



N-1444

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

October/November – 2011

Paper-304 : Object Oriented Programming

Time : 3 Hours]

[Total Marks : 70

Instructions

(1)

नीचे दशांशव निम्नलिखित विषयों उत्तरपत्री पर अवश्य लिखनी.
Fillup strictly the details of signs on your answer book.

Seat No. :

Name of the Examination :

Name of the Subject :

Subject Code No. : Section No. (1, 2,....):

Student's Signature

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

1 Answer in short : 12

- (a) What do you mean by array of objects ? How are they created ?
- (b) List out the operators that cannot be overloaded using friend function.
- (c) Explain containership.
- (d) Differentiate between class and structure.
- (e) Differentiate between tellp() and tellg().
- (f) What is an abstract class ?
- (g) What is the function of showpoint flag ?
- (h) When do we make a class virtual ?
- (i) What do you mean by method overriding ?
- (j) Both ios :: ate and ios::app place the file pointer at the end of the file. Then, what is the difference between them ?

- (k) Distinguish between the following two statement
delete a;
delete [] a;
- (l) Why it is necessary to overload an operator ?

2 Answer the following :

- (a) List out the features of OOPS. Explain polymorphism and encapsulation. 6
- (b) What do you mean by objects as function arguments ? What is the advantage of reference to object ? 5
- (c) Write a program to convert time duration in terms of minutes to TIME class where TIME class contains hours and minutes. 4

OR

- (a) What do you mean by default arguments ? When it is useful ? 6
- (b) Write a note on constructor ? 5
- (c) Write a program that creates date class containing data member's day, month, year. Create another class dmy containing string data member, which store the day+month+year. Apply conversion routine and convert one type of object to another type of object. 4

3 Answer any three : 15

- (a) Write a class string and overload + for concatenate the string and == for compare the string.
- (b) Explain memory management operators. Point out reasons why using new is better idea using malloc () ?
- (c) What is operator overloading ? Write rules for operator overloading. Give example.
- (d) Explain pointer to object and pointer to member of a class with example.

- 4 (a) What is conversion function ? How it is created ? 6
Explain with example.
- (b) How can we achieve reusability of class in OOPs ? 6
Explain all its type.
- (c) How do the properties of following two derived class 4
differ ?
- (i) Class D1 : Public B, Protected C {.....}
- (ii) Class D2 : Private B, Protected C {.....}

OR

- (a) Explain the following function : 6
- (i) eof ()
- (ii) seekp ()
- (iii) bof ()
- (iv) get ()
- (v) seekg ()
- (vi) getline ()
- (b) What is pure virtual function ? Why do we need pure 6
virtual function ? Write down the rules for virtual
function.
- (c) Write down the syntax for user defined manipulators. 4
Design a manipulator to print float values in following
format :
- 15 column width
 - 4 digit precision
 - Right justified
 - Filling unused spaces with '#'
 - Trailing Zeros shown

- 5 (a) Create a class Employee having variables emp_id, e_name, Basic_salary, & allowance. Calculate pf and net salary for each employee (pf=12% of basic salary, total salary = basic salary + allowance - pf). Store the records into a file employee. dat and perform the following operations. Use read () and write () binary function for operations in file. 6
- (i) Add new records
 - (ii) Display particular record
 - (iii) Modify Particular record
 - (iv) Delete particular record and
 - (v) Display all record
- (b) Explain read () and write () binary function in detail. 4
- (c) How can you achieve formatted output in C++ ? 2