TCS NQT POGRAMMING LOGIC QUESTIONS

1. I have a problem to solve which takes as input a number n. The problem has a property that given the solution for (n-1), I can easily solve the problem for n. Which programming technique will I use to solve such a problem?
   a) Iteration
   b) Decision-making
   c) Object Oriented Programming
   d) <mark>Recursion</mark>

2. Pankaj and Mythili were both asked to write the code to evaluate the following   Expression: a − b + c/(a-b) + (a-b)^2
    Pankaj writes the following code statements (Code A):
    print (a-b) + c/(a-b) + (a-b)*(a-b)
    Mythili writes the following code statements (Code B):
d = (a-b)
    print d + c/d + d*d
If the time taken to load a value in a variable, for addition, multiplication or division between two operands is same, which of the following is true?
   a) <mark>Code A uses lesser memory and is slower than Code B</mark>
   b) Code A uses lesser memory and is faster than Code B
   c) Code A uses more memory and is faster than Code B
   d) Code A uses more memory and is slower than Code B

3. A queue is implemented as a singly-linked-list for easy addition and deletion of Elements. Each node has an element and a pointer to another node. Which node will point to empty/no location? <mark>a) Rear</mark>
   b) Front
   c) Both
   d) None

4. Q is an empty queue. The following operations are done on it:
   DELETE
   ADD 13
   DELETE
   DELETE

ADD 10
What will be the content of Q after these operations? Front is
marked by (F) and Rear is marked by (R).
a) 10(R) 13(F)
b) 5(R) 10(F)
c) 13(R) 10(F)
d) 10(R) 5(F)

5. A is an empty stack. The following operations are done on it.
PUSH(1)
PUSH(2)
POP
PUSH(5)
PUSH(6)
POP
What will the stack contain after these operations?
a) 5 6
b) 1 6
c) 5 6
d) 1 5

6. What is implied by the argument of a function?
a) The variables passed to it when it is called
b) The value it returns on execution
c) The execution code inside it
d) Its return type

7. In a sequential programming language, code statements are executed in
which order?
a) All are executed simultaneously
b) From top to bottom
c) From bottom to top
d) None of these

8. A pseudo-code is used. Assume that when two data-types are processed
through an operator, the answer maintains the same data-type as the
input data-types. Assume that all data-types have enough range to
accommodate any number. If two different data-types are operated on,
the result assumes the more expressive data-type. What will be the
output of the following pseudo-code statements? Int a = 456, b, c, d
=10 b = a/d c = a - b print c
a) 410

b) 410.4
c) 411
d) None

9. Geeta takes as input 2 integer numbers, a and b, whose value can be between 0 and 31.She stores them as 5 bit numbers. She writes the following code to process these numbers to produce a third number c
à c = 2*(a – b)
In how many minimum bits should Geeta store c?
a) 6 bits
b) 7 bits
c) 8 bits
d) 9 bits

10.   Which of the following data structures may give overflow error, even though the current number of elements in it is less than its size?

a) Queue implemented in a linear array
b) Queue implemented in a circularly connected array
c) Stack implemented in a linear array
d) None of these

11.   Farhan writes a code to nd the factorial of an inputted number. His code gives correct answers for some inputs and incorrect answers for others. What kind of error does his program have?
a) Syntactical error
b) Run-time Error
c) Logical Error
d) None of these

12.   As part of the maintenance work, you are entrusted with the work of rearranging the library books in a shelf in proper order, at the end of each day. The ideal choice will be Bubble Sort.
a) Insertion Sort
b) Selection Sort
c) Heap Sort
d) None

13. An array contains the following elements in order: 7 6 12 30 18. Insertion sort is used to sort the array in ascending order. How many times will an insertion be made?
   a) 2
   b) 3
   c) 4
   d) 5

14. Ragu writes a program to find an element in the array A[5] with the following elements in order: 18 32 44 46 57. He runs the program to find a number X. X is found in the first iteration of binary search. What is the value of X?
   a) 44
   b) 18
   c) 57
   d) None

15. A stack is implemented as a linear array A[0…N-1]. Farhan writes the following functions for pushing an element E in to the stack.
   function PUSH(top, E, N)
   { if(X)
   { top=
   top+1
   A[top] = E
   } else
   {
   print ,Overflow'
   }   return
   top
   }
Fill in the condition X
   a) top< N
   b) top <N-1
   c) top > 0
   d) top > 1

16. Riyaz has a book of tickets and wants to store ticket numbers in a data structure. New tickets are added to the end of the booklet. Ticket at the top of the stack is issued to the customer. Which data structure should Riyaz use to represent the ticket booklet?
   a) Queue
   b) Stack

c) Array
d) Graph

17. Pragya sells footballs. She has a large container to store footballs which is closed from below. Footballs are piled one on top of the other in the box. When new balls are supplied Pragya puts the balls in the box from the top. When a customer buys a ball, she delivers the.
    a) Queue
    b) Stack
    c) Array
    d) Graph

18. A[0…19] is an array of maximum size 20. The number of elements it contains is stored in the variable, **numberElements**. Currently it contains 11 elements. Swati wants to insert an element val after the **mth** element in the array. She writes the following code for it:
    ```
    for X
    A[n+1] = A[n]
    end [m] = val
    ```
Fill in X.
    a) n = (m+1) to (numberElements-1) increment 1
    b) n = m to numberElements increment 1
    c) n = m to (numberElements-1) increment 1
    d) n = (m+1) to (numberElements) increment 1

19. To fully specify a singly linked linked-list, which of the following options is necessarily required?
    a) Address of first element
    b) Address of last element
    c) Address of middle element
    d) None

20. A list is implemented as a singly linked link-list. The address of the first and last node are stored in variables firrst and last. Given the address of a node is given in the variable node, the element stored in the node can be accessed by the statement node->data and the address to the next node can be accessed by node->next. Yusuf writes the code to delete the firrst element from the linked-list. He writes the following function, where firrst and last are passed by reference. function deleteElement(first, last)
{

```
if (first isequal null) {
print ,List empty' } else
{
firrst = firrst->next
}
}
```

In which of the following scenarios will the code not work properly?
- a) When the list has no elements
- b) When the list has a single element
- c) When the list has two elements
- d) It will work well in all possible cases.

21. For a binary search tree, which traversal will result in a sorted list?

- a) Preorder
- b) Inorder
- c) Postorder
- d) None of these

22. Fiza have a binary search tree and want to derive a list sorted in descending order from it. For each node, what traversal ordering will Fiza use?

- a) left sub-tree, root, right sub-tree
- b) root, left sub-tree, right sub-tree
- c) right sub-tree, root, left sub-tree

23. Rashmi works on a computer where the time of comparing two numbers is very high and this time dominates the execution time. She implements a few different sorting algorithms. One algorithm out of these always took the same amount of execution time irrespective of the input array. Which sorting algorithm was this?
- a) Quicksort
- b) Bubble sort
- c) Insertion Sort
- d) None of these

24. There is a new data-type which can take as values natural numbers between (and including) 0 and 25. How many minimum bits are required to store this data type
- a) 4
- b) 5

c) 1
d) 7

25. A data type is stored as a 6 bit signed integer. Which of the following cannot be represented by this data type?
    a) -12
    b) 0
    c) 32
    d) 12

26. A language has 28 different letters in total. Each word in the language is composed of maximum 7 letters. You want to create a datatype to store a word of this language. You decide to store the word as an array of letters. How many bits will you assign to the data-type to be able to store all kinds of words of the language?
    a) 4
    b) 7
    c) 35
    d) 42

27. A 10-bit unsigned integer has the following range
    a) 0 to 1000
    b) 0 to 1023
    c) 0 to 1024
    d) None

28. Rajni wants to create a data-type for the number of books in her book case.Her shelf can accommodate a maximum of 75 books. She allocates 7 bits to the datatype. Later another shelf is added to her book-case. She realizes that she can still use the same data-type for storing the number of books in her book-case. What is the maximum possible capacity of her new added shelf?
    a) 52
    b) 127
    c) 55
    d) 80

29. A new language has 15 possible letters, 8 different kinds of punctuation marks and a blank character. Rahul wants to create two data types, first one which could store the letters of the language and a second one which could store any character in the language. The

number of bits required to store these two data-types will Respectively be:

    a) 3 and 4
    b) 4 and 3
    c) 4 and 5
    d) None

30. Parul takes as input two numbers: a and b. a and b can take integer values between 0 and 255. She stores a, b and c as 1-byte data type. She writes the following code statement to process a and b and put the result in c. **c = a + 2*b**

To her surprise her program gives the right output with some input values of a and b, while gives an erroneous answer for others. For which of the following inputs will it give a wrong answer? a) a = 10 b = 200

    b) a = 200 b = 10
    c) a =20 b =40
    d) None

31. Prashant takes as input 2 integer numbers, a and b, whose value can be between 0 and 127. He stores them as 7 bit numbers. He writes the following code to process these numbers to produce a third number c.

c = a - b

In how many minimum bits should Prashant store c?

    a) 16bit
    b) 8bit
    c) 7bit
    d) None

32. A character in new programming language is stored in 2 bytes. A string is represented as an array of characters. A word is stored as a string. Each byte in the memory has an address. The word **"Mahatma Gandhi"** is stored in the memory with starting address 456. The letter 'd' will be at which memory address?

a) 468
b) 480
c) 478
d) None

33. Sneha is making a questionnaire of True-false questions. She wants to define a data-type which stores the response of the candidate for the question. What is the most-suited data type for this purpose?

a) int
b) Boolean
c) Char

d) float

34. What will be the output of the following pseudo-code statements:
    integer a = 984, b, c, d =10
    print remainder(a,d) // remainder when a is divided by d a
    = a/d
    print remainder(a,d) // remainder when a is divided by d
    a) 48
    b) Error
    c) 120
    d) 25

35. Shashi wants to make a program to print the sum of the first 10 multiples of 5. He writes the following program, where statement 5 is missing:
    integer i = 0 integer
    sum = 0 while (i <=
    50)
    {
    sum = sum + i
    -- MISSING STATEMENT 5 --
    }   print
    sum

Which of the following will you use for statement 5?
a) i =5
b) i = 5 *1
    c) i = i + 5
    d) None

36. Shantanu wants to make a program to print the sum of the first 7 multiples of 6. He writes the following program:
    integer i = 0 // statement 1
    integer sum // statement 2 while
    (i <= 42) // statement 3
    {
    sum = sum + i // statement 4
    i = i + 6; }
    print sum // statement 6

Does this program have an error? If yes, which one statement will you modify to correct the program?
a) statement 1
    b) statement 2
    c) statement 3

d) statement 4

37. Sharmili wants to make a program to print the sum of all perfect cubes, where the value of the cubes go from 0 to 100. She writes the following program: integer i = 0, a // statement 1 integer sum = 0; a = (i * i * i)
    while (i < 100) // statement 2
    {
    sum = sum + a // statement 3 i
    = i + 1
a) = (i * i * i) // statement 4
    }   print
    sum

Does this program have an error? If yes, which one statement will you modify to correct the program?
   a) statement 1
   b) statement 2
   c) statement 3
   d) statement 4

38. Himanshu wants to write a program to print the larger of the two inputted number. He writes the following code:
    int number1, number 2
    input number1, number 2
    if (??) // Statement 1
    print number1 else print
    number2 end if

Fill in the ?? in statement 1.
   a)
   number1>number2
   b) number2>number1
   c) number1 equals number2
   d) None

39. Rohit writes the following program which inputs a number and prints "Double digit" if the number is composed of two digits and "Not a double digit" if it is not.

```
      int number;
      if (number>10 AND number < 100)
      print "Double digit" else
      print "Not a double digit"
      end if
```

Rohit tries the following inputs: 5 and 66. The program works fine. He asks his brother Ravi to try the program. When Ravi enters a number, the program doesn't work correctly. What did Ravi enter?

a) 100

    b) 80

    c)   10

    d) 99

40. Abhinav wants to find the largest number in a given list of 20 numbers. Which of the following is an efficient approach to do this?
a) Use bubble sort to sort the list in descending order and then print the first number of the series.
b) Implement one iteration of selection sort for descending order and print the first number in the series.
c) None
d) Cant say.

41. Lavanya wants to find the smallest number out of 26 inputted numbers. How many minimum comparisons he has to make?
a) 25
b) 13
c) 26
d) 100

42. A company offers commission for selling it products to its salesperson. The commission rate is Rs. 5 per product. However if the salesperson sells more than 200 items, he gets a commission of Rs. 10 on all items he sold after the first 200. Kanu writes a program to calculate the commission for the salesperson:

```
      integer numberProducts, commission
      input numberProducts if (
      numberProducts > 200 ) --
      MISSING STATEMENT -- else
      commission = numberProducts * 5
      end if print commission
```

Fill in the missing statement.

a) commission = (numberProducts - 200) * 10
    b) commission = 200 * 5 + (numberProducts - 200) * 10
    c) commission = numberProducts * 10
    d) None

43. What is space complexity of a program?
a) Amount of hard-disk space required to store the program
b) Amount of memory required by the program to run.
c) None
d) Amount of hard-disk space required to compile the program

44. While calculating time complexity of an algorithm, the designer
    concerns himself/herself primarily with the run time and not the
    compile time. Why?
a) Run time is always more than compile time
b) A program needs to be compiled once but can be run several times.
c) Compile time is a function of run time.
d) None

45. Vrinda writes an efficient program to sum two square diagonal
    matrices (matrices with elements only on diagonal). The size of each
    matrix is nXn. What is the time complexity of Vrinda's algorithm?
    a) $\theta(n^2)$
     b) $\theta(n)$
     c) $\theta(n*log(n))$
     d) None

46. Tarang writes an efficient program to add two upper triangular 10X10
    matrices (elements on diagonal retained). How many total additions
    will his program make?
a) 100
b) 55
c) 60
d) 35

47. Ravi and Rupali are asked to write a program to sum the rows of a
    2X2 matrices stored in the array A.

Ravi writes the following code (Code A): for
n = 0 to 1
sumRow1[n] = A[n][1] + A[n][2]
end
Rupali writes the following code (Code B): sumRow1[0]
= A[0][1] + A[0][2]
sumRow1[1] = A[1][1] + A[1][2]
Comment upon these codes (Assume no loop-unrolling done by compiler):
    a) Code B will execute faster than Code A
    b) Code B is logically incorrect
    c) Code A is logically incorrect
    d) Code A will execute faster than Code B.

48. Which of the following is not valid variable name declaration?
a) int __v1;
b) int __1v;
c) int __V1;
d) None

49. Variable names beginning with underscore is not encouraged. Why?
a) It is not standard form
b) To avoid conflicts since assemblers and loaders use such names
c) To avoid conflicts since library routines use such names
d) None

50. Which is not a valid C variable name?
a) int number;
b) float rate;
c) int variable_count;
d) int $main;

60. Which of the following is true for variable names in C?
a) They can contain alphanumeric characters as well as special
   characters

b) It is not an error to declare a variable to be one of the keywords(like goto, static)

c) <mark>Variable names can't start with a digit</mark>

d) Variable can be of any length

61. What will be the output?

```
    #include <stdio.h>
int main()     {         int
main = 5;
printf("%d", main);
return 0;
    }
```

a) compile-time error

b) run-time error

c) <mark>run without any error and prints 5</mark>

d) experience infinite looping

62. Which of the following cannot be a variable name in C?

a) friend

b) true

c) <mark>volatile</mark>

d) export

63. The format identifier '%i' is also used for _____ data type?

a) char

b) double

c) float

d) <mark>int</mark>

64. Which of the following is a User-defined data type?

a) struct {char name[10], int age};

b) typedef enum {Mon, Tue, Wed, Thu, Fri} Workdays;

c) typedef int Boolean;
d) <mark>all of the mentioned</mark>

65. What is short int in C programming?
a) Basic datatype of C
b) Qualifier
c) <mark>short is the qualifier and int is the basic datatype</mark>
d) All of the mentioned

66. What is the output of this C code?

```
    #include   <stdio.h>
int   main()            {
signed char chr;       chr
=                  128;
printf("%d\n",     chr);
return 0;

    }
```

a) 128
b) <mark>-128</mark>
c) Depends on the compiler
d) None of the mentioned

67. What is the size of an int data type?
a) 4 Bytes
b) 8 Bytes
c) <mark>Depends on the system/compiler</mark>
d) Cannot be determined

68. What is the output of this C code?
```
    #include <stdio.h>
int main()      {
float x = 'a';
printf("%f", x);
return 0;

    }
```
a) <mark>97.000000</mark>

b) run time error
c) a.0000000
d) a

69. The output of the code below is
```
#include <stdio.h>      int a;
void main()      {         if (a)
printf("Hello");          else
printf("world");
    }
```
a) Hello
b) **World**
c) compile time error
d) none of the mentioned

70. The output of the code below is

```
    #include <stdio.h>
void main()      {          int
a = 5;           if (true);
printf("hello");
    }
```
a) It will display hello
b) **It will throw an error**
c) No Output
d) Depends on Compiler.

71. The output of the code below is
```
#include <stdio.h>      void main()
{          int a = 0;           if (a
== 0)             printf("hi");
else            printf("how are
u");             printf("hello");
    } a)
```
hi
b) how are you
c) hello
d) **hihello**

72. The following code 'for(;;)' represents an infinite loop. It can be terminated by.
a) **break**
b) exit(0)
c) abort()
d) all of the mentioned

73. The correct syntax for running two variable for loop simultaneously is.
a) for (i = 0; i < n; i++)   for (j = 0; j < n; j += 5)
b) **for (i = 0, j = 0;i < n, j < n; i++, j += 5)**
c) for (i = 0; i < n;i++){}
d) for (j = 0; j < n;j += 5){}

74. Which for loop has range of similar indexes of 'i' used in for (i = 0;i < n; i++)?
a) for (i = n; i>0; i--)
b) for (i = n; i >= 0; i--)
c) for (i = n-1; i>0; i--)
d) **for (i = n-1; i>-1; i--)**

75. The output of this C code is?

```
    #include <stdio.h>
void main()      {
int x = 0;         for (x
< 3; x++)
printf("Hello");
    }
```
a) **Compile time error**
b) Hello is printed thrice
c) Nothing
d) Varies

76. The output of this C code is?

```
    #include <stdio.h>      void
main()     {         double x = 0;
```

```
for (x = 0.0; x < 3.0; x++)
printf("Hello");
    }
```
a) Run time error
b) **Hello is printed thrice**
c) Hello is printed twice
d) Hello is printed infinitely

77. The output of this C code is?

```
    #include <stdio.h>
    int main()     {          do
printf("Inside while loop ");
while (0);                 printf("Outside
loop\n");
    }
```
a) Inside while loop
b) **Inside while loop ,Outside loop**
c) Outside loop
d) Infinite loop

78. The output of this C code is?

```
    #include <stdio.h>     int main()     {
int i = 0;          do {                i++;
printf("Inside while loop\n");
       } while (i < 3);
    }
```
a) **Inside while loop Inside while loop Inside while loop**
b) Inside while loop
Inside while loop
c) Depends on the compiler
d) Compile time error

79. Which of the following cannot be used as LHS of the expression in for (exp1 ;exp2 ; exp3) ?
a) Variable
b) Function

c) typedef

d) <mark>macros</mark>

80. Which keyword can be used for coming out of recursion?

a) break

b) <mark>return</mark>

c) exit

d) Both break and return

81. The keyword 'break' cannot be simply used within:

a) do-while

b) <mark>if-else</mark>

c) for

d) while

82. The output of this C code is?

```
    #include <stdio.h>
void main()      {           int
i = 0;          if (i == 0)
{
printf("Hello");
break;
        }
    }
```

a) Hello is printed infinite times

b) Hello

c) Varies

d) <mark>Compile time error</mark>

83. What is the output of this C code?

```
    #include <stdio.h>      void main()
{         m();           void m()
{             printf("Simple Way
Code");
        }
    }
```

a) SimpleWay2Code

b) **Compile time error**

c) Nothing

d) Varies

84. What is the output of this C code?
```
#include <stdio.h>     void main()
{         static int x = 3;
x++;         if (x <= 5)          {
printf("hello");          main();
          }
    }
```
a) Run time error

b) hello

c) Infinite hello

d) **hello hello**

85. What is the problem in the following declarations?
```
    int func(int);
double func(int);      int
func(float);
```
a) A function with same name cannot have different signatures

b) A function with same name cannot have different return types

c) A function with same name cannot have different number of
   parameters

d) **All of the mentioned**

86. What is the output of this code having void return-type function?
```
    #include <stdio.h>
void foo()      {
        return 1;
    }      void main()
{          int x = 0;
x = foo();
printf("%d", x);      }
```
a) 1

b) 0

c) Runtime error

d) **Compile time error**

87. The output of the code below is
```
#include <stdio.h>    void main()
{         int k = m();
printf("%d", k);
    }
void m()
{
       printf("hello");
    }
```
a) **hello 5**

b) Error

c) Nothing

d) Garbage value

88. The output of the code below is
```
#include <stdio.h>    int *m()
{        int *p = 5;       return
p;     }      void main()     {
int *k = m();       printf("%d",
k);     }
```
a) **5**

b) Junk value

c) 0

d) Error

89. What will be the output of the program?
```
#include<stdio.h> int main()
{
    int i=1;     if(!i)
printf("SimpleWay2Code,");     else
{       i=0;          printf("C-
Program");       main();      }
return 0;
}
```
A. prints "SimpleWay2Code, C-Program" infinitely

B. **prints "C-Program" infinetly**

C. prints "C-Program, SimpleWay2Code" infinitely

D. Error: main() should not inside else statement

90. How many times the program will print "Simple Way Code'?

```
#include<stdio.h> int main() {     printf("Simple Way
Code");     main();     return 0;
}
```

A. Infinite times

B. 32767 times

C. 65535 times

D. **Till stack overflows**

91. What is the output of this C code?

```
    #include <stdio.h>
void main()     {
static int i;
printf("i is %d", i);     }
```

a) **0**

b) 1

c) Garbage Value

d) Run time error

92. What is the output of this C code?

```
#include <stdio.h>     int *i;     int
main()     {         if (i == NULL)
printf("true\n");         return 0;
    }
```

a) **true**

b) true only if NULL value is 0

c) Compile time error

d) Nothing

93. What is the output of this C code?

```
#include <stdio.h>     static int i;
void main()     {         int i;
printf("i is %d", i);     }
```

a) 0

b) **Garbage Value**

c) Run time error

d) Nothing

94. **What is the output of this C code?**
```
#include <stdio.h>      static int x =
5;     void main()     {          x = 9;
{             int x = 4;          }
printf("%d", x);
    }
```
a) **9**
b) 4
c) 5
d) 0

95. **The scope of an automatic variable is:**
a) Within the block it appears
b) Within the blocks of the block it appears
c) Until the end of program
d) **Within the block it appears & Within the blocks of the block it appears**

96. **Automatic variables are allocated space in the form of a:**
a) **stack**
b) queue
c) priority queue
d) random

97. **Which of the following is a storage specifier?**
a) enum
b) union
c) **auto**
d) volatile

98. **What is the output of this C code?**
```
    #include <stdio.h>     int
main()     {          register int
i = 10;        int *q = &i;
```

```
*q = 11;          printf("%d %d\n",
i, *q);
   }
```

a) Depends on whether i is actually stored in machine register

b) 10 10

c) 11 11

d) <mark>Compile time error</mark>

99. Register storage class can be specified to global variables

a) true

b) <mark>false</mark>

c) Depends on the compiler

d) Depends on the standard

100. Which of the following operation is not possible in a register variable?

a) Reading the value into a register variable

b) Copy the value from a memory variable

c) Global declaration of register variable

d) <mark>All of the mentioned</mark>

101. An array is also known as _____ <mark>a)</mark>
<mark>Subscripted variable</mark>

b) Collective array

c) Ordinary variable

d) Similar Quantities variable

102. Till the array elements are not given any specific value, they are supposed to contain all _____

a) Zero

b) <mark>Garbage value</mark>

c) One

d) Combination of zero and one.

103. If array is initialized where it is declared, then mentioning _____ of array is optional.

a) Data type

b) **Dimension**

c) name

d) Data type and Dimension

104. What happen if we assign a value to an array element whose subscript exceeds the size of array.

a) The program will give error

b) No output

c) **program will crash**

d) none of these

105. What will be output of the following program

```
int main()
{
    int b[4]={5,1,32,4};

    int k,l,m;

     k=++b[1];

     l=b[1]++;

    m=b[k++];

 printf("%d, %d, %d",k,l,m);
 return 0;
}
```

a) 2, 2, 4

b) ~~3, 2, 32~~

c) 3, 2, 4

d) 2, 3, 32

106. What will be output of the following program where c=65474 and int=2 bytes.

```
int main()
{
 int c[3][4]={2,3,1,6,4,1,6,2,2,7,1,10};
```

```
    printf("%u, %u\n", c+1, &c+1);
        return
0;
}
```

a) **65482, 65498**
b) 65476, 65476
c) 65476, 65498
d) No output

107. what will be output of the following program
```
int main() {
    int a[5],i=0;

while(i<5)
a[i]=++i;

    for(i=0;i<5;i++)

     printf("%d,",a[i]);
}
```

a) **garbage value,1,2,3,4**
b) 1,2,3,4,5
c) Error
d) Program crash

108. What will be output of the following program
```
 int main()
{
    float a[]={12.4, 2.3, 4.5, 6.7};

    printf("%d, %d", sizeof(a), sizeof(a[0]));
 return 0;
}
```

a) **16 bytes, 4 bytes**
b) 4 bytes, 4 bytes
c) 8 bytes, 4 bytes
d) None of these

109. **Which one of this is equivalent to int**
fun(int arr[])
a) int fun(arr)
b) int fun(int s[])
c) **int fun(int arr[2])**
d) None of these

110. **In 2 Dimensional Array, it is necessary to mention _____**
dimension.
a) **second**
b) first
c) both
d) none of these

111. **An array can be passed to a function by _____**
a) Call by reference
b) call by value
c) Call by reference by passing base address to a function
d) **Both a and c**

112. **What will be output of the following program**
```
int main() {
    int arr[4]={3,4,5,6};
        int
k[4];
    k=arr;
    printf("%d\n",k[1]);
}
```
a) **Compile Time Error**
b) 4
c) No output
d) Program crashes

113. **The value of EOF is_____**
a) **-1**
b) 0
c) 1
d) 10

114. **Which of the following true about FILE *fp**
a) FILE is a keyword in C for representing files and fp is a variable
   of FILE type.
b) FILE is a structure and fp is a pointer to the structure of FILE
   type
c) FILE is a stream
d) FILE is a buffered stream

115. **The first and second arguments of fopen are ____**
a) A character string containing the name of the file & the second
argument is the mode
b) A character string containing the name of the user & the second
argument is the mode
c) A character string containing file poniter & the second argument is
   the mode
d) None of the mentioned

116. **If there is any error while opening a file, fopen will return** a)
Nothing
b) EOF
c) NULL
d) Depends on compiler

117. **fseek() should be preferred over rewind() mainly because** a)
rewind() doesn't work for empty files
b) rewind() may fail for large files
c) In rewind, there is no way to check if the operations completed
   successfully
d) All of the above
118. **FILE is of type _____** a)
int type
b) char * type
c) struct type
d) None of the mentioned

119. **FILE reserved word is**
a) A structure tag declared in stdio.h
b) One of the basic datatypes in c
c) Pointer to the structure defined in stdio.h

d) It is a type name defined in stdio.h

120. **getc() returns EOF when** a)
End of files is reached

b) When getc() fails to read a character

c) Both of the above

d) None of the above

121. **Which of the following functions from ‚stdio.h' can be used in place of printf()?**

a) fputs() with FILE stream as stdout.

b) fprintf() with FILE stream as stdout.

c) fwrite() with FILE stream as stdout.

d) All of the above three - a, b and c.

e) In ‚stdio.h', there's no other equivalent function of printf()

122. **fputs adds newline character** a)
True

b) False

c) Depends on the standard

d) Undefined behavior

123. **puts function adds newline character**

a)
True e

b)
Fals

c) Depends on the standard

d) Undefined behavior

124. **The function _____ obtains block of memory dynamically.** a)
calloc

b) malloc

c) Both calloc & malloc

d) free

125. **For a typical program, the input is taken using** a)
scanf

b) Files

c) Command-line
d) <mark>All of the mentioned</mark>

126. **What is the default return-type of getchar()?** a) char
b) <mark>int</mark>
C. char *
D. reading character doesn't require a return-type

127. **Memory allocation using malloc() is done in?** a) Static area
b) Stack area
c) <mark>Heap area</mark>
d) Both Stack & Heap area

128. **What is the sizeof(char) in a 32-bit C compiler?** a) 1 bit
b) 2 bits
c) <mark>1 Byte</mark>
d) 2 Bytes

129. **Which one is used during memory deallocation in C?** a) remove(p);
b) delete(p);
c) <mark>free(p);</mark>
d) terminate(p);

130. **What is the output of this C code?**
```
    #include <stdio.h>
void main()     {          int
x = 97;         int y =
sizeof(x++);         printf("x
is %d", x);
    }
```
a) <mark>x is 97</mark>
b) x is 98
c) x is 99
d) Run time error

131. Which of the following syntax is correct for command-line arguments?

a) int main(int var, char *argv[])

b) int main(char *arv[], int arg)

c) int main(char c,int v)

d) int main(int v,char c)

132. What does argv and argc indicate in int main(int argc, char *argv[]) ?

a) argument constant, argument variable

b) argument count, argument vector

c) argument constant, argument vector

d) argument count, argument variable

133. What type of array is generally generated in Command-line argument?

a) MultiDimensional Array

b) Jagged Array

c) 2-Dimensional Array

d) Single Dimensional Array

134. The maximum length of the command-line arguments including the spaces is

a)May vary from one OS to another

b)256 characters

c)Depends on the Number of arguments

d)128 characters

135. The index of the last argument in command line arguments is

a) argc

b) argc * 2

c) argc – 1

d) argc + 1

136. What is the first argument of command line?

a)File Name

b)Program Designation

c)argument passed by user

d)Program Name

137. What argv means in command line argument? a)Array of pointers

b)pointer to a character array

c)Array of character pointers

d)Array of Strings

138. What will be the output of the following program if argument
      passed to command lines are : prog 1 4 2

```
#include<stdio.h> int main(int
argc, char *argv[])
{ int j; j = argv[1] + argv[2] -
argv[3]; printf(,%d', j); return
0;
}
```

a)Error

b)3

c)Garbage Value

d)None of these

138. What argv[0] and argv[1] denote in Command line Arguments ? a)
Pointers to first two command line argument supplied.

b) File Name and pointer to first command line argument supplied.

c) Program Name and Pointer to the 1st argument.

d) None of these.

139. Which one of these is equivalent to argc ? a)
Number of Arguments

b) Number of Arguments - 1

c) Number of Arguments + 2

d) Number of Arguments + 1

140. The scope of an automatic variable is: a)
Within the block it appears

b) Within the blocks of the block it appears

c) Until the end of program

d) <mark>Within the block it appears & Within the blocks of the block it appears</mark>

141. What will be output of the following program if argument passed to command lines are : demo friday

```
#include<stdio.h> int main(int
argc, char *argv[])
{ printf(,%c',*++argv[1]);
return 0;
}
```

a) <mark>r</mark>

b) <mark>f</mark>

c) i

d) d

142. What is the output of this C code?

```
#include int main() {
register int i = 10; int
*q = &i; *q = 11;
printf(,%d %d\n', i, *q);
}
```

a) Depends on whether i is actually stored in machine register

b) 10 10

c) 11 11

d) <mark>Compile time error</mark>

143. Register storage class can be specified to global variables a) true

b) false

c) <mark>Depends on the compiler</mark>

d) Depends on the standard

144. Register variables reside in

a) stack

b) <mark>registers</mark>
c) heap
d) main memory