# Cloud Computing Module-2

1. Which decomposition approach starts with a high-level view of the application and breaks it down into smaller services based on business capabilities?

* Top-down decomposition
* Bottom-up decomposition
* Left-right decomposition
* Top-to-bottom decomposition

2. What is the main advantage of bottom-up decomposition?

* It aligns with business capabilities.
* It starts at the code level.
* It requires no refactoring.
* It guarantees a smooth transition to microservices

3. In the context of microservices architecture, what does orchestration refer to?

* A form of musical composition
* The coordination of multiple services to fulfill complex requests
* Isolation of services
* Independent service management

4. What role do technologies like Docker and Kubernetes play in microservices deployment and management?

* They enable direct service communication.
* They automate orchestration.
* They have no relevance to microservices.
* They simplify database management.

5. What is the primary purpose of API gateways in microservices architecture?

* To hide all APIs from external clients
* To make communication between services difficult
* To centralize entry points for client interactions
* To act as a message broker between services

6. What is the primary objective of microservices architecture?

* Encouraging tightly coupled services
* Promoting large, monolithic applications
* Developing small, loosely coupled services
* Isolating services from each other

7. How does microservices architecture promote scalability?

* By tightly coupling all services
* By scaling all services simultaneously
* By allowing independent scaling of specific services
* By using a single, monolithic application

8. What is the purpose of an API gateway in microservices architecture?

* To make communication between services difficult
* To centralize entry points for client interactions
* To automate microservices deployment
* To provide strong authentication and authorization

9. What does it mean for microservices to be 'small and focused'?

* Microservices should use a minimal amount of resources.
* Microservices should have a limited number of features.
* Microservices should be individually manageable and focused on specific functions.
* Microservices should be entirely independent.

10. Which decomposition approach starts with a high-level view of the application and breaks it down based on business capabilities?

* Top-down decomposition
* Bottom-up decomposition
* Functional decomposition
* Technical decomposition

11. In a bottom-up decomposition approach, where does the process begin?

* At the highest business capability level
* With the identification of code modules
* By refactoring the entire monolithic application
* By establishing clear API boundaries

12. What is one of the factors to consider when selecting services to decompose in a microservices architecture?

* The number of lines of code in a service
* How many other services a service interacts with
* The extent of business capability a service covers
* The choice of programming language for a service

13. Why is independence an important factor in selecting services for decomposition?

* Independent services are easier to develop and test.
* Interdependent services lead to better communication.
* Interdependent services are easier to scale.
* Independent services help avoid cascading failures.

14. In a microservices architecture, what is the primary role of orchestration?

* Managing communication between services
* Isolating services from each other
* Coordinating the deployment of services
* Ensuring efficient resource utilization

15. What is one of the advantages of effective communication in a microservices architecture?

* It eliminates the need for logging and monitoring.
* It promotes tightly coupled services.
* It enables seamless scaling of all services simultaneously.
* It supports fault tolerance and graceful handling of failures.