22316

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3 Hours / 70 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.

(6) 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) Demonstrate the static and dynamic initialization of variable.

b) Write the syntax for declaration of a class.

c) State the characteristics of static member function.

d) State different types of visibility mode in inheritance.

e) Give the syntax for constructor in derived classes.

f) Define polymorphism with it's types.

g) Define file with it's operations.

2. Attempt any THREE of the following: **12**

a) State the features of object oriented programming.

b) Explain overloaded constructor with suitable example.

c) Write a program on single inheritance.

d) Illustrate this pointer with example.

Marks

3. Attempt any THREE of the following: **12**

a) Write a program to print first n natural numbers and their sum using for loop.

b) Compare static and non-static data members. (any four points)

c) State any four rules for virtual functions.

d) Write a program for get and put functions.

4. Attempt any THREE of the following: **12**

a) Explain the structure of C++ program.

b) List any four properties of constructor function.

c) Illustrate the concept of virtual base class with suitable example.

d) State the advantages of pointer.

e) Write a program for closing a file.

5. Attempt any TWO of the following: **12**

a) State the use of scope resolution operator and explain it with example.

b) Write a program to show object as function argument.

c) Write a program on hybrid inheritance.

6. Attempt any TWO of the following: **12**

a) State the difference between constructor and destructor. (any six points)

b) Explain abstract class with suitable example.

c) Write C++ program to overload binary operator '+' to concatenate two strings.