

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

MCA DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Second Semester

Master of Computer Applications

MC4202 – Advanced Database Technology

Regulations – 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	How the global coordinator controls distributed transactions in a distributed database?	UN	1	2
2.	Assess the messages used by 2 phase commit protocol.	UN	1	2
3.	List the different types of queries used in spatial database.	RE	2	2
4.	Show the significance of handoff management.	RE	2	2
5.	Define Cassandra Query Language (CQL).	RE	3	2
6.	Differentiate graph database & RDBMS.	UN	3	2
7.	Recall the XML tree rules.	RE	4	2
8.	How to link XML file with CSS? With example.	UN	4	2
9.	Relate the databases & IR systems.	RE	5	2
10.	State probabilistic model.	RE	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Illustrate the distributed system in detail and interpret the implementation issues.	UN	1	13
	Or			
	b i What is distributed query processing? Explain in detail with an example.	UN	1	6
	ii What is a distributed transaction? Summarize the distributed transactions work?	UN	1	7
12.	a Outline the concept of mobile transaction models.	UN	2	13
	Or			
	b i Explain spatial data management. Elaborate the various indexing techniques of spatial data management.	UN	2	7
	ii Discuss the syntax and semantics of active databases. How the active rules are specified in oracle?	UN	2	6
13.	a i How does MongoDB create collection automatically? With suitable example.	AN	3	8
	ii Compare with Mongo DB and Orient DB.	AN	3	5

Or

	b	i	Analyze the components of Cassandra keyspace. Write a suitable example & syntax.	AN	3	6
		ii	Simplify the partitioning in two ways of hive. Write a relevant example & syntax.	AN	3	7
14.	a		Survey the different approaches for storing XML documents in databases with example.	AN	4	13
			Or			
	b	i	Distinguish between structured, semi structured & unstructured data.	AN	4	6
		ii	Examine the XPath expression with a suitable example.	AN	4	7
15.	a		Analyze the two main approaches to IR.	AN	5	13
			Or			
	b	i	Classify the retrieval models.	AN	5	6
		ii	Simplify the text preprocessing.	AN	5	7

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	How is concurrency control achieved in distributed databases? Examine your answer with an example.	AN	1	15
		Or			
	b	Discover the problems of location-dependent data distribution. How does it affect the data integrity and data consistency? Analyze your answer.	AN	2	15