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Question Paper Code : X 60374

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020
Third Semester
Computer Science and Engineering
CS 2203/CS 35/CS 1202/10144 CS 304/080230004 – OBJECT ORIENTED PROGRAMMING
(Common to Information Technology)
(Regulations 2008/2010)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions

PART – A **(10×2=20 Marks)**

1. State any four advantages of object oriented programming.
2. What is data encapsulation ?
3. What is a constructor ?
4. What are new and delete operators ?
5. Write a function template that swaps the values of the two variables with which it is called ?
6. What functions does terminate and unexpected handlers call ?
7. What is inheritance ? What are the types of inheritance ?
8. What is meant by abstract class ?
9. Define name spaces.
10. What is random access ?

PART – B **(5×16=80 Marks)**

11. a) Describe the principles of object-oriented programming with examples.

(OR)

b) i) Is it possible for a nonmember function to access the private members of a class ? Explain with proper example for your validation. **(8)**

ii) Write a C++ program to overload the function add() for different parameters of different types. **(8)**

12. a) Describe the constructor with dynamic allocation.

(OR)

b) Explain the overloading the assignment operator with examples.

13. a) What is a function template ? Write a template function to sort arrays of float and int using bubble sort. **(16)**

(OR)

b) Discuss in detail about exception handling constructs and write a program to illustrate divide by zero exception. **(16)**

14. a) What are virtual functions ? Explain with an example how late binding is achieved using virtual function. **(16)**

(OR)

b) Explain the various runtime casting methods in detail. **(16)**

15. a) What are manipulators ? Explain in detail various manipulators used for I/O operations with example. **(16)**

(OR)

b) i) Write a program to read and count the characters in a string. **(8)**

ii) Explain how sequence iterators work. **(8)**

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