



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF MATHEMATICS AND ACTUARIAL SCIENCE

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN

ACTUARIAL SCIENCE WITH IT

1ST YEAR 1ST SEMESTER 2024/2025 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: ITB 9104

COURSE TITLE: PROGRAMMING IN PASCAL

EXAM VENUE: STREAM:

DATE: EXAM SESSION:

TIME:

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 1 [30 marks]

- a) Write a code that would print the word “Hello World” (6 marks)
- b) State the character sets and identifies of Pascal (4 marks)
- c) Describe the difference between a procedure and a function (4 marks)
- d) State the Standard data types in Pascal (4 marks)
- e) Give the three things that every pascal program generally has (3 marks)
- f) Give any FIVE basic variable types (5 marks)
- g) Describe the difference between *type* declaration and *var* declaration (4 marks)

Question 2 [20 marks]

- a) Discuss the features of Pascal language (12 marks)
- b) Discuss the reasons why Pascal has grown in popularity in the teaching and academics arena (8 marks)

Question 3 [20 marks]

- a) What is a variable? (2 marks)
- b) Define and discuss the characteristics of a variable (8 marks)
- c) Write a code that makes use of the various types of variables learned in class to produce the following output: “*Welcome to the beauty of Pascal Allan Smith*” (10 marks)

Question 4 [20 marks]

- a) With the aid of a diagram, illustrate the general form of a typical decision-making structure found in pascal (5 marks)
- b) With the aid of a diagram, illustrate the general form of a loop statement found in most of the programming languages (5 marks)
- c) Write a while do loop code that would output the values from 1 to 16 (10 marks)

Question 5 [20 marks]

- a) Write a function code that would compare two values and output the max value (10 marks)
- b) Write a procedure code that would compare three values entered by a user and gives the minimum value (10 marks)