

# 2912\_IT\_Sem-III\_R19\_DBMS\_Inst. Name

1) The Question Paper will have MCQs (for 20 marks) and Subjective/Descriptive Questions (for 60 marks).

2) MCQ correct options and subjective question answers to be written on A4 size papers. Scan all pages of answer papers of Q.1 to Q.4 and create single file in pdf format to upload in the link given.

---

**\* Required**

1. Enter your Name \*

---

2. Enter your Seat Number \*

---

2912\_IT\_Sem-  
III\_R19\_DBMS\_Inst.  
Name

1) The Question Paper will have MCQs (for 20 marks) and Subjective/Descriptive Questions (for 60 marks).

2) MCQ correct options and subjective question answers to be written on A4 size papers. Scan all pages of answer papers of Q.1 to Q.4 and create single file in pdf format to upload in the link given.

Q.1) 1 to 3

<b>Q1.</b>	<b>Choose the correct option for following questions. All the Questions are compulsory and carry equal marks</b>
1.	Type of data independence in which the schema can be modified without modifying the conceptual schema is called as _____.
Option A:	Conceptual Level Independence
Option B:	Logical Data Independence
Option C:	External Level Independence
Option D:	Physical Data Independence
2.	What is the name of a relationship that connects a strong entity with the weak entity?
Option A:	Strong relationship
Option B:	Identifying relationship
Option C:	Weak relationship
Option D:	Dependent relationship
3.	Cardinality is termed as
Option A:	Number of Tuples.
Option B:	Number of Tables
Option C:	Number of Attributes.
Option D:	Number of Constraints.

Q.1) 4 to 6

4.	The Relational Algebra is
Option A:	Data Definition Language
Option B:	Non Procedural Language
Option C:	Meta Language
Option D:	Procedural Language
5.	Which of the SQL statements is correct ?
Option A:	SELECT count(cust_ID, Country from customers group by Country having count (cust_ID>=20)
Option B:	SELECT count(cust_ID from customers group by Country having count (cust_ID>=20)
Option C:	SELECT count(cust_ID, Country from customers having count (cust_ID>=20)
Option D:	SELECT count(cust_ID, Country from customers group by cust_ID having count (cust_ID>=20)
6.	UPDATE instructor_____ salary=salary*1.05; Fill in with the correct keyword to update the instructor relation.
Option A:	Where
Option B:	Set
Option C:	In
Option D:	Select

## Q.1) 7 to 10

7.	Which operator is used to filter data by looking for the presence of any record in subquery?
Option A:	some operator
Option B:	in operator
Option C:	exists operator
Option D:	like operator
8.	B in BCNF stands for-
Option A:	Bouston
Option B:	Bold
Option C:	Back
Option D:	Boyce
9.	A functional dependency of the form $A \rightarrow C$ is transitive if -
Option A:	$A \rightarrow B$
Option B:	$A \rightarrow B$ and $B \rightarrow C$
Option C:	$B \rightarrow C$
Option D:	$C \rightarrow A$
10.	Which graph is used to detect a deadlock?
Option A:	Transaction graph
Option B:	Wait-for graph with cycle
Option C:	Wait-for graph with no cycle
Option D:	Wait-for graph with odd number of transactions

## Q.2

<b>Q2</b>	
<b>A</b>	<b>Solve any Two 5 marks each</b>
i.	State any five limitations of the file Management system.
ii.	Justify the need of DBMS in Banking and Airlines.
iii.	Differentiate Strong and weak entities with suitable examples.
<b>B</b>	<b>Solve any One 10 marks each</b>
i.	Explain the following relational algebra operations with examples : i) Union ii) Cartesian Product iii) Left Outer Join iv) Set Intersection Operation v) Natural Join
ii.	Explain with example different Integrity Constraints in SQL.

## Q.3

<b>Q3</b>	
<b>A</b>	<b>Solve any Two</b> <b>5 marks each</b>
i.	Explain different types of attributes in the ER Model.
ii.	Explain different types of mapping cardinalities for binary relationship set in ER diagram.
iii.	What are Triggers? Explain with examples.
<b>B</b>	<b>Solve any One</b> <b>10 marks each</b>
i.	<p>Consider the following relations for a database that keeps track of student enrollment in courses and the books adopted for each course and answer the queries below:</p> <p>STUDENT (SSN, Name, Major, Bdate)  COURSE (Course#, Quarter, Grade)  ENROLL (SSN, Course#, Quarter, Grade)  BOOK_ADOPTION (Course#, Quarter, Book_ISBN)  TEXT (Book_ISBN, Book_Title, Publisher, Author)</p> <p>1) Find names of students who have registered for a DBMS course.  2) Find titles of books for the course DBMS.  3) Calculate count of students enrolled for the course DBMS.  4) Display name of all publishers for the course DBMS.  5) Find how many students have enrolled for more than three courses in the first quarter.</p>

## Q.3 Continues...

ii.	<p>Consider the following six relations for an order-processing database application in a company and answer the queries below:</p> <p>CUSTOMER (Cust#, Cname, City)  ORDER (Order#, Odate, Cust#, Ord_Amt)  ORDER_ITEM (Order#, Item#, Qty)  ITEM (Item#, Unit_price)  SHIPMENT (Order#, Warehouse#, Ship_date)  WAREHOUSE (Warehouse#, City)</p> <p>1) Specify foreign keys for all the schemas.  2) Find count of customers who have ordered for more than <u>Rs. 50,000</u> in the month of december.  3) Find and list the items which are ordered above 20 units.  4) List name of cities where orders in december are kept.  5) Find the number of warehouses in Mumbai.</p>
-----	---

Q.4

<b>Q4.</b>	
<b>A</b>	<b>Solve any Two 5 marks each</b>
i.	Explain transitive functional dependency with an example.
ii.	Justify the need of normalization.
iii.	Define Boyce-Codd normal form. How does it differ from 3NF?
<b>B</b>	<b>Solve any One 10 marks each</b>
i.	Explain conflict and view serializability with suitable examples.
ii.	What is a recoverable schedule? Why is recoverability of schedules desirable?

3. Upload your answer papers \*

Files submitted:

4. Have you uploaded required pdf file of answers? \*

*Mark only one oval.*

☐ Yes

---

This content is neither created nor endorsed by Google.

Google Forms