(i) **Printed Pages : 2**   Roll No. ....

(ii) **Questions**   **: 9**   **Sub. Code :** | 1 | 3 | 4 | 2 | 3 |

                     Exam. Code : | 5 | 0 | 4 | 2 |

Bachelor of Computer Application (FYUP) 2nd Semester

(2055)

OBJECT ORIENTED PROGRAMMING USING C++

Paper : NBCA203

Time Allowed : Three Hours]   **[Maximum Marks : 45**

Note :— Attempt **ONE** question from each section and entire compulsory question. All questions carry equal marks.

SECTION—A

1. What is the primary reason to use abstraction in OOP ? What does an object represent in the class ? Demonstrate with an example.   9

2. Write a note on :

    (a) Advantages of 'new' operator

    (b) Defining member functions.   9

SECTION—B

3. How does a constructor differ from an ordinary member function ? When is the copy constructor in C++ used ?   9

4. Using the concept of binary operator overloading, write a program to compare the area of squares using relational '>' and '<' operators. [Formula : Area of a Square = Side × Side].   9

SECTION—C

5. What is the importance of inheritance ? How can one make a private member inheritable ? Describe the problem that may arise in multiple inheritance. 9

6. How does polymorphism promote extensibility ? Can a pointer of base class type point to object of derived class ? Demonstrate. 9

SECTION—D

7. Give common examples of exceptions. Why should we deal with them ? What happens when a catch handler throws an exception ? 9

8. Describe the classes for file stream operations. Why do we need binary files ? 9

(Compulsory Question)

9. Answer the following :

    (a) What are the advantages of late binding ? 2

    (b) Why is inline function faster ? 2

    (c) Write the benefits of function overloading. 2

    (d) List the rules for defining friend functions. 2

    (e) What is file opening mode ? 1