

Roll No. ....

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**BCA / M-19**  
**ADVANCED PROGRAMMING USING C++**  
**Paper-BCA-242**

*Time allowed : 3 hours]*

*[Maximum marks : 80*

*Note : Attempt five questions in all, selecting one question from each unit. Question. No. 1 is compulsory. All questions carry equal marks.*

1. (a) What is the difference between overloading and overriding?
- (b) What is a virtual destructor ?
- (c) What is the difference between text and binary files ?
- (d) Discuss the conditions that the casting operator should satisfy to convert from class type to built-in type.

**Unit-I**

2. What is run-time polymorphism ? What is the need of it ? Explain using suitable examples.
3. What is an abstract class ? What do you understand by pure virtual function ? Discuss the syntax and semantics.

**Unit-II**

4. Draw a table showing the rules of different types of derivation in inheritance in C++.
5. What is type conversion ? Write the code to convert the int array into a matrix object type in C++.

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### Unit-III

6. What is multiple inheritance ? What is the use of it ? Illustrate using suitable example.
7. What is a function template ? What is the advantage of it ? Discuss using suitable example.

### Unit-IV

8. What is an exception ? How is an exception handled in C++ ? Write a program to demonstrate the concept of rethrowing an exception.
9. (a) Write a brief note on the stream and corresponding methods for file handling in C++.
- (b) A class template is known as parameterized class. Comment.