct the problems of the low-level language, discuss briefly on the general features of high-level language (5 MARKS)
- c) What is file handling in relation to programming? Briefly explain functions used in file handling (5 MARKS)
- d) Distinguish between top down design model and bottom up design model as applied in problem solving process. (5 MARKS)
- e) Briefly discuss on program variables and constants. (5 MARKS)
- f) Write a Pseudo code of a simple program that accepts two integers, compares them and display the relationship between them i.e. whether they are the same or one is greater than the other. (5 MARKS)

QUESTION TWO

- a) An object contains data and methods. How is Object Oriented Programming different from Procedural programming (10 MARKS)
- b) Write the general format of the following statements:
 - i) If statements and Switch statements
 - ii) Draw a block diagram of digital computer, explain various units in it

(10 MARKS)

QUESTION THREE

a) Write short notes on the following :

- i) array declaration and initialization
- ii) Structure declaration and initialization (10 MARKS)

b) Solving a problem on a computer involves the following activities:

- (i) Defining the problem and analyzing the problem:
- (ii) Developing the algorithms
- (iii) Writing a computer program corresponding to the algorithm
- (iv) Testing and debugging the program
- (v) Documenting the program

Write brief notes on each of the above activities (10 MARKS)

QUESTION FOUR

a) Explain an operator? Illustrate Arithmetic operators, Functions and their usage (10 MARKS)

b) Write a simple program code that calculate area of a triangle whose height 27.5cm and base is 10cm. use π as 3.14 (10 MARKS)

QUESTION FIVE

a) Draw a flowchart for the following problem: A student wants to determine whether the values stored in A and B are not equal. Then will store the bigger value in the space labeled LARGE and the smaller value in location labeled SMALL. Finally prints the bigger value i.e. either A or B accordingly (10 MARKS)

b) Differentiate between while loop and do while Loop using syntaxes and block diagrams (10 MARKS)