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**Question Paper Code : 45888**

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Fourth Semester

Software Engineering

XCS 246/ 10677 SW 304 — OBJECT ORIENTED PROGRAMMING AND C++

(Common to 5 year M.Sc. Information Technology and M.Sc. Computer Technology)

(Regulation 2003 / 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write some features of object oriented programming.
2. Write the structure of C++ programs briefly.
3. What is a class? How does it accomplish data hiding?
4. How does an inline function different from a preprocessor macro?
5. What is a copy constructor? What is its purpose?
6. How are the overloaded operator functions useful in object oriented design?
7. Define abstract class.
8. Define virtual function.
9. What are input and output streams?
10. Write down the advantages of saving data in binary form.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the basic concepts of object oriented programming in detail. (8)
- (ii) Write in detail about various control structures in c++. (8)

Or

- (b) (i) Explain different data types available in C++ with suitable examples. (8)
- (ii) Describe different operators available in C++ with suitable example. (8)

12. (a) (i) Explain about function overloading with suitable example. (8)  
(ii) What is a friend function? Explain with an example. Write the merits and demerits of friend function. (8)

Or

- (b) (i) Write a C++ program to create an object within a function and returned to another function. (8)  
(ii) Explain static data member and static member function with an example. (8)
13. (a) (i) With suitable example discuss in detail about constructors and destructors. (8)  
(ii) Explain how to use multiple constructors in a class with an example. (8)

Or

- (b) (i) Explain the mechanism of binary operator overloading with suitable example. (8)  
(ii) Explain in detail about type conversion with an example. (8)
14. (a) What are the different forms of inheritance? Explain with an example for each.

Or

- (b) How do you achieve polymorphism? Explain with an example.
15. (a) Explain how the output values are formatted using manipulators and ios function with suitable example.

Or

- (b) Discuss in detail about opening and closing a file by creating a file with constructor function.
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