(Please write your Exam Roll No.)

Exam Roll No. .....

END TERM EXAMINATION

FOURTH SEMESTER [B.TECH] MAY-JUNE 2018

Paper Code: ETCS-210 **Subject: Object Oriented Programming**

(Batch 2013 Onwards)

Time: 3 Hours **Maximum Marks :75**

Note: Attempt any five questions including Q. no.1 which is compulsory.

Q1 (a) What is copy constructor? **(2.5)**

(b) Differentiate between a class and a structure **(2.5)**

(c) What is the difference between call by value and call by reference for a function? **(2.5)**

(d) What do you mean by namespace? **(2.5)**

(c) Explain the concept of virtual class. **(2.5)**

(f) Can an empty class be created? If yes, what is the significance of it? **(2.5)**

(g) What is the difference between function overloading & function overriding **(2.5)**

(h) What is code reusability? Explain its different types. **(2.5)**

(i) What do you mean by persistent objects? **(2.5)**

(j) What is exception handling? Explain its use. **(2.5)**

(k) How does a compile time polymorphism differ from run time polymorphism? **(2.5)**

(l) What is a template class and how is it useful? **(2.5)**

Q2 (a) What do mean by an inline function? Write a small program using inline function. **(6)**

(b) Is function overloading a type of polymorphism? Write a program C++ that computes area of a triangle. square and a rectangle using this concept. **(6.5)**

Q3 (a) What is dereferencing operator? Write a small program using pointer to members of a class and explain the use of this operator. **(6)**

(b) What is a friend function? Write any three features of it and explain its functionality using suitable example. Why friend functions should be avoided? **(6.5)**

Q4 (a) What is parameterized constructor? Explain with suitable example. **(6)**

(b) What do you mean by dynamic object initialization and how is it achieved? **(6.5)**

Q5 (a) What is operator overloading? Write a program that adds and subtract two complex number using operators overloading. **(6)**

(b) Is conversion from one class type to another class type possible in C++? If yes, how is it achieved? **(6.5)**

Q6 (a) Explain with suitable example that how a base class member function can be accessed in a derived class if derived class has also a member function with the same name as that of the base class member function. **(8)**

(b) Differentiate between different types of access specifiers in C++. **(4.5)**

P.T.O.