Name: Enrolment No:	

UPES
End Semester Examination, December 2023

Course: Cloud Computing Fundamentals   Semester   : 3
Program: B.Tech (CSE-H+NH)-CCVT   Time   : 03 hrs.
Course Code: CSVT2009   Max. Marks: 100

Instructions: All questions are compulsory.

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SECTION A
(5Qx4M=20Marks)

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S. No.		Marks	CO
Q 1	Explain the concept of virtualization in cloud computing.	4	CO1
Q 2	Explain the fundamental differences between private clouds, public clouds, and hybrid clouds.	4	CO4
Q3	Multiple choice questions. Choose the correct answer. 3.1] What is network virtualization? A) The process of creating a physical network infrastructure. B) The process of simulating a network for testing purposes. C) The abstraction of network resources to create multiple virtual networks on a shared physical network. 3.2] Which technology is commonly used for network virtualization in data centers? A) VLAN (Virtual Local Area Network) B) VPN (Virtual Private Network) C) MPLS (Multiprotocol Label Switching) 3.3] What is the primary benefit of Application Virtualization? A) Improved security B) Enhanced hardware performance C) Simplified software deployment and management 3.4] What is the primary advantage of using containers for application deployment? A) Improved security B) Easier scalability C) Faster application startup	1+1+1+1	CO3
Q4	Explain the concept of scalability in cloud computing.	4	CO4

Q5	Describe the concept of full and paravirtualization.	4	CO2

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SECTION B
(4Qx10M= 40 Marks)

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Q6	Explore the benefits of cloud computing.	10	CO5
Q7	Explain and describe five key benefits of adopting a multi-cloud strategy in the context of modern cloud computing.	10	CO6
Q8	Define the concept of 'Cloud Workload' within the cloud computing framework. Explore the fundamental attributes, various categories, obstacles, and advantages linked to the administration of cloud workloads. Employ real-world instances to elucidate your arguments.	2+2+3+3	CO6
Q9	Explain the concept of Desktop Virtualization	10	CO4

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SECTION-C
(2Qx20M=40 Marks)

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Q10	Explore the impact of cloud service models (IaaS, PaaS, SaaS) on workload characteristics. How do these service models influence the scalability and manageability of workloads in the cloud?	10+10	CO5
Q11	Explain: a. the core components of a typical cloud computing architecture, b. infrastructure as a service (IaaS), c. platform as a service (PaaS), and d. software as a service (SaaS). Provide examples of each and describe them properly.	10+10	CO4