



ME-3734

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

October / November – 2013

305 : Object Oriented Programming

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दृशवित्त निशांनीवाणी विगतो उत्तरवही पर अवश्य लखवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="Second Year B. C. A. (Sem. 3)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="305 : Object Oriented Programming"/>	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="7"/> <input type="text" value="3"/> <input type="text" value="4"/> Section No. (1, 2,.....) : <input type="text" value="NIL"/>	<input type="text"/>
	Student's Signature

- (2) All questions are compulsory.  
(3) Figures to the right indicate full marks.

1 Answer any seven : 14

- (1) Explain each function for manipulation of file pointers
- (2) Define the read( ) and write( ) function for reading binary file.
- (3) Which methods cannot call through an object?
- (4) How getline( ) works?
- (5) What is dynamic constructor?
- (6) What are the rules for Unary Operator Overloading using friend?
- (7) When and how inline function can be used?
- (8) How to print the trailing zeros using ios function and manipulators.

2 Do as directed : 14

- (a) Explain pure virtual function? When it is necessary? 7  
Explain rules of pure virtual function
- (b) Explain the execution of base class constructors for 7  
multilevel and multiple Inheritance

OR

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1

[Contd...

- 2 (a) In which circumstances function can be made friend ? 7  
Write the advantage of friend function.
- (b) What do you mean by overloading of an operator? 7  
How many arguments are needed for overloading unary operator and why ?

3 Answer the following : 14

- (a) What are the different methods to open a file? 5  
Explain with proper example.
- (b) Explain the difference between call by value and call by reference. 5
- (c) Explain exception handling. 4

OR

- 3 (a) When we can we use virtual base class and how it is different from virtual function. 5
- (b) Explain static data and static member function with proper example. 5
- (c) How do the properties of following class differ? 4  
class D1 : protected B, private C {  
class D2 : private B, public C {

4 Do as directed : (any two) 14

- (a) Explain memory management operators. Point out reason why using new is better than using malloc( )
- (b) Explain constructor? What is the significance of dynamic constructor?
- (c) Design the single manipulators to provide the following output specification for printing the float values
- (a) 11 column width
- (b) 2 digit precision
- (c) Left justified
- (d) Filling Unused space with '+'
- (e) Display the trailing zeros & also + sign

5 Answer the following : (any two)

14

- (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.
- (1) To assign initial values
  - (2) Overload '+' operator to deposit an amount
  - (3) Overload '-' operator to withdraw amount (after checking minimum balance)
  - (4) To display all customer having balance  $\geq 25,000$
- (b) Consider a class BCA which contain information about the entire student (rollno, name, semester, total mark and percentage). Transfer the records from this file to another file called SYBCA for the students having the semester field value 3 and display all the records in the file SYBCA
- (c) Write a program that consists of two classes time12 and time24. The first one maintenance time (hour and minute) 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.