

16018(D) - 0 DEC 2016

B. Tech 1st Semester Examination

Principle of Computer Programming & C++ (NS)

BE-104

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt any one question from section A, B, C and D. Section E is Compulsory. Each question carries 20 Marks.

SECTION - A

1. Define Computer. Draw a block diagram of a Computer. Explain the function of each block. (20)
2. Define program, programming language, and Software. Explain the Operating System and its functions. (20)

SECTION - B

3. What are the different types of programming languages? Differentiate between these different types of the languages. Also explain the role of linker and loader. (20)
4. Give the advantages and disadvantages of the followings:
 - (i) Flow chart
 - (ii) Pseudo Code
 - (iii) Algorithm (20)

SECTION - C

5. Compare object oriented programming vs procedure oriented programming with concrete example. Write a program to find the largest element out of n elements entered by user, without making use of arrays. (20)
6. Explain the different types of operators used in C++ with necessary examples. Also explain the concept of Operator overloading in C++ with example. (20)

SECTION - D

7. What are the different decision making and looping statements used in C++? Write a program that prompts the user to enter an integer n, and then n floating-point numbers. As the numbers are read, the program will calculate the average of the positive numbers only. (20)
8. What is pointer? What kinds of operations are allowed on pointers? How we can declare and initialize two dimensional array using pointers? Write a program to sort an array of n elements using pointer. (20)

SECTION - E

9. Explain the following with suitable example.
 - (i) Call by references & call by value.
 - (ii) Scope rule for a variable.
 - (iii) DOS.
 - (iv) Polymorphism. (4×5=20)