

Time: 2:00 Hours

Maximum Marks: 35

Instructions to the candidates:

1. All questions are compulsory.
2. Draw neat labelled diagram wherever necessary
3. Figure to the right indicate full marks

Q.1 Solve any **FIVE** of the following.

[5]

- a) Define Class.
- b) What is an array?
- c) List any two data types in C++.
- d) Define Destructor.
- e) List any 2 operator that can be overloaded in C++.
- f) What is Multiple Inheritance?

Q.2 A] Solve any **TWO** of the following.

[6]

- a) What are the unique advantages of Object-Oriented Programming?
- b) Explain reference variable with an example.
- c) How memory management is performed dynamically?

B] Solve any **TWO** of the following.

[4]

- a) Write the Syntax of Unary Operator Overloading.
- b) Write a C++ program to overload function volume and find volume of cube, cylinder and sphere.
- c) Explain Abstract Class.

Q.3 A] Solve any **TWO** of the following.

[6]

- a) Explain Static data member.
- b) Explain type casting with an example.
- c) Write a program to print area of circle and Rectangle using Inline function

B] Solve any **TWO** of the following. **[4]**

- a) Write a program to add two Distance object (Km and meter data members) using the concept of Operator Overloading.
- b) What are the advantages of Inheritance.
- c) What is Virtual function?

Q.4 Solve any **TWO** of the following. **[10]**

- a) What is the ambiguity that arises in multiple inheritance? How it can be overcome. Explain with example.
- b) Differentiate between early binding and late binding.
- c) What are manipulators? Explain setfill(), setprecision(), setbase() with an example.

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