

(i) Printed Pages : 2

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**Bachelor of Computer Applications 2nd Semester**

**1048**

**OBJECT ORIENTED PROGRAMMING USING C++**

**Paper-BCA-16-204**

**Time Allowed : Three Hours]**

**[Maximum Marks : 65**

**Note :-** Attempt **one** question from each section and the entire compulsory question. **All** questions carry equal marks.

**SECTION-A**

1. Object oriented programming allows the division of programs into objects that represent real world entities. Justify this statement along with its principal advantages. 13
2. Discuss the following :
  - (a) Reference variables
  - (b) Distinguish between new operator and malloc()
  - (c) Default arguments. 4,4,5

**SECTION-B**

3. Why can a friend function be not called using the object of the class to which it is friend ? Explain its characteristics along with suitable examples. 13



4. (a) Demonstrate an instance where operator overloading should be used for string manipulation operations. 6
- (b) Write a program to achieve the following – Create a class ‘account’ to withdraw and deposit money, and to display balance amount. Use constructor to set initial balance. Assume data members and member functions as necessary. 7

### SECTION–C

5. Define inheritance. What is the effect of inheritance on the visibility of members ? Explain the concept of hybrid inheritance with a program. 13
6. How can we execute different versions of the same function with respect to polymorphism ? What are the implications of making a virtual function pure ? 13

### SECTION–D

7. Describe the exception handling mechanism with a practical example. When do we use multiple catch handlers ? 13
8. Distinguish between opening a file using constructor and using open () method. List the stream classes for file operations. 13

### SECTION–E

#### (Compulsory Question)

9. (a) Inline functions 3
- (b) Operators that cannot be overloaded 3
- (c) Nesting of classes 3
- (d) Conversion from user to basic defined type. 4