1. Explain the three primary service models of cloud computing (IaaS, PaaS, SaaS) and provide a real-world example for each. (Marks: 6) (CO: CO-1) (RBT: L1)
2. Discuss the advantages and disadvantages of a multi-cloud strategy compared to a single-cloud approach. 7 (Marks: 7) (CO: CO-1) (RBT: L1)
3. Define virtualization and explain its role in enabling cloud computing. 5 (Marks: 5) (CO: CO-1) (RBT: L1)
4. Describe the concept of cloud elasticity and how it benefits businesses. 6 (Marks: 6) (CO: CO-1) (RBT: L1)
5. Compare and contrast public, private, and hybrid cloud deployment models, highlighting their key characteristics and use cases. 7 (Marks: 7) (CO: CO-1) (RBT: L1)
6. What are the key security concerns associated with cloud computing, and how can they be mitigated? 5 (Marks: 5) (CO: CO-1) (RBT: L1)
7. Explain the concept of serverless computing and its benefits for application development. 6 (Marks: 6) (CO: CO-1) (RBT: L1)
8. Discuss the challenges and best practices for migrating an on-premises application to a cloud environment. 7 (Marks: 7) (CO: CO-1) (RBT: L1)
9. Define cloud storage and explain the different types of cloud storage services available. 5 (Marks: 5) (CO: CO-1) (RBT: L1)
10. Explain the role of APIs in cloud computing and how they facilitate interoperability between cloud services. 6 (Marks: 6) (CO: CO-1) (RBT: L1)
11. Discuss the importance of cloud cost optimization and describe strategies for managing cloud spending effectively. 7 (Marks: 7) (CO: CO-1) (RBT: L1)
12. What is a container, and how does it differ from a virtual machine in the context of cloud computing? 5 (Marks: 5) (CO: CO-1) (RBT: L1)
13. Describe the concept of cloud-native applications and their advantages. 6 (Marks: 6) (CO: CO-1) (RBT: L1)
14. Discuss the compliance and regulatory considerations for businesses using cloud services, particularly in data-sensitive industries. 7 (Marks: 7) (CO: CO-1) (RBT: L1)
15. Explain the concept of cloud monitoring and its importance for maintaining cloud service availability. 5 (Marks: 5) (CO: CO-1) (RBT: L1)
16. Describe the benefits of using cloud-based databases compared to traditional on-premises databases. 6 (Marks: 6) (CO: CO-1) (RBT: L1)
17. Discuss the impact of edge computing on cloud architectures and its potential applications. 7 (Marks: 7) (CO: CO-1) (RBT: L1)
18. What is cloud orchestration, and why is it essential for managing complex cloud environments? 5 (Marks: 5) (CO: CO-1) (RBT: L1)
19. Explain the concept of Infrastructure as Code (IaC) and its advantages for cloud deployment and management. 6 (Marks: 6) (CO: CO-1) (RBT: L1)
20. Discuss the future trends in cloud computing, including the role of AI, machine learning, and quantum computing. 7 (Marks: 7) (CO: CO-1) (RBT: L1)