

**Note :** All the questions are compulsory.

**Q.1.** Attempt any 2 Questions.

[10]

- 1) What are the Features of object oriented programming ?
- 2) What are the differences between procedural and object oriented approach.
- 3) What is mean by Encapsulation ? How it can be implemented in OOP ?

**Q.2.** Attempt any 2 Questions.

[10]

- 1) Explain the difference between 'public' member & 'private' member of a class with proper example.
- 2) Explain the difference between constructor and destructor.
- 3) Write a C++ program using class in which user will enter name of the item and cost of item and function will calculate the bill for atleast three items.

**Q.3.** Attempt any 2 Questions.

[10]

- 1) What is operator overloading ? Why it is necessary to overload an operator ?
- 2) Write a C++ program which shows the use of overloading operators using Friend Function.
- 3) What are the rules for overloading operator ?

**Q.4.** Attempt any 2 Questions.

[10]

- 1) What is the difference between 'protected' and 'private' members.
- 2) Write a C++ program which will write some content into the file and then read that content from the file.
- 3) What are the applications of 'this pointer' ? What does 'this pointer' point to ?

**Q.5.** Attempt any 2 Questions.

[10]

- 1) Explain copy constructor with proper programming example.
- 2) How we can implement 'assignment operator' in C++ ? Explain with proper example.
- 3) Write a C++ program which shows creating string object in a program.

**Q.6.** Attempt any 2 Questions.

[10]

- 1) What are the Function Templates ? Explain.
- 2) Write a C++ program which shows the use of Function template in program.
- 3) Write a note on standard template library.

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