ASSIGNMENT-I

(OBJECT ORIENTED PROGRAMMING IN C++)

Last Date of Submission:2082/2/14

1) **Differentiate between structure and class in C++? What shortcomings of structure is addressed by classes? Explain giving appropriate example.**
2) **Briefly explain the component of class with program structure in C++.**
3) **What are the different way of defining member function? Explain with suitable examples.**
4) **Explain the different access specifier in C++.**
5) **What is data hiding? How to you achieve data hiding in C++?**
6) **What is encapsulation? How can encapsulation have enforced in C++? Explain with suitable example code.**
7) **Differentiate between message passing and function call. Explain message passing with suitable example.**
8) Define constructor with their characteristics? Explain different types of constructors with example program.
9) Can constructor can be overloaded? If yes how that is possible with reference of an example?
10) **Write a program to find area of circle and rectangle using the concept of constructor overloading.**
11) **Differentiate between constructor and destructor. Can we have two destructors in class? Give examples to support your reason.**
12) How DMA is better than SMA? Justify your answer. Explain how new and delete operator used in DMA?

                  OR

  What is dynamic memory allocation? How memory is allocated and de-allocated in C++?

13) What is dynamic constructor? Explain its application program to compute two complex numbers.
14) What is an inline function? Explain its importance with the example program.
15) What do you mean by static data member? Write a program to Illustrate the use of static data member and static member function.
    OR

    What do you mean by static data member? Write a program to Illustrate the use of static data member and static member function.

16) **Does friend function violate data hiding? Explain.**

         OR

Private data or member of a class cannot be accessed outside the class. Explain how is it possible to access them with reference of an example.

17) **Using class write a program that receives inputs principal amount, time and rate. Keeping rate 8% as the default argument, calculate simple interest for three customers.**

Write short notes on:

- Origin of C++
- Basic C++ program structure
- **Console I/O streams**
- **Manipulators**
- **Structure in C and C++**
- Memory allocation and recovery
- State and Behavior ,Methods and responsibilities
- Memory allocation for objects
- Implementation of data abstraction
- Default argument
- **Pointer and reference**
- Reference variable