

**B.C.A. DEGREE END SEMESTER EXAMINATION - OCTOBER 2025****SEMESTER 5 : MOBILE APPLICATIONS AND CLOUD TECHNOLOGY****COURSE : 19U5VCBCA3 : PRINCIPLES OF VIRTUALIZATION***(For Regular 2023 Admission and Supplementary 2022/2021/2020/2019/2018/2017/2016 Admissions)*

Time : Three Hours

Max. Marks: 75

**PART A****Answer All (1 mark each)**

1. Define VHD.
2. State the NIST definition of 'Cloud'.
3. What technology is used in application sharing?
4. What is the default URL used to access the RD Web Access Web page?
5. Define Application Virtualization.
6. What is the need of VIM tool ?
7. Write the expansion for the following.  
a) DCUI    b) EULA
8. What are VMWare components?
9. List out any four hypervisor vendors.
10. List some of the examples of Hardware-Assisted virtualization technology by different vendors.

**(1 x 10 = 10)****PART B****Answer any 8 (2 marks each)**

11. Discuss Virtual Machine Configuration.
12. Define the term 'Critical Instruction.' Explain three categories of critical instruction.
13. What is the use of a network adapter in a Virtual network?
14. Explain the important factors which need to be monitored in Hyper-V environment.
15. How can we monitor the overall performance of the network?
16. How do you verify that Forms Authentication is enabled in the RD Web Access Website?
17. List out the major advantages of I/O Virtualization.
18. What are the steps that enable you to create a virtual drive?
19. What is Bit Torrent Sync?
20. Differentiate between Clustering and Grid computing.

**(2 x 8 = 16)****PART C****Answer any 5 (5 marks each)**

21. Distinguish between remote and streaming application virtualization.
22. Explain the working of Role-based Application Provisioning.
23. What is virtual machine density? Enumerate the factors to be considered to estimate virtual machine density.
24. Explain how do you allocate
  - a) memory for a Virtual Machine
  - b) CPU resources for a virtual machine

25. Elaborate on the virtual networking.
26. Enumerate server blades, I/O modules and management modules.
27. Compare and contrast between hardware and software partitioning.

**(5 x 5 = 25)**

**PART D**

**Answer any 2 (12 marks each)**

28. How Application Sharing Works? Explain with real-time scenarios where the application sharing is implemented.
29. Explain in detail about the creation of Virtual Hard Disk.
30. Discuss on Vcenter Server deployment Options.
31. State and explain the components of blade systems?

**(12 x 2 = 24)**