

MARKING SCHEME SET-2

SAMPLE PAPER

CLASS: XI-INFORMATICS PRACTICES SET -1

Section –A														
Q1.	<p>Differentiate between DDL and DML Commands with examples?</p> <table border="0"><thead><tr><th>DDL</th><th>DML</th></tr></thead><tbody><tr><td>It stands for Data Definition Language.</td><td>It stands for Data Manipulation Language.</td></tr><tr><td>It is used to create database schema and can be used to define some constraints as well.</td><td>It is used to add, retrieve or update the data.</td></tr><tr><td>It basically defines the column (Attributes) of the table.</td><td>It add or update the row of the table. These rows are called as tuple.</td></tr><tr><td>It doesn't have any further classification.</td><td>It is further classified into Procedural and Non-Procedural DML.</td></tr><tr><td>Basic command present in DDL are CREATE, DROP, RENAME, ALTER etc.</td><td>BASIC command present in DML are UPDATE, INSERT, MERGE etc.</td></tr></tbody></table> <p>One marks for correctly stating the difference One marks for giving one example each of DDL and DML Commands</p> <p>Or</p> <p>What is database management system? Why do we need a DBMS ? A DBMS refers to Database Management System It is a software that is responsible for storing,manipulating, maintaining and utilizing database. A database along with the a DBMS is referred to as a database system. There are various DBMS software available in the market like :- Oracle, MS SQL Server, MySQL, Sybase,PostgreSQL, SQLite</p> <p>NEED:</p> <ol style="list-style-type: none">1) Processing Queries and Object Management:2) Processing Queries and Object Management:3) Efficient memory management and indexing:4) Integrity constraints etc... <p>One mark each for correctly stating dbms and its need.</p>	DDL	DML	It stands for Data Definition Language.	It stands for Data Manipulation Language.	It is used to create database schema and can be used to define some constraints as well.	It is used to add, retrieve or update the data.	It basically defines the column (Attributes) of the table.	It add or update the row of the table. These rows are called as tuple.	It doesn't have any further classification.	It is further classified into Procedural and Non-Procedural DML.	Basic command present in DDL are CREATE, DROP, RENAME, ALTER etc.	BASIC command present in DML are UPDATE, INSERT, MERGE etc.	2
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Q2.	<p>What is the difference between char and varchar data types?</p> <p>Ans: The basic difference between Char and Varchar is that: char stores only fixed-length character string data types whereas varchar stores variable-length string where an upper limit of length is specified.</p> <table border="0"><thead><tr><th>CHAR Data Type</th><th>VARCHAR Data Type</th></tr></thead><tbody><tr><td>i)Its full name is CHARACTER</td><td>i) Its full name is VARIABLE CHARACTER</td></tr></tbody></table>	CHAR Data Type	VARCHAR Data Type	i)Its full name is CHARACTER	i) Its full name is VARIABLE CHARACTER	2								
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	<p>ii) It stores values in fixed lengths and are padded with space characters to match the specified length</p> <p>iii) It can hold a maximum of 255 characters.</p> <p>iv) It uses static memory allocation. Eg. create table emp(name CHAR(20));</p> <p>ii) VARCHAR stores values in variable length along with 1-byte or 2-byte length prefix and are not padded with any characters</p> <p>iii) It can hold a maximum of 65,535 characters.</p> <p>iv) It uses dynamic memory allocation. eg: create table emp1(name VARCHAR(20));</p>	
Q3.	<p>Database reduces redundancy. Comment</p> <p>Ans 2 marks for correct answer</p> <p style="text-align: center;">Or</p> <p>What do you mean by inconsistency in data</p> <p>Ans: When the same data exists in different formats in multiple tables. This condition is known as Data Inconsistency. It means that different files contain different information about a particular object or person. This can cause unreliable and meaningless information. Data Redundancy leads to Data Inconsistency.</p>	2
Q4.	<p>What is Artificial Intelligence? Write an application of AI?</p> <p>Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. AI the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. Specific applications of AI include expert systems, natural language processing, and speech recognition and machine vision. Or any other suitable answer and example</p>	2
Q5.	<p>Write down SQL statement for creating table LIBRARY having following attributes:</p> <p>i. BOOK_ID – an integer, primary key of the table</p> <p>ii. BOOK_TITLE –a string(size 30)</p> <p>iii. AUTHOR—a string (size 50), NOT NULL</p> <p>iv. QTY – an integer</p> <p>v. PRICE – decimal number</p> <p>Answer: Create table LIBRARY(BOOK_ID integer Primary key, BOOK_TITLE varchar(30), AUTHOR varchar(50) NOT NULL, PRICE decimal);</p>	2
Q6.	<p>Write difference between Drop and Delete command in MySQL? Give a SQL query as an example for each.</p> <p>Ans: DELETE is a Data Manipulation Language (DML) command and used when you want to remove some or all the tuples from a relation. If WHERE clause is used along with the DELETE command it removes only those tuples which satisfy the WHERE clause condition but if WHERE clause is missing from the DELETE statement then by default all the tuples present in relation are removed.</p> <p>Example DELETE FROM student WHERE marks>=75;</p> <p>DROP is a Data Definition Language (DDL) command which removes the named elements of the schema like relations, domains or constraints and you can also remove an entire schema using DROP command.</p>	2

	example DROP Table student;																													
Q7.	<p>Consider the following table FITNESS.</p> <table border="1"> <thead> <tr> <th>PCODE</th> <th>PNAME</th> <th>PRICE</th> <th>Manufacturer</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>Treadmill</td> <td>21000</td> <td>Coscore</td> </tr> <tr> <td>P2</td> <td>Bike</td> <td>20000</td> <td>Aone</td> </tr> <tr> <td>P3</td> <td>Cross Trainer</td> <td>14000</td> <td>Reliable</td> </tr> <tr> <td>P4</td> <td>Multi Gym</td> <td>34000</td> <td>Coscore</td> </tr> <tr> <td>P5</td> <td>Massage Chair</td> <td>5500</td> <td>Regrosene</td> </tr> <tr> <td>P6</td> <td>Belly Vibrator Belt</td> <td>6500</td> <td>Ambawya</td> </tr> </tbody> </table> <p>(i) Mention the Degree and Cardinality of the table FITNESS. Ans Degree: 04 Cardinality: 6</p> <p>(ii) Which column in the table FITNESS you will choose as the primary key? Ans PCODE</p>	PCODE	PNAME	PRICE	Manufacturer	P1	Treadmill	21000	Coscore	P2	Bike	20000	Aone	P3	Cross Trainer	14000	Reliable	P4	Multi Gym	34000	Coscore	P5	Massage Chair	5500	Regrosene	P6	Belly Vibrator Belt	6500	Ambawya	2
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SECTION – B Each question carries 3 marks																														
Q8.	<p>Write short note on various types of services of cloud computing. Distribute 3 marks for each cloud computing services</p> <p>1. Software-as-a-service (SaaS): involves the licensure of a software application to customers. Licenses are typically provided through a pay-as-you-go model or on-demand. SaaS utilizes the internet to deliver applications, which are managed by a third-party vendor, to its users. A majority of SaaS applications run directly through your web browser, which means they do not require any downloads or installations on the client side. This type of system can be found in Microsoft Office's 365, Google Apps, Dropbox, Cisco WebEx.</p> <p>2. Infrastructure-as-a-service (IaaS): involves a method for delivering everything from operating systems to servers and storage through IP-based connectivity as part of an on-demand service. Clients can avoid the need to purchase software or servers, and instead procure these resources in an outsourced, on-demand service- from a cloud provider. Popular examples of the IaaS system include IBM Cloud and Microsoft Azure, Amazon Web Services (AWS) etc</p> <p>3. Platform-as-a-service (PaaS): It is considered as the most complex of the three layers of cloud-based computing. PaaS shares some similarities with SaaS, the primary difference being that instead of delivering software online, it is actually a platform for creating software that is delivered via the Internet.</p> <p style="text-align: center;">Or</p> <p>What is Big data? Write its characteristics. The term Big Data refers to a huge volume of data that cannot be stored processed by any traditional data storage or processing units. Big Data is generated at a very large scale and it is being used by many multinational companies to process and analyze in order Its characteristics are:</p>	3																												

	<p>1. Volume: It refers to the unimaginable amounts of information generated every second from social media, cell phones, cars, credit cards, M2M sensors, images, video, and whatnot..</p> <p>2. Variety: Variety of Big Data refers to structured, unstructured, and semi structured data that is gathered from multiple sources. While in the past, data could only be collected from spreadsheets and databases, today data comes in an array of forms such as emails, PDFs, photos, videos, audios, SM posts, and so much more.</p> <p>3. Value: Value is the major issue that we need to concentrate on. It is not just the amount of data that we store or process. It is actually the amount of valuable, reliable and trustworthy data that needs to be stored, processed, and analyzed to find insights</p> <p>4. Velocity: Velocity plays a major role compared to the others, there is no point in investing so much to end up waiting for the data. So, the major aspect of Big Data is to provide data on demand and at a faster pace.</p> <p>5. Veracity or Variability: It refers to the inconsistency which can be shown by the data many times, thus hampering the process to handle and manage the data effectively.</p>	
Q9.	<p>Define following with example: Primary Key, Candidate Key, Foreign key</p> <p>PRIMARY KEY in DBMS is a column or group of columns in a table that uniquely identify every row in that table. The Primary Key can't be a duplicate meaning the same value can't appear more than once in the table. A table cannot have more than one primary key.</p> <p>CANDIDATE KEY in SQL is a set of attributes that uniquely identify tuples in a table. Candidate Key is a super key with no repeated attributes. The Primary key should be selected from the candidate keys. Every table must have at least a single candidate key. A table can have multiple candidate keys but only a single primary key.</p> <p>FOREIGN KEY is a column that creates a relationship between two tables. The purpose of Foreign keys is to maintain data integrity and allow navigation between two different instances of an entity. It acts as a cross-reference between two tables as it references the primary key of another table.</p>	3
Q10.	<p>Mention the SQL commands along with its syntax to do the following:</p> <ol style="list-style-type: none"> 1. Create the database Named MyDataBase and make this database as the current or working database. 2. Insert a values in existing table MyTable having following columns Sno, employee_name, salary and city 3. To display the table structure of MyTable <p>Ans:</p> <ol style="list-style-type: none"> 1. Create database MyDataBase; Use MyDataBase; 2. Insert into MyTable values(1, 'Ram', 50000, 'Dehradun'); 3. Describe MyTable 	3
<p>Section C Each question carries 4 marks</p>		
Q11.	<p>1. Display the different Streams available for students. Ans: Select distinct streams from student;</p>	4

2. Display name & stipend of students who have not been given any grade.
Ans: Select name, stipend from student where grade is NULL;
3. Display the name of students whose stream is Medical and having Avgmark is more than 75.
Ans: Select name from student where stream='Medical' and Avgmark>75;
4. Increase the stipen 5% of those student who got avgmark more than 80.
Ans : update student set Stipen=Stipen+Stipen*.05 where Avgmark>80;

Q12. Write SQL commands for the statements (i) to (iv)

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Table: STORE

ItemNo	Item	Scode	Qty	Rate	LastBuy
2005	Sharpner Classic	23	60	8	31-Jun-09
2003	Ball Pen 0.25	22	50	25	01-Feb-10
2002	Gel Pen Premium	21	150	12	24-Feb-10
2006	Gel Pen Classic	21	250	20	11-Mar-09
2001	Eraser Small	22	220	6	19-Jan-09
2004	Eraser Big	22	110	8	02-Dec-09
2009	Ball Pen 0.5	21	180	18	03-Nov-09

i) To display details of all the items in the Store table in ascending order of LastBuy.

Ans: Select * from store order by LastBuy;

ii) To display Itemno and item name of those items whose item name starts with 'G' and ends with 'c'.

Ans: Select Itemno, item from store where item like 'G%c';

iii) To display the item names of those items whose Quantity lies in the range from 100 to 150 (both values included)

Ans: Select item from store where qty>=100 and qty<=150;

iv) To display details of those items whose rate is not between 10 and 20.

Ans : Select * from store rate<10 or rate>20;

Or

Consider the below mentioned table of 'CLOTH'

DCODE	DESCRIPTION	PRICE	MCODE	LAUNCHDAT
10001	FORMAL SHIRT	1250	M001	12-JAN-08
10020	FROCK	750	M004	09-SEP-07
10012	INFORMAL SHIRT	1450	M002	06-JUN-08
10019	EVENING GOWN	850	M003	06-JUN-08

Based on the above given table named 'cloth',
Predict the output of the above given queries.

(a) Select description,price from cloth;

Ans :

DESCRIPTION	PRICE
FORMAL SHIRT	1250
FROCK	750

INFORMAL SHIRT	1450
EVENING GOWN	850

(b) Select Description, Launchdate from cloth where price > 850;

DESCRIPTION	PRICE
FORMAL SHIRT	1250
INFORMAL SHIRT	1450

(c) Select * from cloth where MCODE = "M003";

DCODE	DESCRIPTION	PRICE	MCODE	LAUNCHDAT
10019	EVENING GOWN	850	M003	06-JUN-08

(d) Select * from cloth where LAUNCHDATE="12-JAN-08";

DCODE	DESCRIPTION	PRICE	MCODE	LAUNCHDAT
10001	FORMAL SHIRT	1250	M001	12-JAN-08

Q13. Consider the table **EMPLOYEE** and its structure given below and perform the following on the same:

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Structure of table Employee:

Name of Column	ID	First_Name	Last_Name	User_ID	Salary
Type	Number(4)	Varchar(30)	Varchar(30)	Varchar(10)	Number(9,2)

Table : Employee

ID	First_Name	Last_Name	User_ID	Salary
1	Dim	Joseph	jdjdim	5000
2	Jagannath	Mishra	jnmishra	4000
3	Siddharth	Mishra	smishra	8000
4	Shankar	Giri	sgiri	7000
5	Gautam	Buddha	bgautam	2000

(i) Add column address of datatype varchar and size 50 to the table Employee.

Ans: alter table employee add(address varchar(50));

(ii) Modify the last name of Employee with ID = 3 to Gautam

Ans: update employee set last_name='Gautam' where ID=3;

(iii) Increase the salary by 1000 of those employees whose salary is less than 5000

Ans: update employee set salary=salary+1000 where salary<5000;

(iv) Delete the employee record having First_Name as Siddharth

Ans: Delete from employee where First_Name = 'Siddharth'