Assignment – 1

1) Draw the Block diagram of Computer System and explain.
2) Name the major components of computer and give their function in brief.
3) Provide differences between
   a. Software v/s Hardware
   b. Flowchart v/s Algorithm
   c. Compiler v/s Interpreter
   d. System software v/s Application software
4) What is a Flowchart? Explain different symbols and discuss it with an example.
5) Explain in brief the features of C language.
6) Write a short note on : Basic structure of a C program.
7) Explain the ‘C’ Development life cycle using flowchart in detail (please refer fig 1.10 from E-balagurusamy book).
8) Why do we need to use comments in programs ?
9) What is the use of #define and #include directives?
10) What are trigraph characters? How are they useful? Explain any five of them.
11) Explain C Tokens in detail.
12) Differentiate: Constants v/s Symbolic Constants.
13) What are the difference between keyword and identifier?
14) Explain the different data types of C language
15) Explain the storage class specifiers in C.
16) Describe the characteristics and purpose of escape sequence characters?
17) Explain the following with examples :
   a. Enumerated types
   b. Type Def
18) Write a program to illustrate the use of symbolic constants in a real-life application.
19) Describe the purpose of sign and size modifier using an example.
20) Explain the classification of operators in C in brief.
21) Explain relational operators. When can we use relational operators?
22) Explain the ternary operator in C.
23) What is type conversion? Explain the type conversions supported by C language.
24) Discuss about operator precedence and associativity in detail.

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Assignment : 2

1) Explain the various I/O function with example in C.
2) What do you mean by branching?
3) Write the difference between branching and looping.
4) Write the difference between break and continue.
5) Explain (i) if (ii) if…else (iii) if…else if…else” ladder of C with neat diagram and a brief program code.
6) Discuss the dangling else problem.
7) Explain the syntax of switch…case statement. Write a program using switch…case statement.
8) Explain goto statement with an example?
9) Is it advisable to use goto in our program? How goto can help us in our program? Discuss it using an example.
10) Define Looping. What is the need for use of a loop?
11) Discuss and differentiate by giving an example. : Entry controlled loop and Exit controlled loop.
12) Compare and contrast (i) for (ii) while (iii) do while loop.
13) Differentiate: Counter – controlled loops v/s Sentinel- controlled loops.
14) Explain the break and continue statements using suitable example.
15) How would you decide the use of one of the three loops in C for a given problem?
16) What is a null statement? Explain a typical use of it.
17) When do we use the following statement?
   

\textbf{for ( ; ; )}

18) How can we use for loops when the numbers of iterations are not known?
19) Write a for statement to print each of the following sequences of integers.
   
   a. 1,2,4,8,16,32  
   b. 1,3,9,27,81,243  
   c. -4,-2,0,2,4  
   d. -10,-12,-14,-18,-26,-42  

20) Explain initialization of one and two dimensional array.

21) What happens when an array with a specified size is assigned
   
   a. With values fewer than the specified size  
   b. With values more than the specified size

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