G 559

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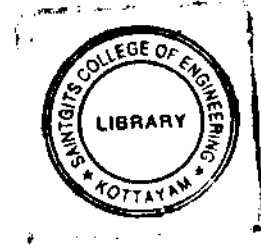# B.TECH. DEGREE EXAMINATION, MAY 2014

Fourth Semester

Branch : Computer Science and Engineering

OBJECT ORIENTED PROGRAMMING (R)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 4 marks.

1. What is a class ? How does it accomplish data hiding ?

2. Explain default constructor, with the help of example.

3. Explain hybrid inheritance with an example.

4. What is a friend function ? What are its advantages and disadvantages ?

5. Discuss the significance of function overloading.

6. Explain the concept and application of an abstract class.

7. What are virtual destructors ? What are their uses in an OOP ?

8. Discuss the applications of namespaces.

9. What is the scope of dynamic objects in OOP ?

10. Explain storing handling in Java.

(10 × 4 = 40 marks)

Part B

Answer all questions.
Each full question carries 12 marks.

11. Explain the use of constructors in a class, with a program example.

Or

12. A circular ring is completely designated by its outer and inner radii. Write a C++ program to read the outer radius and inner radius and find the area of the ring by subtracting the area of the inner circle from that of the outer circle. Use a class named "circle" to store data about the circle.

Turn over

13. Define a class to store the co-ordinates of a point with member functions to read the co-ordinates and display the co-ordinates.

Or

14. Define a class to find an equation to a line with the given slope and passing through a point.

15. Design a class "MATRIX" to store the elements of a matrix with operator functions to add and multiply two matrices.

Or

16. A class named INTEGER 3 will store three integer numbers. Define the class with constructors to initialise the objects of the class. Overload operator '+' to add a constant to all its data members.

17. Write a C++ program using overloaded function reciprocal ( ) to find the reciprocal of a number for any type of arguments. Rewrite the same program using a template function to achieve the same objective.

Or

18. Write a template function to take, as arguments, either two integer numbers, real numbers or characters and return 1 if they are equal and 0 otherwise. How will the function be called in function main ( ) ?

19. What are the common restrictions laid while using inline functions ? Describe automatic inlining with suitable examples.

Or

20. Explain the need of multithreads in JAVA. Explain the syntax of exception handling with the keywords used and also the exception types.

(5 × 12 = 60 marks)