

42 Lecture - CS201

Important Mcqs

1. **What is a class template in C++?**
- a. A class that is used to create multiple instances of a class
 - b. A class that can be used with multiple data types
 - c. A class that is used to define a single data type
 - d. A class that cannot be instantiated

Answer: b

2. **How do you declare a class template in C++?**
- a. By using the keyword "class" followed by the template parameter list and the class declaration
 - b. By using the keyword "template" followed by the template parameter list and the class declaration
 - c. By using the keyword "typedef" followed by the template parameter list and the class declaration
 - d. By using the keyword "typename" followed by the template parameter list and the class declaration

Answer: b

3. **What is the purpose of a template parameter in a class template?**
- a. To represent a data type that can be used by the class
 - b. To represent a constant value that can be used by the class
 - c. To define the size of the class
 - d. To determine the access level of the class members

Answer: a

4. **How do you instantiate a class template in C++?**
- a. By defining a new class with the same template parameters as the original class
 - b. By creating an object of the class with the desired data type as the template argument
 - c. By using the keyword "using" followed by the name of the class template
 - d. By using the keyword "typename" followed by the name of the class template

Answer: b

5. **How does template specialization work in class templates?**
- a. It allows you to create a specialized version of the class for a specific data type or value
 - b. It allows you to define a new template parameter for the class
 - c. It allows you to restrict the data types that can be used with the class
 - d. It allows you to override the default implementation of the class

Answer: a

6. **How do you define member functions for a class template in C++?**

- a. By defining the functions outside the class definition
- b. By defining the functions inside the class definition
- c. By using the keyword "template" before the function definition
- d. By using the keyword "typename" before the function definition

Answer: b

7. **How do you overload a class template in C++?**

- a. By defining a new class with the same name but different template parameters
- b. By defining a new member function with the same name but different template parameters
- c. By defining a new member function with a different name but the same template parameters
- d. By defining a new class with a different name but the same template parameters

Answer: b

8. **What are the advantages of using class templates in C++?**

- a. They provide code reusability and improve code quality
- b. They reduce development time and cost
- c. They allow for generic programming and flexible data structures
- d. All of the above

Answer: d

9. **What are the potential drawbacks of using class templates in C++?**

- a. They can lead to longer compilation times
- b. They can be difficult to understand for novice programmers
- c. They can be prone to errors and bugs
- d. All of the above

Answer: d

10. **Can class templates be used with user-defined data types?**

- a. Yes, as long as the data type is specified as a template parameter
- b. No, class templates can only be used with built-in data types
- c. It depends on the complexity of the user-defined data type
- d. It depends on the implementation of the class template

Answer: a