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III Semester B.C.A. Degree Examination March/April - 2022

COMPUTER SCIENCE

Object Oriented Programming using C++

(CBCS Scheme)

Paper: BCA 303T

Time : 3 Hours

Maximum Marks : 70

Instructions to candidates :

Answer all the Sections.

SECTION - A

Answer any **Ten** questions. Each question carries **2** Marks.

(10×2=20)

1. Define Class and Object. ✓
2. What is the difference between Data Abstraction and Data Encapsulation?
3. What is function prototype?
4. Define Scope resolution operator in C++. Give example ✓
5. What is Constructor? ✓
6. Define Operator overloading.
7. What is the difference between a base class and a derived class?
8. Define Inheritance.
9. Differentiate between function overloading and overriding.
10. Define virtual base class. ✓
11. What are input and output streams?
12. What are templates? ✓

SECTION - B

Answer any **Five** questions. Each question carries **10** Marks.

(5×10=50)

13. a) Explain the structure of C++ program. ✓ (5)
b) Explain the data types in C++ ✓ (5)
14. a) What is an inline function? Write a program to calculate area and circumference of circle using inline function. (5)
b) What is a friend function? Explain with a suitable example. (5)

[P.T.O.]



15. a) What is the general form of class and illustrate access specifiers. (5)
b) Describe types of constructors in detail. (5)
16. a) Explain the types of inheritance with suitable examples. (5)
b) Write a C++ program to perform sorting of array using function template. (5)
17. a) Define polymorphism. Discuss different types of polymorphism. (5)
b) Write a C++ program to overload Unary ++ post increment operator using Friend function. (5)
18. a) What are manipulators? Explain parameterized and non-parameterized manipulators with examples. (5)
b) Write a program to store five strings in an output stream. (5)
19. a) Explain exception handling in C++. (5)
b) Write a program to calculate area and perimeter of a rectangle using inheritance. (5)
20. a) What is a file mode? What are the different mode options available for opening a file? (5)
b) Explain Seek g(), Seek p(), tell g(), tell p() and clear () functions. (5)
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