Reg. No.															

Question Paper Code	13447

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Sixth Semester

Computer Science and Engineering

(Common to Electronics and Communication Engineering)

20CSOE907 - INTRODUCTION TO CLOUD COMPUTING

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	*K – Level*	*CO*
1.	In distributed computing, _____ refers to the ability to scale resources dynamically based on workload demands. (a) elasticity (b) consistency (c) durability (d) scalability	*1*	*K1*	*CO1*
2.	Which of the following is a type of parallel computing? (a) Bit-level parallelism (b) Instruction-level parallelism (c) Task Parallelism (d) All of the mentioned	*1*	*K1*	*CO1*
3.	Which company is known for implementing the publish-subscribe model in its cloud messaging services? (a) Microsoft (b) Google (c) Amazon (d) IBM	*1*	*K1*	*CO2*
4.	If a company wants to optimize memory usage and reduce memory footprint in its cloud environment, what technology should it consider implementing? (a) Memory virtualization (b) Network virtualization (c) Storage virtualization (d) Application virtualization	*1*	*K1*	*CO2*
5.	How does PaaS contribute to cost savings for a company? (a) By increasing hardware expenses (b) By eliminating the need for upfront infrastructure investments (c) By requiring more IT personnel (d) By ensuring more software licenses	*1*	*K1*	*CO3*
6.	Amazon S3 is a _____. (a) Key based object storage (b) Domain system (c) Relational database (d) Content delivery network	*1*	*K1*	*CO3*
7.	Which of the following is a method of resource provisioning that automatically adjusts the resources based on demand? (a) Static provisioning (b) Manual provisioning (c) Dynamic provisioning (d) Reserved provisioning	*1*	*K1*	*CO4*
8.	What is a primary concern in virtual machine (VM) security in the cloud? (a) The performance of virtual machines (b) Protecting the hypervisor and VM isolation (c) The physical location of the VM server (d) Decreasing VM startup time	*1*	*K1*	*CO4*
9.	What are the two main functions in the MapReduce programming model? (a) Split and Combine (b) Map and Reduce (c) Sort and Filter (d) Input and Output	*1*	*K1*	*CO5*
10.	What does federation in cloud computing refer to? (a) Centralized cloud storage (b) Interoperability between multiple cloud providers (c) Using only private clouds (d) Running local databases	*1*	*K1*	*CO6*

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11.	Interpret the cloud resource pooling.	*2*	*K2*	*CO1*
12.	Outline the elasticity in the cloud.	*2*	*K2*	*CO1*
13.	List the two major roles in SOA.	*2*	*K1*	*CO2*

14.	Infer the purpose of the Publish-Subscribe Model.	*2*	*K2*	*CO2*
15.	Summarize major activities of cloud provider.	*2*	*K2*	*CO3*
16.	Compare service aggregation and service arbitrage.	*2*	*K2*	*CO3*
17.	Define security governance.	*2*	*K1*	*CO4*
18.	Define mutual authentication.	*2*	*K1*	*CO4*
19.	Name the different modules in Hadoop framework.	*2*	*K1*	*CO5*
20.	Compare open stack compute and open stack storage.	*2*	*K2*	*CO5*
21.	List out the four levels of federation.	*2*	*K1*	*CO6*
22.	What is the Purpose of federation in Cloud?	*2*	*K1*	*CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Explain in detail the underlying principles of parallel and distributed computing.	*11*	*K2*	*CO1*
		OR			
	b)	Explain in detail the characteristics of Cloud.	*11*	*K2*	*CO1*
24.	a)	Explain in detail about hardware support for virtualization and CPU virtualization.	*11*	*K2*	*CO2*
		OR			
	b)	Illustrate in detail about the REST, a software architecture style for distributed systems.	*11*	*K2*	*CO2*
25.	a)	Compare and contrast public, private, and hybrid clouds.	*11*	*K2*	*CO3*
		OR			
	b)	Illustrate the features of software as a Service and explain in detail about SaaS with example.	*11*	*K2*	*CO3*
26.	a)	Explain in detail about the Inter-cloud resource management.	*11*	*K2*	*CO4*
		OR			
	b)	Illustrate the following: (i) Demand-Driven Resource Provisioning (ii) Event-Driven Resource Provisioning (iii) Popularity-Driven Resource Provisioning	*11*	*K2*	*CO4*
27.	a)	Explain the basics of the Google App Engine infrastructure programming model.	*11*	*K2*	*CO5*
		OR			
	b)	Illustrate the architecture of Virtual box with neat sketch.	*11*	*K2*	*CO5*
28.	a)	Illustrate how encrypted federation differs from trusted federation.	*11*	*K2*	*CO6*
		OR			
	b)	Explain in detail about the architecture and levels of federation.	*11*	*K2*	*CO6*