

Name:	 UPES <small>UNIVERSITY OF TOMORROW</small>
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2023

Course: Cloud Computing Fundamentals
Program: B.Tech CS –All branches
Course Code: CSVT3022P

Semester: V
Time : 03 hrs.
Max. Marks: 100

Instructions: Attempt all the Questions. Choices are mentioned internally

Section A

S. No.		Marks	CO
Q 1	Relate utility computing model with cloud computing model. Are these models same. If not, why?	4	CO1
Q 2	Differentiate between File, Block and Object Storage?	4	CO2
Q 3	Discuss the importance of API, ABI and ISA in design of hypervisors in context of Machine Reference model.	4	CO2
Q 4	Discuss the role of Load Balancer and SLA Monitoring in cloud computing.	4	CO3
Q 5	Describe which kind of cloud workloads are suitable for public clouds.	4	CO4

Section B

Q6	Discuss in detail the major distributed computing technologies that led to the concept cloud computing?	10	CO1
Q 7	Describe different types of Virtualization at Execution Level.	10	CO2
Q 8	Explain the various deployment models for cloud environment.	10	CO3
Q 9	Justify why Workload Categorization is important in Cloud Computing Environment? Explain the various categories of Workloads suitable for cloud environment.	4+6	CO4

Section C

Q 10	Discuss <ul style="list-style-type: none"> • Instruction types based on security rings and privileged mode. • Classification of Parallel Computing Systems. 	10+10	CO2
Q 11	a. Explain Xen Hypervisor architecture with the help of diagram. b. A company currently experiences 8 to 10 percent utilization of its development and test computing resources. The company would like to consolidate to reduce the number of total resources in their data center and decrease energy costs. Which feature and what kind computing environment they should opt for and why? Support your answer with suitable examples. OR c. Explain VMware Hypervisor architecture with the help of diagram.	10+10	CO3

	<p>d. A software tester who is testing a complex application that is running within a single virtual machine, has recently encountered a rare and intermittent software defect that developers have been unable to reproduce or troubleshoot in the past. What steps should be taken by the software tester to allow developers to recreate the issue. Support your answer with suitable examples.</p>	10+10	
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