Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025

Sixth Semester

Information Technology

CCS335 - Cloud Computing

Regulations - 2021

Duration : 3 Hrs *Maximum : 100 Marks*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	State two design challenges for cloud storage architecture.	L2	1	2
2.	What is the purpose of the NIST Cloud Computing Reference Architecture?	L1	1	2
3.	Classify the difference between System VM and Process VM.	L2	2	2
4.	Identify the benefits of virtualization.	L3	2	2
5.	Recall the term Docker.	L1	3	2
6.	Outline the purpose of desktop Virtualization.	L2	3	2
7.	Name two core components of OpenStack.	L1	4	2
8.	Illustrate the role of Eucalyptus in cloud deployment.	L2	4	2
9.	Identify a key benefit of using IAM in a cloud environment.	L3	5	2
10.	Differentiate between IAM architecture and IAM practices.	L2	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*16= 80)*

Q.No			*Questions*	*BLT*	*CO*	*Marks*
11.	a	i	Compare and contrast public, private, and hybrid cloud deployment models. Include examples and benefits of each.	L4	1	8
		ii	Analyze the key design challenges for storage clouds with an architecture diagram.	L4	1	8
			Or			
	b		Analyze the various types of distributed computing system models in detail. Discuss the role of these models in real-world cloud applications.	L4	1	16
12.	a	i	Compare and contrast full virtualization and para-virtualization. Provide examples and explain when each is most appropriate.	L2	2	8
		ii	Explain the various Components of Virtualization Architecture with necessary diagram.	L2	2	8
			Or			
	b	i	Explain how virtualization of CPU, memory, and I/O devices supports cloud computing environments.	L2	2	8
		ii	Explain the various implementation levels of virtualization. Explain their advantages and limitations.	L2	2	8

13.	a	i	Classify the types of virtual machines. What is the difference between containers and Virtual Machine?	L4	3	8
		ii	Compose a scenario where Docker containers would be more efficient than virtual machines. Justify why containers are preferred in this scenario.	L4	3	8
			Or			
	b	i	Examine the importance of virtual clusters and resource management. How do they enhance efficiency in a virtualized infrastructure?	L4	3	8
		ii	Design a virtualization infrastructure for an enterprise using desktop, network, and storage virtualization. Justify the choices of virtualization types and configurations.	L4	3	8
14.	a	i	Explain about the concept of Google APP Engine with a neat architecture.	L2	4	8
		ii	Compare and contrast AWS, Google App Engine, and Microsoft Azure in terms of service offerings and deployment environments.	L4	4	8
			Or			
	b	i	Describe how Eucalyptus enables private cloud deployment. Explain its key components and functionality.	L2	4	8
		ii	Analyze how a cloud-based application can be deployed on AWS. Explain how different AWS services would be utilized in a deployment.	L4	4	8
15.	a	i	Explain about the virtualization system-specific attacks in detail. Describe how each attack affects cloud security.	L2	5	8
		ii	Illustrate a scenario where IAM would help mitigate security risks in a cloud environment. Describe specific IAM practices that would be beneficial.	L3	5	8
			Or			
	b	i	What are the challenges and benefits of cloud data security?	L2	5	8
		ii	Assess the effectiveness of traditional IAM practices versus modern, cloud-based IAM approaches. Provide examples to illustrate how cloud-based IAM enhances security.	L3	5	8