Program: BE Information Technology Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: TEITC 503   **Course Name:** Advanced Data Management Technology

Time: 2-hour   Max. Marks: 80

==

Note to the students: -1. All the Questions are compulsory.

2. Q1. To Q20 carries 2 marks each.

Q1.	Which of he following has "all or none "property.
Option A:	Automicity
Option B:	Durability
Option C:	Isolation
Option D:	Consistency
Q2.	Which are the following event of trigger.
Option A:	Define,create
Option B:	drop,comment
Option C:	insert,delete,update
Option D:	select,commit
Q3.	When the transaction finishes the final statement,the transaction enter into-
Option A:	Active State
Option B:	Committed State
Option C:	Partially committed State
Option D:	Abort State

Q4.	Which of the following protocols ensure conflict serializability and safety from deadlock?
Option A:	Two phase locking Protocol
Option B:	Time stamp ordering
Option C:	Graph based
Option D:	All of the above
Q5.	Pass that determines which tansaction to be undo is known as-
Option A:	Redo
Option B:	Undo
Option C:	Analysis
Option D:	Logical
Q6.	What are the correct features of a distributed database?
Option A:	Always requires more than three machines.
Option B:	Users see the data in one global schema.
Option C:	Have to specify the physical location of the data when an update is done.
Option D:	All DBMS have to be homogenous.
Q7.	Query Optimization can be perform using which operation?
Option A:	Natural Join
Option B:	Semijoin
Option C:	Inner join
Option D:	Outer join
Q8.	An autonomous homogenous environment is which of the following?
Option A:	The same DBMS is at each node and each DBMS works independently.
Option B:	The same DBMS is at each node and a central DBMS coordinates database access.

Option C:	A different DBMS is at each node and each DBMS works independently.
Option D:	A different DBMS is at each node and a central DBMS coordinates database access.
Q9.	The form of data having associated time interval during which it is validis known as
Option A:	Temporal Data
Option B:	Snapshot Data
Option C:	Chunk Data
Option D:	Point in Time Data
Q10.	GIS deals with which kind of data
Option A:	Numeric data
Option B:	Binary data
Option C:	Spatial data
Option D:	Complex data
Q11.	Relational Algebra is a _____ query language that takes two relations as input and produces another relation as an output of the query.
Option A:	Relational
Option B:	Structural
Option C:	Procedural
Option D:	Fundamental
Q12.	Which of the following is used to denote the selection operation in relational algebra?
Option A:	Pi (Greek)
Option B:	Sigma (Greek)
Option C:	Lambda (Greek)
Option D:	Omega (Greek)

Q13.	The _____ operation, denoted by −, allows us to find tuples that are in one relation but are not in another.
Option A:	Union
Option B:	Set-difference
Option C:	Difference
Option D:	Intersection
Q14.	In precedence of set operators, the expression is evaluated from
Option A:	Left to left
Option B:	Left to right
Option C:	Right to left
Option D:	From user specification
Q15.	The assignment operator is denoted by
Option A:	->
Option B:	<-
Option C:	=
Option D:	==
Q16.	The characteristics of dataware house is
Option A:	Dataware house cannot handle large queries on large data system.
Option B:	Speed and responsiveness is the main characteristics of dataware house
Option C:	Dataware house is not an expensive way of providing Business intelligent
Option D:	Once a data reaches in the dataware house, it becomes a permanent record
Q17.	Data can be updated in _____environment.
Option A:	data warehouse.
Option B:	data mining.

Option C:	operational.
Option D:	informational.
Q18.	A type of relationship in start schema is-
Option A:	Many to many
Option B:	One to many
Option C:	Many to one
Option D:	One to one
Q19.	The subset of super key is a candidate key under what condition ?
Option A:	No proper subset is a super key
Option B:	Subset is a super key
Option C:	Each subset is a super key
Option D:	All subsets are super keys
Q20.	**How many fact tables are there in a galaxy schema?**
Option A:	One
Option B:	Two
Option C:	Three
Option D:	Many
Q21.	Describe three phases of ARIES recovery method for the schedule given below-

[Start_transaction,T1]	
[read_item,T1,A]	
[read_item,T1,D]	
[write_item,T1,D,20,25]	
[commit,T1]	
[Checkpoint]	
[Start_transaction,T2]	
[read_item,T2,B]	
[write_item,T2,B,12,18]	

	[Start_transaction,T4] [read_item,T4,D] [write_item,T4,D,25,15] [Start_transaction,T3] {write_item,T3,C,30,40] [read_item,T4,A] [write_item,T4,A,30,20] [commit,T4] [read_item,T2,D] [write_item,T2,D,15,25] System fails (10 marks)
Q22.	Find out data transfer cost of distributed query processing for the following query "For each department, retrieve the department name and the name of the department manager" Site1: Employee | Fname	Minit	Lname	SSN	Bdate	Address	Sex	Salary	SSSN	Dno | |---|---|---|---|---|---|---|---|---|---| 10000 records each record is 100 bytes long. SSN= 9bytes, Fname=15 bytes, Lname=15 bytes, Dno=4 bytes. Site2: Department | Dname	Dnumber	Mgrssn	Mgrstartdate | |---|---|---|---| 100 records each records is 35 bytes long. Dumber= 4 bytes. Query is submitted to result site 1.consider different strategies for executing this query and find which one is best using natural join and semijoin. (10 marks)
O23.	Explain various OLAP operations with Examples? (5 marks)
Q24.	Write short note on Mobile database (5 marks)
Q25	What is Query Tree?Explain with suitable example. (5 marks)
Q26	Explain ETL Process (5 marks)