

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

M.E DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Second Semester

Computer Science and Engineering

MP4251/PCSE2402 - Cloud Computing Technologies

Regulations – 2021/2024

Duration : 3 Hrs

Maximum: 100 Marks

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

Q.No	Questions	BLT	CO	Marks
1.	List the major distributed computing technologies that led to cloud computing.	L1	1	2
2.	Summarize the challenges still open in cloud computing.	L2	1	2
3.	Give reasons for need of abstraction in a virtualized environment.	L2	2	2
4.	Define “Everything as a Service”.	L1	2	2
5.	List any two types of events captured by CloudTrail.	L2	3	2
6.	Define Auto scaling.	L2	3	2
7.	Outline the role of the Fabric Controller in Windows Azure.	L4	4	2
8.	List any three features of Windows Azure.	L1	4	2
9.	Mention the default block size in HDFS.	L4	5	2
10.	List the three programming models supported in Aneka.	L2	5	2

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

Q.No	Questions	BLT	CO	Marks
11.	a i Differentiate Emulation and Interpretation.	L2	1	8
	ii Discuss the system virtual machines and process virtual machines in terms of architecture.	L1	1	8
	Or			
	b i Discuss the role of virtualization in cloud computing.	L1	1	8
	ii Explain the following:	L2	1	8
	a. Storage Virtualization			
	b. Network Virtualization			
12.	a i List and explain the Cloud deployment models with suitable example.	L2	2	8
	ii Discuss how would you apply the principles of generic cloud architecture design to build a scalable and highly available web application for a growing business.	L4	2	8

Or

	b	i	Discuss the layered architecture of cloud computing and explain how each layer contributes to the overall functionality and scalability of cloud services.	L4	2	8
		ii	List and explain the Architectural Design Challenges in cloud platform.	L2	2	8
13.	a	i	Write the steps to Deploy a sample EC2 instance using the AWS Management Console and attach a 20GB EBS volume to it.	L3	3	10
		ii	Compare and contrast AWS Code Commit and Code Build based on functionality.	L2	3	6
Or						
	b	i	List and explain any two commonly used AWS Management Tools.	L2	3	8
		ii	Analyze how AWS Config and AWS Trusted Advisor can be used together to improve compliance and cost optimization in your AWS environment.	L4	3	8
14.	a	i	Discuss how reliable is the Windows Azure Fabric Controller in managing resource allocation and failure recovery.	L3	4	8
		ii	List the benefits and limitations of using Windows Azure for deploying a cloud application.	L2	4	8
Or						
	b	i	Show the architecture for a scalable web application using Windows Azure services, including storage and service runtime components.	L2	4	8
		ii	Create a REST API call that uploads a file (BLOB) to Azure Storage and explain the request structure.	L4	4	8
15.	a	i	Explain the architecture of the Hadoop Distributed File System (HDFS) with neat sketch.	L2	5	8
		ii	Explain the various steps involved in Setting up Hadoop Cluster.	L2	5	8
Or						
	b	i	Explain about Aneka's Task Programming model in details.	L2	5	8
		ii	Compare Hadoop's MapReduce programming model with Aneka's Map-Reduce model.	L2	5	8