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**Question Paper Code : 65076**

5 Year M.Sc. DEGREE EXAMINATION, MAY/JUNE 2013.

Third/Fourth Semester

Computer Technology

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

(Common to 5 Year M.Sc. Information Technology and 5 Year M.Sc. Software Engineering)

(Regulation 2003/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Differentiate procedure oriented and object oriented programming.
2. Why c in and c out are not keywords?
3. Write syntax, how to define member function outside of class?
4. What is forward declaration?
5. What is a copy constructor?
6. Why class containing pure virtual function is an abstract class?
7. List the operators that can not be overloaded.
8. How to call array of object using pointers?
9. What is runtime polymorphism?
10. Write the syntax for inserter function.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the following:
- (i) Compare the conventional programming and OOPS. (8)
  - (ii) Key concepts of object oriented programming. (8)

Or

- (b) Write a C++ program that
- (i) Calculate and prints the sum of the integers from 1 to 10 (8)
  - (ii) To calculate X raised to the power. (8)
12. (a) (i) Describe in detail about the classes and objects with suitable examples. (8)
- (ii) Write a C++ program to get and display the student particulars using objects. (8)

Or

- (b) (i) Explain the control structures of C++ with suitable examples. (8)
- (ii) Write a C++ program to sort the five numbers using friend function. (8)
13. (a) Write a program to overload the stream insertion and stream extraction operators to handle data of a user-defined telephone number class called Phone Number. (16)

Or

- (b) (i) Write a program to explain the concept of function overloading. (8)
- (ii) Explain different type conversion with suitable example. (8)
14. (a) Write an example program for virtual functions and pure virtual functions with suitable algorithm. (16)

Or

- (b) Write a program to implement the concept of multiple inheritance and explain it with an example. Assume suitable member function to accept and display data. (16)

15. (a) Write a C++ program that maintains a bank's account information the program adds new accounts, deletes accounts in a text file. Assume that a file credit .dat has been created and the initial data has been inserted.(16)

Or

- (b) Explain in detail about the constructor and destructor functions used in the console I/O with suitable examples. (16)
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