

## **Department of Computer Science and Engineering**

### **23CSX507- Cloud Computing and Virtualization**

#### **UNIT-I INTRODUCTION TO CLOUD COMPUTING**

Introduction to Cloud Computing: Overview, Roots of Cloud Computing, Layers and Types of Cloud, Desired Features of a Cloud, Benefits and Disadvantages of Cloud Computing, Cloud Infrastructure Management, Infrastructure as a Service Providers, Platform as a Service Providers, Challenges and Risks, Assessing the role of Open Standards.

#### **QUESTION BANK**

##### **PART A (2 MARKS)**

1. Define cloud computing. (K1)
2. List any two examples of cloud services. (K1)
3. Why is cloud computing considered an on-demand service? (K2)
4. List two technologies that led to cloud computing. (K1)
5. How virtualization contributed to cloud computing. (K2)
6. Name the three main service models of cloud computing. (K1)
7. Differentiate between public cloud and private cloud. (K2)
8. Explain the difference between IaaS and PaaS. (K2)
9. List any two desired features of cloud computing. (K1)
10. Why scalability is an important feature of cloud computing. (K2)
11. Explain the importance of elasticity in cloud services. (K2)
12. State any two disadvantages of cloud computing. (K1)
13. Explain how cloud computing reduces cost. (K2)
14. Describe one risk involved in cloud computing. (K2)
15. Define cloud infrastructure management. (K1)
16. List any two components managed in cloud infrastructure. (K1)
17. Explain the importance of resource management in cloud infrastructure. (K2)
18. Describe how virtualization helps infrastructure management. (K2)
19. Define Infrastructure as a Service (IaaS). (K1)
20. Explain the role of virtual machines in IaaS. (K2)
21. Describe how billing works in IaaS. (K2)
22. Define Platform as a Service (PaaS). (K1)
23. Name any two PaaS providers. (K1)
24. How PaaS helps application developers. (K2)
25. Describe the role of programming frameworks in PaaS. (K2)
26. List any two challenges of cloud computing. (K1)
27. Why availability is a major concern in cloud computing. (K2)
28. Define open standards in cloud computing. (K1)
29. How open standards help avoid vendor lock-in. (K2)
30. Write the importance of interoperability in cloud computing. (K2)

**Vision:** To produce demand driven, quality conscious and globally recognize computer professionals through education, innovation and collaborative research.

### PART-B (16 MARKS)

1. Explain the technologies that led to the evolution of cloud computing. (k2)
2. Analyze the differences among IaaS, PaaS, and SaaS. (k4)
3. Evaluate the suitability of public, private, and hybrid clouds for healthcare systems. (k4)
4. Design a cloud infrastructure management plan for a medium-sized enterprise. (k4)
5. (a) Explain the key features expected from an ideal cloud system. (8) (k2)  
(b) Explain the major benefits and limitations of cloud computing. (8) (k2)
6. Describe the procedure for hosting a web application using IaaS services. (k3)
7. Examine how different PaaS services support enterprise application deployment. (k4)
8. (a) Demonstrate how security measures can be applied to reduce risks in cloud computing. (8) (k3)  
(b) Illustrate the use of open standards in achieving interoperability among cloud platforms. (8) (k3)

**Vision:** To produce demand driven, quality conscious and globally recognize computer professionals through education, innovation and collaborative research.