

III Semester B.C.A. Examination, April/May 2021

(F + R) (CBCS) (Y2K14 Scheme)

COMPUTER SCIENCE**BCA 303 : Object Oriented Programming Using C++**

Time : 3 Hours

Max. Marks : 70

Instruction : Answer all Sections.**SECTION – A**I. Answer any ten questions. Each question carries two marks. **(10×2=20)**

- 1) What is data abstraction ?
- 2) Define polymorphism and name two types of polymorphism.
- 3) What are manipulators ? Give two examples of manipulators.
- 4) What is default arguments to functions ?
- 5) Write two differences between constructor and destructors.
- 6) Which operators cannot be overloaded in C++ ?
- 7) Define abstract class.
- 8) What is the purpose of 'this' operator ?
- 9) Define template. Name two types of templates.
- 10) Differentiate between seekg() and seekp() function.
- 11) What is function prototype ?
- 12) Define static data members use in a class.

SECTION – BII. Answer any five questions. Each question carries 10 marks. **(5×10=50)**

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| 13) a) Explain in detail basic concept of object oriented programming. | 5 |
| b) Write a note on control structures of C++. | 5 |
| 14) a) Differentiate between call by value and call by reference arguments. | 5 |
| b) Explain Inline function with a program to calculate area and circumference of circle. | 5 |



- 15) a) Explain friend function with an example. 4
 b) Write a C++ program to add two complex numbers by overloading '+' operator. 6
- 16) a) Write a C++ program to overload a unary minus operator. 5
 b) Explain multiple inheritance and ambiguity resolution in it. 5
- 17) a) Define virtual function with an example. 5
 b) Explain unformatted I/O operations. 5
- 18) a) Explain difference between function overloading and overriding. 5
 b) Explain type conversion of basic to class and class to basic type. 5
- 19) a) What is exception ? Explain different blocks of exception handling. 5
 b) Explain function template with an example. 5
- 20) a) Explain file pointer and file opening modes. 5
 b) Write a note on stream classes. 5

(a) Write a note on signatures of functions. (4)

(b) Write two differences between constructor and destructor. (4)

(c) What objects are stored in heap in C++? (4)

(d) Define simplest class. (4)

(e) What is the purpose of this operator? (4)

(f) Define template. Name two types of template. (4)

(g) Differentiate between seek() and seekp() function. (4)

(h) What is function prototype? (4)

(i) Define static class members and its uses. (4)

SOLUTION - B

- (Q=10×20)
 (a) Answer any five questions. Each question carries 10 marks.
 (b) Explain in detail please to object oriented programming.
 (c) Write a note on copy constructor of C++.
 (d) Explain different types of memory call by reference arguments.
 (e) Explain inline function with a brief note of advantages and disadvantages of inline.