Code: 21F00402c

MCA IV Semester Supplementary Examinations January 2024
NOSQL DATABASES
(Master of Computer Applications)

Time: 3 hours   Max. Marks: 60

Answer all the questions
*****

1	(a)	What is the need of NoSQL emergence? How NOSQL databases is useful in social networks companies? Listthe barriers of NoSQL databases.	6M
	(b)	Explain the steps to load and query the data in column – oriented NoSQL databases.	6M
		OR	
2	(a)	Broadly classify the four different types of NO SQL databases.	6M
	(b)	Describe the detailed architecture of document – oriented NoSQL databases.	6M
3	(a)	Describe the value of relational databases.	7M
	(b)	Explain the working of Schemaless databases.	5M
		OR	
4	(a)	Explain Cassandra's data model with column families.	6M
	(b)	Discuss about Update Consistency and Read Consistency with an example.	6M
5	(a)	Write the code snippet to write the document which contains details such as order_id, order_items to store in MongoDB.	6M
	(b)	Explain with a neat diagram, the partitioning and combining in Map Reduce.	6M
		OR	
6	(a)	Explain with a neat diagram how to add a new node to an existing replica-set cluster.	6M
	(b)	Illustrate the working of peer-to-peer replication with an example.	6M
7	(a)	Explain column-oriented NoSQL databases using Apache Cassandra.	6M
	(b)	Illustrate scaling and application level sharding of nodes with a neat diagram.	6M
		OR	
8	(a)	With a neat diagram explain the architecture of HBASE.	6M
	(b)	Describe the query features and transactions of Apache HBASE.	6M
9	(a)	Discuss when not to use key-value stores by giving some examples.	5M
	(b)	Write a code to create a bucket to store and fetch the session/shopping cart objects.	7M
		OR	
10	(a)	Illustrate with an example to store all the data in a single bucket.	7M
	(b)	Explain multioperation transactions used in key-value databases.	5M

*****