

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. III Year II Semester Regular & Supplementary Examinations June-2025

VIRTUALIZATION TECHNIQUES

(Common to CCC & CAI)

Time: 3 Hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1 a Discuss the key components of system architectures relevant to virtualization. CO1 L2 6M

b How different system architectures influence virtualization techniques CO1 L1 6M

OR

2 Describe the fundamental technique in emulating hardware platforms and software environments. CO1 L3 12M

UNIT-II

3 a Explain the concept of server virtualization and its benefits in modern IT environments. CO2 L2 6M

b How are virtual workloads managed and optimized within a virtualized infrastructure? CO2 L2 6M

OR

4 Explain the concept of memory virtualization and its role in optimizing resource utilization. CO2 L2 12M

UNIT-III

5 a What is WAN virtualization, and how does it optimize network resources? CO3 L1 6M

b Discuss the role of VLANs in network scalability and segmentation. CO3 L3 6M

OR

6 How are virtualization technologies integrated into traditional network architectures? CO3 L3 12M

UNIT-IV

7 Discuss the concept of Label Switched Paths (LSPs) in network routing. CO4 L2 12M

OR

8 a Describe the operation of Label Switched Paths in routing. CO4 L2 6M

b How does control-plane virtualization streamline network management tasks? CO4 L3 6M

UNIT-V

9 a Explain the concept of Shared Kernel virtualization. CO5 L2 6M

b How do server virtualization solutions streamline IT infrastructure management? CO5 L3 6M

OR

10 Explain the flexibility and customization options available in VirtualBox for virtual machine configurations. CO5 L2 12M

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