Core Java

1. Java 8 Features
2. Stream API
3. Lambda Expressions and Functional Interfaces
4. Multithreading and Lock Strategies
5. String Class
6. Static Keyword (blocks, classes, variables)
7. Global and Instance Variables
8. Java Memory Model
9. Collections (All, HashMap- synchronized and other types)
    - Using model classes as keys in HashMap or Set
10. Design Patterns (Singleton, Factory, Observer etc.)
11. SOLID Principles
12. Java Version Usage and Java 8 Differences

13. Abstract Class and Functional Interfaces (example-based questions)
14. Try-Catch-Finally (detailed)
15. Main Function Miscellaneous Questions
16. Operator Precedence
17. Constructor Chaining

Databases

1. Basic Concepts
2. Normalization
3. Query Problems
    - Aggregation functions
    - Order and group by
    - Clauses (like, string split functions, ranking)
4. Connection Pool
5. Database Optimization Techniques
    - General
    - Spring Boot-specific

Spring Boot

1. Basic Concepts (Annotations, Injection)
2. Stereotype Annotations
3. Bean Life Cycle and Scopes
4. Configuration (Property Files, YAML, PostConstruct)
5. REST API Concepts
    - All mappings
    - PUT vs POST scenarios
    - XML/JSON
    - Headers
    - Variables
    - Interceptor
    - Naming conventions
6. Exception Handling
7. JUnit/Mockito Basics (@SpringBootTest)
8. Spring Security (JWT, Access Tokens,

TLS, SSL, Message Layer Security)
9. Repository
10. Maven/Gradle
11. Database Connection
12. Kafka Knowledge (optional)

Microservices

1. Design Patterns
2. Inter-Service Communication
3. Monolithic vs Microservices (Advantages and Disadvantages)
4. Resiliency and Efficiency
5. Scenario-Based Questions
    - Service availability
    - Deployment strategies
6. Deployment Strategies (lower downtime, handle pending requests)
7. Step-by-Step Service Calling Process
8. Service Discovery
9. Load Balancing

10. API Gateway
11. HTTP Status Codes

Deployment CI/CD

1. Docker and Kubernetes Basics
    - Docker Image
    - Container vs Pod
    - Communication between pods/ containers
2. Pipeline Stages
3. Code Quality and Vulnerability Checks
    - Prisma Scan
    - Checkmarx
4. End-to-End Deployment Strategy
5. Server, Datacenters, Instances
    - Handling traffic
    - Rolling out updates strategies
6. Openshift (if applicable)
    - Secret map
    - Config map