

## B.Hanumanthu\_ISTE60

### Final Assessment:Java Full Stack Development without keys

Format:MCQ

Points:125

Time:125 mins

#### Instructions:

- 1.Download the document in the docx/word format
- 2.Highlight your response in yellow color
- 3.Share your complete screen while answering the test
- 4.Record your screen while answering the test
- 5.Upload your response in the pdf format in your folder in the drive
- 6.Evaluate your response on the uploaded copy and update the score-card sheet

#### MCQs

1. What is the primary purpose of the Java programming language?
  - a. System administration
  - b. Web development
  - c. Mobile application development
  - d. Data analysis
2. In Java, which keyword is used to declare a constant variable?
  - a. var
  - b. const
  - c. final
  - d. static
- 3.What is the default value for a variable of the boolean data type in Java?
  - a. true
  - b. false
  - c. 0
  - d. 1
4. In Java, what is the purpose of the "break" statement?
  - a. To exit the program
  - b. To skip the current iteration of a loop
  - c. To terminate the current method
  - d. To declare a label
5. What does J2EE stand for?
  - a. Java 2 Enhanced Edition
  - b. Java 2 Enterprise Edition

- c. Java To Extensive Execution
- d. Java 2 Embedded Environment

6. Which component of J2EE is responsible for managing transactions?

- a. Servlet
- b. JSP
- c. EJB
- d. JDBC

7. In J2EE, what is the purpose of the Deployment Descriptor (web.xml)?

- a. To define the project structure
- b. To configure servlets and filters
- c. To manage database connections
- d. To specify HTML document structure

8. Which protocol is commonly used for communication between web servers and servlets?

- a. HTTP
- b. FTP
- c. SMTP
- d. TCP

9. Eclipse IDE is primarily used for:

- a. Database management
- b. Web development
- c. Integrated Development Environment (IDE)
- d. Graphic design

10. What is the purpose of the Eclipse "Workspace" in the Eclipse IDE?

- a. It stores project source code
- b. It holds configuration settings and resources
- c. It manages database connections
- d. It hosts the web server

11. Which perspective in Eclipse is used for Java development?

- a. Java Perspective
- b. Web Perspective
- c. Database Perspective
- d. Server Perspective

12. What is the function of the Eclipse "Package Explorer" view?

- a. To display a list of installed packages
- b. To organize and navigate project resources
- c. To manage server configurations
- d. To create UML diagrams

13. What is Maven primarily used for in Java development?

- a. Code compilation
- b. Dependency management and build automation**
- c. Database administration
- d. User interface design

14. Which file is used to configure Maven settings globally?

- a. pom.xml
- b. settings.xml**
- c. maven-settings.xml
- d. global-settings.xml

15. What is the purpose of the Maven lifecycle phases?

- a. To organize project files
- b. To define build goals and processes**
- c. To manage project dependencies
- d. To create virtual environments

Solution 15: b. To define build goals and processes

16. Which command is used to build a Maven project?

- a. mvn compile
- b. mvn run
- c. mvn start
- d. mvn build**

17. Which SQL statement is used to retrieve data from a MySQL database?

- a. FETCH
- b. GET
- c. SELECT**
- d. EXTRACT

18. What does the term "ACID" stand for in the context of database transactions?

- a. All Commands In Database
- b. Atomicity, Consistency, Isolation, Durability**
- c. Advanced Control of Instances and Databases
- d. Automated Control of Isolated Databases

19. Which data type is used to store variable-length character strings in MySQL?

- a. CHAR
- b. INT
- c. VARCHAR**
- d. TEXT

20. What is the purpose of the "GROUP BY" clause in MySQL?

- a. Sorting data in ascending order
- b. Filtering data based on a condition
- c. Aggregating data based on a column
- d. Joining tables

21. In Hibernate, what is the purpose of an Entity class?

- a. To define a database table
- b. To handle HTTP requests
- c. To create a graphical user interface
- d. To manage dependencies

22. What is the role of the Hibernate SessionFactory?

- a. To execute SQL queries directly
- b. To manage Hibernate sessions
- c. To handle HTTP requests
- d. To define entity classes

23. In Hibernate, what is Lazy Loading?

- a. Loading data eagerly
- b. Loading data on-demand
- c. Loading data randomly
- d. Loading data concurrently

24. What is the purpose of Hibernate's @GeneratedValue annotation?

- a. To generate primary key values automatically
- b. To specify the SQL data type of a column
- c. To define a foreign key constraint
- d. To create a new database table

25. What does HTML stand for?

- a. Hyperlink and Text Markup Language
- b. Hyper Transfer Markup Language
- c. Hyper Text Markup Language
- d. High-Level Text Markup Language

26. Which HTML tag is used to create a hyperlink?

- a. <link>
- b. <a>
- c. <url>
- d. <src>

27. In CSS, how can you apply styles to an HTML element with the id "example"?

- a. #example
- b. .example
- c. @example
- d. element.example

28. What is the purpose of the CSS "box-sizing" property?

- a. To define the color of a box
- b. To set the size of an HTML box
- c. To control the border width of a box
- d. To include or exclude padding and border in the box size calculation

29. Which keyword is used to declare a variable in JavaScript?

- a. var
- b. let
- c. const
- d. variable

30. What is the purpose of the "addEventListener" method in JavaScript?

- a. To add a new HTML element
- b. To create a function
- c. To attach an event handler to an element
- d. To remove an event listener

31. In JavaScript, what is the purpose of the "typeof" operator?

- a. To check if a variable is defined
- b. To determine the data type of a value
- c. To concatenate strings
- d. To create a new object

32. What does the term "hoisting" mean in JavaScript?

- a. Lifting an element on the webpage
- b. Moving a variable or function declaration to the top of its scope
- c. Animating an object
- d. Scrolling to the top of a webpage

33. What is the primary goal of ECMAScript 6 (ES6)?

- a. To replace HTML and CSS
- b. To standardize JavaScript across different browsers
- c. To enhance the performance of web servers
- d. To introduce new features and improvements to JavaScript

34. Which keyword is used to declare a block-scoped variable in ES6?

- a. var
- b. let

c. const

d. set

35. What is the purpose of the arrow function syntax in ES6?

a. To define anonymous functions

b. To bind the value of "this" lexically

c. To create function expressions

d. To define asynchronous functions

36. Which ES6 feature is used for handling asynchronous operations with promises?

a. async/await

b. try/catch

c. defer/promise

d. resolve/reject

37. What is jQuery?

a. A programming language

b. A JavaScript library

c. A style sheet language

d. A database management system

38. How can you select all elements with the class "example" in jQuery?

a. \$('example')

b. \$('example')

c. \$('#example')

d. getElementByClass('example')

39. What is the purpose of the `\$(document).ready()` function in jQuery?

a. To check if the document is loaded

b. To select the document element

c. To create a new HTML document

d. To apply styles to the document

40. In jQuery, how do you fade out an element with the class "fade"?

a. \$('.fade').hide()

b. \$('.fade').fadeOut()

c. \$('.fade').fadeRemove()

d. \$('.fade').toggle()

41. What does AJAX stand for?

a. Asynchronous JavaScript and XML

b. Advanced JavaScript and XML

c. Asynchronous jQuery and XHTML

d. Accelerated JavaScript and XML

42. In Ajax, what is the purpose of the XMLHttpRequest object?

- a. To create an XML document
- b. To send HTTP requests and receive responses asynchronously
- c. To manipulate HTML elements
- d. To define the structure of a webpage

43. What is the primary advantage of using Ajax in web development?

- a. Improved security
- b. Faster page loading
- c. Simpler coding
- d. Compatibility with older browsers

44. How do you handle errors in an Ajax request using jQuery?

- a. Using the `error` callback
- b. Using the `catch` statement
- c. By placing the error handling code before the Ajax call
- d. Errors are automatically handled by jQuery

45. What is React.js?

- a. A JavaScript library for building user interfaces
- b. A server-side programming language
- c. A database management system
- d. A style sheet language

46. What is the virtual DOM in React?

- a. A conceptual representation of the DOM in memory
- b. A component that renders other components
- c. A special DOM reserved for virtual reality applications
- d. An HTML element in React

47. In React, what is the purpose of state?

- a. To store component properties
- b. To manage data that may change over time
- c. To define static data
- d. To control the layout of components

48. How do you define a functional component in React?

- a. `class MyComponent extends React.Component`
- b. `function MyComponent() { }`
- c. `component MyComponent { }`
- d. `define MyComponent extends React.Component`

49. What is Angular?

- a. A programming language
- b. A JavaScript library
- c. A style sheet language
- d. A TypeScript-based web application framework

50. In Angular, what is the purpose of the NgModule decorator?

- a. To define a new component
- b. To configure dependency injection
- c. To declare a new directive
- d. To create a new module

51. What is data binding in Angular?

- a. A technique to bind HTML elements to external data sources
- b. Connecting Angular components to a database
- c. Defining data types in Angular
- d. Creating a link between Angular and jQuery

52. How do you handle user input events in Angular?

- a. Using the `(click)` directive
- b. By defining an `onInput` method
- c. With the `(input)` event binding
- d. Through the `handleUserInput` attribute

53. What is Bootstrap?

- a. A programming language
- b. A JavaScript library
- c. A style sheet language
- d. A front-end framework for web development

54. In Bootstrap, how do you create a responsive navigation bar?

- a. Using the `.navbar-collapse` class
- b. With the `.nav-bar` class
- c. By adding the `.responsive-navbar` class
- d. Through the `.navbar-expand` class

55. What is the purpose of the Bootstrap grid system?

- a. To create responsive layouts with rows and columns
- b. To style text and fonts
- c. To handle user authentication
- d. To manage server-side logic

56. Which class is used to create a styled alert box in Bootstrap?

- a. `.alert-box`
- b. `.notification`



- c. ``alert``
- d. ``message-box``

57. What does DBMS stand for?

- a. Database Management Server
- b. Data Backup and Management System
- c. Database Management System
- d. Data Business Management Software

58. What is a primary key in a relational database?

- a. A key used for opening a database
- b. A unique identifier for a record in a table
- c. A password for database access
- d. A secondary key used for indexing

59. In SQL, what does the "SELECT" statement do?

- a. Insert data into a table
- b. Update existing records in a table
- c. Retrieve data from a database
- d. Delete records from a table

60. What is normalization in the context of database design?

- a. A process to optimize database performance
- b. A technique to minimize data redundancy and dependency
- c. The act of backing up a database
- d. A method to encrypt sensitive data

61. What is Spring MVC?

- a. A programming language
- b. A front-end framework
- c. A server-side framework for building web applications
- d. A database management system

62. In Spring MVC, what is the role of the DispatcherServlet?

- a. To dispatch HTTP requests to controllers
- b. To manage database connections
- c. To define the project structure
- d. To create a new view

63. What is the purpose of the `@Controller` annotation in Spring MVC?

- a. To define a new class
- b. To mark a class as a controller
- c. To handle database connections
- d. To create a new database table

64. How do you pass data from a controller to a view in Spring MVC?

- a. Using the `@ModelAttribute` annotation
- b. By including the data in the URL
- c. Through the `ModelAndView` object
- d. By adding parameters to the view method

65. What is the core purpose of the Spring Framework?

- a. To handle HTTP requests
- b. To manage database connections
- c. To provide a comprehensive infrastructure for Java applications
- d. To create web pages

66. What is Dependency Injection in the context of the Spring Framework?

- a. Injecting dependencies into the database
- b. The act of resolving dependencies at runtime
- c. Injecting dependencies into a class through constructor or setter
- d. The process of excluding dependencies

67. What is an AOP (Aspect-Oriented Programming) in Spring?

- a. A way of organizing projects in Spring
- b. A technique for handling exceptions
- c. A programming paradigm that aims to increase modularity
- d. A type of database table

68. In Spring, what is the purpose of the `@Autowired` annotation?

- a. To mark a class as a component
- b. To inject dependencies automatically
- c. To handle HTTP requests
- d. To create a new view

69. What is Spring Boot?

- a. A programming language
- b. A front-end framework
- c. A microservices-based extension of the Spring Framework
- d. A database management system

70. In Spring Boot, how is the application configuration simplified?

- a. By using XML configuration files
- b. By eliminating the need for configuration
- c. By increasing the number of configuration files
- d. By using properties and annotations

71. What is the purpose of the `@SpringBootApplication` annotation in Spring Boot?

- a. To define a new class
- b. To mark a class as a controller
- c. To configure a Spring Boot application
- d. To create a new database table

72. How does Spring Boot simplify the deployment of applications?

- a. By increasing the number of required dependencies
- b. By providing an embedded web server
- c. By eliminating the need for testing
- d. By requiring extensive manual configuration

73. What does REST stand for in the context of web services?

- a. Remote Execution of Server Tasks
- b. Representational State Transfer
- c. Responsive Server Technologies
- d. Rapid Execution of Service Tasks

74. In REST, what HTTP method is typically used to update a resource?

- a. GET
- b. POST
- c. PUT
- d. DELETE

75. What is the purpose of the status code "404 Not Found" in a REST API response?

- a. Successful request
- b. Resource not found
- c. Resource updated
- d. New resource created

76. What is the purpose of the "Content-Type" header in a REST API request?

- a. To specify the desired response format
- b. To define the type of authentication used
- c. To indicate the type of data being sent
- d. To identify the HTTP method used

77. What is Git?

- a. A programming language
- b. A version control system
- c. A server-side framework
- d. A style sheet language

78. What is the purpose of the "git clone" command?

- a. To create a new Git repository
- b. To clone a remote repository to the local machine

- c. To merge branches in Git
- d. To delete a Git repository

79. In Git, what is the role of the "HEAD" pointer?

- a. To point to the last commit in the current branch
- b. To indicate the starting point of a branch
- c. To track changes in a file
- d. To manage Git hooks

80. What is a Git branch?

- a. A separate copy of the entire repository
- b. A commit in the repository history
- c. A pointer to a specific commit
- d. A local copy of a remote repository

81. What does the SOLID acronym stand for in object-oriented design?

- a. Secure, Organized, Lightweight, Integrated, Dynamic
- b. Single Responsibility, Open/Closed, Liskov Substitution, Interface Segregation, Dependency Inversion
- c. Scalable, Optimized, Logical, Integrated, Decentralized
- d. Structured, Object-Oriented, Lightweight, Interactive, Dynamic

82. In SOLID, what does the "Liskov Substitution Principle" state?

- a. Objects of a superclass should be replaceable with objects of a subclass without affecting the correctness of the program
- b. A class should have only one reason to change
- c. Classes should be open for extension but closed for modification
- d. High-level modules should not depend on low-level modules

83. According to the "Interface Segregation Principle" in SOLID, what should happen to large interfaces?

- a. They should be hidden from the client
- b. They should be split into smaller, client-specific interfaces
- c. They should be merged with other large interfaces
- d. They should be implemented by multiple classes

84. How does the "Dependency Inversion Principle" in SOLID suggest handling dependencies?

- a. High-level modules should depend on low-level modules
- b. Low-level modules should depend on high-level modules
- c. Modules should not depend on each other
- d. Abstractions should not depend on details; details should depend on abstractions

85. What does UML stand for?

- a. Unified Markup Language

- b. Universal Modeling Language
- c. Uniform Modeling Language
- d. Unstructured Modeling Logic

86. In UML, what does a diamond shape represent in a class diagram?

- a. Association
- b. Inheritance
- c. Aggregation
- d. Composition

87. What is the purpose of a use case diagram in UML?

- a. To show the sequence of interactions between objects
- b. To illustrate the static structure of a system
- c. To depict the flow of control in a system
- d. To represent the interactions between a system and its users

88. What does a solid line with an unfilled arrowhead represent in a UML class diagram?

- a. Association
- b. Inheritance
- c. Aggregation
- d. Composition

89. What is Node.js?

- a. A programming language
- b. A front-end framework
- c. A server-side JavaScript runtime
- d. A database management system

90. In Node.js, what is the role of the npm command?

- a. To install and manage Node.js packages
- b. To execute JavaScript code
- c. To create new JavaScript files
- d. To define the project structure

91. How does Node.js handle asynchronous operations?

- a. By blocking the event loop
- b. By using callbacks and Promises
- c. By ignoring asynchronous operations
- d. By terminating the application

92. What is the purpose of the Node.js "require" function?

- a. To import external JavaScript libraries
- b. To include HTML files
- c. To install Node.js modules
- d. To load external modules or files

93. What is JUnit?

- a. A programming language
- b. A front-end framework
- c. A testing framework for Java
- d. A database management system

94. In JUnit, what is the purpose of the `@Test` annotation?

- a. To mark a class as a test class
- b. To define a new test method
- c. To skip a test case
- d. To run the entire test suite

95. How can you assert that two values are equal in a JUnit test?

- a. `assertEquals(value1, value2)`
- b. `assertEquals(value1, value2)`
- c. `value1.equals(value2)`
- d. `value1 == value2`

96. What does the `@Before` annotation in JUnit signify?

- a. It marks a test method to be executed before any test case
- b. It specifies that a method is a test case
- c. It marks a method to be executed after any test case
- d. It is not a valid JUnit annotation

97. What is Mockito?

- a. A programming language
- b. A front-end framework
- c. A mocking framework for Java
- d. A database management system

98. In Mockito, what is the purpose of the `when` method?

- a. To define the behavior of a mock object
- b. To create a new mock object
- c. To verify the number of method invocations
- d. To execute a method on a mock object

99. How can you verify that a method was called on a Mockito mock object?

- a. `verifyMethodCall(mockObject)`
- b. `validateMethodCall(mockObject)`
- c. `assertMethodCalled(mockObject)`
- d. `verify(mockObject).methodName()`

100. In Mockito, what is a stub?

- a. A placeholder for a real object
- b. A mock object
- c. A mechanism to verify method calls
- d. A fake implementation of a method

101. What is the purpose of a logging framework?

- a. To design user interfaces
- b. To manage database connections
- c. To record information about the application's runtime behavior
- d. To create web pages

102. In Java, what is SLF4J?

- a. A front-end framework
- b. A logging framework
- c. A database management system
- d. A server-side framework

103. How do you log a message at the INFO level using SLF4J?

- a. `log.info("Message");`
- b. `logger("Message").info();`
- c. `info("Message")`
- d. `LoggerFactory.getLogger(getClass()).info("Message");`

104. What is the purpose of log levels in a logging framework?

- a. To control the appearance of logs in the console
- b. To specify the color of log messages
- c. To define the font size of log messages
- d. To indicate the severity or importance of log messages

105. What is the Spring IoC container?

- a. A database management system
- b. A container that manages the lifecycle of Java objects
- c. A front-end framework
- d. A programming language

106. In Spring, what is the purpose of the `@Transactional` annotation?

- a. To define a new transaction
- b. To mark a class as transactional
- c. To manage database connections
- d. To configure a Spring Boot application

107. What is Spring AOP?

- a. A front-end framework
- b. Aspect-Oriented Programming in Spring

- c. A database management system
- d. A programming language

108. How is the Spring Boot application configured by default?

- a. Through XML configuration files
- b. By using annotations and properties files
- c. By specifying configurations in the command line
- d. Configuration is not required in Spring Boot

109. What is the purpose of the Spring Bean?

- a. To define a new Java class
- b. To represent an object that is managed by the Spring IoC container
- c. To manage database connections
- d. To create a new database table

110. In Spring, what is a stereotype annotation?

- a. Annotations used for marking classes as beans
- b. Annotations used for defining transactions
- c. Annotations used for creating views
- d. Annotations used for logging

111. What is the purpose of the Spring MVC framework?

- a. To manage database connections
- b. To provide a comprehensive infrastructure for building web applications
- c. To handle HTTP requests and responses
- d. To create static web pages

112. How do you configure view resolvers in Spring MVC?

- a. Through XML configuration files
- b. By using annotations
- c. By specifying properties in the application.properties file
- d. View resolvers are not configurable in Spring MVC

113. What is Spring Boot Starter?

- a. A standalone application built with Spring Boot
- b. A set of dependency management conventions
- c. A front-end framework
- d. A programming language

114. How does Spring Boot simplify database configuration?

- a. By requiring explicit configuration for each database connection
- b. By using a default in-memory database
- c. By eliminating the need for a database
- d. By providing auto-configuration based on the classpath



115. What is the purpose of the `@SpringBootTest` annotation in Spring Boot?

- a. To define a new test method
- b. To mark a class as a test class
- c. To configure the application for testing
- d. To specify the database connection details

116. How is external configuration done in Spring Boot?

- a. Through XML configuration files
- b. By hardcoding values in the code
- c. By using the `application.properties` or `application.yml` files
- d. Configuration is not possible in Spring Boot

117. What is a RESTful API?

- a. A programming language
- b. A front-end framework
- c. An architectural style for designing networked applications
- d. A database management system

118. In a REST API, what HTTP method is typically used to retrieve data?

- a. POST
- b. GET
- c. PUT
- d. DELETE

119. What is the purpose of the HTTP status code "201 Created" in a REST API response?

- a. Successful request
- b. Resource not found
- c. New resource created
- d. Bad request

120. How do you secure a REST API?

- a. By using HTTP Basic Authentication
- b. By exposing the API only on certain days
- c. By requiring complex URL structures
- d. Security is not applicable to REST APIs

121. What is a Git repository?

- a. A collection of programming languages
- b. A server that hosts web pages
- c. A version control system storage
- d. A type of database management system

122. How do you create a new branch in Git?

- a. ``git new-branch branch_name``
- b. ``git branch create branch_name``
- c. ``git checkout -b branch_name``
- d. ``git add branch_name``

123. What is the purpose of the "git merge" command?

- a. To create a new branch
- b. To delete a branch
- c. To combine changes from different branches
- d. To commit changes

124. How do you undo the last Git commit?

- a. ``git cancel``
- b. ``git revert``
- c. ``git reset --hard HEAD^``
- d. ``git undo``

125. In a logging framework, what is the purpose of log levels such as INFO, DEBUG, and ERROR?

- a. To control the appearance of logs in the console
- b. To specify the color of log messages
- c. To define the font size of log messages
- d. To indicate the severity or importance of log messages