TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
(DICT 14J)

ECS 2201: OBJECT ORIENTED PROGRAMMING

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2014
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt question **ONE (Compulsory)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One (Compulsory)

a) Explain the term object-oriented programming. **(2 marks)**

b) Explain the object oriented features of C++ programming language. **(12 marks)**

c) Explain the following terms as used in object oriented programming: **(6 marks)**
- **(i)** Class
- **(ii)** Object
- **(iii)** Methods

Question Two

a) Explain the following C++ program segment void employee: assign-values (const int idz const double salary 2)

```
{ id = id 2;
salary = salary 2;
}
void employee:: display_values ( )
{
count << “ln employee id “<< id;
cout << “ln employee salary “<< salary;
}
```
(8 marks)

b) Draw a program flowchart to read 3 integer values, compare them and display the second largest element. **(6 marks)**

c) Implement Q2 (b) above using C++ programming language. **(6 marks)**

Question Three

a) Explain the term function in C++ programming language. **(2 marks)**

b) Explain the advantages of Q3 (a) above. **(8 marks)**

c) Develop a program to find the factorial of a given number using a function i.e.
N! = N’* (N-1)! * …. 1 **(10 marks)**

Question Four

a) Develop a C++ program having a class called STOCK. The class has attribute stock number, stock name and quantity. The program should input the above attributes. **(10 marks)**

b) Explain any FIVE reasons for learning several programming language. **(10 marks)**

Question Five

a) Explain the term structure as used in C++ programming. **(2 marks)**

b) Explain the similarities of structures and Arrays. **(4 marks)**

c) Explain the difference between structures and arrays. **(4 marks)**

d) Develop a C++ program to create a structure called person having the following persons ID, Age, Sex, height and weight. The program should also display the values. **(10 marks)**