

(i) Printed Pages : 2

Roll No. ....

(ii) Questions : 9

Sub. Code : 

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Exam. Code : 

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**Bachelor of Computer Applications 2<sup>nd</sup> Semester**

**(2053)**

**OBJECT ORIENTED PROGRAMMING USING C++**

**Paper : BCA-16-204**

**Time Allowed : Three Hours]**

**[Maximum Marks : 65**

**Note :— Attempt ONE question from each unit and compulsory Question No. 9.**

**UNIT—I**

1. (a) Draw difference between OOPS and traditional Programming language. 7
- (b) Exemplify the structure of C++ Program. 6
2. (a) Explain any three main concepts of OOPS like Abstraction, Polymorphism, etc. 7
- (b) What are members ? Explain Private and Public through examples. 6

**UNIT—II**

3. (a) What is function ? When a function is accessed as "friend" function and inline function ? Explain. 7
- (b) Which are basic data-types and user defined data-types ? How are they converted vice-versa ? Explain. 6

4. (a) What is array ? How are arrays of objects created ? 7  
(b) How are constructors and destructors created and used ?  
Explain. 6

### UNIT—III

5. (a) Explain and exemplify various Privately and Publically derived members in case of Single Inheritance. 7  
(b) What are virtual functions ? Exemplify. When are they called pure ? Explain. 6
6. (a) Explain various types of Inheritance. 7  
(b) How do you carry out "Early" and "Late" binding to execute polymorphism ? Explain. 6

### UNIT—IV

7. (a) What is Exception ? How are they handled ? Explain. 7  
(b) How are various file operations executed for classes ?  
Explain. 6
8. (a) Explain "Throwing" and "Catching" Mechanism for exceptions. 7  
(b) Write a program to demonstrate Random file processing. 6

### UNIT—V

9. Explain :
- (a) Memory Management Operators. 3  
(b) Manipulators. 2  
(c) Static Members. 2  
(d) Type Conversion. 2  
(e) Nesting of classes. 2  
(f) Binding. 2