



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
(DICT 13S/EV & FT Y2 S1)

ECS 2202: OBJECT ORIENTED PROGRAMMING

END OF SEMESTER EXAMINATION

SERIES: AUGUST 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 **THREE** printed pages

Question One (Compulsory)

a) Explain the following object-oriented features:

- (i) Data abstraction
- (ii) Encapsulation
- (iii) Polymorphism
- (iv) Inheritance
- (v) Dynamic binding
- (vi) Message passing

(12 marks)

b) Explain the following commands:-

- (i) #include<iostream.h>
- (ii) Using Namespace std;
- (iii) Void main (void);
- (iv) Cout () ;
- (v) Cin () ;

(8 marks)

Question Two

a) Explain the following data structures terms:

- (i) Record
- (ii) Arrays
- (iii) Queue
- (iv) List

(8 marks)

b) Write a C++ program to read 10 elements in an array called SCORE, the compare them and display the largest. (12 marks)

Question Three

a) Explain the following C++ program segment:

```
// class declaration
class employer
{int id;
double salary
void assign – values (const int, const double):
Void display – value ( )
};
// class implementation
void employee :: assign _ values (const int id2, const double salary 2)

{id = id2;
salary = salary 2;
}
```

(10 marks)

b) Develop a C++ program having a class called CUSTOMER. The class has attributes CUSTOMER, Number, Name then county. The program should input the above attributes.

(10 marks)

Question Four

- a) With examples, explain the looping control structures in C++ programming language. **(12 marks)**
- b) Write a C++ program to read a student name and the score for a particular subject. The program should output grades as shown:

Above 90	'A'
80 – 89	'B'
70 – 79	'C'
60 – 69	'D'
Below 60	'FAIL'

Use the nested if statement

(8 marks)

Question Five

- a) Explain any SIX structured features of C++ programming language. **(12 marks)**
- b) Develop a program flowchart to read 100 integer values then calculate their sum using a loop. **(8 marks)**