MURANG'A UNIVERSITY COLLEGE

(A Constituent College of Jomo Kenyatta University of Agriculture and Technology)

UNIVERSITY EXAMINATIONS 2013/2014

YEAR ONE EXAMINATION FOR DIPLOMA IN INFORMATION TECHNOLOGY

SCI 1106 INTRODUCTION TO PROGRAMMING

COURSE:DIT   **TIME: 2 HOURS**

DAY/TIME: Tuesday 2:00pm-4:00pm   **DATE: 18th August 2015**

Instructions: *answer question one and any other two questions*

Question one

a) Define the following terms as used in programing concepts.   (5mks)

    i.   Programming language

    ii.   variable

    iii.   Pseudo code

    iv.   Algorithm

    v.   loader

b) Differentiate between a compiler and an interpreter.   (2mks)

c) Explain three reasons why flow charts are important when designing a program   (6mks)

d) Write a pseudo code and draw a flow chart that indicate a program that enters two numbers, calculate the sum of the two numbers and displays the sum.   (4 mks)

e) Differentiate between the following conversion characters %d and %f   (2mks)

f) State five rules of naming an identifier as used in programming.   (5mks)

g) Using examples explain two type of comments as used in programming   (4mks)

QUESTION TWO

a) Control structures are categorized in three kinds. State the three categories of control structures. (3mks)

b) With the aid of a flow chart differentiate between a while and an if statement. (6mks)

c) Using nested if……….else statement write a program that requires the user to enter marks of a student and grades students as follows: (10mks)

marks	grade
70-100	A
60-69	B
50-59	C
40-49	D
39 and below	E

d) Write the syntax of for loop. (1mks)

QUESTION THREE

a) State three reason why functions are used in programming language. (3mks)

b) Write a c-program that will output the following on the screen (8mks)

OUTPUT

Here are the initials

EWC

The age and number of dependents are:

32   2

The salary and bonus are:

25000.00   575.25

c) Explain the meaning of the following c standard library headers: (5mks)

i. ctype.h

ii. errno.h

iii. math.h

iv. stdio.h

v. time.h

vi. Differentiate between local and global variable and give an example of each.

QUESTION FOUR

a) Explain eight characteristics/features of programming language (8mks)

b) Write a c-program that will output the following on the screen (8mks)

OUTPUT

Parrots	Rams	Kings
3	5	2
2	5	1
2	6	4

c) With an example, discuss four operators used in c-programming. (4mks)