



A **showbie** PRODUCT

Date _____

Score _____

- 1.** Explain the importance of understanding SQL Injection prevention in Java development.
- 2.** Explain the concept of constructors in Java and their types.
- 3.** Discuss the differences between method overloading and method overriding in Java.

4. Discuss the benefits of method overloading in Java programming.
5. Explain the concept of methods in Java programming.
6. Explain the role of JdbcTemplate in Java for database operations.
7. Discuss the significance of Data Access Object (DAO) pattern in Java applications.

8. Discuss the importance of constructors in Java.

9. Explain the difference between class and object in Java.

10. What role does Polymorphism play in Java programming?

- ☐ (A) Polymorphism is used for data hiding.
- ☐ (B) Polymorphism is the process of encapsulation.
- ☐ (C) Polymorphism allows methods to be called on objects of different classes through a common interface, promoting flexibility and extensibility.
- ☐ (D) Polymorphism is the implementation of inheritance.

11. What is the purpose of Abstraction in Java?

- ☐ (A) Abstraction is used for creating multiple instances of a class.
- ☐ (B) Abstraction is the process of inheritance.
- ☐ (C) Abstraction is the implementation of interfaces.
- ☐ (D) Abstraction allows hiding the implementation details and showing only the essential features of an object.

12. What is the role of Interfaces in Java?

- ☐ (A) Interfaces define a set of methods that a class must implement, enabling multiple inheritance and achieving abstraction.
- ☐ (B) Interfaces are used for data hiding.
- ☐ (C) Interfaces are the implementation of polymorphism.
- ☐ (D) Interfaces are used for encapsulation.

13. How does Inheritance promote code reusability in Java?

- ☐ (A) Inheritance allows a class to inherit fields and methods from another class, promoting code reuse and reducing redundancy.
- ☐ (B) Inheritance is the process of polymorphism.
- ☐ (C) Inheritance is the implementation of interfaces.
- ☐ (D) Inheritance is used for data hiding.

14. Why is Abstraction considered a key principle in Java programming?

- ☐ (A) Abstraction helps in managing complexity by hiding unnecessary details and focusing on essential features.
- ☐ (B) Abstraction is the implementation of polymorphism.
- ☐ (C) Abstraction is the process of encapsulation.
- ☐ (D) Abstraction is used for code reusability.

15. What is the primary benefit of using Interfaces in Java?

- ☐ (A) Interfaces are used for data hiding.
- ☐ (B) Interfaces are the implementation of encapsulation.
- ☐ (C) Interfaces are used for code reusability.
- ☐ (D) Interfaces enable achieving multiple inheritance, defining a contract for classes to implement, and promoting code flexibility.

16. Discuss a real-world scenario where Polymorphism can be applied effectively.

17. What is Polymorphism in Java?

- ☐ (A) Polymorphism is the process of data hiding.
- ☐ (B) Polymorphism is the implementation of encapsulation.
- ☐ (C) Polymorphism is the abstraction of classes.
- ☐ (D) Polymorphism allows objects of different classes to be treated as objects of a common superclass, enabling methods to be called on objects of different types.

18. Explain the concept of Inheritance in Java.

19. What is Encapsulation in Java?

- ☐ (A) Encapsulation is the bundling of data and methods that operate on the data into a single unit, preventing direct access to the data from outside the unit.
- ☐ (B) Encapsulation is the implementation of polymorphism.
- ☐ (C) Encapsulation is the process of creating interfaces.
- ☐ (D) Encapsulation is the inheritance of classes.

20. Explain the relationship between keys and normalization in PostgreSQL.

21. Denormalization in PostgreSQL is used to reduce data redundancy. True or False?

- ☐ (T) True
- ☐ (F) False

22. Describe the significance of constraints in PostgreSQL databases.

23. Foreign keys in PostgreSQL ensure referential integrity. True or False?

- ☐ T True
- ☐ F False

24. What are the benefits of using indexes in PostgreSQL?

- ☐ A Faster data retrieval and improved query performance
- ☐ B Limited storage capacity
- ☐ C Increased data redundancy
- ☐ D Slower data access and decreased query speed

25. Explain the role of keys in maintaining data integrity in PostgreSQL.

26. Primary keys in PostgreSQL can have duplicate values. True or False?

- ☐ T True
- ☐ F False

27. What is the purpose of normalization in database design?

- ☐ A To reduce data redundancy and improve data integrity
- ☐ B To complicate data retrieval
- ☐ C To slow down query performance
- ☐ D To increase data duplication

28. Discuss the importance of keys in PostgreSQL.

29. Views in PostgreSQL store data physically. True or False?

- ☐ T True
- ☐ F False

30. What are constraints in SQL?

- ☐ A Rules enforced on data columns to maintain data integrity
- ☐ B Functions to perform calculations
- ☐ C Queries to retrieve data
- ☐ D Commands to create new databases

31. Explain the concept of normalization in a RDBMS.

32. Indexes in SQL help improve query performance. True or False?

- ☐ T True
- ☐ F False

33. What is a join in SQL?

- ☐ A A way to delete rows from a table
- ☐ B A method to create a new table
- ☐ C A method to combine rows from two or more tables based on a related column between them
- ☐ D A technique to update multiple rows at once