

(i) Printed Pages: 4]

Roll No.

(ii) Questions : 9]

Sub. Code :

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Exam. Code :

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**Bachelor of Computer Applications 2nd
Semester Examination**

1047

**OBJECT ORIENTED PROGRAMMING USING
C++**

Paper : BCA-16-204

Time : 3 Hours]

[Max. Marks : 65

Note :- Attempt *one* question from each Section and the compulsory question.

Section-A

1. (a) Explain various concepts of OOP in detail with relevant code example.
(b) Write note on memory management operators. Support your answer with relevant C++ code. 7,6
2. (a) How object oriented programming is different from procedure oriented programming approach ?

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(1)

Turn Over

- (b) Write a program using C++ to read the details of a book (title, author, price) and display the details on execution. Use class and objects in program.

7,6

Section-B

3. (a) What do you mean by a friend function ? Explain the rules for a friend function. Support your answer with a relevant example.

- (b) What do you mean by operator overloading ? Write a program in C++ to overload the plus (+) operator to find sum of two distance values given in km. and mtrs.

7,6

4. (a) What are the different methods by which objects can be passed as arguments to a function. Explain your answer with relevant example.

- (b) What do you mean by a constructor ? Explain different types of constructors used in C++.

7,6

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(2)

Section-C

5. (a) What do you mean by inheritance ? Why is this concept required. ? Explain the kind of ambiguities which may generate during inheritance and how can these be handled.
- (b) What do you mean by virtual functions ? Write a program in C++ to show the use of virtual functions. 7,6
6. (a) Explain different types of inheritance available in C++. Describe every type of inheritance with related syntax.
- (b) What do you mean by polymorphism ? Explain with an example, how polymorphism can be implemented by using pointers. 7,6

Section-D

7. (a) What do you mean by exceptions ? Discuss the basics of exception handling mechanism and the advantages/disadvantages of exception handling.
- (b) What are the steps involved in using a file in a C++ program ? Discuss various classes available for file operations and different methods of opening a file. 7,6

8. Write notes on the following :

- (i) Catching mechanism in exception handling
- (ii) Random file processing and related functions
- (iii) Binary file operations 4,5,4

Section-E

(Compulsory Question)

9. Attempt all parts :

- (i) What do you mean by type cast in C++ ?
- (ii) Differentiate the private and public members of a class.
- (iii) What is function overloading ? Explain in brief.
- (iv) Which operators cannot be overloaded in C++ ?
- (v) What is difference between early and late binding ?
- (vi) How can you rethrow an exception ? Explain in brief. 2,2,2,2,2,3