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(Held in 2022)

INFORMATION TECHNOLOGY

Paper : S–3.2

(Object-oriented Programming)

Full Marks : 40

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. Answer the following as directed :　　1×5=5

   (a) What is object?

   (b) What is the use of scope resolution (::) operator in object-oriented programming?

   (c) Define pointer.

   (d) C++ follows top-down approach.

   　　　　　　　　　(State True or False)

   (e) Class members are public by default.

   　　　　　　　　　(State True or False)

　　　　　　　　　　　　　(Turn Over)

2. Answer the following questions : 2×5=10

(a) Differentiate between private and protected data members.

(b) What is data abstraction? Explain briefly.

(c) Differentiate between overloading and overriding.

(d) What is destructor? What is the use of it?

(e) Are class and structure the same? If not, what is the difference between a class and a structure?

3. Answer any *three* of the following questions :

5×3=15

(a) Write a program to explain the use of friend function.

(b) Differentiate between procedural programming and object-oriented programming.

(c) What is polymorphism? Explain briefly.

(d) Define a class time (hour, minutes and seconds). Write the functions to add two time.

(e) Write a program to demonstrate the use of function overloading.

4. Answer any *one* of the following questions : 10

(a) What is inheritance? Explain the different types of inheritance.

(b) What is operator overloading? Write a program to add two complex numbers using operator overloading.

(c) What is constructor? What is the use of constructor? Explain the different types of constructors with suitable example.

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