17432

21819

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

Marks

1. (A) Attempt any SIX of the following : **12**

(a) What is scope resolution operation ?

(b) Define pointer. Give syntax for declaration of pointer.

(c) What is copy constructor ?

(d) Define polymorphism. Enlist its types.

(e) List various visibility modes used in inheritance.

(f) What are objects ? How are they created ?

(g) Write use of 'This' pointer.

(h) What do you mean by default argument ? Give its suitable example.

(B) Attempt any TWO of the following : **8**

(a) Explain multiple constructors in a class with suitable example.

(b) Define multiple inheritance. Give example.

(c) Explain destructor with suitable example.

2. Attempt any FOUR of the following : **16**

(a) How to define a member function outside the body of class ?

(b) Explain the concept of virtual function with example.

(c) What is the purpose of 'protected' access specifier used in C++ ?

(d) Give advantages of object oriented approach over procedure oriented approach.

(e) Explain friend function. Give example.

(f) Explain the concept of pointer to derived classes.

3. Attempt any FOUR of the following : **16**

(a) What is dynamic memory allocation ? Explain with example.

(b) Explain parameterized constructors with example.

(c) Explain virtual base class with suitable example.

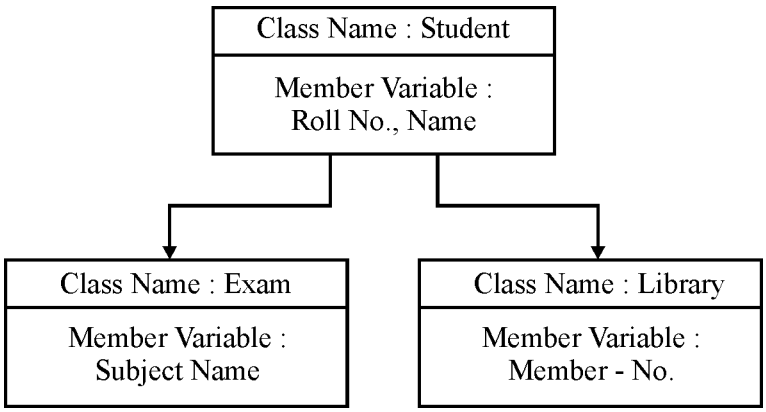
(d) Write a program to overload '+' operator to concatenate two strings.

(e) Explain pointer to object in detail.

(f) Explain class with suitable example.

4. Attempt any FOUR of the following : **16**

(a) Identify the inheritance shown in fig. 1 implement it by using suitable member function.



(Fig.-1)

(b) Write any four characteristics of constructor.

(c) Explain data types in C++.

(d) Explain static member function.

(e) Explain single inheritance with suitable example.

(f) Explain searching elements in array using pointers.

5. Attempt any FOUR of the following : **16**

(a) How to achieve compile time polymorphism explain in detail.

(b) Compare structure and class.

(c) Write a program to demonstrate the use of pure virtual function.

(d) State the concepts of object oriented programming.

(e) Explain pointer arithmetic with example.

(f) Differentiate between static binding and dynamic binding.

P.T.O.

6. Attempt any TWO of the following : **16**

(a) Explain object as a function argument using following points with suitable example :

(i) Pass by value

(ii) Pass by reference

(b) Explain constructor in derived class with suitable example.

(c) Write a program using concept of pointers to string for performing following operations :

(i) String concatenation

(ii) String comparisons
