Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

V SEMESTER B.TECH. (BME) DEGREE MAKE-UP EXAMINATIONS DECEMBER 2017
SUBJECT: OBJECT ORIENTED PROGRAMMING (BME 4006)
(REVISED CREDIT SYSTEM)
Wednesday, 27th December 2017: 2PM to 5 PM

TIME: 3 HOURS **MAX. MARKS: 100**

Instructions to Candidates:

1. **Answer all FIVE full questions.**
2. **Draw labeled diagram wherever necessary**

1A. Explain the following OOP terms: class and object 06

1B. With an example of a class "Employee" describe the mechanism of accessing private and public members (data member and member functions) of the class. 08

1C. What is inline function? Explain. How it will be different from a normal function. 06

2A. What are the important characteristics of a constructor? Give an example for multiple constructor. 06

2B. Give the syntax for defining a function called "function1()" as a friend of a class named "student" and explain. Write the merit and demerit of friend declaration. 06

2C. Write a *C++* program with the following details: 08

- Class name "student".
- Members in the private region: Name, Registration number and Place.
- Member function in the public region of the class for accessing the data members.
- Create an object of the class.

3A. What is operator overloading? Write a C++ code for overloading *unary increment operator* "++". 08

3B. What is polymorphism? Explain. 06

3C. Explain opening of a file "ECG.dat" using constructor of the built in class, and perform the file read operation. 06

4A. Explain the term “function overloading”, considering the function “add(…)”. 06

4B. Explain the following function parameter passing concepts: 06
   i. pass by value
   ii. pass by reference

4C. What do you mean by single inheritance? Write a program to define a base class ORGANISATION a derived class “Employee”. Define the derived class using a protected derivation mode. Create object of both the base class and the class. 08

5A. Explain the default positon of the get-pointer in a read only mode operation? Describe re-positioning of the get-pointer using built in function. 05

5B. What is data type conversion? Give an example. 05

5C. Explain the exception handling mechanism for “divide by zero” problem. 06

5D. Explain the syntax for the following: 04
   i. Entry controlled loop statement
   ii. Multi-way branch statement