

ETT

E-006

2035051053
Roll No.

OBJECT ORIENTED PROGRAMMING

Time : 3 hrs.

2K5-DS-01

M.M. 100

- Note :-**
1. Part 'A' may be attempted in first 5 pages of Answer Sheet.
भाग 'क' के सभी उत्तर, उत्तर-पुस्तिका के प्रथम पांच पृष्ठों में ही करना हैं।
 2. Part 'B' in rest of the Sheets of Answer Sheet.
भाग 'ख' के उत्तर, उत्तर-पुस्तिका के अगले शेष पृष्ठों में लिखिये।
 3. Answers may be given in English or Hindi.
प्रश्नों के उत्तर अंग्रेजी अथवा हिन्दी में दीजिये।

PART - 'A'

Q. 1. Attempt any TEN of the following questions :-

(10X2 = 20)

- (1) What is an Abstract class?
- (2) What is the purpose of defining a Destructor function?
- (3) Explain briefly what is protected member.
- (4) What are the properties of a static data member?
- (5) What is the use of Scope resolution operator in C++
- (6) Differentiate between a local and a static object
- (7) What is Visibility mode?
- (8) What is the use of this keyword?
- (9) What are C++ streams?
- (10) What is inline function.
- (11) What do you mean by garbage collection?
- (12) Differentiate between static and dynamic binding
- (13) What is access specifier and its use?
- (14) What is copy constructor and its use?

Q. 2. Attempt any FIVE of the following questions :

(5X4 = 20)

- a) What is a constructor and destructor? What is the use of default & copy constructors? Is a constructor mandatory for a Class? Explain by giving examples in each case.
- b) Explain how base class member functions can be invoked in a derived class if the derived class also has a member function with the same name.

- c) Explain in detail and what is the value of the following expression?
 $((!(4-4\%3)<5\&\&(6/4>3)))$
- d) Explain what is overloaded operator & how does a compiler proceed to execute an overloaded operator.
- e) What are the various File Opening modes? How is (ios::app) mode different from (iso::ate mode)?
- f) What is Virtual Base ? Explain with an example.
- g) What is virtual destructor? What is the use of declaring it under multiple inheritances?
- h) Explain the various techniques of defining pure virtual function.

PART - 'B'

Attempt any THREE questions of the following :

(3x20=60)

- Q.3. a) What is inheritance ? Explain with example how to inherit a class in C++.
b) What is Dynamic Memory Allocation? Explain with the help of an example how to create and destroy objects dynamically.
- Q.4. a) Create a class whose object represents a complex number (A complex number contains a real part and an imaginary part). Write a program so that it is possible to add two objects of this class and store the result in third object.
b) Explain difference between class and C- structure. How class is defined and declared in C++.
- Q.5. a) Discuss the term function overloading. Write a program using function overloading for subtracting two given integer matrices; two floating matrices and double precision matrices separately.
b) Describe the terms private inheritance and protected inheritance with the help of an example program.
- Q.6. a) Explain different types of control structure.
b) What are files and how these are handled using a suitable example?
- Q.7. a) Define Virtual Function. Explain the mechanism of Virtual function.
b) Explain public, private and protected access specifiers and show the ambiguity in multiple and multipath inheritance.