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## Core Java (10 MCQs)

1. **What will happen if `hashCode()` is not overridden while overriding `equals()`?**
  - a) Compilation error
  - b) Runtime exception
  - c) Different objects may be treated as equal in collections
  - d) No impact on collections
2. **Which of the following is true about `volatile` keyword in Java?**
  - a) Ensures atomicity
  - b) Ensures visibility but not atomicity
  - c) Prevents thread execution
  - d) Works only in a single-threaded environment
3. **What will `String s1 = "hello"; String s2 = new String("hello"); return s1 == s2;` return for?**
  - a) true
  - b) false
  - c) Compilation error
  - d) Runtime error
4. **Which Java collection allows storing `null` keys?**
  - a) `TreeMap`
  - b) `HashMap`
  - c) `ConcurrentHashMap`
  - d) `Hashtable`
5. **Which of these prevents method overriding?**
  - a) `static`
  - b) `final`
  - c) `private`
  - d) Both (b) and (c)
6. **What is the default size of a `HashMap` in Java?**
  - a) 8
  - b) 16
  - c) 32
  - d) 64
7. **What does `finally` block do in Java?**
  - a) Always executes unless `System.exit()` is called
  - b) Executes only if an exception occurs
  - c) Executes only if no exception occurs
  - d) Does nothing
8. **Which of the following is true for `super()` in Java?**
  - a) It can be called multiple times in a constructor
  - b) It must be the first statement in a constructor
  - c) It can be used inside static methods
  - d) It is used to invoke a subclass constructor

9. **Which method is called by the garbage collector before an object is removed?**  
a) delete()  
b) gc()  
c) finalize()  
d) remove()
10. **Which of the following are wrapper classes in Java?**  
a) int, float, double  
b) Integer, Float, Double  
c) Wrappers do not exist in Java  
d) String, StringBuilder, StringBuffer
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### **Servlets (5 MCQs)**

11. **Which method is used to invalidate a session in Servlets?**  
a) `session.invalidate()`  
b) `session.destroy()`  
c) `session.close()`  
d) `session.stop()`
12. **Which HTTP method is considered idempotent?**  
a) GET  
b) POST  
c) PUT  
d) Both (a) and (c)
13. **Which is not a valid session tracking technique in Servlets?**  
a) Cookies  
b) URL Rewriting  
c) Hidden Form Fields  
d) RequestDispatcher
14. **What will happen if you call `response.sendRedirect()` after `response.getWriter().println()`?**  
a) Compilation error  
b) Redirect will work normally  
c) `IllegalStateException` will be thrown  
d) Both responses will be sent
15. **What is the default HTTP response code for a successful Servlet execution?**  
a) 200  
b) 302  
c) 404  
d) 500
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### **JSP (5 MCQs)**

16. **Which tag is used for including a file dynamically in JSP?**
- a) `<jsp:include>`
  - b) `<%@ include %>`
  - c) `<jsp:forward>`
  - d) `<jsp:import>`
17. **Which implicit object is used to set HTTP status codes in JSP?**
- a) session
  - b) response
  - c) application
  - d) config
18. **Which scope is default for a JSP page?**
- a) request
  - b) session
  - c) page
  - d) application
19. **How does JSP handle exceptions if no `errorPage` is defined?**
- a) The exception is ignored
  - b) A default error page is shown
  - c) The request is forwarded to the homepage
  - d) The application crashes
20. **Which of these is true about scriptlets in JSP (`<% %>`) after JSP 2.0?**
- a) Recommended for use
  - b) Deprecated but still supported
  - c) Completely removed
  - d) Throws compilation errors
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## JUnit (5 MCQs)

21. **Which JUnit annotation runs only once before any tests in a test class?**
- a) `@Before`
  - b) `@BeforeClass`
  - c) `@Test`
  - d) `@AfterClass`
22. **Which assertion method is used to check for exceptions in JUnit?**
- a) `assertNull()`
  - b) `assertThrows()`
  - c) `assertEquals()`
  - d) `assertException()`
23. **Which library is commonly used with JUnit for mocking objects?**
- a) Mockito
  - b) JMock
  - c) EasyMock
  - d) All of the above

**24. How do you disable a test method in JUnit?**

- a) By commenting the method
- b) Using `@Ignore` annotation
- c) By removing `@Test` annotation
- d) Both (b) and (c)

**25. What is the main purpose of JUnit?**

- a) Performance testing
  - b) Unit testing
  - c) Functional testing
  - d) UI automation
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## **Maven (5 MCQs)**

**26. Which file is used to configure Maven projects?**

- a) `pom.xml`
- b) `maven.xml`
- c) `project.xml`
- d) `config.xml`

**27. Which Maven command is used to clean, compile, test, and package a project?**

- a) `mvn clean compile test package`
- b) `mvn build`
- c) `mvn deploy`
- d) `mvn clean package`

**28. What is the default Maven build lifecycle?**

- a) Default, Clean, Site
- b) Install, Clean, Build
- c) Clean, Compile, Deploy
- d) Compile, Install, Package

**29. What is the purpose of Maven repositories?**

- a) Store compiled class files
- b) Store and manage dependencies
- c) Store JUnit reports
- d) None of the above

**30. Which dependency scope is used for JUnit in Maven?**

- a) `compile`
  - b) `provided`
  - c) `test`
  - d) `runtime`
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## **Core Java Answers**

1. (c) Different objects may be treated as equal in collections
  2. (b) Ensures visibility but not atomicity
  3. (b) false
  4. (b) HashMap
  5. (d) Both (b) and (c)
  6. (b) 16
  7. (a) Always executes unless `System.exit()` is called
  8. (b) It must be the first statement in a constructor
  9. (c) `finalize()`
  10. (b) Integer, Float, Double
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## Servlets Answers

11. (a) `session.invalidate()`
  12. (d) Both (a) and (c) (GET and PUT are idempotent)
  13. (d) `RequestDispatcher`
  14. (c) `IllegalStateException` will be thrown
  15. (a) 200
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## JSP Answers

16. (a) `<jsp:include>`
  17. (b) `response`
  18. (c) `page`
  19. (b) A default error page is shown
  20. (b) Deprecated but still supported
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## JUnit Answers

21. (b) `@BeforeClass`
  22. (b) `assertThrows()`
  23. (d) All of the above
  24. (d) Both (b) and (c)
  25. (b) Unit testing
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## Maven Answers

26. (a) `pom.xml`

- 27. **(d)** mvn clean package
  - 28. **(a)** Default, Clean, Site
  - 29. **(b)** Store and manage dependencies
  - 30. **(c)** test
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