

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 07

**B.Sc.(IT) (Sem.-3)**  
**PROGRAMMING IN C++**  
Subject Code : BS-205  
Paper ID : [B0411]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.

**SECTION-A**

**Q1. Write a short note on the following :**

1. Virtual destructor
2. Overloading
3. Abstract class
4. Default arguments
5. New and delete
6. Register variables
7. Inline function
8. Macro
9. Call by Reference
10. Early binding

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**SECTION-B**

- Q2 a. What are the advantages of using object oriented technologies over structured programming? Discuss in detail.
- b. What are various kinds of loop statements supported by C++? Explain the functioning of each one with suitable example.
- Q3 a. Write a program in C++ to generate Fibonacci series up to number n using recursion. (Series 1, 1, 2, 3, 5, 8,....n).
- b. What is the role of friend function and friend class? Write suitable C++ code in support of arguments.
- Q4. Using multidimensional array develop a class Matrix for integers in C++. Class must have all possible constructor and destructor functions to create matrix object. Also show usage of Matrix objects in main function.
- Q5. What do you understand by single inheritance, multiple inheritances and multilevel inheritance? Assume classes and Show these diagrammatically and write C++ code in support of your understanding.
- Q6 a. Explain the role of constructor and destructor functions in a C++ class by consider a suitable example and also tell a class can have maximum of how many constructor and destructor functions.
- b. What do you understand by the concept call by value and call by reference? Also differentiate between them with example in C++-
- Q7. Create a class Employee having various properties, Empno., Name, Department, Designation and Salary. And write a program using feature of C++ to read the information of all the Employees of a Computer Department of XYZ company from keyboard and store that information of in a data file.
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