K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2023	
(B.Tech) Program: Information Technology Scheme :II	
Examination: TY Semester: V	
Course Code: ITDLC5051 and Course Name: Advanced Database and Information Retrieval	

Date of Exam:07/12/2023	Duration: 2.5 Hours	Max. Marks: 60

Instructions:
(1)All questions are compulsory.
(2)Draw neat diagrams wherever applicable.
(3)Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	Explain Remote Database Access Protocol.	02	CO2	U
ii)	List down the factors that contribute to the cost of a query.	02	CO1	R
iii)	Explain Data warehouse with real life example	02	CO4	U
iv)	Explain the Retrieval Process in general.	02	CO3	U
v)	Define initial load, incremental load, and full refresh.	02	CO5	U
vi)	Explain indexing with example.	02	CO6	U
vii)	List down Features of a Data Warehouse.	02	CO4	R
viii)	List down the commonly accepted threats to database security.	02	CO2	R
Q.2	Solve any four questions out of six.	16		
i)	Draw and explain taxonomy of Information Retrieval Models.	04	CO3	U
ii)	Apply Data fragmentation techniques on a real life example.	04	CO2	A
iii)	Draw diagram and describe OLAP Architectures: MOLAP, ROLAP,	04	CO5	An
iv)	Explain how to measure cost for Query of Join operation with the help of example.	04	CO1	A
v)	Apply the concept of indexing for a detailed explanation of the approach used in Multimedia Indexing.	04	CO6	A
vi)	Distinguish between OLAP and OLTP systems using a real-life application.	04	CO4	An

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Q.3	Solve any two questions out of three.	16		
i)	List the OLAP operations, and analyze them with the help of an example.	08	CO5	An
ii)	Apply the concept of Centralized and Distributed Databases to differentiate them using real-life example.	08	CO2	A
iii)	Sketch the block diagram and explain the phases of Query processing	08	CO1	A
Q.4	Solve any two questions out of three.	16		
i)	Explain in detail generic multimedia indexing approaches	08	CO6	U
ii)	Describe the main components of IR system	08	CO3	U
iii)	Analyze and elaborate on data extraction issues in detail	08	CO4	An

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