

Roll No.

BCA-301(N)

B. C. A. (Third Semester) EXAMINATION, Dec., 2019

(New Course)

Paper First

OBJECT ORIENTED PROGRAMMING USING C++

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

(Short Answer Type Questions)

Note : All questions are compulsory. Each question carries 3 marks.

1. (A) What is a class ? How does it accomplish data hiding ?
- (B) Explain function overloading with the help of an example.
- (C) What is access specifier in C++ ?
- (D) What is the role of new and delete operator in C++ ?

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- (E) Explain Destructor with a suitable example.
- (F) Write a program to explain single inheritance.
- (G) What is inline function ? Explain with example.
- (H) Describe the concept of polymorphism with its type.
- (I) What is stream in C++ ? How does it work for C++ ?

Section—B

(Long Answer Type Questions)

Note : Attempt any *two* questions. Each question carries 12 marks.

- 2. (a) Discuss all the basic concepts of object oriented programming.
- (b) What is operator overloading ? How is it used in C++ ?
- 3. What is constructor ? Explain the types of constructor with suitable examples.
- 4. Define a class to represent a book in library. Include the following members :

Data members :

- (i) Book number
- (ii) Book name
- (iii) Author
- (iv) Publisher
- (v) Price
- (vi) No of copies
- (vii) No. of copies issued

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Member functions :

- (i) To assign initial values
- (ii) To issue a book after checking for its availability
- (iii) To return a book
- (iv) To display book information

5. Define of the following :

- (a) Aggregation
- (b) Composition
- (c) Classification
- (d) Class hierarchy
- (e) Static data member

Section—C

(Long Answer Type Questions)

Note : Attempt any *two* questions. Each question carries 12 marks.

- 6. (a) What is multiple inheritance ? Explain with example.
- (b) Discuss the problem of ambiguity and how is it resolved ?
- 7. What is Virtual Function ? How is it differ from virtual base class ?
- 8. Describe the concept of exception handling with its mechanism.
- 9. (a) Discuss the template class and template function.
- (b) What are the different types of file opening modes ?

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