

0621

Second Year B. C. A. (Sem. III) (ATKT) Examination
March / April - 2005
Object Oriented Programming: (304)

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1) Seat No. :

ನೀ ಕೆಳಕಂಡ ವಿವರಗಳನ್ನು ಉತ್ತರಿಸಿ ಕೊಡಿ. Mention below given details in Answer Book

Name of the Examination :

Name of the Subject :

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

Student's Signature _____

Q-1 Answer in short

[10]

1. What is stream? Explain Input/Output stream with example.
2. What do you mean by dynamic initialization of a variable?
3. What are objects? How are they created?
4. What are Destructors? How is it written in C++?
5. What is an abstract class?
6. What is static binding?
7. What do you mean by array of objects? How are they created?
8. Can a reference be made to refer to a different referent?
9. What is public modifier in class?
10. State difference between ios::app mode and ios::ate mode in data file.

Q-2

[15]

- A. What is OOP? State advantages of OOP compared to POP. [5]
- B. What do you mean by Objects as function arguments? Explain pass by-value and pass by-reference with example. [4]
- C. Write a program to maintain a telephone directory. Use Add() and Show() methods to add new entries and display the telephone numbers of a person when the name of person is given (Do not use data files) [6]

OR

Q-2

[15]

- A. What are manipulators? Why manipulators are needed? List out all manipulators. Explain any two. [5]
- B. Write down syntax for inline function with example. Give the advantages of inline function. [4]
- C. Write a program that consists of two classes time12 and time24. The first maintains time on 12-hour basis, whereas the other one maintains time on 24-hour basis. Provide conversion functions to carry out conversion from object of one type to another. [6]

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1

[Contd..

- Q-3
- 1 u6
1 u4
- A. What is constructor? When copy constructor is called? What is advantage of using copy constructor? [15]
 - B. What are different forms of inheritance? Describe the Hybrid Inheritance. Write down syntax of hybrid inheritance with example. [5]
 - C. Write a program to find addition of 1 to 200 using + operator overloading. [5]

OR

- Q-3
- 122
- A. What is overload casting operator function? How is it created? Explain with example. [15]
 - B. What is visibility modifier? List out them and differentiate with proper example. [5]
 - C. Create a class with at least two data members and overload >> and << operators. [5]

- Q-4
- 275
180
- A. What is pure virtual function? Why do we need pure virtual function? Write down the rules for virtual functions [15]

OR

- 265
132
- A. Explain pointer to object and pointer to members of a class with example. [5]
 - B. Give output of following (Any two) [4]

```
1) #include <iostream.h>
class date
{
    int day, month, year;
    date()
    { day = 13; month = 12 ; year= 2005}
}

void main()
{ date today;
}

2) #include <iostream.h>
#include <conio.h>
void main( )
{
    int k = 125;
    cout << sizeof (k) << "\n" << sizeof('k');
}
```

```
3) #include <iostream.h>
#include <conio.h>
#include <iomanip.h>
void main( )
{
    float f=786.5
    cout << setw(10);
    cout << setf (ios::left) ;
    cout << setprecision(3);
    cout << fill('+');
    cout << f;
    getch( );
}
```

C. Create a class called "vehicle" which contains data members Registration Number and Fuel type. Make get data() function to input data value. Create a class "two wheeler" from "vehicle" which contains data members distance and mileage. Make get data() function to input data. Use overriding techniques for get data() function and display the information with fuel used. [6]

Q-5

A. Attempt any two

[15]
[8]

- 1) What is file? What is difference between opening a file with constructor function and opening a file with open() function.
- 2) Explain the following function :
i) tellg() ii) write() iii) getline() iv) put()
- 3) If Class C is derived from two base class A and B then write these Classes each containing a zero-argument constructor, ensure that while Build as object of type C firstly then the constructor of A should get called followed by that of B. Also provide a destructor in each class. In what order would these destructor and constructor get called.

B. Create a class Fixed Deposit containing data members Name of depositor, fd-number, fd-amount, fd-date, fd-period. Take appropriate member function and get data into class, then after write into data file called "fd.dat" until user's choice. Display the information of all depositors from the file along with maturity data of fd . Use read() and write() binary function for file.

[7]