**

**I Mid Term examination**

**Session: 2018-19**

**B.Tech 2nd Year (III Semester)**

**Subject with code: Object Oriented Programming 3CS4-06**

**SET-A**

Time: 2 hrs. M.M.:30

**Instruction for students:**

1. No provision for supplementary answer book.
2. Question paper contains three sections. Sec A includes 5 Short answers type questions (upto 25 words) Sec B- contains 06 Questions out of which any 04 questions to be attempt by the student (Analytical/Problem solving questions.). Sec C- contains 03 Questions out of which any 02 questions to be attempt by the student (Descriptive /Design questions.)

 **Sec-A** (5\*1=5 Marks)

Q.1 When do we declare a member of a class as static? Justify the need of static members.

Q.2 How do we pass and return structure as a function argument? Write the syntax.

Q.3 What is function overloading?

Q.4 justify two statements, Vector is a class and V1, V2 are objects :

 Vector V2(V1);

 Vector V2=V1;

Q.5 What is default argument? Write syntax.

  **Sec-B** (4\*2.5=10 Marks)

Q.1 What is containership or nesting of classes? How does it differ from inheritance?

Q.2What is abstract class? Explain the role of abstract class while building the class hierarchy.

Q.3 What are the characteristics of OOP? Explain all features.

Q.4 What is function overriding? Implement the concept of the same. Differentiate function overloading and overriding.

Q.5 Why do we make a class as virtual? Implement the concept of virtual base class with example.

Q.6 What is constructor and destructor? Explain the uses and characteristics of both.

 **Sec-C** (2\*7.5=15 Marks)

Q.1 Explain mechanism of accessing a private data member of the class from a nonmember function and justify it with a program in C++ to swap private data members of two classes

Q.2 What is inheritance? What are the different forms of inheritance supported by C++ ? Explain each with suitable example.

Q.3 (a) what is nested and inner class? Explain with example.

(b) Design a class to differentiate the concept of call by value , call by address and call by refrence .

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 **Sec-A** (5\*1=5 Marks)

Q.1 Write the syntax to declare member function definition inside the class and outside the class.

Q.2 what is pure virtual function?

Q.3 What is visibility mode? What are different inheritance visibility modes supported by C++?

Q.4 What is destructor? Why is it used? Write down the syntax.

Q.5 What is function overriding?

  **Sec-B** (4\*2.5=10 Marks)

Q.1 What is inline function? Write a program to implement the same.

Q.2 What is static data member and static member function? Design a class to implement the concept of static members.

Q.3 What is function overloading? Explain with the help of an example.

Q.4 What is abstract class? Explain the role of abstract class while building the class hierarchy.

Q.5 What is containership or nesting of classes? How does it differ from inheritance?

Q.6 What are the features of OOP? Explain each.

 **Sec-C** (2\*7.5=15 Marks)

Q.1 Explain mechanism of accessing a private data member of the class from a non-member function and justify it with a program in C++ to find out maximum among private data members of two classes.

Q.2 What is constructor? How many types of constructors are in C++ ? Describe with the help of a suitable example.

Q3. What is inheritance? What are the different forms of inheritance supported by C++ ? Explain each with suitable example.