

END TERM EXAMINATION**THIRD SEMESTER [B.TECH] DECEMBER 2017****Paper Code: ETIT-209 Subject: Object Oriented programming Using C++****Time: 3 Hours****Maximum Marks: 75****Note: Attempt any five questions including Q no.1 which is compulsory.**

- Q1 Answer the following:- (10x2.5=25)
- Explain the features of data hiding and encapsulation in object oriented languages.
 - Mention the limitations of dynamic binding.
 - Give the applications of static functions in a class.
 - Give the syntax of copy constructor and explain its working.
 - Compare the features of class and structure.
 - Explain namespace. Give an example in C++.
 - Explain how Unexpected Exceptions are processed in C++.
 - Give the syntax and explain the following: Write a statement that opens file trans.dat for input. Use an ifstream object called in Transaction.
 - Explain iterators in STL.
 - Explain pure virtual functions. Give its syntax.
- Q2
- Compare object oriented programming and structured programming. (5)
 - Write a C++ program to illustrate new and delete operators. (5)
 - Mention the role of indirection operator (*) and address operator (&) in C++. (2.5)
- Q3
- Define function overloading. Write a C++ program to swap two numbers of type integers, float and character using function overloading. (2.5+4=6.5)
 - Explain various types of constructors. Give an example for each. (6)
- Q4
- Explain the sequence of constructors and destructors invoked for multiple inheritances. Give an example for illustration. (4)
 - Write a C++ program to illustrate virtual functions. (6)
 - Justify the false statement and give its solution: A class is made abstract by declaring that class virtual. (2.5)
- Q5
- Write a C++ program to illustrate class template. (5)
 - Compare sequence containers and associative containers in STL. Give an example for each. (5)
 - Mention various types of Iterator Categories. (2.5)
- Q6
- Find the error and show how to correct the following statement: (3.5)
The file "tools.dat" should be opened to add data to the file without discarding the current data. ofstream outTools("tools.dat", ios::out);
 - Justify the statement "Each automatic object constructed in a try block is destructed before an exception is thrown". Give an example. (4)
 - Write a C++ program to create User-defined Exception Class DivisionByZero. In the main user enters dividend and divisor. If the user enters divisor as 0, control is to be passed to user-defined Exception Class DivisionByZero to display the message "Division by zero! Valid." (5)
- Q7
- Compare inheritance and composition. Give their respective applications. (4)
 - Write a C++ program to overload templates. (4)
 - Give an example to illustrate Rethrowing an Exception. (4.5)
- Q8 Write short note on the following:- (12.5)
- Standard template library
 - Generic function
 - Features of object oriented programming
