

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER –IV• EXAMINATION – SUMMER - 2017**

**Subject Code: 3341605****Date: 05-05-2017****Subject Name: Database Management****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. દશમાંથી કોઈપણ સાતના જવાબ આપો. **14**
1. What is meant by the instance of a database ?
  ૧. Instance of a database શું છે ?
  2. Define METADATA.
  ૨. METADATA ની વ્યાખ્યા આપો.
  3. Explain the NOT NULL constraint.
  ૩. NOT NULL constraint સમજાવો.
  4. Define SUPER KEY.
  ૪. SUPER KEY ની વ્યાખ્યા આપો.
  5. What is transaction management in DBMS ?
  ૫. DBMS માં transaction management શું છે ?
  6. Explain strong entity.
  ૬. Strong entity સમજાવો.
  7. Explain the ALTER TABLE command in SQL.
  ૭. SQL માં ALTER TABLE command સમજાવો.
  8. Explain the use of Data Manipulation Language (DML) Commands.
  ૮. Data Manipulation Language (DML) Commands નો ઉપયોગ સમજાવો.
  9. Explain data redundancy.
  ૯. Data redundancy સમજાવો.
  10. Explain the BETWEEN and NOT BETWEEN operator in SQL.
  ૧૦. SQL માં BETWEEN and NOT BETWEEN ઓપેરેટર સમજાવો
- Q.2** (a) Differentiate between ACTIVE and PASSIVE data dictionary **03**
- પ્રશ્ન. ૨ (અ) ACTIVE and PASSIVE data dictionary વચ્ચે તફાવત સમજાવો. **03**
- OR
- (a) Differentiate between PRIMARY KEY & UNIQUE KEY. **03**
- (અ) PRIMARY KEY & UNIQUE KEY વચ્ચે તફાવત સમજાવો **03**
- (b) Explain the CHECK constraint with an example. **03**
- (બ) ઉદાહરણ સાથે CHECK constraint સમજાવો. **03**

OR

	(b) Explain the use of DISTINCT clause in SQL.	03
	(બ) SQL માં DISTINCT clause નો ઉપયોગ સમજાવો.	03
	(c) When using a Foreign Key, what are the options CASCADE and SET NULL used for ?	04
	(ક) Foreign Key વાપરતી વખતે, options CASCADE and SET NULL શેના માટે વપરાય છે.	04
	OR	
	(c) Explain the three level architecture of DBMS.	04
	(ક) ત્રણ લેવલ્ architecture of DBMS સમજાવો.	04
	(d) Write a short note on CLIENT SERVER DBMS.	04
	(ડ) CLIENT SERVER DBMS પર ટૂંકી નોંધ લખો.	04
	OR	
	(d) Write a short note on SQL VIEW.	04
	(ડ) SQL VIEW પર ટૂંકી નોંધ લખો.	04
<b>Q.3</b>	(a) Differentiate between STORED ATTRIBUTE and DERIVED ATTRIBUTE.	03
<b>પ્રશ્ન. 3</b>	(અ) STORED ATTRIBUTE and DERIVED ATTRIBUTE વચ્ચે તફાવત સમજાવો	03
	OR	
	(a) Differentiate between SIMPLE ATTRIBUTE and COMPOSITE ATTRIBUTE.	03
	(અ) SIMPLE ATTRIBUTE and COMPOSITE ATTRIBUTE. વચ્ચે તફાવત સમજાવો	03
	(b) Explain the role of the DBA.	03
	(બ) DBA નો રોલ સમજાવો.	03
	OR	
	(b) Explain any three applications of DBMS.	03
	(બ) DBMS ની ત્રણ એપ્લિકેશન સમજાવો.	03
	(c) With an example explain the CARTESIAN PRODUCT operation.	
	(ક) ઉદાહરણ સાથે CARTESIAN PRODUCT operation સમજાવો.	04
	OR	
	(c) Explain the INNER join operation.	04
	(ક) INNER join operation સમજાવો.	04
	(d) Draw sample E-R diagram showing (a) ONE TO MANY and (b) MANY TO MANY relationship.	04
	(ડ) સેમ્પલ E-R diagram સાથે (a) ONE TO MANY and (b) MANY TO MANY relationship સમજાવો.	04
	OR	
	(d) Explain the privilege commands GRANT and REVOKE.	04
	(ડ) Privilege કમાન્ડ્સ GRANT અને REVOKE સમજાવો	04
<b>Q.4</b>	(a) Explain the use of FOREIGN KEY with an example.	03
<b>પ્રશ્ન. 4</b>	(અ) ઉદાહરણ સાથે FOREIGN KEY સમજાવો.	03
	OR	
	(a) Explain any two AGGREGATE functions.	03
	(અ) કોઈ પણ બે AGGREGATE functions સમજાવો.	03

- (b) Explain any four data types of MS ACCESS. **04**  
 (બ) MS ACCESS ના કોઈ પણ ચાર data types સમજાવો **04**

OR

- (b) Explain the HAVING and ORDERBY clause in SQL with example. **04**  
 (બ) SQL માં HAVING and ORDERBY clause સમજાવો. **04**  
 (c) Assume the following table **07**

Table name : LIBRARY

Column Names : BOOK-ID, TITLE, AUTHOR, PUBLICATION, PRICE

For the above table write SQL queries for the following tasks :

- (i) Make the above table using SQL command.  
 (ii) Enter four records into the above table.  
 (iii) Add a column to the above table called NO-OF-COPIES.  
 (iv) Display books of any one author.
- (ક) નીચે આપેલ ટેબલ ધારો. **09**

Table name : LIBRARY

Column Names : BOOK-ID, TITLE, AUTHOR, PUBLICATION, PRICE

ઉપરોક્ત ટેબલ માટે નીચે આપેલ ટાસ્ક માટે SQL queries લખો.

- (i) SQL command ની મદદ થી ઉપરોક્ત ટેબલ બનાવો.  
 (ii) ઉપરોક્ત ટેબલ માં ચાર રેકોર્ડનાખો..  
 (iii) ઉપરોક્ત ટેબલ માં NO-OF-COPIES નામનું કોલમ ઉમેરો.  
 (iv) કોઈ પણ એકજ author ની બુક્સ ડીસ્પ્લે કરાવો.

- Q.5** (a) Explain Functional dependency. **04**  
**પ્રશ્ન. ૫** (બ) Functional dependency સમજાવો. **04**  
 (b) Explain with an example the 2NF form. **04**  
 (બ) ઉદાહરણ સાથે 2NF form સમજાવો. **04**  
 (c) Explain the need for Normalisation? **03**  
 (ક) Normalisation ની જરૂરીયાત સમજાવો. **03**  
 (d) Convert the following table to 1NF form **03**

Enrollmenmt No	Student name	Subjects offered
001	ABC	PHYSICS , CHEMISTRY, MATHS
002	XYZ	GEOGRAPHY, HISTORY , BIOLOGY

- (ડ) ઉપરોક્ત ટેબલ ને 1NF form માં ફેરવો. **03**

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