Question Paper Code | **13701**

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025
Seventh Semester
Artificial Intelligence and Data Science
20CSPC603 – CLOUD COMPUTING
Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)
Answer ALL Questions

		Marks	K–Level	CO

1. MIMD stand for_____. — 1, K2, CO1
   (a) Multiple Instruction, Matrix Data (b) Multiple Instruction, Multiple Data
   (c) Matrix Instruction, Multiple Data (d) Matrix Instruction, Matrix Data

2. Users can customize their servers with their add-ons, in _____cloud. — 1, K2, CO1
   (a) Public (b) Private (c) Hybrid (d) Dedicated

3. When aiming for high density virtualization which technique allows multiple instances of an operating system to share the same kernel, optimizing resource utilization and reducing overhead? — 1, K2, CO2
   (a) Full virtualization (b) Para-virtualization
   (c) OS level virtualization (d) Hyper convergence

4. Full virtualization is when an operating system is executing on a Type _____ VM. — 1, K1, CO2
   (a)1 (b)2 (c)3 (d)4

5. How does cloud storage benefit small businesses in terms of scalability? — 1, K1, CO3
   (a) Limited scalability options (b) Reduced flexibility
   (c) Easily adjustable storage capacity (d) Fixed storage plans

6. Which of the following is/are XML parser API(s)? — 1, K1, CO3
   (a) XaaS (Anything as a Model) (b) DOM (Document Object Model)
   (c) CLI (Command Line Interface) (d) SLA (Service Level Agreement)

7. Users may lose data if they migrate from one vendor to another which is called as _____ — 1, K2, CO4
   (a) Data breach (b) Data lock in (c) Data locality (d) Data recovery

8. Integrity monitoring and log inspection can be applied at _____ level. — 1, K2, CO4
   (a) Virtual machine (b) Application (c) Physical (d) Session

9. Google App Engine provides integration to different development tools like_____ — 1, K1, CO5
   (a) Eclipse (b) Jenkins (c) IntelliJ (d) All the mentioned

10. Who is going to analyze the SLA ? — 1, K2, CO6
    (a) Cloud controller (b) Cloud Exchange (c) Cloud mediator (d) Cloud broker

PART - B (12 × 2 = 24 Marks)
Answer ALL Questions

11. Differentiate between parallel and distributed computing. — 2, K2, CO1

12. Give the advantages of cloud computing. — 2, K1, CO1

13. Define REST and its working. — 2, K1, CO2

14. Express the levels of virtualization. — 2, K1, CO2

15. What is cloud storage? — 2, K1, CO3

16. Brief notes on Virtualization? — 2, K1, CO3

17. Describe about SAML protocol. — 2, K2, CO4

18. Explain data privacy. — 2, K2, CO4

19. What is the significance of Map Reduce in data processing? — 2, K1, CO5

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

13701

20.	How does VirtualBox facilitate virtualization in cloud infrastructure?	*2*	*K1*	*CO5*
21.	Summarize the benefits of using federated services in cloud computing.	*2*	*K1*	*CO6*
22.	Highlight two key levels of cloud federation and their purposes.	*2*	*K3*	*CO6*

PART - C (6 × 11 = 66 Marks)
Answer ALL Questions

23.	a)	Describe in detail about an evolution of cloud computing.	*11*	*K2*	*CO1*
		OR			
	b)	Explain in detail about Elasticity in Cloud and On-demand Provisioning.	*11*	*K2*	*CO1*
24.	a)	Explain about various implementation levels of virtualization.	*11*	*K2*	*CO2*
		OR			
	b)	Describe in detail about the REST a software architecture style for distributed systems.	*11*	*K2*	*CO2*
25.	a)	Briefly discuss the NIST cloud computing reference architecture.	*11*	*K2*	*CO3*
		OR			
	b)	Compare: Public. Private and Hybrid clouds.	*11*	*K2*	*CO3*
26.	a)	Articulate the concepts of Inter cloud Resource Management.	*11*	*K2*	*CO4*
		OR			
	b)	Define cloud Security. Elaborate Cloud Security standards in detail.	*11*	*K2*	*CO4*
27.	a)	Describe the significance of Virtual Box in cloud computing? Discuss its features and how it is used for virtualization.	*11*	*K2*	*CO5*
		OR			
	b)	Discuss Open Stack and its role in private cloud environments. What are the key components and services provided by Open Stack?	*11*	*K2*	*CO5*
28.	a)	Describe the challenges of implementing cloud federation, particularly in terms of security, data management, and compliance.	*11*	*K3*	*CO6*
		OR			
	b)	Explain how federated cloud environments address the challenge of vendor lock-in. What strategies do they use to increase portability?	*11*	*K3*	*CO6*