Total Pages : 8

BCA-301

B.C.A. III Year Examination, 2016

Paper–I

(Object Oriented Programming Using C++)

Time : Three Hours
Maximum Marks : 100

PART - A (खण्ड-अ) [Marks : 20

Answer all questions (50 words each).
All questions carry equal marks.
सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर पचास शब्दों से अधिक न हो।
सभी प्रश्नों के अंक समान हैं।

PART - B (खण्ड-ब) [Marks : 50

Answer *five* questions (250 words each).
Selecting *one* from each unit. All questions carry equal marks.
प्रत्येक इकाई से **एक-एक** प्रश्न चुनते हुए, कुल **पाँच** प्रश्न कीजिए।
प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।
सभी प्रश्नों के अंक समान हैं।

PART - C (खण्ड-स) [Marks : 30

Answer any *two* questions (300 words each).
All questions carry equal marks.
कोई **दो** प्रश्न कीजिए। प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो।
सभी प्रश्नों के अंक समान हैं।

PART-A

UNIT - I

1. (a) What is data encapsulation ?

(b) What is scope resolution operator ? Write its uses ?

UNIT - II

(c) Give examples for static and dynamic objects.

(d) Why is it necessary to overload an operator ?

UNIT - III

(e) Define abstract types.

(f) Define virtual destructors,

UNIT - IV

(g) Define class template.

(h) Define exception objects.

UNIT - V

(i) What is STL ? List out its benefits.

(j) Differentiate sequential and random file processing.

PART-B

UNIT - I

2. Discuss how dynamic allocation is achieved in C++ programming.

3. Write a C++ program to sort the given number in ascending order.

UNIT - II

4. Explain the copy constructor with illustrative example.

5. What is function overloading ? Write the rules for overloading operators.

UNIT - III

6. Explain any two types of inheritance with suitable examples.

7. Define the following terms related to OO paradigm :

   (a) Polymorphism

   (b) Virtual function

UNIT - IV

8. Design and implement a template version of function to search for determining whether an array contains a particular value.

9. Illustrate exception handling with suitable example.

UNIT - V

10. Write short note on stream.

11. Create a new file to store and retrieve the students marks details using file I/O classes.

PART-C

UNIT - I

12. (a) Compare structure and OO programming paradigm.

(b) What are the various elements of object oriented programming.

UNIT - II

13. Define a class to represent a book in a library include the following members. Data members :

(i) To assign initial values.

(ii) To issue a book after checking for its availability.

(iii) To return a book.

(iv) To display book information.

UNIT - III

14. (a) What are the various types of access specifier of base class ? Explain their usage with an example for each.

(b) When are base class and derived class constructors called ? Explain.

UNIT - IV

15. (a) Write a program using a try block to detect and throw an exception.

(b) Distinguish between overloaded functions and functions templates.

UNIT - V

16. What is containers ? Explain applications of container classes.