Java Programming Multiple Choice Questions

1. 1. What is the purpose of the `static` keyword in Java?

- A) To define a constant variable
- B) To create a method that can be called without an instance of the class
- C) To prevent a class from being inherited
- D) To define an abstract method

Answer: B

2. 2. Which of the following best describes a `final` variable in Java?

- A) A variable that can be modified multiple times
- B) A variable that can only be assigned once
- C) A variable that can be inherited by subclasses
- D) A variable that must be initialized in a static block

Answer: B

3. 3. What is method overloading in Java?

- A) Having two methods in the same class with the same name and parameters
- B) Having two methods in the same class with the same name but different parameters
- C) Having two methods in the same class with different names and parameters
- D) Having a method in a subclass with the same name as a method in the superclass

Answer: B

4. 4. Why can't a static method refer to 'this' or 'super'?

- A) Because 'this' and 'super' are not static
- B) Because 'this' refers to an instance and 'super' to a superclass
- C) Because static methods can only refer to static data
- D) All of the above

Answer: D

5. 5. Which of the following statements about Java input/output is true?

- A) `System.out.print` writes data to the standard output stream
- B) `System.out.println` writes data to the standard error stream
- C) `System.err.print` writes data to the standard output stream
- D) `System.err.println` writes data to the standard input stream

Answer: A

6. 6. Which method would you use to insert a new node at the end of a singly linked list?

- A) InsertAtBeginning()
- B) InsertAtEnd()
- C) InsertAfter()
- D) InsertBefore()

Answer: B

7. 7. How does the insertion of a node at the beginning of a doubly linked list differ from that in a singly linked list?

- A) It requires updating two links (next and prev) instead of one
- B) It requires creating a new head node
- C) It requires updating only the prev link
- D) There is no difference

Answer: A

8. 8. Can a `final` class be extended in Java?

- A) Yes
- B) No
- C) Only if it is not abstract
- D) Only if it is not static

Answer: B

9. 9. What is a static block in Java used for?

- A) To initialize instance variables
- B) To initialize static variables
- C) To create instance methods
- D) To define a class constructor

Answer: B

10. 10. What is the correct way to delete a node from a singly linked list given only access to that node?

- A) You cannot delete a node without access to its previous node
- B) Copy the data from the next node to the current node and delete the next node
- C) Set the current node to null
- D) Move the next node to the current node's position

Answer: B