

**D 53018**

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Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2014**

(CUCSS)

**CSC 1C 04—OBJECT ORIENTED CONCEPTS AND C++**

Time : Three Hours

Maximum : 36 Weightage

**Part A**

*Answer all questions.  
Each question carries 1 weightage.*

1. Distinguish between object and class.
2. What is class Hierarchy ?
3. Explain the use of **inline** functions.
4. What is function overloading ?
5. Explain the use of 'this' pointer.
6. What is a virtual base class ?
7. Explain the use of templates in C++.
8. Explain static data members. Discuss the characteristics of static **member** functions.
9. Give the importance of **UML** in object oriented software **design**.
10. List the steps in the design of interface objects.
11. Explain state space behaviour of a subclass.
12. What are Component diagrams ?

(12 x 1= 12 weightage)

**Part B**

*Answer any **six** questions.  
Each question carries 2 weightage.*

13. Explain encapsulation with suitable example.
14. Explain copy constructor with an example.
15. Write a C++ program to add two matrices using operator **overloading**.
16. Explain the different visibility modes of membership functions in a class using an example.
17. Write a note on Object Interaction and Collaboration.
18. Explain Encapsulation structure.

Turn over

19. Discuss the different approaches for identifying classes.
20. Explain operation cohesion in a class interface.
21. Write a note on container classes.

(6 x 2. = 12 weightage)

### Part C

*Answer any **three** questions.  
Each question carries 4 weightage.*

22. Explain the derived constructors. How will you initialize a base class object using the derived class constructor ?
23. Distinguish between function template and overloaded functions using examples.
24. Explain state and activity diagrams with example.
25. Discuss the basic principles of object oriented design.
26. Explain the Exception handling mechanism in C++.
27. Explain the characteristics of UML in object oriented software design.

(3 x 4 = 12 weightage)