

Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

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

Fifth Semester

Artificial Intelligence and Data Science

CCS372 – Virtualization

(Common to Computer Science and Engineering &

Information Technology)

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

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

Q.No	Questions	BTL	CO	Marks
1.	What is meant by a hypervisor?	L1	1	2
2.	List out the relationship between cloud computing and virtualization.	L2	1	2
3.	Name any two server virtualization platforms.	L1	2	2
4.	Outline the function of a virtual desktop infrastructure (VDI).	L2	2	2
5.	Differentiate between physical and virtual networks.	L2	3	2
6.	List the benefits of WAN virtualization?	L2	3	2
7.	Analyze what happens if address space remapping fails during storage operations?	L4	4	2
8.	Examine how can integrating SAN and NAS improve data access performance?	L4	4	2
9.	What is Oracle VM VirtualBox?	L2	5	2
10.	State the purpose of AWS EC2 service.	L2	5	2

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

Q.No	Questions	BLT	CO	Marks
11.	a Explain in detail the need for virtualization in cloud computing and discuss how it helps in cost reduction, administration, and fast deployment.	L2	1	16
	Or			
	b Explain about full virtualization, partial virtualization, and paravirtualization with neat diagrams.	L2	1	16
12.	a Explain the basics of virtual machines. Discuss the types of virtual machines with examples.	L2	2	16
	Or			
	b Explain desktop virtualization and discuss the types of desktop virtualization with examples.	L2	2	16

13.	a	Illustrate the architecture of VLANs with neat diagrams. Explain how VLANs contribute to network segmentation and security.	L2	3	16
	Or				
	b	Compare and contrast VLAN and WAN virtualization in terms of purpose, functionality, and implementation.	L2	3	16
14.	a	Explain memory virtualization and discuss its importance in cloud and data center environments.	L2	4	16
	Or				
	b	Explain the concept, architecture, and benefits of RAID. Compare various RAID levels (RAID 0, 1, 5, 6, 10).	L2	4	16
15.	a	Explain Amazon AWS virtualization services and also how virtualization supports its scalability and reliability.	L4	5	16
	Or				
	b	Explain a virtualization environment for a medium-scale organization using suitable tools (VMware/Hyper-V/AWS).	L4	5	16