KUMARAGURU
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B.TECH DEGREE EXAMINATIONS: DEC 2022

(Regulation 2018)

Fifth Semester

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

U18AII5201: Cloud Architecture

COURSE OUTCOMES

CO1:   Analyze the main concepts, key technologies, strengths, and limitations of cloud

CO2:   Analyze and understand various queuing models

CO3:   To understand and use the architecture of compute and storage cloud, service, and delivery models.

CO4:   Apply the core issues of cloud computing such as resource management and security.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	List some of the advantages of cloud computing	CO1	[K1]
2.	Compare and contrast cloud elasticity and cloud scalability	CO2	[K2]
3.	Explain SOAP transport-independent messaging protocol	CO2	[K2]
4.	Identify the advantages of type 2 hypervisor	CO1	[K3]
5.	Infer the roles that are coordinated by a cloud broker and cloud provider	CO3	[K2]
6.	What is the importance of layered cloud architecture?	CO4	[K1]
7.	Outline the entities of the global exchange of cloud resources	CO4	[K2]
8.	Infer some ways of preventing data breaches, insufficient identity, credential, access and key management	CO3	[K2]
9.	Compare and contrast Google cloud engine and Microsoft azure	CO4	[K2]
10.	List the types of virtualizations	CO1	[K1]

Answer any FIVE Questions: -
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Distinguish the following with respect to their underlying principles.
		    1. Shared Memory Architecture
		    2. Distributed Memory Architecture
		    3. Hybrid distributed shared memory
			8	CO1	[K2]

	b)	Examine the logic behind PAAS, SAAS and IAAS. Also highlight their differences with respect to the implementation strategies	8	CO2	[K4]

12.	a)	Analyze some ways of disaster recovery with respect to the parameters	8	CO2	[K4]

12. a) Analyze some ways of disaster recovery with respect to the parameters   8   CO2   [K4]
   a) Back up
   b) Cold/hot Site
   c) Virtualization

    b) Identify some ways of standardized XML messaging system using web service   8   CO1   [K3]

      by using SOAP, UDDI and WSDL

13. a) Categorize few methods for implementing System of systems and REST in   16   CO3   [K4]
   virtualization through HTTP and REST API

14. a) Build a NIST Cloud Computing Reference Architecture in which a cloud   16   CO4   [K3]
   consumer may request service from a cloud broker instead of contacting a cloud
   provider directly. The cloud broker may create a new service by combining
   multiple services or by enhancing an existing service.

15. a) Plan a methodology to implement elasticity in cloud for a production industry   8   CO2   [K3]
   that implements the following logics.
      1. Vertical Scalability
      2. Diagonal Scalability

    b) Assume that an organization is interested to implement Hadoop and MapReduce   8   CO3   [K4]

      in their sector hence suggest some strategies to be adopted

16. a) Identify the logic behind on demand computing and narrate why it is important   8   CO1   [K3]

    b) Explain Publish Subscribe model with a neat sketch   8   CO2   [K2]

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