

C++ problems

1. What will be the output of:

```
cout<< suit; if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

ANSWER: some address

2. What will be the output of:

```
cout<< *(*suit+1); if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

ANSWER: D

3. What will be the output of :

```
cout<< *(*suit)+1; if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

OUTPUT: e

4. What will be the output of:

```
cout << *(suit+2); if: char *suit[] = {“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

ANSWER: Clubs

5. what will be the output of :

```
cout<< *suit[3]; if: char *suit[] = {“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

Answer:S

6. what will be the output of :

```
cout<< *(*suit+2)+2; if: char *suit[] = {“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

Answer: u

7. What will be the output of:

```
cout<< suit[3]; if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

Spades

8. What will be the output of :

```
cout<< **suit; if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

OUTPUT: H

9. What will be the output of :

```
cout<< *(*suit)+3; if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

OUTPUT: r

10. What will be the output of:

```
cout << suit[1][2]; if: char *suit[] = {“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

OUTPUT: a

11. What will be the output of :

```
cout<< *suit; if: char *suit[]={“Hearts”, “Diamonds”, “Clubs”, “Spades”};
```

OUTPUT: Hearts

- 12.

```
int s = 155;  
cout << --s << endl;
```

output: 154

- 13.

```
int s = 4;  
cout << --s << endl;
```

output: 3

14. Are these statements equivalent?

```
while (x > y){ do_smth(); }  
x > y ? do_smth() : break;
```

false

15. Your program is expected to find out if a person is suitable for military service (age from 18 to 45 for men and from 18 to 35 for women). Please, provide a proper condition (variables that are used: int age that stores an age value, char gender that takes 2 possible values 'M' or 'W')

```
if((age > 18 && age < 45 && gender == 'M') || (age > 18 && age < 35 && gender == 'W'))
```

16.

```
#include <iostream>
using namespace std;
int main() {
    int a=3;
    double b=5.0;
    std::cout<< sizeof(a/b);
}
```

output 8

17. How many stars will the following code print to the console window?

```
#include <iostream>
using namespace std;
int main() {
    for (int n=0; n<5; n++){
        for (int n=0; m<n; m++) {
            cout<< " *";
        }
    }
}
```

10 stars

18.

```
#include <iostream>
using namespace std;
int main() {
    int a[]={1,2,3,4,5,6,7,8,9,10};
    for (int i=0; i<10; i++){
        a[i] = a[i] * a[9-i];
        cout<< a[i] << " ";
    }
}
```

output . 10 18 24 28 30 180 196 192 162 100

19. What is the value of the X variable at the end of the following snippet?

```
int X = 1, Y = 2, Z;
Z = X / Y * --X * Y++;
```

answer: x=0;

20. What is the value of p?

```
#include <iostream>
using namespace std;
int main(){
    int p;
    bool a = true;
    bool b = false;
    int x = 10;
    int y = 5;
    p = ((x + y) + (a + b));
    cout << p;
}
```

Output: 16

21.

```
#include <iostream>
using namespace std;
int main() {
    int x=3;
    if (x>0) {
        while (x<5) {
            x++;
            cout<< " *";
        }
    } else {
        cout<< " *";
    }
}
```

How many stars will be output by executing the following code?

Stars 2

22.

```
int fib[] = {1,2,3};
cout << fib << endl;
```

Output: address of the zero's element

23.

```
#include <iostream>
using namespace std;
int main() {
    int i=8;
    while ( i>0) {
        if (i> 5) {
            cout<< "x";
            i=i-2;
        }
        else {
            cout << "Y";
            i=i-1;
        }
    }
}
```

Output : XXYYYYY

24.

```
#include <iostream>
int main() {
    int a=3;
    switch (a) {
        case 1: std::cout<< 3 << std::endl;
        case 2:
        case 3 :
            std::cout << 4;
        default: std::cout << 5 ;
        break;
    }
}
```

Output: 45

25.

```
#include <iostream>
using namespace std;
int main() {
    int i=0;
    do {
        i++;
        cout<< i;
        continue;
    }
    while (i<5);
}
```

Output : 12345

26. Initial array: 3 4 2 7 6. What is the order of elements of array after first pass of Bubble sort?

Output: 3 2 4 6 7

27.

```
#include <iostream>
using namespace std;
int main() {
    int a=10;
    for ( int i=0; i< 10; i++)
    { int a = 100;
      a+=i;
    }
    cout << a;
    return 0;
}
```

Output : 10

28.

```
int arr[5] = {3, 6};
cout << arr[2] << endl;
```

Output: 0;

29. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    int i = 1, j = i + 2 * i;
    switch(j - i) {
    case 1: j++;
    case 2: j--;
    case 0: j++; break;
    }
```

```
default: j = 0;    }
cout<< ++j;
return 0;
}
```

the program outputs 4

30.

```
#include <iostream>
using namespace std;
int main() {
    const int size= 5;
    int array[size]{1,0,1};
    for (int i = 3; i< size; i++) {
        array[i] = array[i-3] + array[i-2] + array[i-1];
    }
    for ( int i=0; i< size; i++) {
        std::cout<<array[i] << std::endl;
    }
}
```

Output:

1
0
1
2
3

31. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    int i, t[4];
    for(i = 3; i; i--) {
        t[i] = i - 1;
        t[t[i]] = t[i];
    }
    cout<<t[0];
    return 0;
}
```

the program outputs 0

32. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    int i, s = 0, t[] = {0, 1, 2, 4, 8, 16};
    for(i = 2; t[i] < 8; i *= 2)
        s += t[i];
    cout<<s;
    return 0;
}
```

Output: 2

33. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    int i = 2, j;
    for(j = 0; j < 0; j -= i)
        i /= 2;
    cout<<i + j;
    return 0; Output: 2;
}
```

34. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    int i = 1, j = i + 2 * i;
    switch(j) {
        default: j = 0;
        case 1: j++; break;
        case 2: j--;
        case 0: j++; break;
    }
    cout<<++j;
    return 0;
} outputs 2
```

35. How many times loop "for(int i=1; i>x; i++)" is executed if x = 15 **There is no correct answer**

36. How many times loop "for(int i=1; i>x; i++)" is executed if x = 15 **OUTPUT: 5**

37. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    char t[] = { 'a', 'z', 'B', 'Z', '0' };
    cout<< t[t[1] - t[0] - t[3] + t[2] + 3] - t[4];
    return 0;
}
```

the program outputs 0

38. #include <iostream>

```
using namespace std;

int fun(int t) {

    return ++t;}

int main() {

int arr[] = { 8, 4, 2, 1 };
```

```
cout<<fun(arr[3]) + arr[2];
```

```
return 0;} the program outputs 4
```

39. #include <iostream>

```
using namespace std;  
int main() {  
    int i, t[4];  
    for(i = 0; i < 3; i++) {  
        t[i] = i;  
        t[i + 1] = 2 * t[i]; }  
    cout<< t[3];  
    return 0;} the program outputs 4
```

40. #include <iostream>

```
using namespace std;  
  
int main() {  
  
    int i = 16, j = 6;  
  
    while(j > 0) {  
  
        i /= 2;  
  
        j -= i / 2;}  
  
    cout<<i + j;  
  
    return 0;}
```

Output 4

41. What will be the output if: int x[] = {7, 5, 6}; int *ptr = x; cout << ptr[1];

Output 5

42. #include <iostream>

```
using namespace std;  
int f(int v) {  
    v = 2 * v;  
    return v * v;}  
int main() {  
    int i = 2;  
    f(i);  
    cout<<i;  
    return 0;}
```

Output 2

43. #include <iostream>

```
using namespace std;  
int main(){  
    int a = 5;
```

```

for (int i = 0; i < 5; i++) {
    int a = 1;
    a = a * 2; }
cout << a << endl;
return 0;}

```

Output 5

```

44. #include <iostream>
using namespace std;
int main() {
    int t[4][4];
    cout<<sizeof(t) / sizeof(t[0]) / sizeof(t[0][0]);
    return 0;}

```

Output 1

```

45. #include <iostream>

```

```

using namespace std;

int main() {

    int t[] = { 1, 2, 3, 4, 5 }, *p = t;

    *p++;

    (*p)++;

    *p++;

    cout<<p[-1];

    return 0;}

```

Output 3

```

46. #include <iostream>

```

```

using namespace std;

int main(){

    int i;

    const char *arr[] = {"C", "C++", "Java", "VBA"};

    const char *(*ptr)[4] = &arr;

    cout << ++(*ptr)[2];

    return 0;}

```

Output ava

```

#include <iostream>
int main() {
double y;
y = 3/2;
y = y == 1 ? (y = 3/2 ==1) : (y == 1.5 ? 0:1);

```



```
std:: cout << y;  
}
```

Output:1

47. #include <iostream>

```
using namespace std;  
  
int main() {  
  
    int i = 0;  
  
    if(i = 1)  
  
        i = 2;  
  
    else  
  
        i = 3;  
  
    cout<<i;  
  
    return 0; }
```

Output : 2

48. What will be the output of:

```
cout<< *arr;  
if int arr[] = {1,2,3};
```

OUTPUT: 1

49. What will be produced by executing the following part of the code?

```
char name[] = {'H','e','l','l','o'};  
  
cout << name;
```

Answer: We cannot tell clearly as we may get some garbage in the output

50.

```
#include <iostream>  
int main() {  
    double y= 5;  
    if ((++y)++ ==6) {  
        std:: cout << y;}  
    if (y == 7) {  
        std:: cout << y++;}  
    }  
    std:: cout << --y;
```

```
}
```

Answer: 777

51.

```
while (true)
{
do
{
cout << "Hi"<< endl;
break;
} while (true);
}
```

infinite loop

52. What is the output of the code?

```
struct Car {
double engineVolume;
int productionYear;
bool isElectric;
};
int main(){
Car mercedes;
mercedes.engineVolume = 4.5;
mercedes.productionYear = 2002;
mercedes.isElectric = false;
Car* copyMercedes = &mercedes;
copyMercedes-> engineVolume = 2.4;
cout<< mercedes.engineVolume << endl;
return 0;
}
```

OUTPUT: 2.4

53.

```
int s = 4;
cout << s-- << endl;
```

output: 4

54.

```
int a = 10;
int b, c;
c = a;
cout<< a<< b<< c;
return 0;
```

111011

55.

```
#include <iostream>
int main () {
int arr[5]{};
```

```

int arr2[5]{1, 2, 3};
int i {0};
for(int i =0; i<5; i++){
arr[i++]=arr2[i--];
}

for(int i =0; i<5; i++){
std:: cout<<arr[i];
}
}

```

12300

56. What are values of array: int x[5] = {1,2} **ANSWER: 1 2 0 0 0**

57. You have array: int b[2][3]={ {1,2,6},{3,4,1}} what will be the output of: cout<<b[0][0];

Output: 1

58. You have array: int b[2][3]={ {1,2,6},{3,4,1}} what will be the output of: cout<<b[0][2];

Output: 6

59. You have array: int b[2][3]={ {1,2,6},{3,4,1}} what will be the output of: cout<<b[1][2];

Output: 1

60. int x = 7, y = 2;

```

bool f;

f = x!=6 || x<y

cout << f;

outcome: 1

```

61.

```

int size = 6;

int arr[size];

for (int i = 0; i<size; i++){

    arr[i] = 2*i;}

```

This may cause an error

```

62. #include <iostream>
using namespace std;
int main() {
int i = 16, j = 8;
do {
i /= 2;
j -= i / 2;
} while(j > 0);
cout<<i + j;

```

```
return 0;}
```

Output: the program enters an infinite loop and does not output anything

63. How to create mySwap function to swap two original integers

```
void mySwap (int &a, int &b){  
    int t=a;  
    a=b;  
    b=t; }
```

64. What happens if you try to compile and run this program?

```
#include <iostream>  
using namespace std;  
int main (){  
    int i=16, j=6;  
    while (j>0){  
        i/=2;  
        j-= i/2;  
    }  
    cout<< i+ j;  
    return 0;  
}
```

OUTPUT: 4

65.

```
int x=10;  
int*ptr=&x;  
int**pptr=&ptr;  
**pptr=20;  
cout<<x<<endl ;
```

Outputs : 20

66.

```
#include<iostream>  
using namespace std;  
int main(){  
  
    int a=10;  
    int *p=&a;  
    *p*=10;  
    cout<<*p*10;}
```

OUTPUT: 1000

67.

```
INT binaryToDecimal(char* binary) {  
    int sum = 0, length = strlen(binary), powerOfTwo = 1;  
    for (int i = length - 1; i >= 0; i--) {  
        sum += (binary[i] - '0') * powerOfTwo;  
        powerOfTwo *= 2;  
    }  
    return sum;  
}
```

68. You have a function:

```
void print(int x=5, int z=10) {cout<<x<<" "<<y<<" "<<z;}
```

 what is the output of function call: **print(5,1)**

69.

```
#include<iostream>  
using namespace std;  
void print(int x,int y=5, int z=10) {  
    cout<<x<<" "<<y<<" "<<z;  
}
```

```
int main() {
    print(5,1);
}
```

OUTPUT: 5 1 10

70.

```
bool isPrime(int n){
    for(int i=2;i*i<=n;i++){
        if(n%i==0){
            return false;
        }
    }
    return true;
}
```

71.

```
int x[]={7,5,6};
int *ptr=x;
cout<<*(ptr+1);
```

OUTPUT: 5

72.

```
#include<iostream>
using namespace std;
int f(int v){
    v=2*v;
    return v*v;}
int main(){
    int i=2;
    f(i);
    cout<<i;
}
```

OUTPUT: 2

73.

```
#include<iostream>
using namespace std;
int main(){
    cout<<(1>2?1:2)<<('a'>'z'?'a':'z');
```

OUTPUT: 2z

74. What will be the sum after executing the following part of the code?

```
#include<iostream>
using namespace std;
int main(){
    int twoDim[3][4]={
        {1,2,3,4},
        {11,22,33,44},
        {111,222,333,444}
    };
    int sum=0;
    for(int i=0;i<3;i++){
        sum+=twoDim[i][3-i];
    }
    cout<<sum;
```

OUTPUT: 259

75. What will be the result of *c3, after executing the following code:

```
#include<iostream>
using namespace std;
int main(){
    char c1='a';
    char c2=c1;
    char *c3=&c2;
    char *c4,*c5;
    c4=c3;
    c5=&c1;
    c2='z';
    c3=c5;
    cout<<*c3;
}
```

OUTPUT: 'a'

76. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    float x = 3.0, y = 2.0;
    int i = 1, j = 2;
    x = (int)x / y + (float)i / j;
    cout<<x;
    return 0;
}
```

c. the program outputs 2.000000

77. int x = 5; int *ptr = &x; What will show the following code: cout << ptr << " " << *ptr << " " << &x; and if address of x is A04B88D0. **b. A04B88D0 5 A04B88D0**

78. int x = 5; int *ptr = &x; What will show the following code: cout << ptr << " " << *&ptr << " " << *&ptr; and if address of x is A04B88D0. **b. A04B88D0 A04B88D0 A04B88D0**

79. int x = 5; int *ptr = &x; What will show the following code: cout << &ptr << " " << *ptr << " " << &x; and if address of x is A04B88D0. **there is no correct answer**

80. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
    int i = 1, j = i + 2 * i;
    switch(j - i) {
        case 1: j++;
        case 2: j--;
        case 0: j++; break;
        default: j = 0;
    }
}
```

```

        cout<< ++j;
        return 0;
    }

```

b. the program outputs 4

81. What happens if you try to compile and run this program?

```

#include <iostream>
using namespace std;
int main() {
    int i = 16, j = 6;
    while(j > 0) {
        i /= 2;
        j -= i / 2;
    }
    cout<<i + j;
    return 0;
}

```

d. the program outputs 4

82. What is the output of this code?

```

#include <iostream>
using namespace std;

int main()
{
    char a[]="c++", b[]="c++";
    if(a == b){
        cout<<"True";
    }
    else {
        cout<<"False";
    }
    return 0;
}

```

OUTPUT: False

83.

```

#include <iostream>
using namespace std;
int main (){
    cout<<-1-1-1;
    return 0;
}

```

Answer:-3

84.

```

#include <iostream>
using namespace std;
int main (){
    int a=15;
    int b=6;
    cout<<((double)a/b);
}

```

Output: 2.5

85.

```
#include <iostream>
using namespace std;
int main () {
    for (int n=0; n<5; n++) {
        int sum=0;
        for (int m=n; m>1; m--) {
            sum +=m;
        }
        cout<<sum<<" ";
    }
}
```

Output: 0 0 2 5 9

86. What will be the output of the following code:

```
int x = 99, y = 88;
int a = (x<y)? x:y;
int b = (x>y)? x:y;
cout << a << b;
```

Answer: 8899

87. How many times loop “for (int i=1; i<x; i++)” is executed if x = 5

ANSWER: 4

88. What will be the content of twoDim after executing the following code?

```
#include <iostream>
using namespace std;
int main() {
    int twoDim[3][3];
    int num=1;
    for (int i=0; i<3; i++) {
        for (int j=0; j<3; j++) {
            twoDim[i][2-j]=num;
            num++;
        }
        num++;
    }
}
```

OUTPUT: num=13 ?

89. What is size of a given array: char s[] = “hello”; **answer :6**

90. What are size of arrays:

```
char s1[] = "bye-bye";
char s2[] = { 'b', 'y', 'e', 'b', 'y', 'e' };
```

OUTPUT: s1=8, s2=7

91. How many times “for(int i=1; i>x; i++)” is executed if changed x =15

ANSWER: There is no correct answer

92. What are values of array: `int x[5]={0};`

OUTPUT: 0 0 0 0 0

93. What will be the output:

```
int x[] = {7, 5, 6};
int *ptr = x;
cout<< *(ptr + 1);
```

OUTPUT: 5

94. What output will be produced by executing the following code?

```
#include <iostream>
using namespace std;
int main(){
    int i=0;
    do{
        i++;
        cout<<i;
        continue;
    }
    while(i<5);
}
```

OUTPUT: 12345

95. Complete the implementation body for the loop in order to get the following output:

```
int main() {
    for ( [int k = 5; k >= 0; k--] ) {
        for ( [int i = k + 2; i <= 6; i++] ){
            [cout << "*";]
        }
        for ([int j = k - 1; j >= 0; j--]){
            [cout << "+";]
        }
        cout << "\n";
    }
    return 0;
}
```

OUTPUT:

```
+++++
*++++
* *+++
* * *++
* * * *+
* * * * *
```

96. What output will be produced by executing the following code?

```
#include <iostream>
using namespace std;
int main () {
    double x = 94.93;
    int y = x;
    cout<< ((double)y);
}
```

OUTPUT: 94

97. What is the output of the following code:

```
#include <iostream>
using namespace std;
int main () {
int a = 10;
int b = 20;
if (a = b) {
cout<< "yes";
}
else if (a > b)
{
cout<< "no";
}
```

OUTPUT: yes

98. What is size of an array - int n[] = {3, 5, 6, 3, 7};

OUTPUT: 5

99. Which solution has the exact same output as in the given example?

```
#include <iostream>
using namespace std;
int main () {
int a[] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17};
for(int i =0; i < 17; i++)
{
if(a[i] % 2==0)
cout << a [i]<< " ";
}
}
```

This program returns an output. Find another solution that will output the same

OUTPUT:

```
#include <iostream>
using namespace std;
int main () {
int a[] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17};
for(int i =0; i < 17; i++)
{
if(a[i] % 2!=0)
cout << a [i]<< " ";
continue;
}
}
```

100. What is the output of the below program?

```
int a = 10;
int b, c;
b = a++;
c=a;
cout<<a<<b<<c;
return 0;
```

OUTPUT: 111011

101. What is the output of this code?

```
#include <iostream>
using namespace std;
int main () {
    int a {5};
    int b {3};
    if (a%b)
        std::cout<<"it is divisible"<< std::endl;
    std::cout<<"it is not divisible"<< std::endl;
}
```

OUTPUT: it is divisible it is not divisible

102. How many stars will be output by executing the following code?

```
#include <iostream>
using namespace std;
int main () {
    int x =3;
    if (x > 0){
        while (x<5){
            x++;
            cout<< " *";
        }
    } else {
        cout<< " *";
    }
}
```

OUTPUT: 2

103. What is the output?

```
#include <iostream>
using namespace std;
int main () {
    int a = 10;
    for (int i=0; i< 10; i++){
        int a = 100;
        a += i;
    }
    cout<< a;
    return 0;
}
```

OUTPUT: 10

104. How many stars will be printed by executing the following code?

```
#include <iostream>
using namespace std;
int main () {
    int y = 12;
    int z = 0.0;
    while(y< 10.0){
        z += 3;
        y += z;
        cout<< " *";
    }
}
```

```
}  
}
```

OUTPUT: 0

105. What is the output of this code?

```
#include <iostream>  
int main () {  
    int arr[5] = {};  
    for(int i=0; i<5; i++)  
        arr[i] = i++;  
    for (int i=0; i< 5; i++)  
        std::cout<< arr[i];  
}
```

OUTPUT: 00204

106. int x=2, y = 6;

cout << y % x << endl;

OUTPUT: 0

107. What is the difference between '=' and '==' signs?

ANSWER: '=' is assignment operator and '==' is equality operator

108. Arrays **must** be explicitly declared providing a _____ size

ANSWER: constant

109. What happens if you try to compile and run this program?

```
#include <iostream>  
using namespace std;  
int main() {  
    int i = 16, j = 8;  
    do {  
        i /= 2;  
        j -= i / 2;  
    } while(j > 0);  
    cout<<i + j;  
    return 0;  
}
```

OUTPUT: the program enters an infinite loop and does not output anything

110. What will be the output of the following part of the code:

int k = 10;

switch(k%2){

case 0: cout << " 0 ";

case 2: cout << " 1 "; break;

case 1: cout << " 2 ";

```
}
```

OUTPUT: 0 1

111.

Programmer wrote this code

```
#include <iostream>
int main () {
char word[] = "hello";
std::cin >> word;
}
```

The program prompts a user to input any string. When user entered word "New York" (7 letters) code worked fine, however when he entered word "program" (7 letters) the code did not run. Why?

OUTPUT: Initial size of array is 5, and providing a word "program" causes stack around variable to be corrupted

112. What output will be produced by executing the following code?

```
#include <iostream>
using namespace std;
int main () {
int a = 15;
int b = 6;
cout << ((double) a/b);
}
```

OUTPUT: 2.5

113. What will cause an error from below?

ANSWER: int a[3] = {0, 1, 2, 3};

114. What is the output?

```
#include <iostream>
using namespace std;
int main () {
int a[] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11};
for(int i=0; i<10; i++){
cout << a[++i] << " ";
}
}
```

OUTPUT: 2 4 6 8 10

115. What will be the output?

```
int a = 1, b = 2, c = 3;
int ***p1, **p2, *p4;
p1 = &p2;
p2 = &p3;
p3 = &a;
p4 = &b;
```

```

**p2 =10;
cout<< **p1<<" "<<**p2<<" "<<*p3;

```

OUTPUT: 10 10 10

116. What will be output

```

void new_func(int*a, int b){
    *a =10;
    b+= 20;
}
int main () {
    void(*func)(int*, int) = new_func;
    int a = 10;
    int b = 5;
    func(&b, a);
    cout<<a<<" "<<b;
    return 0;
}

```

OUTPUT: 10 10

```

116
117
118
119
120
121
122
123
124
int x = 10;
int* ptr = &x;
int** ptrToPtr = &ptr;

cout << x << endl;

return 0;
}

```

117.

```

int x=10;
int* ptr = &x;
int** ptrToPtr = &ptr;
cout<< x<< endl;
return 0;
}

```

At which line pointer to pointer was created?

ANSWER: 119

118. What will be output by executing the following code?

```

int a =10;
int b=12;
int *pt1 =&a;
int *p2 =14;
cout<< *pt1;

```

OUTPUT: This will cause a runtime error

119. Suppose we execute the following code:

```

char c1 = 'A';
char c2 = c1;
char *c3 = &c2;
char *c4;
char *c5;
char **c6;
c4 = c3;
c5 = &c1;
c6 = &c3;
c2 = 'z';
c3 = c5;
**c6 = 'W';

```

*c3 will be?

OUTPUT: 'W'

*c4 will be?

OUTPUT: 'z'

c1 will be?

OUTPUT: 'W'

120. Suppose we execute this code:

```

int a1 = 10;
int a2 = a1;
int a3 = 15;
int *a4 = &a3;
int *a5;
int a6;
int **a7;
a5 = a4;
a6 = &a1;
a7 = &a4;
a2 += 5;
a3 = 0;
a4 = a6;

```

*a6 will be?

ANSWER: 10

a4 will be? Answer: The address of a1

121. What will be the output?

```

int main () {
int nn = 99;
int dat_id = 66;
int *dat_funny = &nn;
whatsup(dat_id, dat_funny);
cout<<nn<<" "<<dat_id<<" "<<*dat_funny;
return 0;
}
void whatsup(int id, int *funny){

```

```
id= 23;
*funny = 32;
}
```

OUTPUT: This will not compile

122.

What will be output by executing the following part of the code?

```
double v1[3] = {1.2, 2.3, 3.4};
double vcopy = {9.9, 9.9, 9.9};
vcopy = v1;
cout<< vcopy[0]<< " "<<vcopy[1]<< " "<< vcopy [2];
```

ANSWER: This will not compile

123. Suppose we execute this code:

```
int a1 = 10;
int a2 =a1;
int a3 = 15;
int *a4 = &a3;
int *a5;
int *a6;
int **a7;
a5 =a4;
a6 = &a1;
a7 = &a4;
a2 += 5;
a3 =0;
a4 =a6;
```

a4 will be?

ANSWER: The address of a1

124.

Write output in ONE word/number

```
bool f1 (int a){
    if (a>1)return true;
    else return false;
}

bool f2 (int a){
    if (a==0) return true;
    else return false;
}

bool f3 (int a){
    if (a<0)return true;
    else return false;
}

int main () {
    bool (*func[3]) (int)={f1,f2,f3};
    int choice, num;
    cin>>choice>>num;
    cout<<(*func[choice]) (num);
```



```
return 0;  
}
```

choice is 0, num is 0

ANSWER: One =1

125. What is the value of the X variable at the end of the following snippet?

```
int X;    X = 'b' - 'a' * ('\ / '\');
```

the snippet is invalid and will cause a compilation error

126. What will be the value of the sum after executing the part of the code?

```
int a[3] = {1,2,3};
```

```
int b[ ] = {11,22,33};
```

```
int sum = 0;
```

```
for (int i = 0; i < 3; i++) sum += pow(a[i],2) + b[i];
```

output: 80

127. #include <iostream>

```
using namespace std;
```

```
int main() {
```

```
    float x = 3.0, y = 2.0;
```

```
    int i = 1, j = 2;
```

```
    x = (int)x / y + (float)i / j;
```

```
    cout << x;
```

```
    return 0;} Output: 2.000000
```

128. What will be the result of *c3, after executing the following code: 'a'

```
char c1 = 'a';  
char c2 = c1;  
char *c3 = &c2;  
char *c4, *c5;  
c4 = c3;  
c5 = &c1;  
c2 = 'z';  
c3 = c5;  
cout << *c3;
```

129. What is the value of the X variable at the end of the following snippet?

```
int X = 1;
```

```
    X = X + 2 * X;
```

```
    X = X / 2 * X;
```

$X = X + 2 + X$; **Output : 8**

130. What is the value of the X variable at the end of the following snippet?

```
int X = 1;
X = X * X + 2;
X = X / X * 2;
X = X + 2 + X;
```

Output : 6

131. `#include<iostream>`

`using namespace std;`

`int f(int a, int b = 3, int c = 3){`

`cout<< ++a * ++b * --c ;`

`return 0;}`

`int main(){`

`f(5, 0, 0);` **OUTPUT: -6**

132. What will cause an error from below if: `int y, x = 5; int *const ptr = &x;` **output: ptr = &y;**

133. What will cause an error from below if: `int y, x = 5; const int *ptr = &x;`

= *ptr = 10;

134. `#include <iostream>`

`using namespace std;`

`int* func(int *ptr) {`

`for (int i = 0; i < sizeof(ptr); i++) {`

`ptr[i] *= 2;} return ptr;}`

`int main() {`

`int arr[] = { 1, 2, 3 ,4 };`

`int *ptr = arr;`

`cout << func(ptr);`

`return 0;` **Output: address of the array**

135. `#include <iostream>`

`using namespace std;`

```

    int f(int i) {
        ++i;
        return i;}
int main() {
    int i = 1;
    i = f(i);
    cout<<i;
    return 0;} OUTPUT: 2

```

136. What is the value of p?

```

#include <iostream>

using namespace std;

int main() {
    int p;

    bool a = true;
    bool b = false;
    int x = 10;
    int y = 5;
    p = ((x + y) + (a + b));
    cout << p; } OUTPUT: 16

```

137. #include <iostream>

```

using namespace std;

int main() {
    int i = 1, j = 0, k;
    k = (j % i) + (i && j) + (!i || !j);
    cout<<k;
    return 0; } OUTPUT: 1

```

138.

```

int main () {
int a =0;
int b =100;
while (a<b) {

```

```

b =b/2-a;
a++;
cout<< " * ";
}
}

```

star 4

139.

Complete the implementation body for the loop in order to get following output

```

+ + + + +
* + + + +
* * + + +
* * * + +
* * * * +
* * * * *

```

```

int main () {
for ([int k =5; k>=0; k--]){
    for ([int i = k+2 ; i<=6; i++){
        [cout<<" * ";]
    }
    for([int j =k -1; j>=0; j--]){
        [cout<<" + ";]
    }
    cout<<"\n";
}
}

```

140.

```

struct Student{
    int subject1;
    int subject2;
    int subject3;
    int subject4;
    int total(){
        return subject1 + subject2 + subject3 + subject4;
    }
};

int main () {
Student Askhat;
Askhat.subject1 = 20;
Askhat.subject2 = 20;
Askhat.subject3 = 25;
Askhat.subject4 = 25;
cout<< Askhat.total ()<<endl;
return 0;
}

```

How many bytes Askhat struct going to take in memory? 16

141. What is size of an array - `int n[] = {3, 5, 6, 3, 7};` Answer:5

142. Which condition is true if `x = 10` and `y = -2` Answer :if(`x >= 10 || y%2==1`)

143. What will be the output of the following part of the code:
`int k = 10;`

```
switch(k%2){
case 0: cout << " 0 ";
case 2: cout << " 1 "; break;
case 1: cout << " 2 ";
```

Output: 0 1

144. Which condition is true if $x = 1$ and $y = 0$ **answer: $\text{if}(x\%2==1 \parallel y>=1)$**

145. **How many times loop** "for(int i=0; i<x; i*=2)" is executed if $x = 100$ **answer: there is no correct answer**

146. How many times loop "for(int i=10; i>x; i-=2)" is executed if $x = -1$ **answer: 6**

147.

```
#include <iostream>
using namespace std;

int main () {
char a[100];
cin>>a;
cout<<a;
}
```

What is the output of the following code if your input is "Good luck with your quiz!\n0 Hope, it's easy to you ;)": **good**

148.

```
#include <iostream>

int main () {
int a =100;{
int a =150;{
int a = 200;
std::cout<<a<<std::endl;
}std::cout<<a<<std::endl;
}std::cout<<a<<std::endl;
}
```

Output: 200

150

100

149.

ANSWER: There will be an error

```
#include <iostream>
using namespace std;
main () {
int r, x = 2;
float y = 5;
r = y%x;
cout<<r;
}
```

150.

```
bool f1 (int a){
```

```

    if (a>1)return true;
    else return false;
}

bool f2 (int a){
if (a==0) return true;
else return false;
}
bool f3 (int a){
if (a<0)return true;
else return false;
}
int main () {
bool (*func[3])(int)={f1,f2,f3};
int choice, num;
cin>>choice>>num;
cout<<(*func[choice])(num);
return 0;
}

```

Write output in ONE word/number : choice is 3, num is 4 **OUTPUT: error**

151.

```

char c1 = 'A';
char c2 =c1;
char *c3 =&c2;
char *c4;
char *c5;
char **c6;
c4 =c3;
c5 =&c1;
c6 =&c3;
c2 = 'z';
c3 = c5;
**c6 = 'W';

```

***c4 will be? ANSWER: 'Z'**

152.

```

int a1 = 10;

int a2 = a1;
int a3 =15;
int *a4 = &a3;
int *a5;
int a6;
int **a7;
a5 =a4;
a6 =&a1;
a7 =&a4;
a2 +=5;
a3 =0;
a4 = a6;

```

***a4 = 10**

153.

```

double carr[]={1.2, 2.3, 3.4};
double *pa;
pa = carr;

```

```
*pa = 5.5;
*(pa+1) = *(pa+2);
cout<< carr[0]<<" "<< carr[1]<<" "<<carr[2];
```

OUTPUT: . 5.5 3.4 3.4

154. **output: 2.4**

```
cout<<(int) (2.0 * 6.0) / 5.0;
```

155. **Match codes with correct outputs**

```
#include<iostream>
using namespace std;

int main () {
int x[5]={1, 2, 3, 4, 5};
for(int i=0; i<5; i++){
    if(i%3 == 2)break;
    x[i] = i*2;
    cout<<x[i]<<" ";
}
return 0;
}
```

OUTPUT: 0 2

```
#include<iostream>
using namespace std;

int main () {
int x[5]={5, 4, 3, 2, 1};
for(int i=1; i<4; i++){
    if(i%2 == 0)continue;
    x[i] = i;
    cout<<x[i]<<" ";
}
return 0;
}
```

OUTPUT: 1 3

```
#include<iostream>
using namespace std;

int main () {
int x[5]={1, 2, 3, 4, 5};
for(int i=0; i<5; i++){
    if(i%2 == 0)continue;
    x[i] = i*3;
    cout<<x[i]<<" ";
}
return 0;
}
```

OUTPUT: 3 9

156. What will be the output of the following part of the code?

```

int mat[3];
int i, j;
int num = 0;
for (i = 0; i < 3; i++) {
    for (j = 2; j >= 0; j--) {
        mat[i] = j;
    }
    cout << mat[num] << " ";
    num++;
}

```

output: 000

157.

```

#include<iostream>
using namespace std;
int main () {
    int a = 1;
    for (int i = 0; i < 10; i++){
        a *= 2;
    }
    cout<<a;
}

```

OUTPUT: 1024

158.

```

bool f1 (int a){
    if (a>1)return true;
    else return false;
}

bool f2 (int a){
    if (a==0) return true;
    else return false;
}

bool f3 (int a){
    if (a<0)return true;
    else return false;
}

int main () {
    bool (*func[3]) (int)={f1,f2,f3};
    int choice, num;
    cin>>choice>>num;
    cout<<(*func[choice]) (num);
    return 0;
}

```

choice is 1, num is -1
ANSWER: 0

159.

```

int a1 = 10;
int a2 = a1;
int a3 =15;
int *a4 = &a3;
int *a5;
int a6;
int **a7;

```



```

a5 =a4;
a6 =&a1;
a7 =&a4;
a2 +=5;
a3 =0;
a4 = a6;      *a5 will be?

```

OUTPUT: 0

160.

```

int a1 = 10;
int a2 = a1;
int a3 =15;
int *a4 = &a3;
int *a5;
int a6;
int **a7;
a5 =a4;
a6 =&a1;
a7 =&a4;
a2 +=5;
a3 =0;
a4 = a6;      *a4 will be?

```

OUTPUT: 10

161.

```

#include<iostream>
using namespace std;

int main () {
int a = 1, b =2, c = 3;
int ***p1, **p2, *p3, *p4;
p1 = &p2;
p2 = &p3;
p3 = &a;
p4 = &b;
*p2 = &c;
cout<< ***p1<<" "<<**p2<<" "<<*p3;
}

```

OUTPUT: 3 3 3

162.

```

int a1 = 10;
int a2 = a1;
int a3 =15;
int *a4 = &a3;
int *a5;
int a6;
int **a7;
a5 =a4;
a6 =&a1;
a7 =&a4;
a2 +=5;

```

```
a3 =0;
a4 = a6;    **a7 will be?
```

OUTPUT: 10

163. How many times loop “for(int i=1; i<=x; i+=3)” is executed if x=15 **Output:5**
164. what will be the sum after executing the following part of the code?
165. What is the output of the code?

```
Struct Car{

double engineVolume;

int productionYear;

bool isElectric;

};

int main(){

Car mercedes;

mercedes.engineVolume=4.5;

mercedes.productionYear=false;

Car* copyMercede=&mercedes;


copy mercedes->engineVolume=2.4;

cout<<mercedes.engineVolume<<endl;

return 0;

} 2.4
```

166. `#include <iostream>`
- ```
using namespace std;

int fun(int *t){

return *(++t);}

int main(){

int arr[]={8, 4, 2, 1};

cout<<fun(arr+2);

return 0;}
```
- output: 1**

167. Suppose we have the following struct definitions are variable declarations in main for the below questions:

```

#include <iostream>

using namespace std;

struct Student{
 int ID;

 int year;

};

 struct Course{

 char dept[4];

 int number;

 int teacherID;

 Student stds[25];};

int main() {

 Course introToProgramming:

 ...

 return 0;

```

What is the proper syntax for setting the year of the 10th student to 2? - `introToProgramming.stds[9].year = 2;`

168. What happens if you try to compile and run this program? - 200

```

#include <iostream>

using namespace std;

int main(){

 int a=100, b=200;

 int *p=&a, *q=&b;

 p=q;

 cout<<*p;

 return 0;

}

```

169. What happens if you try to compile and run this program? - 2

```

#include <iostream>

using namespace std;

int main(){

int i=2, j;

for(j=0; j<0;j-=i)

i/=2;

cout<<i+j;

return 0;

}

```

170. What will be the output if: `x[]={7,5,6}; *ptr=x;`

```
cout<<ptr[1]; - 5
```

171. `#include <iostream>`

```

using namespace std;

int main(){

int i=1, j=0, k;

k=(j%i)+(i&&j)+(!i||!j);

cout<<k;

return 0;

} - output 1

```

172. `#include <iostream>`

```

using namespace std;

int main(){

int arr[]={4,5,6,7};

int *p=arr;

cout<<*arr+9;

return 0;

} - output 13

```

173. According to rules of structure member alignment what is the most optimal way to create structure?

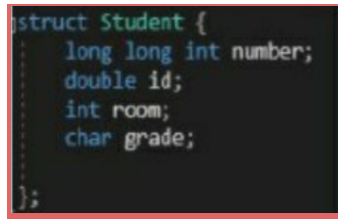
```
struct Student {

 long long int number;

 double id;

 int room;

 char grade;};
```



```
struct Student {
 long long int number;
 double id;
 int room;
 char grade;
};
```

174. `#include <iostream>`

```
using namespace std;

int main() {

 char a='A', *b=&a, **c=&b;

 **c=a+(a==*b) ;

 cout<<a;

 return 0;

}
```

output B

175. What is the value of the X variable at the end of the following snippet?

```
int X;

X='b'-'a'*('\\'/'\\');
```

output 1

176. `#include <iostream>`  
`using namespace std;`  
`void f(int i) {`  
 `i++;`  
`}`  
`int main() {`

```

int i=1;
f(i);
cout<< i;
return 0;
}

```

**output: 1**

177. `#include <iostream>`  
`char *f(char *p) {`  
`return p++;`  
`}`  
`char *g(char *p) {`  
`return p+=2;`  
`}`  
`int main() {`  
`char s[] = "ABCDEFGHJIJ";`  
`char p = *f(g(f(s+6)));`  
`cout<<p- 'A' ;`  
`return 0;`  
`}`

**OUTPUT : 8**

178. `#include <iostream>`  
`using namespace std;`  
`int main() {`  
`int a = -1; b=1;`  
`float i= 2.0, j = -2.0;`  
`cout << (a>b) +(b>a) + (i>j) + ('z' > 'a');`  
`return 0;`  
`}`

**output : 3**

179. `#include <iostream>`  
`using namespace std;`  
`int main() {`

180. What happens if you try to compile and run this program?

```

#include <iostream>
using namespace std;
char* func(char *ptr) {
 for(int i = 0; i < sizeof(ptr); i++) {
 swap(ptr[i], ptr[sizeof(ptr) - i - 1]);
 }
 return ptr;
}
int main()
{
 char arr[] = "hello";
 char *ptr = arr;
 cout << func(ptr);
 return 0;
}

```

**OUTPUT: a. hello**

181. What happens if you try to compile and run this program?

```

#include <iostream>
using namespace std;

```

```
int main ()
{ cout << (2 > 1 ? 1 : 2) << ' ';
 cout << ('m' < 'm' ? 'n' : 'm') << '\n';
 return 0;
} OUTPUT: b. 1 m
```

182. what will be the output if : `int x[] = {7, 5, 6}; cout << *(x+2);` **output: 6;**

183. what output will be produced by executing the following code?

```
#include <iostream>
using namespace std;
int main () {
 int i=8;
 while (i>0){
 if (i>5) {
 cout<<"X";
 i=i-2;
 }
 else {
 cout<<"Y";
 i=i-1;
 }
 }
}
```

**answer: XXYYYY**

184. **Fill the gaps:**

```
#include <iostream>
using namespace std;
void printArray(int a[], int n) {
 for (int i=0; i<n; i++){
 cout<< a[i] << " ";
 }
}
void main(){
 int arr[3][2]={1,2},{4,6}, {7,3}};
 for(int i=0; i<3; i++){
 printArray(arr[i],2);
 cout<<endl;
 }
}
```

185. Programmer wrote following code

```
#include <iostream>
int main () {
 char word[]="hello";
 char word2[6]={'h','e','l','l','o'};
 if (word == word2) {
 std::cout<<"Two words are the same"<< std::endl;
 }
 else{
 std::cout<<"Two words are different"<< std::endl;
 }
}
```

186. What is the output of this code and why?

answer: Two words are different

because he is comparing memory addresses where arrays are stored and not arrays. use strcmp() function to compare strings

187. What are size of arrays: char s1[]="buy-buy"; char s2[]={'b','y','e','-','b','y','e'};

s1= 8, s2=7

188. What are size of arrays: char s1[]="hi"; char s2[]={'h','i'};

s1= 3, s2=2

189. #include <iostream>

using namespace std;

int main () {

int x[] = {5, 4, -3, 15, 13, 50};

x[3] = x[0]+x[2];

x[5]=x[x[1]];

x[4] = 75 + x[4];

for (int i=0; i<6; i++) {

cout<< x[i] << " ";

}} **OUTPUT: 5 4 -3 2 88 13**

190. what values are stored in the array x after running the following code?

```
#include <iostream>
using namespace std;
int main () {
 int x[]={5,4,-3,15,13,50};
 x[3]=x[0]+x[2];
 x[5]=x[x[1]];
 x[4]=75+x[4];
 for (int i=0; i<6; i++) {
 cout<<x[i]<<" ";
 }
}
```

answer: 5 4 -3 2 88 13

191. int a = 3, b = 2;

double c;



```
c=a/b;
```

```
cout<< c; OUTPUT:1
```

192. What will be the output if: `int x[]={7,5,6}; cout<<*(x+2);` - **6**

193. What output will be produced by executing the following code?

```
#include <iostream>
using namespace std;
int main() {
 int a = 25;
 double b=7;
 double c = a/b;
 cout << c; OUTPUT:3.571
```

194. `#include <iostream>`  
`using namespace std;`  
`int main() {`  
`int i=1, j=0, k;`  
`k=(i&&j)+(i||j)+!(i&&j)+!i+j;`  
`cout<<k;`  
`return 0;`  
`}` **output 2**

195. What will cause an error from below? -

```
a.char a[]="hello";
b.int x[12];
c.There no correct answer
d.int a[4]={1,2,3,4};
e.char a[]={'a', 'r', 't'};
```

196. what is the output?

```
int x=4, y=20;
cout<<y%x<<endl;
```

**OUTPUT:0**

197. what will be the output of the following part of the code?

```
int mat[3];
int i,j;
int num=0;
for(i=0; i<3; i++){
 for (j=2; j>=0; j--){
 mat[i]=j;
 }
 cout<<mat[num]<<" ";
 num++;
}
```

**answer: 0 0 0**

198. `#include <iostream>`  
`using namespace std;`  
`int main() {`  
`char *ptr;`  
`char Str[ ] = "abcdefg";`  
`ptr = Str;`

```
ptr += 5;
cout << ptr;
return 0;
}
```

**OUTPUT : fg**

199. #include <iostream>

```
using namespace std;
```

```
int main() {
```

```
int t[4] = { 0, -1, -2, -3 }, *p=t+3;
```

```
cout<< p[*p] - t[2];
```

```
return 0; }
```

**output: 2;**

200. x

201. what is the output of the following code?

```
#include <iostream>
int a;
int main () {
 std::cout<<a;
}
```

**OUTPUT:0**

202. What will be output by executing the following code?

```
char c='A';
char *ch;
*ch='X';
cout<< *ch;
```

**answer: This will cause a runtime error**

203. what will be the output ?

```
void bla(double *d) {
 *d=123.4;
}
int main () {
 double x=55.5;
 bla(x);
 cout<<x;
 return 0;
}
```

**answer: This will not compile**

204. what will be output by executing the following part of the code?

```
char xc[4]={'a','b','c','d'};
char *xp[4];
for(int i=0; i<4; i++){
 xp[i]=&xc[i];
}
for(int i=0; i<4; i++){
 *xp[i]=*xp[3-i];
}
```

```
cout<<xc[0]<<" "<<xc[1]<<" "<<xc[2]<<" "<<xc[3];
answer: d c c d
```

205.

```
#include <iostream>

using namespace std;

int main() {
 for (int n=0; n<5; n++) {

 int sum = 0;

 for (int m = n; m>1; m--) {

 sum += m;

 } cout << sum << " ";

 } } OUTPUT: 0 0 2 5 9;
```

206. The programmer wrote Bubble sort code:

```
#include <iostream>

int main()
{
 const int size=11;
 char word [size]="programmer";
 for (int i=0;i<size-1;i++){
 for(int j=0;j<size-1;j++){
 if(word[j]>word[j+1]){
 char temp=word[j];
 word[j]=word[j+1];
 word[j+1]=temp;
 }
 }
 }
}

std::cout<<word;
return 0;
}
```

To sort string. What is the output of this code and why?

It is sorted in alphabetic order.

The code will not produce any output since Null terminator is sorted to be first.

207. Int a=1, b=2, c=3;

```
Int ***p1, **p2, *p3, *p4;
```

```
p1=&p2;
```

```
p2=&p3;
```

```

p3=&a;

p4=&b;

p2=&p4;

cout<<***p1<<" "<<**p2<<*p3; OUTPUT : 2 2 1

```

208. **Char c = 'A';**

**Char \*ch;**

**\*ch ='X';**

**Cout<<\*ch; OUTPUT: . This will cause a runtime error**

209. **#include <iostream>**

```

using namespace std;

void multiplybytwo(int a) {

 a = 1;

 a *= 2;}

int main(){

 int a = 5;

 multiplybytwo(a);

 cout << a << endl;

 return 0;} OUTPUT: 5

```

210. What will be the content of twoDim after executing the following code?

```

#include <iostream>
using namespace std;
int main() {
int twoDim[3][3];
int num=1;
for (int i=0; i<3; i++){
for (int j=0; j<3; j++){
 twoDim[i][2-j]=num;
 num++;
}
num++;
}
}

```

Select one:

d. 3 2 1

7 6 5

11 10 9

211.

```
#include <iostream>
using namespace std;
int main() {
 int i = 1, j = 0, k;
 k = (i && j) + (i || j) + !(i && j) + !i + j;
 cout<< k;
 return 0;
}
```

the program outputs 2

212.   #include <iostream>  
using namespace std;  
void func(int \*ptr) {  
 int a = \*ptr;  
 a += a;  
 ptr = &a;}  
int main(){  
 int a = 1;  
 int \*ptr = &a;  
 func(ptr);  
 cout << \*ptr;  
 return 0; } **OUTPUT : 1**

213.

```
#include <iostream>
using namespace std;
void f(int i) {
 i++;
}
int main() {
 int i = 1;
 f(i);
 cout << i;
 return 0;
}
```

the program outputs 1

214.

```
#include <iostream>
using namespace std;
int main()
{
 int a = 10;
```

```
int *p = &a;
*p *= 10;
cout << *p * 10;
return 0;
}
```

answer: 1000

215. What happens if you try to compile and run this program?

```
#include <iostream>
using namespace std;
int main() {
 int i = 5, j = 4;
 for(i--; i--; i--)
 j--;
 cout<<i + j;
 return 0;
}
```

c. the program outputs 1

216.

217. How many times loop “for(int i=1; i>x; i++)” is executed if x = 15 **There is no correct answer**

218. `#include <iostream>`

```
using namespace std;
```

```
int main() {
```

```
int i, t[4];
```

```
for(i=0; i<3; i++) {
```

```
t[i]=i;
```

```
t[i+1]=2*t[i];
```

```
}
```

```
cout<<t[3];
```

```
return 0;
```

```
} output 4
```

219.

```
#include <iostream>
```

```
int main() {
```

```
double y=5;
```

```
if((++y)++ ==6) {
```

```
std::cout<<y;
```

```

}

if(y==7) {

 std::cout<<y++;

}

std::cout<<--y;

} output 777

```

220. `#include <iostream>`  
`using namespace std;`  
`int main(){`  
`int a=5, b=0;`  
`int *ptr=&b;`  
`for (int i=0;i<a;i++){`  
`b+=10;`  
`}`  
`ptr=&a;`  
`cout<<b*ptr<<endl;`  
`return 0;`  
`} output 5`

221. `int arr[] = { 5,6,7 }; int *a = arr; a = a + 2; cout << a[-1] << endl; output 6`

222. `#include <iostream>`

```

using namespace std;

int f(int t[][2]) {

return t[0][0] + t[0][1];}

int main() {

int i,t[2][2] = { {0,4},{4,2} };

i = f(t);

cout<<i;

return 0;

} OUTPUT : 4

```

**223. What happens if you try to compile and run this program?**

```

#include <iostream>

using namespace std;

```

```

int fun(int t) {

return ++t;

}

int main() {

int arr[] = { 8, 4, 2, 1 };

cout<<fun(arr[3]) + arr[2];

return 0;

} the program outputs 4

```

224. `#include <iostream>`

```

using namespace std;

int answer;

int main() {

for (int i=1; i<=100; i++)

answer += (i%2);

cout<< answer;

return 0;

} output: 50;

```

225.

```

#include <iostream>
using namespace std;
int main() {
int i = 1, j = i + 2 * i;
switch(j - i) {
case 1: j++;
case 2: j--;
case 0: j++; break;
default: j = 0;
}
cout<< ++j;
return 0; }

```

**ANSWER:** **the program output 4**

226. `#include <iostream>`



```

using namespace std;

int main() {

double y;

y=3/2;

y=y==1?(y=3/2==1):(y==1.5?0:1);

cout<<y;

}

```

ANSWER: the program output 1

227. #include <iostream>

```

using namespace std;

int main() {

char s[10] = "ABCDE", *p = s + 3;

cout << p[1] - p[-1];

return 0; } Output: 2

```

228.

```

int s = 4;
cout<< ++s <<endl; OUTPUT: 5

```

229. int s = 4;

```

cout<< s++ <<endl; OUTPUT: 4

```

230. void f() {

```

}

```

```

int main () {

```

```

int i;

```

```

i = f();

```

```

cout<<i;

```

```

return 0; } Output: compilation fails

```

231. What will be the output of cout << &arr[0] << " " << &arr[2]; if: int arr[] = {1, 2, 3}; and the address of first element of array is AABBC00 b. AABBC00 AABBC08

232.

```

#include <iostream>

using namespace std;

int main() {

int a = -1, b = 1;

float i = 2.0, j = -2.0;

cout<< (a > b) + (b > a) + (i > j) + (j > i) + ('z' > 'a');

return 0;

} OUTPUT: the program outputs 3

```

233. #include <iostream>

```

using namespace std;

int main(){

int a=0;

int b=100;

while(a<b){

 b=b/2-a;

 a++;

 cout<<"*";

}

} OUTPUT: the program outputs 4

```

234. What will be the output if: int x[] = {7, 5, 6}; int \*ptr = x;  
 cout << \*(ptr+1); - OUTPUT: the program outputs 5

235. int x=10;

```

int* ptr=&x;

int** ptrToPtr = &ptr;

**ptrToPtr=20;

cout<<x<<endl;

OUTPUT: the program outputs 20

```

236. What are sizes of arrays: `char s1[] = "hi"; char s2[] = {'h', 'i'};` `s1 = 3, s2 = 2`

237. `#include <iostream>`

```
using namespace std;
```

```
int main() {
```

```
 double arr[] = {1.2, 2.3, 3.4};
```

```
 double *pa;
```

```
 pa = arr;
```

```
 *pa = 5.5;
```

```
 *(pa + 1) = *(pa + 2);
```

```
 cout << arr[0] << " " << arr[1] << " " << arr[2] << endl;
```

```
 return 0;
```

```
} OUTPUT: the program outputs 5.5 3.4 3.4
```

238. What is the output?

```
cout << 22 / 5 * 3;
```

```
OUTPUT: 12
```

239. `#include <iostream>`

```
using namespace std;
```

```
int main() {
```

```
int t[4] = { 0, -1, -2, -3 }, *p = t + 3;
```

```
cout<<p[*p] - t[2];
```

```
return 0;
```

```
} OUTPUT: 2
```

240. `#include <iostream>`

```
using namespace std;
```

```
int main(){
```

```
int arr[]={4,5,6,7};
```

```
int *p=arr;
```

```
cout<< *arr+9;
```

```
return 0;
```

```
} OUTPUT: 13
```