



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

FIRST YEAR FIRST SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE
& TECHNOLOGY
(MAIN CAMPUS)

SCS 103: PROGRAMMING IN PASCAL

Date: 22nd November, 2013

Time: 2.30 - 4.30 p.m.

INSTRUCTIONS:

- Answer ALL Questions in SECTION A and any other TWO from SECTION B.
- Write your registration number on all sheets of the answer book used.
- Use a NEW PAGE FOR EVERY QUESTION attempted, and indicate number on the space provided on the page of the answer sheet.
- Fasten together all loose answer sheets used.
- NO MOBILE PHONES in the examination room.

Question Three (20 Marks)

- a) Provide a brief explanation of the term procedure as used in programming (2 Marks)
- b) State and briefly explain two way that can be used to pass arguments during the procedure call (4 Marks)
- c) Declare a procedure named Averaging that accepts three values of type Real. The procedure should compute the average of the three numbers and displays the result on the screen. (4 Marks)
- d) Write a Pascal program that implements the Averaging procedure. The values used to call the procedure are entered from the keyboard (10 Marks)

Question Four (20 Marks)

- a) State and briefly explain the three main categories of control structures (6 Marks)
- b) Write a Pascal program that will compute the sum of contents of a single dimensional array called Summation that has 500 elements of type Real. The program should print the value of the sum on the screen. (8 Marks)
- c) Distinguish between single dimensional array and multidimensional array (4 Marks)
- d) Write a code segment that will create a two dimensional array of string type. The array should contain 20 rows and 45 columns. (2 Marks)

Question Five (20 Marks)

- a) Explain the importance of text file in programming (2 Marks)
- b) State and briefly explain three modes that can be used to open a text file (6 Marks)
- c) Define the term file variable (2 Marks)
- d) Write a Pascal program that will accept the national identity number, name, age, gender of a person from the keyboard and stores them in a text file called 'C:\PeopleRecord.TXT' without deleting the already existing contents of the file (10 Marks)