MCQ on Structures

1.	What is the keyword used to define a structure in C?			
	A)	struct	B)	record
	C)	class	D)	structure
2.	How do you access a member of a structure in C?			
	A)	**. (dot)**	B)	->(arrow)
	C)	:: (scope)	D)	, (comma)
3.	How is the size of a structure determined in C?			
	A)	By the size of its largest member	B)	By the total size of its members
	C)	By the size of its smallest member	D)	By the number of members
4.	Which statement correctly defines a structure named "Person" with members "name" and "age" of type char and int respectively?			
	A)	**struct Person { char name; int age; }**	B)	struct Person { name, age; }
	C)	struct { name; age; } Person;	D)	struct { char* name, int age; } Person;
5.	When should you use a structure instead of an array in C?			
	A)	**When you need to store elements of different data types**	B)	When you need a fixed-size collection of elements
	C)	When you need a dynamic collection of elements	D)	When you need to perform mathematical operations
6.	What is the size of an empty structure in C?			
	A)	**0 bytes**	B)	1 byte
	C)	It varies depending on the compiler	D)	4 bytes
7.	Which of the following is a collection of different data types?			
	A)	String	B)	Array
	C)	**Structure**	D)	Files
8.	Which of the following comment about the usage of structures in true?			
	A)	Storage class can be assigned to individual member	B)	**The scope of the member name is limited to the particular structure, within which it is defined**
	C)	Individual members can be initialized within a structure type declaration	D)	None of above
9.	In C, can you compare two structures using the equality operator (==)?			
	A)	Yes, always	B)	**No, never**
	C)	Only if both structures have the same name	D)	Only if both structures have the same members
10.	How do you declare an array of structures in C for a structure named **myStruct**?			

	A)	array myStruct arr[];	B)	myStruct arr;
	C)	struct array myStruct[];	D)	**myStruct array[];**

11. What will be the output of the following C code?

```
#include <stdio.h> void main()
{
    struct student
    {
        int no;
        char name[20];
    };
    struct student s; no = 8;
    printf("%d", no);
}
```

	A)	Nothing	B)	Compile time error
	C)	Junk	D)	8

12. Number of bytes in memory taken by the below structure is?

```
Struct test
{
    int k; char c;
};
```

	A)	Multiple of integer size	B)	Integer size+character size
	C)	Depends on the platform	D)	Multiple of word size

13. The correct syntax to access the member of the **i**th structure in the array of structures is?

Assuming:

```
struct temp
{
        int b;
} s[50];
```

	A)	s.b.[i];	B)	s.[i].b;
	C)	s.b[i];	D)	s[i].b;

14. What is the output of this C code?

```
struct student
{
};
void main()
{
    struct student s[2]; printf("%d", sizeof(s));
}
```

	A)	2	B)	4
	C)	8	D)	0

15. What is the output of this C code?

```
struct
{
    int k; char c;
};
int main()
{
    struct p;
    p.k = 10; printf("%d\n", p.k);
 }
```

	A)	Compile time error	B)	10
	C)	Undefined behavior	D)	Segmentation fault

MCQ on Array of structures, Pointers, Files

1. Given the structure and array declaration below, how do you access the age of the third student in the array?

```
struct Student
 {
char name[50];
int age;
};
```

	struct Student students[5];			
	A)	students[3].age	B)	students[2].age
	C)	students.age[2]	D)	students[2]->age
2.	What is the correct way to declare a pointer to a structure in C?			
	A)	struct Person *ptr;	B)	Person *ptr;
	C)	struct *Person ptr;	D)	*struct Person ptr;
3.	What is the correct way to open a file named "data.txt" in read mode in C?			
	A)	FILE *fp = fopen("data.txt", "w");	B)	FILE *fp = open("data.txt", "r");
	C)	FILE *fp = fopen("data.txt", "r");	D)	FILE *fp = fopen("data.txt");
4.	What does the fclose() function return if the file is successfully closed?			
	A)	0	B)	1
	C)	EOF	D)	-1
5.	How do you initialize a pointer to point to the integer variable num? int num = 10;			
	A)	int *ptr = num;	B)	int *ptr = #
	C)	int ptr = num;	D)	int *ptr = *num;
6.	Which operator is used to access the address of a variable in C?			
	A)	*	B)	&
	C)	@	D)	%

7.	What will be the output of the following code? int main()
	{
	int var = 7; int *p;
	p = &var; printf("%d", *p);
	}			

	A)	7	B)	The memory address of var
	C)	0	D)	Undefined

8.	What does the following code snippet do? int main()
	{
	int arr[5] = {1, 2, 3, 4, 5};
	int *ptr = arr; printf("%d", *(ptr + 2));
	}			

	A)	Prints 2	B)	Prints 3
	C)	Prints the address of the third element	D)	Prints 4
9.	What is the correct way to access the value of a variable through a pointer?			
	A)	&ptr	B)	*ptr
	C)	ptr*	D)	@ptr
10.	Which of the following functions is used to open a file in C?			
	A)	open()	B)	Fileopen()
	C)	fopen()	D)	openfile()
11.	What is the correct way to read a single character from a file in C?			
	A)	char c = fgets(fp);	B)	char c = fscanf(fp);
	C)	char c = fread(fp);	D)	char c = fgetc(fp);
12.	What is the result of the expression ptr++ in C, where ptr is a pointer?			

	A)	Increase the value of ptr by 1	B)	Decrease the value of ptr by 1
	C)	Move ptr to the next memory location	D)	It's not a valid operation

13.	What is the output of the following C code? int main()
	{
	char *ptr;
	char mystring[] = "abcdefg";
	ptr = mystring;
	ptr += 5;
	printf("%s",ptr);
	}			

	A)	efg	B)	fg
	C)	defg	D)	cdefg

14.	What will be the output of the following C code?
	void main() {
	int a[] = {1,2,3,4,5}, *p;
	p = a;
	++*p;
	printf("%d ", *p); p += 2;
	printf("%d ", *p);
	}			

	A)	2 4	B)	3 4
	C)	2 3	D)	2 2
15.	How do you read a character from a file in C?			
	A)	readchar()	B)	getc()
	C)	read()	D)	getchar()

MCQ- Formatted and Unformatted Input-Output

1.	For every input variable there must be one character group.			
	A)	TRUE	B)	FALSE
	C)		D)	
2.	Which one of the following is not TRUE			
	A)	Multiple number of character groups are allowed in a control string. They must be separated by blank spaces.	B)	Each input variable must in the address_list must be preceded by an ampersand (&) symbol.
	C)	White spaces may be included in the address_list, but all variables in the address list must be separated by commas.	D)	Address_list must be enclosed within double quotes.
	In the formatted input output functions variables in the address_list should match.			

3.	A)	Order of character groups	B)	Number of character group
	C)	Data Type	D)	All of the above
4.	Select the odd one out			
	A)	putch()	B)	scanf()
	C)	gets()	D)	puts()
5.	The format specification for a floating-point number in decimal notation is			
	A)	%w.pf	B)	%w.pe
	C)	%w.pc	D)	%w.pd
6.	Printf("%2d",1234); predict the output			
	A)	12	B)	34
	C)	1234	D)	None of the
7.	Printf("%-6d",1234); predict the output			
	A)	1234 will be right justified	B)	1234 will be left justified
	C)	1234 will be negative number	D)	None of the above
8.	Printf("%010d",123456); predict the output			
	A)	123456	B)	0123456
	C)	0000123456	D)	1234560000
9.	If y= 456.7353 predict the output Printf("%8.2f",y);			
	A)	456.7353	B)	45.7353
	C)	456	D)	456.73
10.	Control string of printf()consists			
	A)	Characters that will be placed on the screen as they appear.	B)	Character groups
	C)	Escape sequence	D)	All of the above