14609
B. Tech 2nd Semester Examination
Principles of Computer Programming and C++ (N.S.)
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 one question each from Sections A, B, C and D. Section E is compulsory.

SECTION - A

1. (a) What are the basic components of a computer system? Explain Volatile and Non-Volatile memory. (10)

(b) Explain in brief about the different generations of computers. Give a brief introduction of operating system and define RAM and ROM. (10)

OR

2. (a) Give a brief introduction of the following,

(i) Dot Matrix printer

(ii) Line printer

(iii) Laser printer (10)

(b) Give a general introduction about virus and anti-virus. Explain the different pointing devices. (10)

SECTION - B

3. (a) Differentiate between High level and Low level languages with suitable examples. What are testing and debugging of a program? (10)

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(b) What are Internal and External commands? Differentiate between External and Internal commands

OR


(b) What is software? Explain System software and Application software.

SECTION - C

5. Bring out the salient features of object oriented programming. What is its importance in software development?

OR

6. (a) What is the difference between a class and an object in C++? Explain how to define a class in C++. Also give a brief introduction of basic data types in C++.

(b) Write a C++ program to find the sum of first n natural numbers using recursion.

SECTION - D

7. (a) Discuss the following C++ operators

(i) new

(ii) delete

(iii) goto

(b) Write a C++ program to swap the two numbers using argument passed by

(i) call by value

(ii) call by reference
8. Discuss in detail about text and binary files. How these files can be read and written? (20)

SECTION - E

9. Short answer type questions

(i) What is pseudo code?

(ii) What are the different programming errors?

(iii) Give the name of five input and output devices.

(iv) What is an operating system?

(v) What is procedure oriented programming?

(vi) What are user defined data types?

(vii) Give an example of pre and post increment operators.

(viii) Explain argument passing by value.

(ix) How to declare and initialize a pointer.

(x) Write a function of factorial in C++. (10×2=20)