

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2009/2010 ACADEMIC YEAR

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

COURSE CODE: COMP 111

COURSE TITLE: INTRODUCTION TO PROGRAMMING

STREAM: Y1S1 & Y1S2

DAY: FRIDAY

TIME: 9:00 – 11:00 A.M.

DATE: 26/03/2010

INSTRUCTIONS:

Attempt **Question ONE** and **Any other TWO**.

PLEASE TURN OVER

QUESTION ONE (30 marks)

a. Write and explain the do.. while syntax **[4 marks]**

b. An electric power distribution company charges its domestic consumers as follows:

Consumption units	rate of charge (Ksh)
0-200	0.50 per unit
201 -400	100 plus 0.65 per unit
401 – 600	230 plus 0.80 per unit
	Excess of 400
601 and above	390 plus 1.00 per unit
	Excess of 600

Write a program that reads customer number and power consumed and prints amount to be paid by the customer. **[8 marks]**

c . Identify the error and correct the program. **[4 marks]**

```
#define ROWS 5
#define COLUMNS 5
Main()
{
int row, column, product[ROWS][COLUMNS];
int i, h;
printf("Multiplication table\n\n");
printf(" ");
for(j = 1; j <= COLUMNS; j++)
printf("%4d", j);
printf("\n");
printf(" \n");
for(i = 0; i < ROWS; i++)
{
row = i + 1;
printf("%2d", row);
for(j = 1; j <= COLUMNS; j++)
{
column = j;
product[i][j] = row + column;
printf("%4d", product[i][j]);
}
printf("\n");}
```

d. Using a suitable example explain syntax of switch case statement .

[4 marks]

e. Explain about call by reference and call by value

[4 marks]

f. Differentiate between compiler and interpreter

[4 marks]

g . State steps used to execute a C program

[1/2 *4= [2 marks]

QUESTION TWO (20 marks)

- a. Explain any four derived data types used in C language [4 marks]
- b. Write a program to print largest value in the given list using if else statement [6marks]
- c. Draw the flow chart for Question 2(b). [5 marks]
- d. Explain the following terms:
 - (i) malloc() [2marks]
 - (ii) free() [3 marks]
- e. using a suitable program explain GOTO statement [3 marks]

QUESTION THREE (20 marks)

- a. What is array ? State the rules used to declare the array [4 marks]
- b. Write a program to Program to accept two numbers and print sum of two numbers by using functions [4 marks]
- c. Using a suitable program explain the parts of for loop [4 marks]
- d. Write a program to Program to print ODD numbers from 1 to 10 [4 marks]
- e. Using a suitable example explain the main use of enumerated data types [4 marks]

QUESTION FOUR (20 marks)

- a. What is a function? Classify types of functions and explain them. [4 marks]
- b. (i) What is a pointer? [2 marks]
(ii) State four examples of key words [2 marks]
- c. Write a C program to print your name 20 times on the screen [2 marks]
- d. Write a program using if else to display the day depending on the case entered where by the case should be between 1 to 7. [6 marks]
- e. Explain the following terms
 - (i) Union
 - (ii) Structure [4 marks]