



INFOTECH Computer Education

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1. Answer the following questions:

- a) Name the protocol used for sending and receiving e-mails. [1]
- b) An organization is planning to link its sale counter situated in various parts of the same city, which type of network out of LAN, MAN or WAN will be formed? [1]
- c) Arrange the following communication channels in ascending order of their data transmission rates.
Ethernet Cable, Optical Fiber, Telephone Cable, Co-axial Cable [1]
- d) Which of the following software's are open source: [1]
Linux, MS Windows 7, Photoshop, My Sql
- e) Compare and Contrast between Freeware and Free software. [2]
- f) What do the following protocols do? (i) HTTP (ii) FTP [2]
- g) Write the two advantages and two disadvantages of the following topologies in network
(i) Bus Topology (ii) Star Topology [2]

2. Answer the following questions:

- a) A label by default allows only one line of text to be displayed. Can you display multiple lines of text in a label? If so, how? [1]
- b) Which java method would you use for setting the password character as '\$' ? [1]
- c) Write the HTML tags to define a Password box. [1]
- d) What is wrong with following coding? [1]
<UL type ="a" start=4>
- e) Compare HTML and XML briefly. [1]
- f) Expand the following : (i) CSS (ii) DTD [1]
- g) How can you load the drivers? [1]

3. Answer the following questions:

- a) Naved wants to list the names of all the tables in his database namely STATUS. What command (s) should he write at MYSQL prompt to get this result ? [1]
- b) Bank accountant needs to change the last name of one of his customer in table CUSTOMER. Which command should be used for this? [1]
- c) swati needs to display name of those students who have "A" as the second character in their name. She writes the following SQL query: [1]
select name
from STUD

where name LIKE '*A%';
not producing the result. Identify the problem.

but the query is

- d) What is the difference between Primary key constraint and Unique constraint? [2]
- e) A table SERVICES in a database has 9 columns but no rows. 15 new rows are inserted in the table and 6 rows get deleted. What is the degree and cardinality of this table? [1]
- f) What are the similarities and differences between Natural join and Equi join? [2]
- g) What do you mean by Rollback command in database transaction? [1]

4. Answer the following questions:

- a) What do you mean by method overloading and method overriding, with an example.? [2]
- b) What will be the value of jTextField1 after execution of following code: [1]
`jTextField1.setText("Information".reverse());`
- c) What is the difference between Abstract class and Interface ? [2]
- d) What is the difference between String and StringBuffer class ? and name two methods for each class [2]
- e) The following code has some error(s). Rewrite the correct code underlining all the corrections made: [2]

```
int a, b=20;  
DO  
{  
    a=b*2;  
    b=a/b;  
}While(b>40)
```

- f) The Milton Casting Company has developed an application to calculate the wage of its workers. The following functionalities are expected. The Wage rate are Rs.150/- (per day) for male and Rs.130/- for females. An additional amount Rs.50/- per day is paid if worker is skilled. [6]

The screenshot shows a Java Swing window titled "Wage Calculator". It contains the following elements:

- A text input field labeled "Name".
- Two radio buttons labeled "Male" and "Female".
- A checkbox labeled "Skilled".
- A text input field labeled "No. of Days Worked".
- A "Calculate" button.
- A text input field labeled "Total wage amount".
- A "Clear" button.

Write the java code for the following questions:

- 1) Write a method to Calculate total wage, which takes input as number of days and return the total wage. And also write the code to call the method in button ActionPerformed Event.
- 2) Write the code for clear button. When Clear Button is clicked, all the text boxes get cleared and Male option is selected.
- 3) Write the code to reverse the name and show it in message dialog. [6]

5. Answer the following questions:

- a) What is the purpose of DROP TABLE command in SQL? How is it different from DELETE command? [2]
- b) Write the SQL command for (i) to (iv) and write the output of the (v) on the basis of the table SUPPLIER:

Table: SUPPLIER

SNo	PName	SName	Qty	Price	City
S1	Bread	Britannia	150	8.00	Delhi
S2	Cake	Britannia	250	20.00	Mumbai
S3	Coffee	Nascafe	170	45.00	Mumbai
S4	Chocolate	amul	380	10.00	Delhi
S5	Sauce	kissan	470	36.00	Jaipur

- (i) Display details for all products whose quantity is between 170 and 370. [1]
- (ii) Display data for all products sorted by their quantity. [1]
- (iii) Find all the products that have no supplier. [1]
- (iv) Give SName for that entire product whose name starts with "C". [1]
- (v) Give the output of the following SQL commands: [2]
- (a) Select AVG(Price) from SUPPLIER where price <30;
- (b) Select MAX(Price) from SUPPLIER where price >30;
- (c) Select COUNT(*) from SUPPLIER Group By City;

6. Answer the following questions:

- a) Write an SQL command for creating a table EMPLOYEE whose structures given below: [2]

Field name	Datatype	Size	Constraint
EmpId	Number	6	Primary key
EmpName	varchar	20	Not null
EmpAddress	varchar	30	
EmpSal	Number	9,2	>5000
DeptId	Varchar	2	Foreign key References Dept_Id of DEPARTMENT Table

- b) Given two tables as shown here. [2]

Employee2

Empno(PK)	salary
100	200.85
200	129.54
300	98.17

Employer

Id(PK)	Employee_no(FK)
51	100
52	100
53	200
54	300

Write commands to create them with constraints. Delete on a primary key should be cascaded to its foreign keys.

c) Consider the tables PURCHASE and CUSTOMERS given below:

[6]

CUSTOMER

Cust_Id	First_Name	Last_Name	DOB
1	Alisha	Madan	20/01/1989
2	Akhil	Sachdeva	01/02/1990
3	Rajesh	Mehta	10/09/1986
4	Rani	Garg	24/11/1986

PURCHASE

Cust_ID	Date	PurchaseAmount
3	11/09/2010	200
1	14/10/2010	199
2	21/09/2010	600
1	01/09/2010	99
4	23/11/2010	300

With reference to these tables, write commands in SQL for (i) and (ii)

and output for (iii)

- (i) Display the first name, last name and purchase amount of all the customers.
- (ii) Display the names of all customers whose purchase amount is more than Rs. 200
- (iii)

```
SELECT CUSTOMERS.First_Name, CUSTOMERS.Last_Name, PURCHASE.Date
FROM CUSTOMER JOIN PURCHASE
ON CUSTOMER.Cust_Id=PURCHASE.Cust_Id
ORDER BY Date;
```

7.

a) What is front end? What is its significance? [2]

b) Identify the various types of relationships from the following and also show them diagrammatically. [1]

(i) A student enrolls for various courses in a college.

c) What controls would you suggest for following types of inputs? [2]

(i) To display some information.

(ii) Enter password.

(iii) To choose more than one subject from a set of subjects.

(iv) To enter multiline text.