Reg.No.:												

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 6009

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – MAY / JUNE 2024
Sixth Semester
Electrical and Electronics Engineering
U19ITOE3 - BASICS OF CLOUD COMPUTING
(Common to ECE & BT)
(Regulation 2019)

Time: Three Hours | Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	What are the advantages and disadvantages of distributed network?	2	K1	CO1
2.	List the unique characteristics of an ideal cloud computing model?	2	K1	CO1
3.	Compare GPU and CPU chips in terms of their strengths and weaknesses.	2	K2	CO2
4.	Differentiate between hypervisor and para-virtualization and give one example VMM (virtual machine monitor), that was built in each of the two categories.	2	K2	CO2
5.	Recall the need of Multitenant technique used in cloud computing.	2	K1	CO3
6.	What are the Security Challenges in VMs?	2	K1	CO3
7.	What are the building blocks of BigTable?	2	K1	CO4
8.	Define three types of AMI.	2	K1	CO4
9.	List out the advantages of Cloud Mashups.	2	K2	CO5
10.	How the cloud resources can help in processing and storing the data collected in an IoT application?	2	K4	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.		Questions	Marks	KL	CO
11.	a)	Explain the five core features of cloud computing with necessary illustration.	13	K2	CO1
		(OR)			
	b)	Illustrate the performance and security issues in cloud computing.	13	K2	CO1
12.	a)	Do an architectural comparison between full virtualization, para virtualization and hardware assisted virtualization.	13	K3	CO2
		(OR)			
	b)	How onsite private cloud differ from outsourced private cloud and highlight the inherent advantages and disadvantages.	13	K4	CO2
13.	a)	Why are virtual machines and virtual clusters suggested in cloud computing systems? Illustrate with an example.	13	K4	CO3
		(OR)			
	b)	What breakthroughs are required to build virtualized cloud systems cost-effectively? Explain.	13	K4	CO3
14.	a)	Consider two cloud service systems: Google File System and Amazon S3. Explain how they achieve their design goals to secure data integrity and to maintain data consistency while facing the problems of hardware failure, especially concurrent hardware failures.	13	K3	CO4
		(OR)			
	b)	Suggest two hardware mechanisms and software schemes to secure the application cloud (SaaS), the infrastructure cloud (IaaS), and the platform cloud (PaaS). Discuss their specific requirements and difficulties that may be encountered.	13	K4	CO4
15.	a)	The IoT differs from the traditional Internet in many ways. Identify their differences and describe their distinctions in connecting entities, infrastructure and networking, and application domains.	13	K4	CO5
		(OR)			
	b)	Distinguish the following pairs of terminologies:		K4	CO5
		i. Open source versus proprietary operating systems	4		
		ii. Internet of Things versus cyber-physical systems	4		
		iii. Social networks versus professional networks	5		

PART – C

(1 x 15 = 15 Marks)

Q.No.		Questions	Marks	KL	CO
16.	a)	Assess the performance of online social and professional networking with their security issues.	15	K5	CO2
		(OR)			
	b)	Discuss the enabling technologies for building the cloud platforms from virtulized and automated data centers to provide IaaS, PaaS, or SaaS services. Identify hardware, software, and networking mechanisms or business models that enable multitenant services.	15	K5	CO3