

Test Series -4

Time: 40 min

M.Marks: 25

Topics: My-SQL ,My-SQL Connectivity and Networking

Q1 What is the protocol used for voice call over the internet [1]

Q2 In your phone the Gmail is automatically login? Where is the password saved? [1/2]

Q3 What is the SQL clause for grouping tuple and putting it in ascending order? [1/2]

Q4 What is the use of UNIQUE constraint in MYSQL? [1]

Q5 Write one DDL command from MYSQL. [1/2]

Q6 Name the media preferably used in the Internet Backbone of Country. [1/2]

Q7 “XYZ” Company conducts workshops for employees of organizations. The company requires data of workshops that are organized. As a database administrator you have decided that:

Name of the Database: ABCINC

Name of the Table: WORKSHOP

Attributes of Table ‘Workshop’ are as follows

Field	Type
WorkshopId	Integer
Title	Varchar(50)
DateWorkshop	Date
NumSpeakers	Integer

Table : WORKSHOP

WorkshopId	Title	DateWorkshop	NumSpeakers
1001	Robotics	2020-02-21	3
1002	AI	2020-05-24	4
1003	Humanoids	2020-07-15	3
1004	Block Chain	2020-04-25	5
1005	Cloud	2020-03-03	4

(a) Identify the attribute best suited to be declared Primary Key. [1/2]

(b) Write the Degree and cardinality of the table WORKSHOP. [1]

(c) Write SQL command to update/modify the Number of Speakers from 3 to 4 of Humanoids Workshop. [1]

(d) Write a command to display the structure of the table WORKSHOP. [1/2]

(e) The following error is received when the SQL statement is executed. [1]

“No database selected”

Can you identify the problem? What is the remedy?

Q8 What is the difference between Packet switching and circuit switching techniques? [1]

Q9 In networking, what is WAN? How is it different from LAN? [1]

Q10 Expand the following terms: [2]

i) GPS ii) ATM iii) GPRS iv) IRC

Q11 Consider the following tables FACULTY and COURSES. Write SQL commands for the statements (i) to (iii).

FACULTY

F_ID	Fname Lname	Hire_date	Salary
102	Amit Mishra	12-10-1998	12000
103	Nitin Vyas	24-12-1994	8000
104	Rakshit Soni	18-5-2001	14000
105	Rashmi Malhotra	11-9-2004	11000

COURSES

C_ID	F_ID	Cname	Fees
C21	102	Grid Computing	40000
C22	103	System Design	16000
C23	104	Computer Security	8000
C24	103	Human Biology	15000
C25	102	Computer Network	20000
C26	105	Visual Basic	6000

i) Select F_ID, sum(Fees) from COURSES group by F_ID; [1]

ii) Select Max(Salary), Min(Salary) from Faculty; [1]

iii) Select Fname, Cname from FACULTY, COURSES where COURSES.F_ID =FACULTY.F_ID and COURSES.F_ID=102; [1]

Q12 In a database company , there are two tables given below

Table:SALES

Salesmanid	Name	Sales	LocationID
S1	ANITA SINGH ARORA	250000	102
S2	Y.P.SINGH	1300000	101
S3	TINA JAISWAL	1400000	103
S4	GURDEEP SINGH	1250000	102
S5	SIMI FAIZAL	1450000	103

TABLE: LOCATION

LOCATIONID	LOCATIONNAME
101	DELHI
102	MUMBAI
103	KOLKATA
104	CHENNAI

Write SQL Query for the following

- (i) Display all the records from sales table [1]**

- (ii) Display the location of SIMI FAIZAL [1]**

- (iii) Display the salesman name from Mumbai location [1]**

- (iv) Display the salesman name with sales more than 100000 [1]**

- (v) Display the salesman record from sales and location table with name starting with 'A' [1]**

Q13 Ayurveda Training Educational Institute is setting up its centre in Hyderabad with four specialised departments for Orthopedics, Neurology and Pediatrics along with an administrative office in separate buildings. The physical distances between these department buildings and the number of computers to be installed in these departments and administrative office are given as follows.

Answer the queries as raised by them in (i) to (v).

Shortest distances between various locations in metres :

Administrative office to Orthopedics Unit	55
Neurology Unit to Administrative Office	30
Orthopedics Unit to Neurology Unit	70
Pediatrics Unit to Neurology Unit	50
Pediatrics Unit to Administrative Office	40

Number of Computers installed at various locations are as follows :

Pediatrics Unit	40
Administrative Office	140
Neurology	50
Orthopedics Unit	80

a) Suggest the most suitable location to install the main server of this institution to get efficient connectivity. [1/2]

b) Suggest the best cable layout for effective network connectivity of the building having server with all the other buildings. [1/2]

c) Suggest the devices to be installed in each of these buildings for connecting computers installed within the building out of the following : Gateway, switch, Modem [1/2]

d) Suggest the topology of the network and network cable for efficiently connecting each computer installed in each of the buildings out of the following : [1/2]

Topologies: Bus Topology, Star Topology

Network Cable: Single Pair Telephone Cable, Coaxial Cable, Ethernet Cable.

e) The university is planning to connect its admission office in Delhi, which is more than 1250km from university. Which type of network out of LAN, MAN, or WAN will be formed? Justify your answer.[1]

Q14 Write python-mysql connectivity to retrieve all the data of table student

[2]