



**Sixth Semester B.E. Degree Examination, Jan./Feb. 2021**  
**Programming in C++**

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

**PART - A**

- 1 a. What are the characteristics of object oriented programming languages? Explain any two. (08 Marks)
- b. What is meant by dynamic binding? How is it useful in OOP? (06 Marks)
- c. What are preprocessor directives? Explain with examples. (06 Marks)
- 2 a. What is pointer? Explain the difference between a pointer and reference types with a suitable example. (06 Marks)
- b. What are preprocessor directives? Explain with examples. (06 Marks)
- c. Define an array and write a C++ program to find the largest element of an array. (08 Marks)
- 3 a. Explain the following :
  - i) Arithmetic operators
  - ii) Relational and logical operators. (08 Marks)
- b. With an example C++ program, differentiate between break and continue statements. (06 Marks)
- c. Write a C++ program to read 'n' integers from keyboard, store those numbers in an array and perform sum of those numbers, and display the result. (06 Marks)
- 4 a. What is 'inline' function? Explain with syntax and example. What are its limitations? (06 Marks)
- b. What are the advantages of using functions? Write a C++ program to swap two numbers using "call by address" and explain the mechanism. (08 Marks)
- c. Define recursion. Write a C++ recursion function to find GCD of two integers. (06 Marks)

**PART - B**

- 5 a. What is exception handling? With an example briefly explain try, throw and catch mechanisms in C++. (08 Marks)
- b. Explain different types of constructor with example. (09 Marks)
- c. List the operators of C++ which cannot be overloaded. (03 Marks)
- 6 a. Define class and object. With an example C++ program, explain how data members are declared and accessed? (10 Marks)
- b. Explain with a C++ program for each :
  - i) Copy constructor
  - ii) Destructors. (10 Marks)
- 7 a. What is operator overloading? Write a C++ program to add two complex numbers by overloading operator '+'. (10 Marks)
- b. What is function overloading? Explain with an example program. (10 Marks)
- 8 Write short notes on the following:
 

a. New and delete operators	b. Friend function
c. Virtual function	d. Multiple inheritance (20 Marks)

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