University Question Bank

A compilation of important questions for review

Question 1:

1 Explain different Types of Hardware Virtualization Techniques. L2 CO2?

Answer: Full VirtualizationThis technique creates a complete virtual machine that emulates the underlying hardware. It provides high compatibility but can be less efficient. ParavirtualizationThis technique requires modifications to the operating system to directly interact with the hypervisor. It is more efficient than full virtualization but requires OS modifications.

Question 2:

2 Briefly discuss about cloud computing Platforms and Technologies L2 CO1?

Answer: Infrastructure as a Service IaaSProvides access to compute, storage, and networking resources. Examples AWS EC2, Google Compute Engine. Platform as a Service PaaSOffers a platform for developing and deploying applications. Examples Heroku, Google App Engine. Software as a Service SaaSDelivers software applications over the internet. Examples Salesforce, Google Workspace. Key technologies enabling cloud computing include VirtualizationAllows sharing physical resources among multiple virtual machines. Distributed

SystemsBreaks down applications into smaller, independent components. NetworkingHigh-bandwidth connections and protocols for communication between data centers and users.

Question 3:

6 Explain how cloud computing provides solution for On-Demand L2 CO1 and Dynamic Scaling?

Answer: HardwareRepresents the physical resources. Virtual Machine Monitor VMMThe hypervisor that manages and isolates virtual machines. Virtual Machine VMThe emulated environment running on top of the VMM. This model allows for multiple VMs to run concurrently on a single physical machine, sharing hardware resources efficiently.

Question 4:

5 Explain Distributed system L2 CO1?

Answer: Public CloudServices are offered by third-party providers to the general public. Examples AWS, Google Cloud, Azure. Private CloudServices are dedicated to a single organization and deployed on their own infrastructure. Hybrid CloudCombines public and private cloud services, allowing organizations to leverage the best of both worlds. Community CloudServices are shared by a group of organizations with similar needs, typically within a specific community.

Question 5:

7 Explain Service Oriented Computing L2 CO1 Course Coordinator Module Coordinator

Program Coordinator/ HOD 1?

Answer: ConcurrencyMultiple components running concurrently. Resource sharingAccessing data and services across the network. Fault toleranceSystem continues functioning even if one or more components fail. Examples include web services, peer-to-peer networks, distributed databases.

Question 6:

4 Explain different types of Cloud Deployment Models. L2 CO1?

Answer: On-demandUsers can provision resources, such as servers and storage, as needed without upfront investments. Dynamic ScalingResources can be automatically adjusted based on workload demand, allowing for efficient resource utilization and cost optimization.

Question 7:

3 Explain Machine Reference Model of Virtualizing an Execution L2 CO2 Environment?

Answer: Loose couplingServices are independent and can be updated without affecting other services. InteroperabilityServices can communicate with each other regardless of their underlying technology. ReusabilityServices can be reused in different applications. SOC enables flexible and scalable application development by promoting modularity and reusability.