

## EXPECTED C AND C++ VIVA QUESTIONS

1. What is a computer? Who is the father of computer (ans : Charles Babbage)?
2. List various parts of computer and their uses?
3. What is OS?
4. What are different levels of languages?
5. Why C is called middle level language?
6. What is the difference between compiler and interpreter?
7. Who developed C language, when and where?
8. What is C standard library?
9. What is the structure of simple C program?
10. What are the phases of C development environment?
11. List arithmetic operators in C and their order precedence?
12. Define:
  - a. algorithm
  - b) Flowchart
  - b. Pseudo code
  - c) Variable
  - c. Constant
  - d) Keyword (and list some keywords)
  - e) Data type
13. What are the different data types in C?
14. What are primary and predefined data types in C?
  - a. And how much memory occupied by the variables of each type?
  - b. What are the format specifiers for data types?
15. List the operators in C?
16. What are :
  - a. Shorthand assignment operators in C
  - b. Bitwise operators
  - c. Conditional or ternary operator
  - d. Relational operators
  - e. Logical operators
  - f. Increment and decrement operators
17. What is the difference between pre increment and post increment operators?
18. What is the difference between '=' and '=='?
19. What are the differences between logical and bitwise operators?
20. List out special operators in C?
21. Precedence of arithmetic operators?
22. Precedence of all operators?
23. What are basic input and output functions? And their syntaxes? (printf, scanf, cout, cin)
24. How many types of control structures are there in C?
25. What are
  - a. Selection structures
  - b. Repetitive control structures
26. What is the use of break statement?
27. What is the use of continue statement?
28. Difference between break and continue?
29. What is the difference between while loop and do- while loop?
30. What is a loop?
31. What is the use of 'default' case in switch case?
32. What is the use of break statement in switch statement?
33. Can we have continue within a switch block?
34. Syntaxes of all control structures?
35. List some math library functions and uses?
36. What is a function?

37. Types of function?
38. What are the steps to define a function?
39. What is a function prototype?
40. What function prototype tells the compiler?
41. Write the syntax for declaration and definition of user defined function?
42. What is the difference between predefined and user defined functions?
43. What are parameter passing techniques (Call by value and Call by reference)
44. What is scope?
45. What are different types of scope?
46. Storage classes and their uses (scope default initial value, storage space, lifetime)?
47. What is recursion?
48. What is recursive function?
49. What is iteration?
50. What is the difference between iteration and recursion?
51. What is an array?
52. How to declare and initialize an array?
53. How many types of arrays are there?
54. What is sorting and searching?
55. What is a pointer?
56. How to declare and initialize a pointer variable?
57. What are pointer operators?
58. What are the operations that we can perform on pointer variables?
59. What is a pointer to pointer?
60. What is array of pointer?
61. What is the use of const qualifier?
62. What is a string?
63. How to declare and initialize a string?
64. What is character handling library and list some predefined functions?
65. List some predefined string handling library functions?
66. What strcmp ( ) function will return?
67. What is stream? What is the use of field width and precision?
68. What are escape sequence characters?
69. Define structure and union?
70. What is the difference between structure and array?
71. How to declare structure and union?
72. What is the difference between structure and union?
73. What are structure member access operators (.and->)?
74. What is the use of bit fields in structures?
75. What is the use of typedef ?
76. What is the use of enumerated data types?
77. What is a macro?
78. What is a symbolic constant?
79. What is the difference between macro and inline function?
80. What is the advantage of preprocessor directives?
81. List different pre processor directives?
82. What are predefined file handling functions (sequential access files and random access file)?
83. What is the use of fseek( ) ,rewind ( ) ,ftell( )?
84. What are different modes of opening a file.?
85. What are dynamic memory allocation functions in C( malloc( ) ,calloc( ) ,free( ) )?

## C++

1. Who developed c++ and where?
2. What is the differences between C and C++?
3. What is the difference between procedure oriented and object oriented language?
4. What are the object oriented concepts?
5. What are the different access specifies in C++( Private ,Public,Protected)?
6. What is inline function?
7. What is the difference between normal function and inline function?
8. What are the advantages and disadvantages of inline functions?
9. Define class and object?
10. Write the syntax of class?
11. What is the difference between structure and class?
12. Define inheritance?
13. What are the different types of inheritances?
14. Write the syntax for different types of inheritances?
15. What is base class and derived class?
16. Define polymorphism?
17. What are the different types of polymorphism(runtime and compile time)?
18. What is function overloading and function overriding?
19. Does the function overloading depends on return type or not?
20. Define function template and what are its advantages?
21. What is the difference between function overloading and function templates?
22. What is the operator overloading?
23. Write the syntax for operator overloading(Unary and Binary)?
24. can we overload all the operators? if NO What are the operators we cant overload?
25. What is a friend function and what is the advantage of using it?
26. What is the use of scope resolution operator?
27. What is virtual function?
28. What is pure virtual function?
29. What is friend function?
30. What is abstract class?
31. What is the use of this pointer?
32. What are the dynamic memory allocation operators in C++?
33. What is a constructor and destructor?
34. What are the features of constructors and destructors?
35. Can we overlaod a constructors and destructors?
36. Can we have multiple constructors and destructors?
37. Define stream?
38. Define class template?
39. List different types of errors?
40. Define exception?
41. List some exceptions?
42. Define exception handling?
43. Define try , throw and catch ?