

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2009/2010 ACADEMIC YEAR

**FOR THE DEGREE OF BACHELOR OF COMPUTER SCIENCE
AND BACHELOR OF SCIENCE IN ECONOMICS & MATHEMATICS**

COURSE CODE: COMP 111

COURSE TITLE: INTRODUCTION TO PROGRAMMING

STREAM: Y1S1

DAY: FRIDAY

TIME: 9.00 – 11.00 A.M.

DATE: 13/08/2010

INSTRUCTIONS:

- *Attempt THREE Questions*
- *Section A is COMPULSORY*
- *Attempt any other TWO questions from Section B*

PLEASE TURNOVER

SECTION A

Question One: (30 Marks)

- a) List the benefits of using C programming language. (4 Marks)
- b) Write a program which allows the user to input any four digit integer and calculate the sum of the digits. (6 Marks)
- c) Explain the if-else statement. (3 Marks)
- d) Write a program to check the grade of a student given that: (6 Marks)
 - A 70 and Above
 - B 60 - 69
 - C 50 - 59
 - D 40 - 49
 - Below 40 Fail.Allow the user to input the various subject marks.
- e) Differentiate between the **while** statement and **do – While** statement. (4 Marks)
- f) What are the benefits of using functions? (2 Marks)
- g) Differentiate between recursion and nesting. (3 Marks)
- h) Define a pointer. (2 Marks)

SECTION B

Question Two: (20 Marks)

- a) Explain the structure of a C program. (4 Marks)
- b) Explain the tertiary operator. (4 Marks)
- c) Write a program to print the odd numbers within a range of ten values. (6 Marks)
- d) Explain the following: (6 Marks)
 - i. Break statement
 - ii. Continue statement
 - iii. Return

Question Three: (20 Marks)

- a) Explain the different instructions in C. (4 Marks)
- b) Differentiate between the if-else statement and the switch-case statement. (4 Marks)
- c) Explain the **for** statement. (4 Marks)
- d) Write a program to print the following pattern: (5 Marks)

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- e) Define a structure and describe how to declare it. (3 Marks)

Question Four: (20 Marks)

- a) Differentiate between structured programming and procedural programming. **(4 Marks)**
- b) Write a program to interchange two variables using only two variables. **(5 Marks)**
- c) Write a program to calculate the factorial of a number using a function. **(6 Marks)**
- d) Differentiate pass by value and pass by reference. **(4 Marks)**
- e) Define a string. **(1 Mark)**