**1. A pointer variable can be**

A. Changed within function.  
B. Assigned an integer value.  
C. None of these  
**D. Passed to a function as argument.**

**2. Which of the following uses structure?**

A. Linked Lists  
B. Array of structures  
**C. All of these**D. Binary Tree

**3. Strings are character arrays. The last index of it contains the null-terminated character**

A. \t  
B. \1  
**C. \0**  
D. \n

**4. Which of the following is a collection of different data types?**

A. String  
**B. Structure**C. Array  
D. Files

**5. What function should be used to free the memory allocated by calloc() ?**

**A. free();**B. malloc(variable\_name, 0)  
C. dealloc();  
D. memalloc(variable\_name, 0)

**6. In the standard library of C programming language, which of the following header file is designed for basic mathematical operations?**

A. conio.h  
B. stdio.h  
**C. math.h**D. Dos.h

**7. int \*\*ptr; is?**

A. Pointer to integer  
B. None of these  
**C. Pointer to pointer**D. Invalid declaration

**8. Which of the following special symbol allowed in a variable name?**

**A. (underscore)**B. – (hyphen)  
C. | (pipeline)  
D. \* (asterisk)

**9. All keywords in C are in**

A. Uppercase letters  
B. None of these  
**C. Lowercase letters**D. Camel Case letters

**10. Which of the following statements about stdout and stderr are true?**

A. They both are the same  
B. Run time errors are automatically displayed in stderr  
C. Both are connected to the screen by default.  
**D. stdout is line buffered but stderr is unbuffered.**

**11. Given the below statements about C programming language:**

1. main() function should always be the first function present in a C program file  
2) all the elements of an union share their memory location  
3) A void pointer can hold address of any type and can be typcasted to any type  
4) A static variable hold random junk value if it is not initialised  
  
Which of the above are correct statements?  
  
**A) 2,3**  
B) 1,2  
C) 1,2,3  
D) 1,2,3,4  
  
Explanations  
In a file you can write a function before main() – False  
all the elements of an union share their memory location – True.  
A void pointer can hold address of any type and can be typcasted to any type – True  
Static value – False as value is 0  
  
In C, if an object that has static storage duration is not initialized explicitly, then:  
— if it has pointer type, it is initialized to a NULL pointer;  
— if it has arithmetic type, it is initialized to (positive or unsigned) zero;  
— if it is an aggregate, every member is initialized (recursively) according to these rules; — if it is a union, the first named member is initialized (recursively) according to these rules.

**12. If a function is defined as static, it means**

A) The value returned by the function does not change  
B) all the variable declared inside the function automatically will be assigned initial value of zero  
**C) It should be called only within the same source code / program file.**  
D) None of the other choices as it is wrong to add static prefix to a function  
  
Access to static functions is restricted to the file where they are declared. Therefore, when we want to restrict access to functions, we make them static

**13. Comment on the below while statement=  
while (0 == 0) { }**

A) It has syntax error as there are no statements within braces {}  
**B) It will run forever**C) It compares 0 with 0 and since they are equal it will exit the loop immediately  
D) It has syntax error as the same number is being compared with itself  
  
while( 0==0) {} is equivalent to while(1) {}

**14. What will happen if in a C program you assign a value to an array element whose subscript exceeds the size of array?**

A. The element will be set to 0.  
B. The compiler would report an error.  
**C. The program may crash if some important data gets overwritten.**D. The array size would appropriately grow.  
  
**Explanation:**If the index of the array size is exceeded, the program will crash. Hence “option c” is the correct answer. But the modern compilers will take care of this kind of errors.

**15. What does the following declaration mean?  
int (\*ptr)[10];**

A. ptr is array of pointers to 10 integers  
**B. ptr is a pointer to an array of 10 integers**C. ptr is an array of 10 integers  
D .ptr is an pointer to array

**16. In C, if you pass an array as an argument to a function, what actually gets passed?**

A. Value of elements in array  
B. First element of the array  
**C. Base address of the array**D. Address of the last element of array  
  
Explanation:  
The statement ‘C’ is correct. When we pass an array as a function argument, the base address of the array will be passed.

**17. Is there any difference int the following declarations?  
int fun(int arr[]);  
int fun(int arr[2]);**

A. Yes  
**B. No**  
  
Explanation:  
No, both the statements are same. It is the prototype for the function fun() that accepts one integer array as an parameter and returns an integer value.

**18. Are the expressions arr and &arr same for an array of 10 integers?**

A. Yes  
**B. No**  
  
Explanation:  
Both mean two different things. arr gives the address of the first int, whereas the &arr gives the address of array of ints.

**19. Which of the fplowing statements should be used to obtain a remainder after dividing 3.14 by 2.1?**

A. rem = 3.14 % 2.1;  
B. rem = modf(3.14, 2.1);  
**C. rem = fmod(3.14, 2.1);**D .Remainder cannot be obtain in floating point division  
  
Explanation:  
fmod(x,y) – Calculates x modulo y, the remainder of x/y. This function is the same as the modulus operator. But fmod() performs floating point divisions.

**20. Is there any difference between following declarations?  
  
1 : extern int fun();  
2 : int fun();**

A. Both are identical  
**B. No difference, except extern int fun(); is probably in another file**  
C. int fun(); is overrided with extern int fun();  
D. None of these  
  
Explanation:  
extern int fun(); declaration in C is to indicate the existence of a global function and it is defined externally to the current module or in another file.  
int fun(); declaration in C is to indicate the existence of a function inside the current module or in the same file.

**21. What could be the output for following?  
main()  
{  
int a= – – 2;  
printf(“%d”,a);  
}**

A. 2  
B.-2  
C. 1  
**D. Error**  
–2 is incorrect, // Invalid because lvalue is required to increment

**22. Predict the output of following code:  
  
main()  
{  
int i=-1;  
-i; //No change in value of i  
printf(“%d,%d”,i,-i);  
}**

**A. -1, 1**  
B. -1, -1  
C. 1, 1  
D. 0, 1

**23. Predict the output of following code:  
  
main()  
{  
int var=20; // scope of the local variable is within function or block printf(“%d,”,var); //outer block  
{  
int var=30; //Inner block  
printf(“%d”,var);  
}  
}**

A. Error  
**B. 20,30**  
C. 20,20  
D. Garbage value

**24. Predict the output of following code:  
  
main()  
{  
int var=20; // scope of the local variable is within function or block printf(“%d,”,var); //outer block  
{  
int var=30; //Inner block  
printf(“%d,”,var);  
}  
printf(“%d”,var); //again in outer block  
}**

A. Error  
**B. 20,30,20**C. 20,20,20  
D. Garbage value

**25. Predict the output of following code:  
  
main()  
{  
int i=10;  
printf(“%d,%d”,++i,++i);  
}**

**A. 11,12**  
B. 12,11  
C. 10,11  
D. 11,10

**TCS NQT 2020 Coding Questions With Answers**

**1. What is a linker program?**

A. Places the program in the memory for the purpose of execution.  
B. Relocates the program to execute from the specific memory area allocated to it.  
**C. Links the program with other programs needed for its execution.**  
D. Interfaces the program with the entities generating its input data.  
  
The correct answer is A linker program “**links the program with other programs needed for its execution**.”

**2. Which is NOT a function of a loader?**

A. Allocation  
**B. Translation**  
C. Relocation  
D. Loading  
  
The correct answer is “**translation**” is not a function of a loader.

**3. What happens when you perform a bitwise operation on these numbers?**

**The result of the expression 4^12 is:**  
  
A. 2  
B. 4  
**C. 8**  
D. 12  
  
The result of the expression 4^12 computes to 8. ^ is the XOR operator. The binary form of 4 is 0100 and that of 12 is 1100. Therefore, 0010 ^ 1100 evaluates to 1000, which is equal to 8 in decimal format.

**4. How are data/variables stored inside a computer? The ASCII notation? Truly an important question!  
Binary Coding for the letter X is \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**A.** **01011000**  
B. 00111000  
C. 10001000  
D. 00010100  
  
The binary coding for the letter X is 01011000. Here, 0101 is the zone whereas 1000 is the digit. The alphabets from P to Z have the zone 0101.

**5. The in-order and pre-order traversal of a binary tree is D B E A F C G and A B D E C F G, respectively. The post-order traversal of the binary tree is:**

**A. D E B F G C A**  
B. E D B G F C A  
C. E D B F G C A  
D. D E F G B C A

Below is the given tree.  
  
           A  
                         /     \  
                       /        \  
                     B           C  
                    /   \        /  \  
                  /      \     /    \  
                 D      E   F       G

**6. Identify the line number in which the error exists?**

# include<stdio.h>  
# include<conio.h>  
void main()  
{  
    float a = 100.00;  
   {  
      auto float a = 250.14;  
    {  
           auto float b = 325;  
          printf(“\n%f %f”, a, b);  
          b++;  
     }  
     a++;  
     printf(“\n%f %f”, a, b);  
     a++;  
  }  
 printf(“\n%f”, a);  
 }  
  
A. line number 5  
B. line number 7  
**C.** **line number 9**  
D. line number 14  
  
The variable ‘b’ is declared in the inner block and is accessed in the outer block. Declare ‘b’ globally to remove the error.

**7. Predict the output of this code snippet?**

#include <stdio.h>  
int main()  
{  
  int i = 3;  
  switch (i)  
  {  
    case 0+1: printf(“Cyber”);  
           break;  
    case 1+2: printf(“Tecz”);  
            break;  
    default: printf(“CyberTecz”);  
   }  
 return 0;  
}  
  
A. Cyber  
**B. Tecz**  
C. CyberTecz  
D. Compiler error  
  
Expression gets evaluated in cases. The control goes to the second case block after evaluating 1+2 = 3 and “Online” is printed.

**8. The value obtained in the function is given back to the main by using \_\_\_\_\_\_\_\_ keyword?**

**A. Return**  
B. Static  
C. New  
D. Volatile  
  
“**return**” keyword gives a value obtained in a function to the main.