techniques for IPC: remote procedure calls, distributed objects, and services. We reviewed the reference models that are used to organize the communication within the components of a distributed system and presented the major features of each of the abstractions.

Cloud computing leverages these models, abstractions, and technologies and provides a more efficient way to design and use distributed systems by making entire systems or components available on demand.

Review questions

1. What is the difference between parallel and distributed computing?
2. Identify the reasons that parallel processing constitutes an interesting option for computing.
3. What is an SIMD architecture?
4. List the major categories of parallel computing systems.
5. Describe the different levels of parallelism that can be obtained in a computing system.
6. What is a distributed system? What are the components that characterize it?
7. What is an architectural style, and what is its role in the context of a distributed system?
8. List the most important software architectural styles.
9. What are the fundamental system architectural styles?
10. What is the most relevant abstraction for interprocess communication in a distributed system?
11. Discuss the most important model for message-based communication.
12. Discuss RPC and how it enables interprocess communication.
13. What is the difference between distributed objects and RPC?
14. What are object activation and lifetime? How do they affect the consistency of state within a distributed system?
15. What are the most relevant technologies for distributed objects programming?
16. Discuss CORBA.
17. What is service-oriented computing?
18. What is market-oriented cloud computing?
19. What is SOA?
20. Discuss the most relevant technologies supporting service computing.
21. Short Note on web Services.