Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent unit of MAHE, Manipal 576104)

V SEM B.Tech. (BME) DEGREE MAKE-UP EXAMINATIONS DEC/JAN 2018-19
SUBJECT: OBJECT ORIENTED PROGRAMMING (BME 4006)
(REVISED CREDIT SYSTEM)
Friday, 28h December 2018, 2 to 5 PM

TIME: 3 HOURS **MAX. MARKS: 50**

Instructions to Candidates:

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

1A.. Explain the following concept of object oriented approach: 04

i. Data hiding
ii. Polymorphism

1B. Write a C++ code to specify the class "Student" consisting the following members: 03

Class: student
Private Data members: • Name • Age
Public Member functions: • Read_S() • Display_S()

Create objects of the classes M1 and M2. Describe accessing of members of class using main function.

1C. Define constructor and a destructor for the class "student" given in Q.1B. 03

2A. What is overloading of a constructor. Explain this with an example of a class "Patient". 03

2B. Explain following: 04

i. Inline function
ii. Friend function

2C. List the characteristics of a static data member and a static member function. 03

3A. What is operator overloading? Explain overloading of a unary operator "++" with an example. 04

3B. Explain the datatype conversion from a basic type to a user defined class type. 03

3C. What is parameter passing by" *reference*"? Explain this with a function which passes two integers and returns the swapped numbers. 03

4A. What is polymorphism? Compare the compile time and run time polymorphism, and give an example for each. 03

4B. Explain the following modes of opening a file, with the default position of the file pointer: 03

i) reading
ii) writing
iii) appending

4C. Write a C++ program to specify a base class called "PATIENT" with patient name (P_name) and Patient ID(P_ID) as the private data members. Define two member functions one for initializing the object and other for reading the details of class object. Derive a new class " DOCTOR", with a public derivation mode and explain the accessing of base class members using s\derived class object. 04

5A. What are exception. Explain try, throw and catch statements for exception handing. 03

5B. Explain the following graphics functions: 03

i. window ()
ii. intitgraph()
iii. gotoxy()

5C. Explain multiple inheritance with a C++ example. How it is different form a hierarchal type of inheritance. 04