BCD515C

Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025
NoSQL Databases

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	What is NoSQL? Explain briefly about aggregate data models with a neat diagram. Consider example of relations and aggregates.	10	L2	CO1
	b.	Define materialized view. How are they different from views? Briefly explain the two main strategies to build a materialized view.	10	L2	CO1
		OR			
Q.2	a.	Describe in detail the attack of clusters.	07	L2	CO1
	b.	Explain Impedance mismatch with the help of a suitable example.	07	L2	CO1
	c.	What are schemaless databases? Explain.	06	L2	CO1
		Module – 2			
Q.3	a.	Explain Master Slave and Peer to Peer distribution models with a neat diagram.	10	L2	CO2
	b.	Explain about Update consistency and Read consistency with an example.	10	L2	CO2
		OR			
Q.4	a.	What are Version stamps? What are the ways to create version stamps?	10	L2	CO2
	b.	Explain CAP theorem. How is it applicable to NoSQL systems?	10	L2	CO2
		Module – 3			
Q.5	a.	What is Map Reduce? Explain Map Reduce technique with an example.	10	L2	CO3
	b.	What are the features of key value databases? Explain.	10	L2	CO3
		OR			
Q.6	a.	Explain 2 stages of Map Reduce example with a neat diagram.	10	L2	CO3
	b.	Explain how data can be read and posted from and to the bucket using queries in Riak.	05	L2	CO3
	c.	What is key value store? List some popular key value databases.	05	L1	CO3
		Module – 4			
Q.7	a.	What are document databases? Explain any 2 features of document databases.	10	L2	CO4
	b.	Explain suitable use cases of document data store.	10	L2	CO4
		OR			
Q.8	a.	Describe scaling and sharding in MongoDB.	10	L2	CO4
	b.	How to ensure consistency and availability in MongoDB?	10	L2	CO4
		Module – 5			
Q.9	a.	What are the features of graph databases? Explain.	10	L2	CO5
	b.	Explain some suitable use cases of graph databases and describe when we should not use graph databases.	10	L2	CO5
		OR			
Q.10	a.	Explain the three ways in which graph databases can be scaled with a neat diagram.	10	L2	CO5
	b.	How to query on graph? Explain with example.	10	L2	CO5

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