24164

B.Tech. 4th Semester CSE (F-Scheme) Examination, May–2018

OBJECT ORIENTED PROGRAMMING USING C++

Paper–IT–202–F

Time allowed : 3 hours]   [Maximum marks : 100

Note : *Attempt five questions in total selecting one question from each unit. Question No. 1 is compulsory. All questions carry equal marks.*

1.   Write short note on the following :

   (a)   What is operator overloading ?

   (b)   Enlist the operators that cannot be overloaded.

   (c)   How to initialize a pointer ?

   (d)   What is a pure virtual function ?

   (e)   Why do we need virtual function ?

   (f)   Why are the words such as cin and cout not supported as keywords ?

   (g)   Explain with example, how manipulators are used to output streams.

   (h)   What is abstract class ?

Unit–I

2.   (a)   What is an in-line function ? State its advantages and disadvantages.

   (b)   Create a Class "Book" whose private data members are "book Name", "book Price" and public member functions are "getBookDetails()" and "displayBookDetails( )". Create an object array of type Book and write a friend function "alignBook ()" to align the array of books in alphabetical order.

3.   Create a class named complex with two members real and imaginary of float data type. Create three Objects of class complex of two objects and store the result in third one. Use operator overloading to add two objects.

Unit–II

4.   (a)   What is Constructor ? What are its types ? How is the constructor different from member function ?

   (b)   What is a destructor and when does a destructor member function invoked in a class ?

5. What are static data members? Write its applications? Also write a program which illustrate static data member.

Unit–III

6. (a) What is Inheritance? Explain different type of Inheritance. Explain the Multiple Inheritance with a suitable example.

   (b) What are the ambiguities that arises when multiple Inheritance? How to overcome this? Explain with a suitable example. http://haryanapapers.com

7. (a) Explain about virtual functions with an example.

   (b) How to inherit virtual attributes? Explain in detail with C++ code.

Unit–IV

8. (a) Write statements using seekg() to achieve the following:

   (i) To move the pointer by 15 positions backward from current position.

   (ii) To go to the beginning after an operation is over.

   (iii) To go backward by 20 bytesform the end.

   (iv) To go to byte number 50 in the file.

(b) Write a program to write text in the file. Read the text from the file from end of file. Display the contents of file in reverse order.

9. (a) Distinguish between the term class template and template class.

   (b) Distinguish between overloaded functions and function templates.