

Reg. No.

Question Paper Code

21340

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

First Semester

M.E. - Computer Science and Engineering (with specialization in Networks)

20PCNPC102 - VIRTUALIZATION TECHNOLOGIES

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

*Marks,
K-Level,CO*

1. Mention the different types of hypervisor. *2,K1,CO1*
2. Illustrate booting process in VM. *2,K2,CO1*
3. Explain the process of memory allocation in VM. *2,K2,CO2*
4. Explain ballooning concepts with an example. *2,K2,CO2*
5. Define System level file system. *2,K1,CO3*
6. Explain virtual storage with an example. *2,K2,CO3*
7. Distinguish Cold and hot migration. *2,K2,CO4*
8. Whether the data will loss during migration. Justify your answer. *2,K2,CO4*
9. Mention the technologies under distributed computing *2,K1,CO5*
10. Define VM sprawl. *2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Mention the pros and cons of virtual memory in physical machine and virtualization in memory. *13,K2,CO1*

OR

- b) Write Short notes on
- a) KVM *5,K2,CO1*
 - b) Xen *4,K2,CO1*
 - c) Microsoft hypervisor *4,K2,CO1*

12. a) Discuss the virtualization concepts in memory. Illustrate the Challenges in memory virtualization with neat diagram. *13,K2,CO2*

OR

- b) Mention the pros and cons of virtual memory in physical machine and virtualization in memory. *13,K2,CO2*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

21340

13. a) Discuss in detail about storage virtualization with an example. 13,K2,CO3
- OR**
- b) What is meant by storage virtualization in cloud computing? Discuss in details about the types of storage virtualization in detail with suitable examples. 13,K2,CO3
14. a) Discuss the following in detail 5,K2,CO4
- a) VM based distributed computing 4,K2,CO4
 - b) Elastic computing 4,K2,CO4
 - c) Clustering
- OR**
- b) Explain the different types of computing in virtualized environment. 13,K2,CO4
15. a) Explain cloud computing architecture in virtualized environment with a suitable scenario. 13,K2,CO5
- OR**
- b) Differentiate application virtualization differ from server virtualization. 13,K2,CO5

PART - C (1 × 15 = 15 Marks)

16. a) Create VMs in a single or more than one physical machine. Apply the migration concepts from one VM to another VM within and across physical machine. 15,K3,CO4
- OR**
- b) Create 5 VMs with different specification and deploy an application in virtual environment. 15,K3,CO5