CPP Practice Question

Q1 - Difference between equal to (==) and assignment operator(=)

Ans - The "=" is an **assignment operator** which is used to assign the value(for eg *x=5;*).
The '==' operator checks whether the two given operands are equal or not. If they are equal,
it returns true. Otherwise, it returns false. (*4==4 -> True*)

Q2- What is the size of the int data type?

Ans- 4 bytes

Q3 - What is C++?

Ans- C++ is an object-oriented programming language created by Bjarne Stroustrup. It was
released in 1985.
C++ is a superset of C with the major addition of classes in C language.
Initially, Stroustrup called the new language "C with classes". However, after some time the
name was changed to C++. The idea of C++ comes from the C increment operator ++,

Q4 - What is the difference between compile time and runtime?
Ans- Compile-time is the time at which the source code is converted into an executable
code. While the run time is the time at which the executable code started running in the CPU

Q5 - What are pointers in C++?
Ans- A pointer is a variable that stores the memory address of a variable. And this makes
things very fast in CPP.
int x;
Int *p = &x;   - p is the Pointer which will remember the address of int variable x

Q6 - How to input char data from the user in C++?
char ch;
std::cin>>ch;   - The character input by the user will be stored in the 'ch' variable

Q7 - Which among the following statements is correct about the program given below?

```
 1  #include <iostream>
 2  using namespace std;
 3 ∨    int main()
 4      {
 5          int x;
 6          int *p;
 7          x = 7;
 8          p = &x;
 9          cout << *p;
10          return 0;
11      }
```

1. The output will be 7
2. The output will be 14
3. The output will be 0
4. The output will be 1

Ans - Output will be 7. Pointer p has the memory address of x, and here we are displaying the pointer with a dereference operator that will display the value 7. (which was stored in variable x)

Q8 - Which of the following will give the size of object or type?

1. sizeof
2. malloc
3. realloc
4. calloc

Ans - The sizeof operator is used to give the size of object or type.

Q9 - What should be the output of the below code?

```
main(){

    int i;

    int j=10;

    i=(j++ + j+100 +999+j);

    cout<< i <<endl ;

}
```

1. 1010
2. 1001
3. 11
4. 1131

Ans - 1131. Initially j is 10, now after "j++" j will be still 10, but it's value is now increment by 1 so in j+100 it would be (11+100) and then further (999+11), now if we sum them all it become = 10+11+100+999+11 = 1131

Q10 - Convert 10101011 into Decimal

Ans - $1*2^0 + 1*2^1 + 0*2^2 + 1*2^3 + 0*2^4 + 1*2^5 + 0*2^6 + 1*2^7$ = 171