

CBCS SCHEME - Make-Up Exam

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BAD515C

Fifth Semester B.E/B.Tech. Degree Examination, June/July 2025

Cloud Computing

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.**

Module – 1			M	L	C
1	a.	Define the following basic Techniques and Technologies. i) High performance computing (HPC) system. ii) High through put computing (HTC) system. iii) Peer – to - Peer (p2p) network. iv) Internet of Things (IoT) v) Service – oriented architecture (SOA)	5	L1	CO1
	b.	Give a brief Overview of Scalability analysis and performance metrics in cloud computing.	10	L2	CO1
	c.	Differentiate : i) Cluster computing vs Grid computing ii) Multicore cpus and Multithreading Technologies.	5	L2	CO1
OR					
2	a.	Describe Service – Oriented Architecture (SOA) using a relevant figure.	8	L2	CO3
	b.	Give an explanation of peer – to – peer networks and cloud computing via the internet, using a clear drawing.	7	L2	CO3
	c.	Define GPU and explain its working and programming model and Power Efficiency of the GPU.	5	L2	CO3
Module – 2					
3	a.	Define Virtualization and explain the concept of Trust Management in Virtualized Data Centres as well as cloud Operating System.	7	L2	CO2
	b.	Write the differences between hypervisor and para-virtualization and give one example VMM (virtual machine monitor) that was built in each of the two categories.	8	L2	CO2
	c.	Describe the importance of : i) Hardware support for virtualization ii) CPU virtualization iii) Memory virtualization iv) Input – output virtualization v) Virtualization in Multicore processors.	5	L2	CO2
OR					
4	a.	Illustrate Physical Versus Virtual clusters with a diagram.	8	L2	CO2
	b.	Explain the different implementation levels of Virtualization.	10	L2	CO2
	c.	Name two tools used for virtualization in datacenters.	2	L3	CO2

Module – 3

5	a.	Explain the Public Private and Hybrid clouds using suitable diagram. Differentiate Centralized versus Distributed Computing.	10	L4	CO2
	b.	Write a short note on each of the topics listed below: i) Warehouse – Scale Data- Center Design ii) Data-Center interconnection Networks iii) Modular Data Center in shipping Containers iv) Interconnection of Modular Data Centers v) Data Center Management Issues.	10	L4	CO2

OR

6	a.	Describe Iaas , PaaS, and SaaS cloud service models with suitable diagram.	10	L4	CO2
	b.	Explain Public Cloud Platforms :GAE, AWS and AZURE.	10	L4	CO2

Module – 4

7	a.	Define cloud security and explain how it helps cloud users. Explain Distributed Intrusion.	6	L4	CO2
	b.	Explain : i) OS Security ii) VM Security iii) XOAR	7	L4	CO2
	c.	Write a short note on : i) Security risks posted by shared images ii) Security risks posted by a Management OS.	7	L4	CO2

OR

8	a.	Give a brief explanation on cloud security. Defense Strategies and Privacy and Privacy impact Assessment.	10	L4	CO2
	b.	Provide a Brief explanation of : i) Data and Software Protection Techniques ii) Reputation – Guided Protection of Data Centers.	10	L2	CO2

Module – 5

9	a.	Describe the parallel and Distributed computing paradigms. Differentiate between GFS and HDFS.	8	L2	CO2
	b.	Explain the key features of cloud platforms and write a short note on Traditional Features common to Grids and Clouds.	8	L2	CO2
	c.	List the Main Programming languages supported by Google App Engine.	4	L2	CO1

OR

10	a.	Give a brief summary of : i) Open Source Eucalyptus and Nimbus ii) Open Nebula sector / sphere and Open stack iii) Manjra-soft Aneka cloud and Appliances.	10	L3	CO2
	b.	Define Google File System (GFS). Explain : i) Programming on Amazon EC2 ii) Amazon simple storage service (s3) iii) Microsoft Azure Programming Support.	10	L2	CO2
