Roll No…….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B. Tech. (EE) (Semester – 5th/7th)
OBJECT ORIENTED PROGRAMMING
Subject Code: BCSEO1-014
Paper ID: [18OE111520]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) Why header files are used in C++?
b) Define Abstract class.
c) What is the use of 'this' pointer?
d) What is a destructor? How it is defined.
e) Define Parameterized constructors.
f) What is the use of Friend Function?
g) What is the of 'new' and 'delete' operators in C++?
h) Why do we need Virtual functions?
i) What is the difference between text stream and binary stream?
j) Differentiate between Sequential and Random Access files.

Section – B **(5 marks each)**

Q2. Define Class and Object. Write down a C++ program to demonstrate the concept of Class and Object.

Q3. What are Copy Constructors? Write a program in C++ to demonstrate the concept of Copy Constructors.

Q4. Define Polymorphism. Differentiate between Compile time and Run time polymorphism.

Q5. Discuss the various Access specifiers used in C++ with the help of suitable program.

Q6. What is Operator Overloading? Write a program in C++ to perform Unary Operator Overloading.

Section – C **(10 marks each)**

Q7. Define Object Oriented Programming. Discuss the different characteristics of Object Oriented Programming language in detail.

Q8. What is Inheritance? Discuss the different types of Inheritance. Also write a program in C++ to implement Hybrid Inheritance.

Q9. How the file handling is performed in C++? Write a program in C++ to perform reading and writing from a file.