Course Code: ITC303   Course Name: Database Management System

MCQ_SECTION

Time: 40 Min   **Max. Marks: 40**

1] All questions are Compulsory
2] Assume suitable data wherever required

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks(2 marks each)
1.	Ability to modify the schema of a database in one level without affecting the schema definition in higher level is called_____.
Option A:	Data Migration
Option B:	Data Independence
Option C:	Data Abstraction
Option D:	Data Isolation
2.	An advantages of DBMS are
Option A:	Decrease in data redundancy,more security,data independence
Option B:	Data dependency,No data sharing, increase in data redundancy
Option C:	Increase in data redundancy, data dependency,less security
Option D:	No data sharing,data dependency,Data isolation
3.	An Entity set that does not have sufficient attribute to form primary key is called
Option A:	Weak Entity
Option B:	Strong Entity
Option C:	Simple Entity
Option D:	Composite Entity
4.	The derived attribute and multivalued attribute is respectively represented as
Option A:	Dashed oval,Double ovals
Option B:	Dashed oval,Single oval
Option C:	Double ovals, Dashed oval
Option D:	Double ovals,Single oval
5.	In E-R diagram Total participation and Partial participation are respectively shown by
Option A:	Single line and Double line
Option B:	Double line and Dashed line
Option C:	Single line and Dashed line
Option D:	Double line and Single line

6.	_____key is used to represent relationship between two relations
Option A:	Primary key
Option B:	Candidate key
Option C:	Secondary key
Option D:	Foreign key
7.	If relation R is having A as multivalued attribute then how it will be mapped to RDBMS?
Option A:	New relation will be created for attribute A
Option B:	Attribute A will be included in same relation R
Option C:	Attribute A will be considered as composite attribute
Option D:	Attribute A will be consider as simple attribute and included in same relation.
8.	Which of the following is used to denote the Projection operation in relational algebra?
Option A:	Sigma
Option B:	Pi
Option C:	Lambda
Option D:	Omega
9.	Identify Key R(P,Q,R,S,T) where S → R, R→ Q, Q→P.
Option A:	P
Option B:	Q
Option C:	PQ
Option D:	ST
10.	Normalize to 2NF R(P,Q,R,S,T) where S,T→ R, S→Q, Q →P .
Option A:	R(P,Q,R,S,T)
Option B:	R1(P,Q,R) R2(R,S) R3(S,T)
Option C:	R1(R,S,T) R2(P, Q,S)
Option D:	R1(P,S,T) R2(P,Q) R3(Q,R)
11.	Partial dependency exists if
Option A:	key has only one attribute
Option B:	part of key determines non-key attributes
Option C:	non-key determines another non-key
Option D:	cell is not ordered

12.	Which of the following is a DCL command?
Option A:	Control
Option B:	Grant
Option C:	Select
Option D:	Edit
13.	Which constraint is imposed by primary key?
Option A:	null
Option B:	not unique
Option C:	unique and not null
Option D:	not null
14.	Which of the following is a set operations ?
Option A:	Min
Option B:	Max
Option C:	Difference
Option D:	Average
15.	Which of the following is not a DDL command?
Option A:	Alter
Option B:	Delete
Option C:	Drop
Option D:	Create table
16.	BCNF is
Option A:	Bayes Codd Normal Form
Option B:	Boyce Codd Normal Form
Option C:	Buys Code Normal Form
Option D:	Boys Code Normal Form
17.	ACID properties are
Option A:	Atomicity Consistency Isolation Durability
Option B:	Atomicity Concurrency Isolation Durability
Option C:	Atomicity Concurrency Iterative Durability
Option D:	Atomicity Concurrency Iterative Discoverable
18.	If a schedule is view equivalent of serial schedule then it is called as_____
Option A:	view serial
Option B:	view parallel
Option C:	equivalent view
Option D:	view serializable

19.	Which of the following is transaction state
Option A:	Ruling
Option B:	Committed
Option C:	Distribution
Option D:	Collection
20.	Which of the following pair of instructions are conflicting?
Option A:	Read(A) Read(A)
Option B:	Read(A) Read(B)
Option C:	Read(A) Write(B)
Option D:	Read(A) Write(A)

DESCRIPTIVE_SECTION

Time: 1.20 Hrs.   **Max. Marks: 40**

Attempt all questions.

Q2	Solve any Two Questions out of Three	10 marks each
A	Draw and explain DBMS system architecture	
B	Construct an EER diagram for a hospital with a set of patients and a set of medical doctors associated with each patient a log of various tests and examinations, conducted..	
C	Write the steps to Map ER diagram to Relational Model (tables) and map following ER diagram to Relational Model (tables)	

Q3.	Solve any Four out of Six	5 marks each
A	Explain triggers with example	
B	Consider Insurance Database given below and answer the following queries in SQL. Person (driver_id, name, address) Car (license, model, year) Accident (report_no, adate, location) Owns (driver_id, license) Participated (driver_id, license, report_no, damage_amount) (1) Find total number of people who owned cars that are involved in accidents in 2004.	

C	Consider the following dependency of relation R and Normalize to 3NF Empno, ContractNo → Hours Empno → Ename ContractNo → Hotelno, HotelLoc Hotelno → HotelLoc Key (Empno, ContractNo)
D	Explain BCNF with example
E	Explain ACID properties
F	Explain conflict serializability