53 (IT 401) OOPD

2021

OBJECT ORIENTED PROGRAMMING AND DESIGN
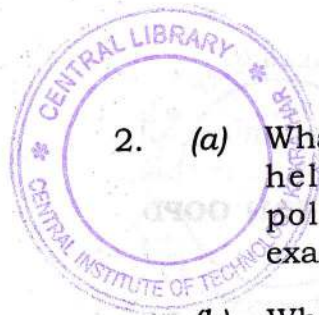
Paper : IT 401

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1. (a) What do you mean by exception handling? Describe the role of keywords try, throw and catch in exception handling. When do you use multiple catch handlers? **10**

   (b) Design a class having the constructor and destructor functions that should display the number of object being created or destroyed of this class type. **10**

2. *(a)* What is a virtual table? How does it help in implementing dynamic polymorphism? Explain with an example. 10

(b) What is the ambiguity that might arise in multiple inheritances? How to overcome this? Explain with an example. 5

(c) When will you make a function inline? 5

3. *(a)* What does 'this' pointer point to? What are the applications of 'this' pointer? 10

(b) Explain the default function arguments with an example. 10

4. Design a class to store a date in a program, use constructor with parameters so that the value of month, day and year are checked before storing the date into the data members. Add a member function to check whether a year is a leap year. 20

5. *(a)* Distinguish between overloaded function and function template. 10

(b) In procedure-oriented programming, all data are shared by all functions. Is this statement True ? Justify your answer.

10

6. Write short notes on : 20

(a) Class template

(b) Operator overloading

(c) Pure virtual function

(d) Friend function.