

Roll No.

(01/23-II)

5235

B.A./B. Sc. EXAMINATION

(Fifth Semester)

COMPUTER SCIENCE

First Paper

Programming in C++

Time : Three Hours Maximum Marks : $\left\{ \begin{array}{l} \text{B.Sc. : 30} \\ \text{B.A. : 20} \end{array} \right.$

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks. For B. Sc. each question carries six marks and for BA students each question carries four marks.

1. (a) Explain the concept of Data Hiding.
- (b) Define importance of Encapsulation.
- (c) Explain Namespaces.

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- (d) Write about abstract classes.
- (e) Discuss few properties of friend function.
- (f) Explain ifstream and ofstream.

Unit I

2. (a) Differentiate between C and C++.
- (b) Explain the terms Data members and Member functions with the help of an example.

3. Explain the following :

- (a) Inline functions
- (b) Static Data Members and Member Functions.

Unit II

4. Explain the concept of Dynamic memory allocation. What is its importance ? Explain in detail with the help of an example.

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5. Explain the role of constructor and destructor functions in a C++ class by considering a suitable example and also tell a class can have maximum of how many constructor and destructor functions.

Unit III

6. Explain the role of Constructors and Destructors in Inheritance with suitable program. <https://www.cdluonline.com>
7. With a suitable program explain the concept of operator overloading. Explain in detail various types of operator overloading.

Unit IV

8. Explain the concept of Exception Handling. Write a program to illustrate the role of error handling in C+.
9. Write notes on the following :
- (i) Try Throw Catch
 - (ii) Inheritance and Templates.