

University of Mumbai

Examination 2020

Examinations Commencing from 23rd December 2020 to 6th January 2021 and from 7th January 2021 to 20th January 2021

Program: **Information Technology**

Curriculum Scheme: Rev 2016

Examination: SE Semester III

Course Code: ITC303 and Course Name:DBMS

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Consider the relations $r_1(P, Q, R)$ and $r_2(R, S, T)$ with primary keys P and R respectively. The relation r_1 contains 2000 tuples and r_2 contains 2500 tuples. The maximum size of the join $r_1 \bowtie r_2$ is
Option A:	2000
Option B:	2500
Option C:	2400
Option D:	4500
2.	Given the basic ER and relational models, which of the following is INCORRECT?
Option A:	An attribute of an entity can have more than one value
Option B:	An attribute of an entity can be composite
Option C:	In a row of a relational table, an attribute can have more than one value
Option D:	In a row of a relational table, an attribute can have exactly one value or a NULL value
3.	A relational database contains two tables student and department in which the student table has columns roll_no, name and dept_id, and department table has columns dept_id and dept_name. The following insert statements were executed successfully to populate the empty tables: Insert into department values (1, 'Mathematics') Insert into department values (2, 'Physics') Insert into student values (1, 'Navin', 1) Insert into student values (2, 'Mukesh', 2) Insert into student values (3, 'Gita', 1) How many rows and columns will be retrieved by the SQL statement? Select * from student, department;
Option A:	0 row and 4 columns
Option B:	3 row and 4 columns
Option C:	3 row and 5 columns
Option D:	6 row and 5 columns
4.	DBMS is a collection of that enables users to create and maintain a database.
Option A:	Keys
Option B:	Translator
Option C:	Program

Option D:	Language
5.	The assignment operator is denoted by_____
Option A:	->
Option B:	<-
Option C:	=
Option D:	==
6.	A domain is atomic if elements of the domain are considered to be _____ units.
Option A:	Different
Option B:	Indivisible
Option C:	Constant
Option D:	Divisible
7.	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:	except
8.	If the employee is the entity type then Michael, smith is the entity _____ ?
Option A:	Characteristics
Option B:	Field
Option C:	Identifier
Option D:	Instance
9.	An entity type whose existence depends on another entity type is called _____ entity?
Option A:	Strong
Option B:	Weak
Option C:	Dependent
Option D:	variant
10.	DBMS helps to achieve
Option A:	Data independence
Option B:	Centralized control of data
Option C:	Neither A nor B
Option D:	Both A and B
11.	Which SQL statement is used to extract data from a database?
Option A:	Get Statement
Option B:	Extract
Option C:	Open
Option D:	Select
12.	With SQL, how do you select all the records from a table named "Employees" where the value of the column "First_Name" is "John"?
Option A:	Select [all] from Employees where First_name<>John

Option B:	Select [all] from Employees where First_name like John
Option C:	Select * from Employees where First_name<>John
Option D:	Select * from Employees where First_Name='John'
13.	Which SQL keyword is used to sort the result-set?
Option A:	Order by
Option B:	Sort by
Option C:	Arrange
Option D:	Order
14.	How can you change "Hansen" into "Nilsen" in the "L_Name" column in the Employees Person table?
Option A:	Update Employees set L_Name='Hansen' where L_Name='Nilsen'
Option B:	Update Employees set L_Name='Nilsen' where L_Name='Hansen'
Option C:	Modify Employees set L_Name='Hansen' where L_Name='Nilsen'
Option D:	Modify Employees set L_Name='Nilsen where L_Name='Hansen'
15.	Which operator is used to select values within a range?
Option A:	Between
Option B:	Range
Option C:	Not In
Option D:	In
16.	The granting and revoking of roles by the user may cause some confusion when that user role is revoked. To overcome the above situation
Option A:	The privilege must be granted only by roles
Option B:	The privilege is granted by roles and users
Option C:	The user role cannot be removed once given
Option D:	By restricting the user access to the roles
17.	Which statement is used to produce a stored function?
Option A:	CREATE FUNCTION
Option B:	Procedure procedure
Option C:	Produce function
Option D:	Create Procedure
18.	If the database modifications occur while the transaction is still active, the transaction is said to use the _____ modification technique.
Option A:	Deferred
Option B:	Immediate
Option C:	More than one of the mentioned
Option D:	modify
19.	If a system has entered and undesirable state due to which it is unable to continue with normal execution, it is called as _____.
Option A:	Logical error
Option B:	System error
Option C:	System Crash
Option D:	Stack overflow

20.	In which normal form conversion of composite attribute to individual attribute happens?
Option A:	2NF
Option B:	3NF
Option C:	1NF
Option D:	BCNF

Q2	Attempt any 4 out of 6 Questions	5 marks each
A	Define Generalization and Specialization	
B	Difference between DBMS and File Processing system	
C	Define characteristics of DBA in detail	
D	List and explain all aggregate function in SQL	
E	Explain Total participation and Partial participation	
F	Explain Transaction state diagram.	

Q3.	Attempt any 2 out of 3 Questions	10 marks each
A	Draw an ER diagram on Hospital Management.	
B	Define Normalization and explain 1NF,2NF with example.	
C	Explain the view in SQL with syntax and example.	