

Unit-1

- 1)a) Illustrate the evolution of HPC and HTC systems (6 M)
b) Write a note on The Internet of Things and Cyber-Physical Systems(4 M)
- 2)a) What are the advanced technologies in CPU Processors?(5 M)
b) How GPU Programming model works(5 M)
- 3)a) Describe Clusters of Cooperative Computers-5M
b) Explain Peer-to-Peer Network families-5 M
- 4) a) What is SOA? explain-5 M
b) What are the trends toward Distributed operating systems- 5 M
- 5) a) Write the Dimensions of Scalability-5 M
b) What are the Network threats and Data integrity-5 M

Unit-2

- 1)a) What are the different levels of Virtualization implementation-5M
b) Discuss about middleware support for Virtualization-5M
- 2)a) Explain Xen Architecture-4 M
b) Explain Full virtualization and host-based virtualization-6 M
- 3) Explain the following
- a) CPU Virtualization-3 M b) Memory Virtualization-4 M c) I/O virtualization-3m
- 4)a) Explain Physical versus Virtual Clusters-5 m
- b) Describe Migration of Memory, Files and Network resources-5 m 5)a)
Explain Virtual storage management-4 m
b) Discuss OS for virtual data centers-6 m

Unit-3

- 1)a) Explain different types(public,private,hybrid) clouds-5m
b) Describe cloud ecosystems-5m
- 2) Explain the following-10m
a) IaaS b) PaaS c) SaaS
- 3)a) Discuss a generic Cloud Architecture-5 m
b) Discuss Layered Cloud Architectural Development-5 m
- 4) Explain the following public cloud platforms
a) GAE b) AWS c) AZURE
- 5)a) what is virtual machine creation and management-5 m
b) describe various cloud security defense strategies-5

- 1) A) What are the Cloud Capabilities and Platform Features (5 M)
B) What are the Data Features and Databases (5 M)
- 2) A) Explain Parallel Computing and Programming Paradigms (4 M)
B) What is MapReduce, Twister and Iterative MapReduce? (6 M)
- 3) A) Write about Programming environment for Google AppEngine (4 M)
B) Explain Google File System (6 M)
- 4) A) Describe Programming on Amazon EC2 (5 M)
B) Write the features of the Azure cloud Platform (5 M)
- 5) A) Explain Emerging Cloud Software Environments (10 M)

Unit-5

- 1) A) What are the policies for Resources Management Applications (6 M)
B) Describe the stability of a Two Level Resource Allocation Architecture (4 M)
- 2) A) What is Feedback Control Based on Dynamic Thresholds (5 M)
B) Discuss Coordination of Specialized Autonomic Performance Managers (^ M)
- 3) A) What is Resource Bundling? Discuss? (6 M)
B) Explain Fair Queuing? (4 M)
- 4) Explain Various Algorithms for Computing Clouds (10 M)
- 5) A) Explain Start Time Fair Queuing (5 M)
B) What is Cloud Scheduling subject to Deadlines (5 M)

Unit-6

- 1) Discuss the Evolution of storage (10 M)
- 2) A) What are the various storage models (5 M)
B) Explain systems and database (5 M)
- 3) Discuss the following: (5 + 5)
A) Distributed File System B) General parallel file systems
- 4) A) Describe the Google File System (6 M)
B) Describe Apache Hadoop (4 M)
- 5) Explain the following (5 + 5)
A) BigTable B) Megastore