**Microservices with Spring Boot & JUnit Testing —**

**CBT Revision**

### **Q1. Which annotation is used to mark a class as a Spring Boot application?**

A. @Configuration  
B. @EnableAutoConfiguration  
C. @SpringBootApplication  
D. @ComponentScan  
✅ **Answer:** C  
Explanation: The @SpringBootApplication annotation combines @Configuration, @EnableAutoConfiguration, and @ComponentScan.

### **Q2. Which component handles service discovery in Spring Cloud?**

A. Eureka  
B. Feign  
C. Hystrix  
D. Ribbon  
✅ **Answer:** A  
Explanation: Eureka acts as a service registry enabling discovery between microservices.

### **Q3. JUnit is mainly used for:**

A. Logging  
B. Unit Testing  
C. Integration Testing  
D. Monitoring  
✅ **Answer:** B  
Explanation: JUnit provides a framework for writing and executing unit tests in Java.

### **Q4. Which file contains Spring Boot configuration settings?**

A. app.yaml  
B. config.xml  
C. application.properties  
D. settings.json  
✅ **Answer:** C  
Explanation: Spring Boot configurations are stored in application.properties or application.yml.

### **Q5. In microservices, communication between services often uses:**

A. WebSockets  
B. HTTP/REST  
C. JDBC  
D. RMI  
✅ **Answer:** B  
Explanation: Microservices typically communicate via lightweight RESTful APIs.

### **Q6. What is the role of Spring Cloud Config Server?**

A. To manage user sessions  
B. To centralize configuration for multiple microservices  
C. To load-balance microservices  
D. To handle caching  
✅ **Answer:** B  
Explanation: Config Server allows externalized and centralized configuration for multiple services.

### **Q7. Which annotation enables Feign clients?**

A. @EnableEurekaClient  
B. @EnableFeignClients  
C. @EnableConfigServer  
D. @EnableRibbon  
✅ **Answer:** B  
Explanation: @EnableFeignClients allows declarative REST clients through Feign.

### **Q8. Which of the following handles circuit breaking in microservices?**

A. Feign  
B. Hystrix  
C. Ribbon  
D. Eureka  
✅ **Answer:** B  
Explanation: Hystrix implements circuit breaker patterns for fault tolerance.

### **Q9. What does the @Test annotation do in JUnit?**

A. Marks configuration classes  
B. Marks a method as a test case  
C. Disables test execution  
D. Declares dependencies  
✅ **Answer:** B  
Explanation: @Test marks a method that should be executed as a JUnit test.

### **Q10. Which feature of microservices supports independent deployment?**

A. Shared database  
B. Monolithic design  
C. Loose coupling  
D. Centralized module  
✅ **Answer:** C  
Explanation: Loose coupling ensures each service can be built, deployed, and scaled independently.

### **Q11. What does @RestController combine in Spring Boot?**

A. @Service and @Component  
B. @Controller and @ResponseBody  
C. @Configuration and @ComponentScan  
D. @Bean and @Component  
✅ **Answer:** B  
Explanation: @RestController is shorthand for @Controller and @ResponseBody.

### **Q12. Which tool is used to manage dependencies in Spring Boot?**

A. NPM  
B. Maven or Gradle  
C. Webpack  
D. Docker  
✅ **Answer:** B  
Explanation: Spring Boot projects use Maven or Gradle for dependency management.

### **Q13. What is the default embedded server in Spring Boot?**

A. Jetty  
B. Tomcat  
C. Undertow  
D. GlassFish  
✅ **Answer:** B  
Explanation: Spring Boot uses Tomcat as its default embedded server.

### **Q14. What annotation marks a class as a configuration class?**

A. @Component  
B. @Bean  
C. @Configuration  
D. @Service  
✅ **Answer:** C  
Explanation: @Configuration indicates a class contains bean definitions.

### **Q15. Which of these is a benefit of using microservices?**

A. Centralized codebase  
B. Easy scalability  
C. Shared state  
D. Monolithic simplicity  
✅ **Answer:** B  
Explanation: Microservices enable independent scaling of components.

### **Q16. What does the @Autowired annotation do?**

A. Creates a new object  
B. Injects dependencies automatically  
C. Registers a bean  
D. Marks a class as a controller  
✅ **Answer:** B  
Explanation: @Autowired is used for automatic dependency injection.

### **Q17. Which testing framework is integrated with Spring Boot for unit testing?**

A. TestNG  
B. Mockito  
C. JUnit  
D. Selenium  
✅ **Answer:** C  
Explanation: Spring Boot integrates naturally with JUnit for unit testing.

### **Q18. What is the purpose of @SpringBootTest?**

A. Run only unit tests  
B. Run full integration tests with the Spring context  
C. Disable database connections  
D. Mock HTTP requests  
✅ **Answer:** B  
Explanation: @SpringBootTest loads the full Spring application context for integration testing.

### **Q19. In JUnit 5, which annotation is used instead of @Before?**

A. @Setup  
B. @BeforeEach  
C. @BeforeAll  
D. @Init  
✅ **Answer:** B  
Explanation: @BeforeEach runs before each test method in JUnit 5.

### **Q20. Which library supports declarative REST clients in Spring Cloud?**

A. Eureka  
B. Feign  
C. Ribbon  
D. Zuul  
✅ **Answer:** B  
Explanation: Feign simplifies HTTP API calls by creating REST clients using annotations.

### **Q21. What is the main purpose of the API Gateway in microservices?**

A. Database communication  
B. Routing and request management  
C. User authentication only  
D. Monitoring logs  
✅ **Answer:** B  
Explanation: API Gateway routes client requests to appropriate microservices and handles cross-cutting concerns like logging, security, and rate limiting.\*

### **Q22. Which Spring Boot annotation starts the embedded web server?**

A. @SpringBootTest  
B. @SpringBootApplication  
C. @Controller  
D. @EnableAutoConfiguration  
✅ **Answer:** B  
Explanation: @SpringBootApplication triggers auto-configuration and starts the embedded web server.\*

### **Q23. In JUnit 5, which annotation disables a test method?**

A. @Ignore  
B. @Disabled  
C. @Skip  
D. @Off  
✅ **Answer:** B  
Explanation: @Disabled prevents a test from being executed in JUnit 5.\*

### **Q24. Which annotation is used to define a REST endpoint in Spring Boot?**

A. @GetMapping  
B. @RequestMapping  
C. @RestController  
D. All of the above  
✅ **Answer:** D  
Explanation: All these annotations can define REST endpoints, with @RestController marking the class level.\*

### **Q25. What is the default port for Spring Boot applications?**

A. 3000  
B. 8080  
C. 9090  
D. 8000  
✅ **Answer:** B  
Explanation: By default, Spring Boot runs on port 8080.\*

### **Q26. Which Spring component manages beans and their lifecycle?**

A. DispatcherServlet  
B. BeanFactory  
C. ApplicationContext  
D. WebConfig  
✅ **Answer:** C  
Explanation: ApplicationContext manages the lifecycle of beans in Spring.\*

### **Q27. What does the @Mock annotation do in testing?**

A. Creates a fake implementation of a dependency  
B. Disables the test method  
C. Loads the application context  
D. Creates a new bean  
✅ **Answer:** A  
Explanation: @Mock from Mockito creates mock objects for dependencies during testing.\*

### **Q28. What annotation helps test REST endpoints using MockMvc?**

A. @AutoConfigureMockMvc  
B. @EnableTestRest  
C. @MockRestClient  
D. @EnableTestController  
✅ **Answer:** A  
Explanation: @AutoConfigureMockMvc sets up MockMvc for REST controller testing.\*

### **Q29. Which layer in microservices handles business logic?**

A. Controller  
B. Service  
C. Repository  
D. Database  
✅ **Answer:** B  
Explanation: The service layer contains the business logic in a microservice architecture.\*

### **Q30. Which annotation marks a Spring-managed class as a repository?**

A. @Entity  
B. @Component  
C. @Repository  
D. @Service  
✅ **Answer:** C  
Explanation: @Repository indicates a class is responsible for database access operations.\*

### **Q31. What does the term “loose coupling” mean in microservices?**

A. Services depend heavily on each other  
B. Services operate independently with minimal dependencies  
C. Services share a single database  
D. Services are deployed together  
✅ **Answer:** B  
Explanation: Loose coupling allows each service to function independently.\*

### **Q32. Which Spring Boot annotation maps a method to an HTTP GET request?**

A. @PostMapping  
B. @GetMapping  
C. @PutMapping  
D. @DeleteMapping  
✅ **Answer:** B  
Explanation: @GetMapping handles HTTP GET requests in REST APIs.\*

### **Q33. What does @EnableEurekaClient do?**

A. Registers a service with Eureka server  
B. Configures the database  
C. Enables Feign clients  
D. Creates a REST controller  
✅ **Answer:** A  
Explanation: @EnableEurekaClient registers the service with the Eureka discovery server.\*

### **Q34. What is the purpose of Spring Boot Starter dependencies?**

A. To reduce configuration and simplify dependency management  
B. To manually add third-party libraries  
C. To disable auto-configuration  
D. To speed up deployment only  
✅ **Answer:** A  
Explanation: Starters provide a curated set of dependencies for common functionality.\*

### **Q35. Which microservices pattern handles failures gracefully?**

A. Load balancing  
B. Circuit breaker  
C. Rate limiting  
D. Event sourcing  
✅ **Answer:** B  
Explanation: The circuit breaker pattern prevents cascading failures in distributed systems.\*

### **Q36. In JUnit, what is the purpose of assertions?**

A. To print logs  
B. To verify expected outcomes of tests  
C. To handle exceptions  
D. To clean up resources  
✅ **Answer:** B  
Explanation: Assertions validate expected results during testing.\*

### **Q37. Which of these is used for distributed tracing in microservices?**

A. Kafka  
B. Zipkin  
C. RabbitMQ  
D. Redis  
✅ **Answer:** B  
Explanation: Zipkin helps trace requests across multiple microservices.\*

### **Q38. What is Docker commonly used for in microservices?**

A. Monitoring  
B. Containerization and deployment  
C. Logging  
D. Security  
✅ **Answer:** B  
Explanation: Docker packages microservices with dependencies into containers.\*

### **Q39. What does @BeforeEach do in JUnit 5?**

A. Runs once before all tests  
B. Runs before each test method  
C. Runs after all tests  
D. Skips the next test  
✅ **Answer:** B  
Explanation: @BeforeEach executes setup code before each test method.\*

### **Q40. Which of these is used for message-driven microservices communication?**

A. REST  
B. Kafka  
C. Feign  
D. Zuul  
✅ **Answer:** B  
Explanation: Kafka provides asynchronous messaging between microservices.\*

**Q41.** In Spring Boot, which annotation is used to test REST controllers with MockMvc?  
A. @SpringBootTest  
B. @WebMvcTest  
C. @DataJpaTest  
D. @MockBean  
✅ **Answer: B**  
*Explanation: @WebMvcTest loads only the web layer of the application for testing controllers.*

**Q42.** What is the main purpose of using Feign Client in microservices?  
A. To perform caching  
B. To simplify REST client calls  
C. To secure endpoints  
D. To manage configurations  
✅ **Answer: B**  
*Explanation: Feign Client abstracts HTTP calls by declaring REST endpoints as Java interfaces.*

**Q43.** What is the default embedded server in Spring Boot?  
A. Jetty  
B. Netty  
C. Tomcat  
D. Undertow  
✅ **Answer: C**  
*Explanation: Spring Boot uses Apache Tomcat as the default embedded server.*

**Q44.** In JUnit 5, which annotation is used to run code before each test?  
A. @BeforeClass  
B. @BeforeTest  
C. @BeforeEach  
D. @Setup  
✅ **Answer: C**  
*Explanation: @BeforeEach runs before each test method execution.*

**Q45.** What is the benefit of using Spring Cloud Config Server?  
A. Manages security  
B. Centralizes configuration management  
C. Performs API routing  
D. Handles logging  
✅ **Answer: B**  
*Explanation: Config Server provides a central place to manage configurations for all microservices.*

**Q46.** What is the default scope of Spring Beans?  
A. Prototype  
B. Request  
C. Session  
D. Singleton  
✅ **Answer: D**  
*Explanation: By default, all beans in Spring are singleton scoped.*

**Q47.** What does Eureka Server do in a microservices setup?  
A. Routes requests  
B. Discovers and registers services  
C. Manages database connections  
D. Monitors system logs  
✅ **Answer: B**  
*Explanation: Eureka Server acts as a service registry, allowing microservices to discover each other.*

**Q48.** Which Spring Boot annotation is used to mark a class as a configuration class?  
A. @Controller  
B. @Service  
C. @Configuration  
D. @Component  
✅ **Answer: C**  
*Explanation: @Configuration indicates that a class contains bean definitions for the application context.*

**Q49.** What is the purpose of @MockBean in Spring Boot testing?  
A. To create a real service  
B. To mock dependencies in the Spring context  
C. To perform integration testing  
D. To start the web environment  
✅ **Answer: B**  
*Explanation: @MockBean allows you to mock dependencies within the Spring context during tests.*

**Q50.** Which annotation in Spring Boot helps in loading properties from a file?  
A. @Value  
B. @PropertySource  
C. @ConfigProperties  
D. @Configuration  
✅ **Answer: B**  
*Explanation: @PropertySource is used to specify property files for configuration.*

**Q51.** What is the advantage of using Hystrix in microservices?  
A. Service discovery  
B. Circuit breaker pattern for fault tolerance  
C. Central configuration  
D. Logging and metrics  
✅ **Answer: B**  
*Explanation: Hystrix provides fault tolerance by isolating failures and preventing cascading errors.*

**Q52.** Which annotation is used in JUnit 5 to disable a test?  
A. @Ignore  
B. @Disabled  
C. @Omit  
D. @Skip  
✅ **Answer: B**  
*Explanation: @Disabled prevents a test method from running.*

**Q53.** In Spring Boot, what file is typically used to store configuration?  
A. app.cfg  
B. application.properties  
C. config.yaml  
D. bootstrap.conf  
✅ **Answer: B**  
*Explanation: application.properties or application.yml is used for configuring application settings.*

**Q54.** What is the use of the @RestController annotation?  
A. To define a database entity  
B. To mark a class for service discovery  
C. To create RESTful web services  
D. To define configurations  
✅ **Answer: C**  
*Explanation: @RestController combines @Controller and @ResponseBody to create REST endpoints.*

**Q55.** What is the function of Spring Boot Actuator?  
A. Compiles Java code  
B. Provides production-ready monitoring and metrics  
C. Handles HTTP requests  
D. Performs dependency injection  
✅ **Answer: B**  
*Explanation: Actuator exposes operational endpoints for monitoring and management.*

**Q56.** Which command is used to package a Spring Boot application?  
A. mvn package  
B. gradle start  
C. mvn deploy  
D. spring build  
✅ **Answer: A**  
*Explanation: The mvn package command packages the Spring Boot app into an executable jar.*

**Q57.** In JUnit, what does assertEquals() do?  
A. Checks for inequality  
B. Verifies equality between expected and actual values  
C. Skips test  
D. Asserts exception  
✅ **Answer: B**  
*Explanation: assertEquals() validates that two values are equal during testing.*

**Q58.** What is the purpose of Spring Boot’s DevTools?  
A. Testing security  
B. Hot reload during development  
C. Packaging deployment  
D. Cloud deployment  
✅ **Answer: B**  
*Explanation: DevTools enables automatic restarts and live reloads during development.*

**Q59.** Which of the following is a NoSQL database often used in microservices?  
A. MySQL  
B. MongoDB  
C. PostgreSQL  
D. Oracle  
✅ **Answer: B**  
*Explanation: MongoDB is a common NoSQL database for microservices due to its flexibility.*

**Q60.** What is the purpose of using Docker in microservices?  
A. Build UI  
B. Monitor APIs  
C. Containerize and deploy microservices  
D. Manage configurations  
✅ **Answer: C**  
*Explanation: Docker allows packaging of microservices into containers for consistent deployment.*

**Q61.** Which Spring Boot starter is used for building RESTful web applications?  
A. spring-boot-starter-data-jpa  
B. spring-boot-starter-security  
C. spring-boot-starter-web  
D. spring-boot-starter-test  
✅ **Answer: C**  
*Explanation: The spring-boot-starter-web dependency includes Spring MVC for building REST APIs.*

**Q62.** In microservices, what is the purpose of API Gateway?  
A. To connect databases  
B. To route requests and handle authentication  
C. To store configurations  
D. To deploy microservices  
✅ **Answer: B**  
*Explanation: API Gateway routes client requests to appropriate services and manages authentication.*

**Q63.** What is the role of Spring Boot Starter Test?  
A. Runs the main application  
B. Provides testing dependencies such as JUnit and Mockito  
C. Manages database connections  
D. Starts Tomcat server  
✅ **Answer: B**  
*Explanation: spring-boot-starter-test provides testing libraries for unit and integration testing.*

**Q64.** Which annotation marks a JPA entity class?  
A. @Repository  
B. @Table  
C. @Entity  
D. @Database  
✅ **Answer: C**  
*Explanation: @Entity marks a class as a JPA entity for ORM mapping.*

**Q65.** What is the main goal of microservices architecture?  
A. Tight coupling  
B. Monolithic development  
C. Independent deployment and scalability  
D. Single shared database  
✅ **Answer: C**  
*Explanation: Microservices promote loose coupling and independent scalability of services.*

**Q66.** Which dependency is used to connect Spring Boot with a PostgreSQL database?  
A. spring-boot-starter-web  
B. spring-boot-starter-jdbc  
C. spring-boot-starter-data-jpa  
D. spring-boot-starter-security  
✅ **Answer: C**  
*Explanation: spring-boot-starter-data-jpa provides integration with JPA and databases like PostgreSQL.*

**Q67.** In JUnit, which assertion checks for null values?  
A. assertEquals()  
B. assertNull()  
C. assertTrue()  
D. assertThat()  
✅ **Answer: B**  
*Explanation: assertNull() verifies that a value is null during a test.*

**Q68.** What does the @Autowired annotation do in Spring Boot?  
A. Defines an entity  
B. Injects dependencies automatically  
C. Registers an event  
D. Creates a new thread  
✅ **Answer: B**  
*Explanation: @Autowired enables automatic dependency injection by Spring.*

**Q69.** Which Spring Boot annotation enables scheduling tasks?  
A. @EnableScheduling  
B. @ScheduledTask  
C. @TaskScheduler  
D. @RunScheduled  
✅ **Answer: A**  
*Explanation: @EnableScheduling enables support for scheduling tasks in Spring Boot.*

**Q70.** What is the main difference between @Controller and @RestController?  
A. @Controller is for REST; @RestController is for MVC  
B. @Controller requires @ResponseBody; @RestController does not  
C. @RestController cannot handle HTTP GET requests  
D. Both are identical  
✅ **Answer: B**  
*Explanation: @RestController includes @ResponseBody, so methods directly return JSON or XML.*

**Q71.** In JUnit, which annotation indicates that a method is a test case?  
A. @RunWith  
B. @Test  
C. @Before  
D. @Start  
✅ **Answer: B**  
*Explanation: @Test marks a method as a test case to be executed by JUnit.*

**Q72.** What is the role of Zipkin in microservices?  
A. Service registration  
B. Distributed tracing  
C. Security configuration  
D. Database connection  
✅ **Answer: B**  
*Explanation: Zipkin helps trace requests across distributed microservices for performance monitoring.*

**Q73.** In Spring Boot, which annotation is used for mapping GET requests?  
A. @PostMapping  
B. @PutMapping  
C. @RequestMapping  
D. @GetMapping  
✅ **Answer: D**  
*Explanation: @GetMapping handles HTTP GET requests in REST controllers.*

**Q74.** What is the use of @SpringBootTest annotation?  
A. Runs unit tests  
B. Runs integration tests by loading the full Spring context  
C. Configures web layer tests only  
D. Mock dependencies  
✅ **Answer: B**  
*Explanation: @SpringBootTest loads the full context for end-to-end integration testing.*

**Q75.** Which testing library is commonly used for mocking objects in Spring Boot?  
A. Mockito  
B. Log4j  
C. Feign  
D. Hystrix  
✅ **Answer: A**  
*Explanation: Mockito is used for creating mock objects during testing.*

**Q76.** What is one advantage of using Gradle over Maven in Spring Boot projects?  
A. Slower builds  
B. No dependency management  
C. Faster and more flexible build scripts  
D. Limited plugin support  
✅ **Answer: C**  
*Explanation: Gradle offers faster builds and customizable build configurations.*

**Q77.** What is the purpose of @Value annotation in Spring Boot?  
A. To define endpoints  
B. To inject property values from configuration files  
C. To perform unit testing  
D. To mark service layers  
✅ **Answer: B**  
*Explanation: @Value reads configuration values directly from property files.*

**Q78.** What is the function of Spring Cloud Gateway?  
A. Manages database queries  
B. Provides routing, filters, and security for microservices  
C. Monitors performance  
D. Provides caching  
✅ **Answer: B**  
*Explanation: Spring Cloud Gateway manages routing and security at the API gateway level.*

**Q79.** Which annotation in Spring Boot is used to define a repository interface?  
A. @Repository  
B. @Controller  
C. @Entity  
D. @Service  
✅ **Answer: A**  
*Explanation: @Repository marks a class or interface as a data access layer component.*

**Q80.** What is the purpose of using H2 database in Spring Boot?  
A. Production database  
B. In-memory testing and development  
C. Logging system  
D. Configuration manager  
✅ **Answer: B**  
*Explanation: H2 is an in-memory database ideal for quick testing and development.*

**Q81.** Which annotation enables transaction management in Spring Boot?  
A. @EnableJpaRepositories  
B. @EnableTransactionManagement  
C. @Transactional  
D. @EnableAspectJAutoProxy  
✅ **Answer: B**  
*Explanation: @EnableTransactionManagement activates annotation-driven transaction management.*

**Q82.** What is the purpose of using Lombok in Spring Boot projects?  
A. Provides dependency injection  
B. Simplifies boilerplate code like getters and setters  
C. Handles API routing  
D. Manages database migrations  
✅ **Answer: B**  
*Explanation: Lombok reduces boilerplate code by generating getters, setters, and constructors.*

**Q83.** In JUnit 5, which annotation is used to group related tests?  
A. @Nested  
B. @Group  
C. @Suite  
D. @AllTests  
✅ **Answer: A**  
*Explanation: @Nested allows grouping related test cases within a single test class.*

**Q84.** What is the default port for a Spring Boot application?  
A. 7070  
B. 8080  
C. 9090  
D. 3000  
✅ **Answer: B**  
*Explanation: By default, Spring Boot runs on port 8080.*

**Q85.** In microservices, what does the term “loose coupling” mean?  
A. Services depend heavily on each other  
B. Services operate independently  
C. Services share the same database  
D. Services are part of one big app  
✅ **Answer: B**  
*Explanation: Loose coupling means services can function independently without tight dependencies.*

**Q86.** What is the main purpose of Spring Security?  
A. Handle caching  
B. Manage API logging  
C. Provide authentication and authorization  
D. Enable database connectivity  
✅ **Answer: C**  
*Explanation: Spring Security manages authentication and authorization in Spring applications.*

**Q87.** In JUnit, what does assertTrue() check?  
A. If a value is null  
B. If a condition is true  
C. If an object equals another  
D. If an exception occurred  
✅ **Answer: B**  
*Explanation: assertTrue() verifies that the given condition evaluates to true.*

**Q88.** Which of the following is a feature of Spring Boot Actuator?  
A. Configuration management  
B. Service discovery  
C. Health checks and metrics  
D. Dependency injection  
✅ **Answer: C**  
*Explanation: Actuator exposes health, metrics, and info endpoints for monitoring.*

**Q89.** What does @TestPropertySource do?  
A. Reads environment variables  
B. Loads custom properties for test classes  
C. Configures security  
D. Defines REST endpoints  
✅ **Answer: B**  
*Explanation: @TestPropertySource loads property files specific to test environments.*

**Q90.** Which Spring annotation defines the business logic layer?  
A. @Repository  
B. @Service  
C. @Controller  
D. @Component  
✅ **Answer: B**  
*Explanation: @Service marks a class that contains business logic.*

**Q91.** What is the main purpose of using Flyway in Spring Boot?  
A. Service registration  
B. Database migration  
C. Logging and metrics  
D. Dependency injection  
✅ **Answer: B**  
*Explanation: Flyway handles database version control and migrations automatically.*

**Q92.** What is the purpose of Spring Boot DevTools restart feature?  
A. Restart application automatically on code changes  
B. Deploy to Docker  
C. Monitor metrics  
D. Reset cache  
✅ **Answer: A**  
*Explanation: DevTools automatically restarts the app when changes are detected.*

**Q93.** Which component in microservices architecture handles inter-service communication?  
A. API Gateway  
B. Feign Client  
C. Config Server  
D. Eureka Server  
✅ **Answer: B**  
*Explanation: Feign Client simplifies inter-service REST communication.*

**Q94.** In Spring Boot, what does @EnableAutoConfiguration do?  
A. Enables caching  
B. Automatically configures beans based on classpath  
C. Manages endpoints  
D. Configures security filters  
✅ **Answer: B**  
*Explanation: @EnableAutoConfiguration automatically configures beans for the app.*

**Q95.** Which annotation is used for exception handling in controllers?  
A. @Exception  
B. @ControllerAdvice  
C. @RestController  
D. @ErrorHandler  
✅ **Answer: B**  
*Explanation: @ControllerAdvice provides centralized exception handling for controllers.*

**Q96.** What is the function of the bootstrap.yml file?  
A. Used for initial application configuration before loading the main context  
B. Defines API endpoints  
C. Handles database schema  
D. Configures actuator endpoints  
✅ **Answer: A**  
*Explanation: bootstrap.yml loads before application.yml for configuration setup.*

**Q97.** What is the purpose of @Data annotation in Lombok?  
A. Marks a class as a JPA entity  
B. Generates getters, setters, equals, hashCode, and toString  
C. Creates a REST endpoint  
D. Performs dependency injection  
✅ **Answer: B**  
*Explanation: @Data combines Lombok annotations for boilerplate code generation.*

**Q98.** What is one key advantage of using microservices over monolithic architecture?  
A. Easier to scale specific components  
B. Requires less configuration  
C. Uses a single codebase for all logic  
D. Runs in a single process  
✅ **Answer: A**  
*Explanation: Microservices allow independent scaling of specific services.*

**Q99.** Which Spring Boot annotation is used to test only the JPA layer?  
A. @SpringBootTest  
B. @DataJpaTest  
C. @WebMvcTest  
D. @JdbcTest  
✅ **Answer: B**  
*Explanation: @DataJpaTest loads only the JPA layer for repository testing.*

**Q100.** What is the purpose of using MockMvc in Spring Boot tests?  
A. To connect to databases  
B. To test MVC controllers without running the full server  
C. To test asynchronous calls  
D. To mock dependencies manually  
✅ **Answer: B**  
*Explanation: MockMvc allows controller testing without deploying the full web server.*