1.

```c
#include <stdio.h>
struct student
{
    int rollno;
    char name[10];
    char *subject, division;
    short int std;
    struct student *point;
};
int main(void)
{
    struct student s;
    struct student m;
    s.subject = m.subject = "C++";
    m.point = &s;
    (m.point)->subject = "CPP";
    printf("%s\t%s\t", s.subject, m.subject);
    return 0;
}
```

A. CPP C++
B. CPP CPP
C. C++ C++
D. Runtime error
Answer: A

2.

```c
#include<stdio.h>
typedef struct p *q;
struct p
{
    int x;
    char y;
    q ptr;
};
int main(void)
{
    struct p p = {1, 65, &p};
    printf("p.ptr->x =%d \t p.ptr->y =%c",p.ptr->x,p.ptr->y);
    return 0;
}
```

A. Compile time error
B. p.ptr->x = 1 p.ptr->y = A
C. p.ptr->x = 1 p.ptr->y = 65
D. p.ptr->x = Address of p p.ptr->y = Address of p
Answer: B

3.

```c
#include<stdio.h>
struct st
{
    int x;
    struct st next;
};
int main( void )
{
    struct st temp;
    temp.x = 10;
    temp.next = temp;
    printf("%d", temp.next.x);
    return 0;
}
```

A. Compiler Error – next has incomplate type
B. 10
C. Runtime Error
D. Garbage Value
Answer: A

4.

```c
#include<stdio.h>
#include<string.h>
struct Test
{
    char str[9];
};
int main(void)
{
    struct Test st1, st2;
    strcpy(st1.str, "CSharp");
    st2 = st1; st1.str[0] = 'J';
    printf("%s \t %s",st2.str,st1.str);
    return 0;
}
```

A. CSharp JSharp
B. JSharp CSharp
C. Segmentation Fault
D. Compile Error
E. CSharp CSharp
Answer: A

5.
For accessing a data member of structure by using a pointer
A. address of operator (&)
B. dot operator (.)
C. value at operator (*)
D. arrow operator (->)
Answer: D

6.
What will be output of following code on 32 bit Compiler?

```
#include <stdio.h>
#pragma pack(1)
int main(void)
{
    struct
    {
       short s[5];
        union
        {
             char x;
             float y;
             long z;
             short int z1;
        }u;
    }t;
    printf("%d", sizeof(t) +  sizeof(t.u));
    return 0;
}
```

A. 21
B. 11
C. 26
D. 14
E. Error as structure does not have any name.
Answer: C

7.

```c
#include <stdio.h>
union test
{
    int x;
    char arr[4];
    int y;
};
int main(void)
{
    union test t;
    t.x = 0;
    t.arr[1] = 'G';
    printf("%s", t.arr);
    return 0;
}
```

A. no outout return value from main function is zero
B. Garbage character followed by 'G'
C. G
D. Compile Error
Answer: A

8.In the following C code, we can access the 1st character of the string sval by using _____

```c
#include <stdio.h>
struct
{
    char *name;
    union
    {
        char *sval;
    }u;
}symtab[10];
```

A. *symtab[0].u.sval
B. symtab[0].u.sval[0].
C. You cannot have union inside structure
D. Both A and B (*symtab[0].u.sval & symtab[0].u.sval[0])
Answer: D

9.

```
#include<stdio.h>
int main(void)
{
    enum days {MON=-1, TUE, WED=6, THU, FRI, SAT};
    printf("%d, %d, %d, %d, %d, %d",MON,TUE,WED,THU,FRI,SAT);
    return 0;
}
```

A. -1, 0, 1, 2, 3, 4
B. -1, 2, 6, 3, 4, 5
C. -1, 0, 6, 2, 3, 4
D. -1, 0, 6, 7, 8, 9
Answer: D

10.

```
#include<stdio.h>
int main()
{
    enum status {pass, fail, absent};
    enum status stud1, stud2, stud3;
    stud1 = pass;
    stud2 = absent;
    stud3 = fail;
    printf("%d %d %d", stud1, stud2, stud3);
    return 0;
}
```

A. 0, 1, 2
B. 1, 2, 3
C. 0, 2, 1
D. 1, 3, 2
Answer: C

11.

```
#include <stdio.h>
#include <string.h>
struct
{
    unsigned int age : 2;

}Age;
```

```c
int main(void )
{
    Age.age = 3;
    printf( "Age.age : %d ", Age.age );
    Age.age = 4;
    printf( "updated Age.age : %d\n", Age.age );
    return 0;
}
```

A. Age.age : 3 updated Age.age : 4
B. Age.age : 0 updated Age.age : 0
C. Age.age : 3 updated Age.age : 0
D. Age.age : 3 updated Age.age : 3
Answer: C

12.

```c
#include <stdio.h>
struct Date
{
    unsigned int d:5;
    unsigned int m:4;
    unsigned int y;
};
int main(void )
{
    struct Date Today={9,3,2017};
    printf("%d",sizeof(Today));
    return 0;
}
```

A. 12
B. 8
C. 16
D. 13
Answer: B

13.

```c
#include <stdio.h>
struct sData
{
    unsigned int a: 2;
    unsigned int b: 2;
    unsigned int c: 2;
};
```

```
int main(void )
{
   struct sData data;
   printf("Sizeof of data.a =  %d", sizeof(data.a));
   return 0;
}
```

A. 4
B. Compile Time Error
C. 2
D. 6
Answer: B

14.
typedef int (*PFI)(char *, char *)creates:
A. type PFI, for pointer to function (of two char * arguments) returning int
B. Error
C. type PFI, function (of two char * arguments) returning int
D. type PFI, for pointer
Answer: A

15.
What is x in the following program?

```
#include<stdio.h>
int main()
{
    typedef char (*(*arrfptr[3])())[10];
    arrfptr x;
    return 0;
}
```

A. x is a pointer
B. x is an array of three pointer
C. x is an array of three function pointers
D. Error in x declaration
Answer: C

16.

```
#include<stdio.h>
int main(void)
{
    typedef float fData;
    static fData *fpData = NULL;
```


```
    float fValue = 90;
    fpData = &fValue;
    printf("%f\n", *fpData);
    return 0;
}
```

A. 90
B. Compiler Error
C. 90.000000
D. Linker Error
Answer: C