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Name

Reg. No· · · · · · · · · · · · · ·

FIRST SEMESTER M.Sc. DEGREE EXAMINATION FEBRUARY 2013

(CUCSS)

Computer Science

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

(2010 Admissions)

Maximum : 36 Weightage

Time : Three Hours

Part A

*Answer **all** questions.*

Each question carries 1 weightage.

1. What is the difference between generalization **and specialization?**

2. What do you mean by Encapsulation?

3. Explain message binding.

4. What is a friend class?

5. Explain the purpose of constructors and destructors.

6. Explain about Standard Template Library.

7. Explain how try { }, catch( ) { } used in handling run-time errors.

8. Explain any *two* classes available in C++ for file operation.

9. What is collaboration diagram?

10. What is CRC cards?

11. What do you mean by Class Cohesion?

12. Explain Encumbrance.

(12 x 1 = 12 weightage)

Part B

Answer any six questions.

*Each question carries **2** weightage.*

13. Explain polymorphism with suitable example.

14. Explain different dynamic memory management functions in C++.

Turn over

15. Discuss the difference between unary and binary operator overloading mechanisms.

16. Explain the application of container classes.

17. Explain state and activity diagrams.

18. What is Use-Case Diagram? Explain.

19. Explain state space of a subclass.

20. What is the use of object interaction diagrams?

21. Write a note on string I/0.

(6 x 2 = 12 weightage)

Part C

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

22. Explain the characteristics of Object Oriented Programming

23. What are the different forms of inheritance? Explain each *one*.

24. Write a C++ program to throw exception for an employee class with suitable data members on any of the following situations :

   (i)   An employee name is a number ; a name exception must be thrown.

   (ii)   If an employee age is greater than 50, an age exception must be thrown.

25. Explain software testing and maintenance in detail.

26. Explain the significance of UML in object oriented software design.

27. Write a note on:

   (a)   Asynchronous messages.

   (b)   Interaction Sequence Diagram.

(3 x 4 = 12 weightage)