University of Mumbai

Program: **Information Technology**
Curriculum Scheme: Rev2019 C-Scheme
Examination: TE Semester V

Course Code: ITDO5012 and Course Name: Advance Data Management Technologies

Time: 2 hour Max. Marks: 80

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Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks (2M each)**
1.	In case of A4 search algorithm if the equality condition is on a key the strategy can retrieve
Option A:	Single records
Option B:	Two records
Option C:	Multiple records
Option D:	No records
2.	Business intelligence (BI) is a broad category of application programs which includes _____
Option A:	Decision support
Option B:	Data mining
Option C:	OLAP
Option D:	All of the mentioned
3.	The operation of moving from finer-granularity data to a coarser granularity is known as
Option A:	Rollup
Option B:	Drilldown
Option C:	Dicing
Option D:	Pivoting
4.	The terms that means value of data at a particular point of time is said to be
Option A:	Interval data
Option B:	temporal data
Option C:	chunked data

Option D:	snapshot data
5.	A homogeneous DDB is which of the following
Option A:	The same DBMS is used at each location and data are not distributed across all nodes
Option B:	The same DBMS is used at each location and data are distributed across all nodes
Option C:	A different DBMS is used at each location and data are not distributed across all nodes
Option D:	A different DBMS is used at each location and data are distributed across all nodes
6.	DynamoDB works on which NoSQL Architectural pattern?
Option A:	Key-Value Store Database
Option B:	Column Store Database
Option C:	Document Database
Option D:	Graph Database
7.	A relational algebra operation annotated with instructions on how to evaluate it is called _____
Option A:	Evaluation algebra
Option B:	Evaluation plan
Option C:	Evaluation primitive
Option D:	Evaluation engine
8.	Which technique is used to restore database after last failure
Option A:	Backup
Option B:	Recovery
Option C:	query optimization
Option D:	concurrency
9.	In ETL, which of this is a not data loading technique:
Option A:	load
Option B:	append
Option C:	Constructive merge
Option D:	collaborative merge
10.	Query decomposition involves converting
Option A:	calculus query into algebraic query
Option B:	algebraic query into calculus query
Option C:	calculus query into relational query
Option D:	relational query into algebraic query

Q2	**Solve any Two Questions out of Three 10 marks each**
A	Express various fragmentation strategies in distributed database and explain them in

	detail with example
B	Transcribe Query Optimization in Distributed Databases. Explain view Serializability with example.
C	Explain type of data extraction method in ETL Process with proper diagram

Q3	**Solve any Two Questions out of Three 10 marks each**
A	Differentiate between DAC and MAC also explain both with detail example
B	Explain ACID properties in Detail
C	Define Big Data? and Explain characteristics of Big Data

Q4	**Solve any Two Questions out of Three 10 marks each**
A	Describe various OLAP operation with the examples
B	Define NoSQL? Describe various architectural pattern
C	Explain Spatial database,Temporal database & Mobile Database