



--	--	--	--	--	--	--	--	--	--

10EC665

**Sixth Semester B.E. Degree Examination, June/July 2019**  
**Programming in C++**

Time: 3 hrs.

Max. Marks:100

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

**PART – A**

- 1 a. What are preprocessor directives? What are their functions? Give six examples of preprocessor directives. (08 Marks)  
b. What do mean by dynamic initialization of a variable? What is the primary difference between static and dynamic memory allocation? (06 Marks)  
c. Explain how new and delete operator manage memory allocation dynamically with an example. (06 Marks)
- 2 a. What are the basic operations performed on string? Write a C++ program to find the number of characters in the string. (08 Marks)  
b. What is the need for const qualifier? Explain with an example. (06 Marks)  
c. Justify the statement “array can be used as a pointer”. (06 Marks)
- 3 a. With an example, explain the data types and variables in C++. (04 Marks)  
b. Write a program to accept a line of text and count the number of times an vowel occurs in it. (08 Marks)  
c. Distinguish between the while and do-while statements. (03 Marks)  
d. Write a C++ program to accept an integer and reverse it. Then print both the input and reversed integers. (05 Marks)
- 4 a. What is function? Mention the advantages of using function. (05 Marks)  
b. What do you mean by a function prototype? (03 Marks)  
c. Differentiate between –  
i. Arguments and parameters  
ii. Normal functions and inline functions  
iii. Call-by-value and call-by –reference with pointer. (06 Marks)  
d. Write a recursive function to find factorial of n numbers. (06 Marks)

**PART – B**

- 5 a. What is an exception? What are the three keywords that are used with exception handling in C++? Explain with an example. (10 Marks)  
b. Write a C++ program to illustrate the process of catching all uncaught exceptions through in a try block. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

- 6 a. Describe the difference between class and object with an example. (04 Marks)  
b. What are class constructor and class destructors? Give the characteristics of each. (06 Marks)  
c. Write a C++ program to implement a class called STRING. In the class develop a copy constructor to copy one string to another. Write the supporting main( ) that uses the copy construct to copy one STRING object to another. (10 Marks)
- 7 a. What is operator overloading? List the operators that can be overloaded and that cannot be overloaded in C++. (06 Marks)  
b. What are the steps involved in operator overloading. (04 Marks)  
c. Write a C++ program to overload ++ and -- operator. (10 Marks)
- 8 a. Briefly explain public, private, protected inheritance. (06 Marks)  
b. Write a note on base class and derived class. (04 Marks)  
c. Explain with an example multiple inheritances. (10 Marks)

\* \* \* \* \*