



UA-3734

Second Year B. C. A. (Sem. III) Examination

March/April – 2012

304 : Object Oriented Programming

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशविले निशानीवाणी विगतो उत्तरवडी पर अवश्य लभवी.  
Fillup strictly the details of signs on your answer book.

Name of the Examination :  
Second Year B. C. A. (Sem. 3)

Name of the Subject :  
304 : Object Oriented Programming

Subject Code No. : 3 7 3 4 Section No. (1, 2,.....) : NIL

Seat No. :  
[ ] [ ] [ ] [ ] [ ] [ ]

Student's Signature

- (2) Figure on the **right** indicate marks.  
(3) Take assumption whenever **necessary**.

1 Answer any **twelve** :

12

- What is the application of scope resolution operator ( : : ) in C++ ?
- What does *this* pointer point ?
- List out the operators that can not be overloaded.
- Explain limitation of inline functions.
- What do you mean by array of objects ? How are they created ?
- What is destructor ? How can you invoke a destructor ?
- How many arguments are required in the definition of an overloaded binary operator using friend function ?
- What do you mean by pure virtual function ?
- Write down the syntax of derived constructor.
- What is manipulator ?
- State the difference between *seekg( )* and *seekp( )*.
- Explain the syntax of *read( )* and *write( )*.
- What is the function of *showpoint* flag ?

- 2 Answer the following :
- (a) Explain memory management operators. Point out reasons why using new is better idea using malloc( ). 6
- (b) When we make a function *inline* ? Why ? 5
- (c) What is visibility modifier ? List out them and differentiate with proper example. 4

OR

- 2 (a) What is Object Oriented Programming ? How is it different from Procedure Oriented Programming ? 6
- (b) What do you mean by overloading of an operator ? Why is it necessary to overload an operator ? 5
- (c) How is polymorphism achieved at run time and compile time ? 4

- 3 Answer any **three** : 15

- (a) Define a class to represent a bank account for handling for 10 customers which consist of *Name of depositor, account number, type of account, Balance amount*. Write a program to perform the following operations :
- (i) To assign initial values
- (ii) To deposit an amount
- (iii) To withdraw amount (after checking minimum balance)
- (b) In which circumstances functions can be made a friend ? Write the advantages of friend function.
- (c) What is Inheritance ? Explain all type of inheritance.
- (d) Explain Static Data and Static member functions with example.
- 4 (a) Explain difference between call by value and call by reference with example. 5
- (b) What is constructor ? Explain parameterized constructor and copy constructor with example. 5
- (c) Write a program that consists of two classes **time12** and **time24**. The first one maintenance time on 12 hour basis, whereas the other one maintains it on 24 hours basis. Provide conversion functions to carry out the conversion from object of one type to another. 4

OR

- 4 (a) Explain different types of type conversion. 5
- (b) Create two classes DM and DB which stores the value of the distance. DM stores distance in meters and cm and DB stores distance in feet and inches. Write a program that can add one object of DM with another object of DB. Use a friend function to carry out the addition operation. Display the result in meters and cm. 5
- (c) Write down the syntax for user defined manipulators. Design a single manipulator to provide the following output specifications for printing float values : 4
- 10 column width
  - 2 digit precision
  - Left justified
  - Filling unused spaces with '\*'
  - Trailing Zeros shown.
- 5 (a) Create a binary file information in an organization i.e. empcode, name of employee, basic salary. Write a program to copy the contents of this file to another file where the basic salary is greater than 5000. 5
- (b) What are the different methods to open a file in your program ? List out various file opening modes. 5
- (c) Explain the following functions with example : 4
- (1) width()
  - (2) fill( )
  - (3) precision( )
  - (4) open( ).
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