

313304

12425

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE of the following :**

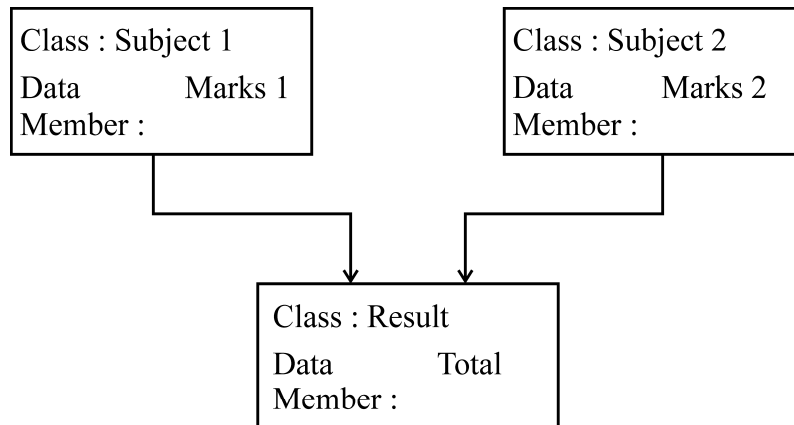
**10**

- (a) Define the following :  
Object, Class
- (b) State any two characteristics of constructor.
- (c) State any two types of polymorphism.
- (d) State any two rules to define friends function.
- (e) Explain in brief abstract base class with example.
- (f) State any two rules for operator overloading.
- (g) State any two visibility modes.



- 2. Attempt any THREE of the following : 12**
- (a) State scope resolution operator and memory management operator in C++. Give its use with suitable example.
  - (b) With suitable example, explain how object can be used function argument.
  - (c) Explain virtual base class with suitable example.
  - (d) Explain pointer to derived class with suitable example.
- 3. Attempt any THREE of the following : 12**
- (a) Explain different file opening modes with suitable example.
  - (b) With suitable example, explain the difference between structure & class. Give four points.
  - (c) Explain virtual function with suitable example.
  - (d) List types of Inheritance. With suitable example, explain single inheritance.
- 4. Attempt any THREE of the following : 12**
- (a) Explain constructor overloading. Give suitable program code in C++.
  - (b) Explain insertion & extraction operator with suitable example.
  - (c) With suitable example explain how file can be opened using constructor.
  - (d) Give four points of distinction between OOP & POP.
  - (e) Explain parameterized constructor with suitable code example.
- 5. Attempt any TWO of the following : 12**
- (a) Write a program to define class 'staff' with datamembers, name, designation & experience in years. Accept data for five objects from the user. Display the name of staff who are manager.

- (b) Write a C++ program to implement the following inheritance :



Accept & display data for two objects of class result.

- (c) Write a program to create a class 'product' with datamembers price & product ID. Accept & display data for one object using pointer to object.

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

**12**

- (a) Explain operator overloading. Write a program to overload binary ++ operator.
- (b) Write a C++ program to show the use of multiple constructors in base class & single constructor in derived class. Create one object.
- (c) Write a program to copy contents of ABC.txt to PQR.txt.

