Microservices Interview Questions (2025 Edition)

■ Microservices Basics

1. What are Microservices?
2. What are the main features of Microservices architecture?
3. Difference between Monolithic and Microservices architecture.
4. What are the advantages of using Microservices?
5. What are the challenges of Microservices?

■ Core Concepts

6. How do Microservices communicate with each other?
7. What is Service Discovery?
8. What is API Gateway and why do we use it?
9. What is Load Balancing and how does it work in Microservices?
10. What is Circuit Breaker Pattern?

■ Spring Cloud Components

11. What is Netflix Eureka?
12. What is Feign Client?
13. What is Spring Cloud Config Server?
14. What is Spring Cloud Gateway?
15. What is the role of Zipkin and Sleuth in Microservices?

■ Communication & Data Handling

16. How do Microservices share data?
17. How do you handle distributed transactions in Microservices?
18. What is Event-Driven Architecture?
19. How do you ensure data consistency across services?
20. What is Idempotency in REST APIs and why is it important?

■ Security in Microservices

21. How do you secure Microservices?
22. How does JWT (JSON Web Token) work?
23. What is OAuth2 and how is it used in Microservices?
24. How do you implement Role-Based Access Control (RBAC) in Microservices?
25. How do you secure inter-service communication?

■ Monitoring & Deployment

26. How do you monitor Microservices?
27. What is centralized logging and why is it important?
28. How do you handle configuration in Microservices?
29. What are containers and why use Docker in Microservices?
30. How do you deploy Microservices using Kubernetes?

■ Advanced / Scenario-Based Questions

31. How do you handle failure in one Microservice?
32. How do you handle versioning in APIs?
33. How do you test Microservices? (Unit, Integration, Contract Testing)

34. How do you scale Microservices horizontally?
35. How do you manage dependencies between Microservices?
36. What are the design patterns used in Microservices?
37. How do you implement communication timeout and retry logic?
38. What's the role of Message Broker (like Kafka)?
39. How do you ensure backward compatibility in APIs?
40. What are best practices for building Microservices?

Pro Tip for Preparation:
- Prepare both theoretical and scenario-based answers.
- Be ready to explain how you've used tools like Eureka, Gateway, JWT, and Kafka in your project.
- 2025 interviews focus heavily on practical Microservice design and communication flow.