Q1. Explain access specifiers used in C#?

Answer:-

In C# there are 6 types of access specifier :-

1. Public :- The type or member can be accessed by any other code in the same assembly or another assembly that references it.
2. Private :- The type or member can be accessed only by code in the same class or struct.
3. Protected :- The type or member can be accessed only by code in the same class, or in a class that is derived from that class.
4. Internal :- The type or member can be accessed by any code in the same assembly, but not from another assembly.
5. Protected internal :- The type or member can be accessed by any code in the assembly in which it is declared, or from within a derived class in another assembly.
6. Private protected :- The type or member can be accessed only within its declaring assembly, by code in the same class or in a type that is derived from that class.

Q2. What is difference between public access specifier and internal access specifier?

Answer:-

If a member id defined under public access specifier then that member is accessible from anywhere.

If a member is defined under internal access specifier then that member can only be access from inside assembly.

Q3. What mean by Sealed class?

Answer:-

Sealed class is the class which does not allow other class to inherit sealed class. This keyword works like final keyword in java.

Q4. Explain the concept of polymorphism and its types.

Answer:-

Polymorphism is the OOP concept which allows to create multiple behaviour with same name. It makes easy to remember only one name of behaviour.

There Are 2 types of polymorphism:-

1. Compile time :- We can achieve compile time polymorphism using overloading.
2. Run time :- We can achieve run time polymorphism using overriding.

Q5. What is mean by Method Overloading?

Answer:-

Method Overloading is concept of polymorphism where we can define multiple method with same name but different number of arguments or different order of arguments.

Q6. Which things has to be considered in case of Method Overloading?

Answer:-

Things that has to be considered in case of Method Overloading:-

1. Two or more method with same name
2. Should be in same class
3. Different number of parameter
4. Different order of parameters
5. Different data types of parameter

Q7. What is difference between class which contains private constructor and sealed class?

Answer:-

If we use private constructor in our class then we cannot create object of that class. But we can use that class using inheritance.

But if we use sealed class then we cannot inherit that class in other class. For that class to come in use we need to use concept of aggregation where we create object of that class inside other class and use member of sealed class.

Q8. What is mean by upcasting?
Answer:-

Consider two class base and derived where derived class is inheriting base class. If we create reference of base class and referred to derived class then that concept is called upcasting.

Q9. What is mean by Name Mangling?
Answer:-

Name mangling is the encoding of function and variable names into unique names so that linkers can separate common names in the language. Type names may also be mangled. Name mangling is commonly used to facilitate the overloading feature and visibility within different scopes. The compiler generates function names with an encoding of the types of the function arguments when the module is compiled. If a variable is in a namespace, the name of the namespace is mangled into the variable name so that the same variable name can exist in more than one namespace.

Q10. Can we overload static methods?
Answer:-

We can overload static methods. We can have two ore more static methods with same name, but differences in input parameters.