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- Q.1 Describe the following MySQL commands with example [4]
(a) IN (b) LIKE (c) HAVING (d) BETWEEN AND
- Q.2 Explain the given below constraints with MySQL Command. [4]
(a) PRIMARY KEY (b) DEFAULT (c) CHECK (d) UNIQUE
- Q.3 Write difference between CHAR and VARCHAR with example. [2]
- Q.4 Describe the following string functions with suitable MySQL example. [2]
(a) INSTR () (b) SUBSTR ()
- Q.5 Write the output of given below MySQL commands for table "COMPANY" [2]

Table : COMPANY

EMP_ID	SALE
S101	3000
S103	NULL
S104	18000
S105	NULL
S107	9000
S108	5000
S109	15000

- (a) SELECT SUM(SALES) FROM COMPANY
WHERE SALE<=(SELECT SALE FROM COMPANY WHERE EMP_ID="S107").
- (b) SELECT COUNT (DISTINCT (SALES)) FROM COMPANY.
- (c) SELECT SALES, ROUND (SALES, -4) FROM COMPANY
- (d) SELECT MIN(SALES) < AVG(SALES) FROM COMPANY.
- Q.6 There is a column QUANTITY in a table SUPPLIER. The following two statements are giving different outputs. What may be the possible reason? [1]
SELECT COUNT(*) FROM SUPPLIER;
SELECT COUNT(QUANTITY) FROM SUPPLIER
- Q.7 Table SPORTS has 4 rows and 3 columns. Table ACADEMICS has 3 rows and 4 columns. What will be the cardinality & degree of the Cartesian product of SPORTS & ACADEMICS? [2]
- Q.8 Categorize the DDL and DML commands: [2]
CREATE, ALTER, DELETE, GRANT, ROLLBACK, SELECT, UPDATE, MODIFY, COMMIT
- Q.9 Consider the table **Flight** given below, write command in SQL for (I) to (IV) and output for (V) to (VIII). [6]

Table : FLIGHT

Flight_No	Origin	Destination	Seats	FlightDate	Rate
1005	Varanasi	Nepal	275	12-Dec-07	3000
2785	Delhi	Kerala	290	17-Jan-08	5500
6587	Mumbai	Varanasi	435	19-Feb-08	5000
1265	Varanasi	Nepal	200	02-Jan-08	5400
4457	Delhi	Lucknow	150	22-Feb-08	4500
6856	Varanasi	Mumbai	180	03-Mar-08	6000

- (I) To display Flight flying between Varanasi and Nepal.
- (II) To display the different Origin (without repetition) of Flights.
- (III) To display list of flights in descending order of Rate.
- (IV) To display flight details of the flight whose flightdate is after Jan 2008.
- (V) SELECT Flight_No, Destination FROM Flight WHERE Destination LIKE '_u%';
- (VI) SELECT Origin, COUNT(*) FROM Flight GROUP BY Origin;
- (VII) SELECT Origin, Destination FROM Flight WHERE seats>400;
- (VIII) SELECT SUM(Rate),MAX(Seats) FROM Flight;

Q.10 In a Database there are two tables :

Table : PRODUCT

PCode	Pname	Price
101	Television	75000
202	Computer	42000
303	Refrigerator	90000
404	Washing Machine	27000

Table : BRAND

PCode	Brand
101	Sony
202	HP
303	LG
404	IFB

Write MySql queries for the following :-

- i) To display Pcode, Pname and corresponding Brand of these products, whose Price is between 20000 and 45000(both values inclusive). [2]
- ii) To display PCode, Price and Brand Name of the Product, which has Pname as "Television". [2]
- iii) To increase the price of all the products by 15%. [1]

Q.11 Write down benefits of pair programming [3]

Q.12 In the Scrum process, a Scrum Master differs from a traditional project manager. Justify the statement. [3]

Q.13 Write down any one situation where waterfall software process can be used. Also mention one advantage and one disadvantage of waterfall software process. [3]

Q.14 Draw a use case diagram for an ATM system. Identify at least three different actors that interact with this system. [3]

Q.15 Shewani has recently started working in MySQL. Help her in understanding the difference between the following :

- (i) Where and having clause [4]
- (ii) Count(column_name) and count(*)

Q. 16 Explain the principles / factors which play a major role in the development of software. [4]