UPES
UNIVERSITY OF TOMORROW

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

Course: Cloud Computing Architecture **Semester: IV**
Program: BT-CSE-CCVT **Time: 03 hrs.**
Course Code: CSVT 2007 **Max. Marks: 100**

SECTION A

S. No.		Marks	CO
Q 1	List the various Cloud Deployment and Delivery models: a. _____, b. _____, c. _____, d. _____, e. _____	4	CO1
Q 2	In context of software development life cycle justify the need and value of Platform as a Service (PaaS). Describe with an example scenario where PaaS is useful.	4	CO2
Q 3	Read the following statement: "Applications offered on Internet are not necessarily offered as software as a service (SaaS)" What are your thoughts on the preceding assertion? Give examples to support your explanation.	4	CO3
Q 4	In Cloud Computing Reference Architecture list the five main Cloud Computing Actors: a. _____, b. _____, c. _____, d. _____, e. _____	4	CO4
Q 5	In Cloud Computing Reference Architecture following are the function of a Cloud Service Provider. Select all correct answers. a. Service Consumption b. Privacy c. Service Arbitrage d. Performance Audit e. Service Management f. Service Deployment g. Security h. Service Aggregation i. Service Intermediation j. Service Orchestration	4	CO4

	SECTION B		
Q 6	Explain different approaches that are appropriate for different needs of PaaS. Also, give suitable example for each approach.	**4+6**	**CO2**

Q 7	Explain the following:
	    a. High availability architecture in cloud environment.
	    b. Types of Load balancers
	    c. Load Balancing algorithms
		4+3+3	**CO2**

Q 8	Compare the three types/categories of SaaS and describe each. Give examples of each category.	**10**	**CO3**
Q 9	Draw schematic diagram for redundant three tier architecture for cloud? Explain autoscaling architecture based on load balancers. <center>OR</center> What are the different types of storage services available in cloud environment. Describe with examples.	**10**	**CO3**
	SECTION-C		
Q 10	Draw the Cloud Computing Reference Architecture diagram. Analyze the purpose of each component. Describe in detail the break-up of Cloud Service Provider.	**20**	**CO4**
Q 11	Digital advertising company TasveerTeriDilMain has a large digital footprint but historically has not been at high risk for cyberattacks. However, when it noticed an uptick in attacks, the company knew it needed to take further steps to protect its systems. Therefore, the company turned hired you as Chief Security Office for a solution, that not only blocks cyberattacks but also deters them in order to reduce needless service slowdowns and boost customer confidence. Draw your application security solution reference architecture and explain the architecture and its components in detail. <center>OR</center> You are Chief Solution Architect for GlobalKirneKiDukan.com, a company with a very large employee store base of more than 10,000 stores. You are asked to create web presence for the company. Illustrate diagrammatically, and, describe your solution design for your web application hosting solution architecture. Detail the cloud components and their positioning and relationship in public network/user network, provider cloud and enterprise network.	**20**	**CO4**