UPES
UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Oracle VM Server for x86: Admin   Semester: VI
Program: B.C.A.   Time : 03 hrs.
Course Code: CSBC 3012   Max. Marks: 100

Instructions: Attempt all questions. Assume any missing data, draw diagrams wherever applicable, provide appropriate examples.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1.	Illustrate various components of a physical Server.	4	CO1
Q 2.	What is the function of a Hypervisors?	4	CO1
Q 3.	Define a Domain Controller.	4	CO2
Q 4.	Explain Virtual Desktop Infrastructure.	4	CO3
Q 5.	Why Zentyal is important for System Administrators?	4	CO4

SECTION B
(4Qx10M= 40 Marks)

Q 6.	What will be your major job responsibilities as a System Administrator?	10	CO1
Q 7.	Write down the stepwise procedure that is used to create a Virtual Machine i.e. identification of available resources and then allocation of these computing resources to a physical machine.	10	CO2
Q 8.	What is the benefits of Oracle Linux Virtualization Manager?	10	CO3
Q 9.	Discuss the features of Active Directory Services.	10	CO4
OR			
	Which virtualization technique is best suited for the Organizations like UPES?	10	CO4

SECTION-C
(2Qx20M=40 Marks)

Q 10.	You have assign a job of a System Administrator. Now explain the different factors that will be considered by you while designing a UPES Data Centre. [Hint: Explain and point all major factors like Location, Power Supply, Cooling, ISPs, Servers, Network, and System Administration etc.]	20	CO3

	"The most likely way for the world to be destroyed, most experts agree, is by accident. That's where we come in; we're computer professionals. We cause accidents." *–Nathaniel Borenstein (1957–)* There are many different ways to integrate with Virtualization Technology in Data Centre. You must analyze your requirements and design judiciously—balancing cost, environment, and performance considerations. Other things to consider are interaction type, synchronization requirements, and transaction type. Ensure that you adequately assess risks and have a risk-mitigation plan in place. Data Centres (operating systems, transaction processors, databases, and so on) have been evolving for over four decades and are still going strong. On the other hand, midrange systems usually go through significant paradigm shifts every three to five years. Why do you think that is the case? - If you were going to establish a Data Centre then what factors will be important for you? **Critical Examine the above phrase and based on your analysis and observations answer any of the questions as below:**		
Q 11.	An earthquake took place in Uttarakhand and the State Data Centre was severely damaged due to this disaster. You as a System Administrator, how you may recover from such disasters, what are the precautions you may have taken earlier, what are your disaster recovery strategies etc. Discuss and elaborate on an optimum solution with the implementation of virtualization, ADS, Zentyal, VPN, VLAN, Domain Controller, DNS, and DHCP etc. Review various types of virtualization, Oracle, and Domains Services to propose a solution.	**20**	**CO4**
OR			
	Briefly explain the Active Directory Services and features of Zentyal for System x86 Administration.	**20**	**CO4**