Q. Code: 278845

Reg. No. | | | | | | | | | | | | | |

M.E/ M.TECH. DEGREE EXAMINATIONS, MAY 2023

Second Semester

CP22201 – CLOUD SERVICES AND VIRTUALIZATION

(Computer Science and Engineering)

(Regulation 2022)

TIME:3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Employ the concepts of storage virtualization, network virtualization and its Management.	**3**
CO 2	Apply the concept of virtualization in the cloud computing.	**3**
CO 3	Identify the architecture, infrastructure and delivery models of cloud computing.	**1**
CO 4	Develop services using Cloud computing.	**5**
CO 5	Apply the security models in the cloud environment.	**3**

PART- A (20x2=40Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	Justify the need of virtual machines in cloud computing.	**1**	**4**
2.	Compare and Contrast between Emulation and Simulation.	**1**	**3**
3.	Write the importance of binary interpretation.	**1**	**2**
4.	Outline the usage of Exception Emulation.	**1**	**2**
5.	Write the usage of Resource Pooling in virtualization.	**2**	**2**
6.	Differentiate between the physical cluster with virtual cluster.	**2**	**3**
7.	List the Live VM Migration Steps and Performance Effects.	**2**	**3**
8.	Examine the usage of Internet Suspend-Resume (ISR) technique.	**2**	**4**
9.	List the prime characteristics of Cloud computing.	**3**	**3**
10.	Write the impact of Inter Grid Gateway.	**3**	**2**
11.	List the various Categories of cloud computing services.	**3**	**3**
12.	Distinguish between Public and Private Cloud.	**3**	**3**
13.	List the important features of HDFS.	**4**	**3**
14.	Justify the usage of GAE Functional Modules while developing a cloud application.	**4**	**4**
15.	Outline the purpose of heartbeat signal in Hadoop.	**4**	**2**
16.	Write the Structure of Map Reduce Program.	**4**	**2**
17.	Identify the key Design Objectives of Reputation Systems.	**5**	**2**
18.	Outline the basic cloud security defense strategies.	**5**	**2**

19.	Differentiate between Passive and Active attacks.	**5**	**3**	
20.	Justify the strategy followed for Distributed Defense against DDoS Flooding Attacks.	**5**	**4**	

PART- B(5x 10=50Marks)

		Marks	CO	RBT LEVEL
21. (a)	What is Virtual Desktop? Explain in detail about the different types of desktop virtualization models.	**(10)**	**1**	**4**
	(OR)			
(b)	Explain about the process virtual machine and system virtual machine.	**(10)**	**1**	**4**
22. (a)	Illustrate the following Virtualization in detail: (i) CPU virtualization (ii) Memory Virtualization (iii) I/O Devices	**(10)**	**2**	**4**
	(OR)			
(b)	Elaborate in detail about the Virtualization for Data centre automation	**(10)**	**2**	**4**
23. (a)	Describe and examine the merits and demerits of Cloud deployment models: public, private, hybrid, community.	**(10)**	**3**	**2**
	(OR)			
(b)	Demonstrate in detail about the Inter-cloud Resource Management approach for provisioning the services using dynamic deployment.	**(10)**	**3**	**2**
24. (a)	Explain in detail about the HDFS and MapReduce in Hadoop framework with a neat diagram.	**(10)**	**4**	**4**
	(OR)			
(b)	Elaborate how Open Stack and Nimbus components support in cloud software environments with neat diagram.	**(10)**	**4**	**4**
25. (a)	Explain about Distributed Intrusion Detection, Data and Software Protection Techniques in cloud security and trust management.	**(10)**	**5**	**4**
	(OR)			
(b)	Illustrate with neat sketch and explain the activities of Identity Access Management Processes.	**(10)**	**5**	**4**

PART- C(1x 10=10Marks)

(Q.No.26 is compulsory)

		Marks	CO	RBT LEVEL
26.	Evaluate the different types of hypervisors and explain about Xen architecture in detail.	**(10)**	**2**	**5**