BACHELOR OF ELECTRICAL AND ELECTRONIC ENGINEERING
SMA2276: COMPUTER PROGRAMMING II
MAIN EXAM

QUESTION ONE (30 MARKS)

a) Differentiate between the following terms: (6mks)
   i.   Syntax and semantics
   ii. Pseudo code and algorithm
   iii. Logical and runtime errors
b) Why is it necessary to study FORTRAN programing language for Civil Engineers? (5mks)
c) Write an array to store the names of 50 buildings and populate at least one element. (5mks)
d) Explain the steps involved in the system development process.   (5mks)
e) Write a FORTRAN program to print numbers between 20 and 200 on the screen. (5mks)
f) Write a function that will take two integer values and return the product.   (5mks)

QUESTION TWO (20 MARKS)

a) Mention and explain the types of format specifiers used in FORTRAN.   (10mks)
b) Write a program that will capture student details and store them in a file.   (10mks)

QUESTION THREE (20 MARKS)

a) Explain the different types of operators in FORTRAN programing language giving appropriate examples.   (10mks)
b) Write a program to calculate the area of a triangle from the base and height using the formula A=1/2bh.   (10mks)

QUESTION FOUR (20 MARKS)

a) Write the syntax for and explain the various types of decision constructs in FORTRAN programing.   (12mks)
b) Write a FORTRAN program to that captures two values and compares them, printing out whether they are equal, larger or less than the other.   (8mks)

QUESTION FIVE (20 MARKS)

a) Write a program to display a mathematical 8 by 8 multiplication table on the screen.(20mks)