**1. Q. What does SQL stand for?**  
  
**A. Structured Query Language**  
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**2. Q. How do you select all records from the table?**  
  
**A. Select \* from table\_name;**  
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**3. Q. What is a join?**  
  
**A. Join is a process of retrieve pieces of data from different sets (tables) and returns them to the user or program as one joined collection of data.**  
  
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**4. Q. What kinds of joins do you know? Give examples.**  
  
**A. We have self join, outer joint (LEFT, RIGHT), , cross-join ( Cartesian product n\*m rows returned)**  
  
**Ex:**  
  
  
**outer joint**  
  
**SELECT Employee.Name, Department. DeptName**  
  
**FROM Employee, Department**  
  
**WHERE Employee.Employee\_ID = Department.Employee\_ID;**  
  
**cross-join**  
  
**SELECT \* FROM table1, table2;**  
  
**self join**  
  
**SELECT e1.name | |â€™    â€˜ | | e2.ename FROM emp e1, emp e2 WHERE e1. emp\_no = e2.emp\_no;**  
  
  
  
**The following summarizes the result of the join operations:**  
  
  
  
**·  The result of T1 INNER JOIN T2 consists of their paired rows where the**  
  
**join-condition is true.**  
  
**·   The result of T1 LEFT OUTER JOIN T2 consists of their paired rows where**  
  
**the join-condition is true and, for each unpaired row of T1, the**  
  
**concatenation of that row with the null row of T2. All columns derived**  
  
**from T2 allow null values.**  
  
**·   The result of T1 RIGHT OUTER JOIN T2 consists of their paired rows**  
  
**where the join-condition is true and, for each unpaired row of T2, the**  
  
**concatenation of that row with the null row of T1. All columns derived**  
  
**from T1 allow null values.**  
  
**·  The result of T1 FULL OUTER JOIN T2 consists of their paired rows and,**  
  
**for each unpaired row of T2, the concatenation of that row with the null**  
  
**row of T1 and, for each unpaired row of T1, the concatenation of that row**  
  
**with the null row of T2. All columns derived from T1 and T2 allow null**  
  
**values.**  
  
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**5. Q. How do you add record to a table?**  
  
**A. INSERT into table\_name VALUES (â€˜ALEXâ€™ , 33 , â€˜Mâ€™);**  
  
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**6.  Q. How do you add a column to a table?**  
  
**A. ALTER TABLE Department**  
  
**ADD (AGE,  NUMBER);**  
  
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**7.  Q. How do you change value of the field?**  
  
**A. UPDATE EMP\_table**  
  
**set  number = 200 where item\_munber = â€˜CDâ€™;**  
  
       **update name\_table set status = 'enable'  where phone = '4161112222';**  
  
       **update SERVICE\_table set REQUEST\_DATE = to\_date ('2006-03-04 09:29', 'yyyy-mm-dd hh24:MI') where    phone = '4161112222';**  
  
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**8.  Q. What does COMMIT do?**  
  
**A. Saving all changes made by DML statements**  
  
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**9.  Q. What is a primary key?**  
  
**A. The column  (columns) that has completely unique data throughout**  
  
**the table is known as the primary key field.**  
  
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**10. Q. What are foreign keys?**  
  
**A. Foreign key field â€“ is a field that links one table**  
  
**to another tables primary or foreign key.**  
  
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**11. Q. What is the main role of a primary key in a table?**  
  
**A. The main role of a primary key in a data table is to maintain the internal integrity of a data table.**  
  
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**12. Q. Can a table have more than one foreign key defined?**  
  
**A. A table can have any number of foreign keys defined. It can have only**  
  
**one primary key defined.**  
  
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**13. Q. List all the possible values that can be stored in a BOOLEAN data field.**  
  
**A. There are only two values that can be stored in a BOOLEAN data field:**  
  
**-1(true) and 0(false).**  
  
------------------------------------------------------------------------------------------------------------   
  
**14  Q. What is the highest value that can be stored in a BYTE data field?**  
  
**A. The highest value that can be stored in a BYTE field is 255. or from -128**  
  
**to 127. Byte is a set of Bits that represent a single character.**  
  
**Usually there are 8 Bits in a Byte, sometimes more, depending on how**  
  
**the measurement is being made. Each Char requires one byte of memory**  
  
**and can have a value from 0 to 255 (or 0 to 11111111 in binary).**  
  
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**15.  Q. How many places to the right of the decimal can be stored in a**  
  
**CURRENCY data field?**  
  
**A. The CURRENCY data type can store up to four places to the right of the**  
  
**decimal. Any data beyond the fourth place will be truncated by Visual**  
  
**Basic without reporting an error.**  
  
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**16.  Q. What is a stored procedure?**  
  
**A. A procedure is a group of PL/SQL statements that can be called by**  
  
**a name. Procedures do not return values they perform tasks.**  
  
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**17.  Q. Describe how NULLs work in SQL?**  
  
**A. The NULL is how SQL handles missing values.**  
  
**Arifthmetic operation with NULL in SQL will return a NULL.**  
  
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**18.  Q. What is Normalization?**  
  
**A. The process of table design is called normalization.**  
  
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**19.   Q. What is referential integrity constraints?**  
  
**A. Referential integrity constraints are rules**  
  
**that are partnof the table in a database schema.**  
  
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**20.    Q. What is Trigger?**  
  
**A. Trigger will execute a block of procedural code**  
  
**against the database when a table event occurs.**  
  
**A2. A trigger defines a set of actions that are performed in response**  
  
**to an insert, update, or delete operation on a specified table. When**  
  
**such an  SQL operation is executed, in this case the trigger has been**  
  
**activated.**  
  
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**21.    Q. Which of the following WHERE clauses will return only rows**  
  
**that have a NULL in the PerDiemExpenses column?**  
  
**A.      WHERE PerDiemExpenses <>**  
  
**B.      WHERE PerDiemExpenses IS NULL**  
  
**C.      WHERE PerDiemExpenses = NULL**  
  
**D.      WHERE PerDiemExpenses NOT IN (\*)**  
  
  
  
**A. B is correct When searching for a NULL value in a column, you must**  
  
**use the  keyword IS. No quotes are required around the keyword NULL.**  
  
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**22.   Q. You issue the following query:SELECT FirstName FROM**  
  
**StaffListWHERE FirstName LIKE'\_A%'Which names would be**  
  
**returned by this query? Choose all that apply.**  
  
**A.      Allen**  
  
**B.      CLARK**  
  
**C.      JACKSON**  
  
**D.      David**  
  
  
  
**A. C is correct Two wildcards are used with the LIKE operator.**  
  
**The underscore (\_) stands for any one character of any**  
  
**case, and the percent sign (%) stands for any number of**  
  
**characters of any case including none. Because this string**  
  
**starts with an underscore rather than a percent sign, it won't**  
  
**return Allen or Clark because they represent zero and two**  
  
**characters before the "A". If the LIKE string had been "%A%",**  
  
**both of these values would have been returned.**  
  
**David was not returned because all non-wild card characters**  
  
**are case sensitive. Therefore, only strings**  
  
**with an uppercase "A" as their second letter are returned**  
  
  
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**23.   Q. Write a SQL SELECT query that only returns each city only once from Students table?**  
  
**Do you need to order this list with an ORDER BY clause?**  
  
**A. SELECT DISTINCT City**  
  
**FROM Students;**  
  
**The Distinct keyword automatically sorts all data**  
  
**in ascending order. However, if you want the data**  
  
**sorted in descending order, you have to use an ORDER BY clause**  
  
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**24.    Q. Write a SQL SELECT sample of the concatenation operator.**  
  
**A.  SELECT LastName ||',' || FirstName, City FROM Students;**  
  
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**25.    Q. How to rename column in the SQL SELECT query?**  
  
**A.       SELECT LastName ||',' || FirstName**  
  
**AS "Student Name", City AS "Home City"**  
  
**"FROM StudentsORDER BY "Student Name"**  
  
-----------------------------------------------------------------------------------------------------------   
  
**26.   Q. Write SQL SELECT example how you limiting the rows returned with a WHERE clause.**  
  
**A. SELECT InstructorID, Salary FROM Instructors**  
  
**WHERE Salary > 5400 AND Salary < 6600;**  
  
-----------------------------------------------------------------------------------------------------------   
  
**27.   Q. Write SQL SELECT query that returns the first and**  
  
**last name of each instructor, the Salary,**  
  
**and gives each of them a number.**  
  
**A. SELECT FirstName, LastName, Salary,**  
  
**ROWNUM FROM Instructors;**  
  
-----------------------------------------------------------------------------------------------------------   
**28.    Q. Which of the following functions can be used only with numeric values?**  
  
**(Choose all that apply.)**  
  
**A.      AVG**  
  
**B.      MIN**  
  
**C.      LENGTH**  
  
**D.      SUM**  
  
**E.      ROUND**  
  
  
**A. A and D  Only A and D are correct. The MIN function**  
  
**works with any character, numeric, or date datatype.**  
  
**The LENGTH function is a character function that returns**  
  
**the number of letters in a character value. The ROUND**  
  
**function works with both numeric and date values.**  
  
-----------------------------------------------------------------------------------------------------------   
  
**29. Q.  Which function do you use to remove all padded characters**  
  
**to the right of a character value in a column with a char datatype?**  
  
**A.      RTRIM**  
  
**B.      RPAD**  
  
**C.      TRIM**  
  
  
  
**A.  C is correct .The TRIM function is used to remove padded spaces.**  
  
**LTRIM and RTRIM functions were included in earlier versions**  
  
**of Oracle, but Oracle 8i has replaced them with a single**  
  
**TRIM function**  
  
-----------------------------------------------------------------------------------------------------------   
  
**30.  Q. Which statement do you use to eliminate padded spaces**  
  
**between the month and day values in a function TO\_CHAR(SYSDATE,'Month, DD, YYYY') ?**  
  
**A. To remove padded spaces, you use the "fm"**  
  
**prefix before the date element that contains the spaces.**  
  
**TO\_CHAR(SYSDATE,'fmMonth DD, YYYY')**  
  
-----------------------------------------------------------------------------------------------------------   
  
**31. Q. Is the WHERE clause must appear always before the GROUP BY clause in SQL SELECT ?**  
  
**A. Yes.**  
  
**The proper order for SQL SELECT**  
  
**clauses is: SELECT, FROM, WHERE, GROUP BY, HAVING, ORDER BY.**  
  
**Only the SELECT and FROM clause are mandatory.**  
  
-----------------------------------------------------------------------------------------------------------   
  
**32. Q. How Oracle executes a statement with nested subqueries?**  
  
**A. When Oracle executes a statement with nested subqueries,**  
  
**it always executes the innermost query first. This query passes its**  
  
**results to the next query and so on until it reaches the outermost query.**  
  
**It is the outermost query that returns a result set.**  
  
-----------------------------------------------------------------------------------------------------------   
  
**33. Q. Which operator do you use to return all of the rows**  
  
**from one query except rows are returned in a second query?**  
  
**A. You use the MINUS operator to return all rows from one query except**  
  
**where duplicate rows are found in a second query. The UNION operator**  
  
**returns all rows from both queries minus duplicates. The UNION ALL operator**  
  
**returns all rows from both queries including duplicates.**  
  
**The INTERSECT operator returns only those rows that exist in both queries.**  
  
-----------------------------------------------------------------------------------------------------------   
  
**34. Q. How you will create a column alias? (Oracle 8i)**  
  
**A. The AS keyword is optional when specifying a column alias.**  
  
**You must enclose the column alias in double quotes when the alias**  
  
**contains a space or lowercase letters. If you specify an alias in**  
  
**lowercase letters without double quotes, the alias will appear in uppercase.**  
  
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**35  Q. Which of the following statements are Data Manipulation Language commands?**  
  
**A.      INSERT**  
  
**B.      UPDATE**  
  
**C.      GRANT**  
  
**D.      TRUNCATE**  
  
**E.      CREATE**  
  
  
  
**A.  A and B are correct. The INSERT and UPDATE statements are**  
  
**Data Manipulation Language (DML) commands.**  
  
**GRANT is a Data Control Language (DCL) command.**  
  
**TRUNCATE and CREATE are Data Definition Language (DDL) commands**  
  
  
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**36. Question. What is Oracle locking?**  
  
**A. Oracle uses locking mechanisms to protect data from**  
  
**being destroyed by concurrent transactions.**  
  
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**37. Question. What Oracle lock modes do you know?**  
  
**A.  Oracle has two lock modes: shared or exclusive.**  
  
**Shared locks are set on database resources so that many transactions**  
  
**can access the resource.**  
  
**Exclusive locks are set on resources that ensure**  
  
**one transaction has exclusive access to the database resource**  
  
-----------------------------------------------------------------------------------------------------------   
  
**38.  Question. What is query optimization?**  
  
**A.  Query optimization is the part of the query**  
  
**process in which the database system compares**  
  
**different query strategies and chooses the one with**  
  
**the least expected cost**  
  
-----------------------------------------------------------------------------------------------------------   
  
**39.  Question. What are the main components of Database management systems software.**  
  
**A. The database management system software includes**  
  
**components for storage management, concurrency control, transaction**  
  
**processing, database manipulation interface, database definition interface,**  
  
**and database control interface.**  
  
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**40.  Question. What are the main attributes of  database management system?**  
  
**A. A database management system is composed of five elements: computer hardware, software, data, people (users), and operations procedures.**  
  
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**41.  Question. What is transaction?**  
  
**A. A transaction is a collection of applications**  
  
**code and database manipulation code bound into an indivisible unit of execution.**  
  
**it consists from:**  
  
**BEGIN-TRANSACTION Name**  
  
**Code**  
  
**END TRANSACTION Name**  
  
  
-----------------------------------------------------------------------------------------------------------   
**42.  Question.  What databases do you know?**  
  
**Informix**  
  
**DB2**  
  
**SQL**  
  
**Oracle**  
  
-----------------------------------------------------------------------------------------------------------   
**43.  Question. Explain SQL SELECT example:**  
  
**select j.FILE\_NUM**  
  
**from DB\_name.job j, DB\_name.address a**  
  
**where j.JOB\_TYPE ='C'**  
  
**AND j.COMPANY\_NAME = 'TEST6'**  
  
**AND j.OFFICE\_ID = '101'**  
  
**AND j.ACTIVE\_IND = 'Y'**  
  
**AND a.ADDRESS\_STATUS\_ID = 'H'**  
  
**AND a.OFFICE\_ID = '101'**  
  
**AND a.FILE\_NUM = j.FILE\_NUM order by j.FILE\_NUM;**  
  
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**Answer: j and a aliases for table names. this is outer joint select statament from two tables.**  
  
  
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**44.  Q. Describe some Conversion Functions that you know**  
  
  
  
**A. TO\_CHAR converts a number / date to a string.**  
  
**TO\_DATE converts a string (representing a date) to a date.**  
  
  
  
**TO\_NUMBER converts a character string containing digits to a numeric data type, it accepts one parameter which is a column value or a string literal**  
  
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**45.   Q.  Describe some Group Functions that you know**  
  
**A. 1) The COUNT function tells you how many rows were in the result set.**  
  
**SELECT COUNT(\*) FROM TESTING.QA**  
  
     **2) The AVG function tells you the average value of a numeric column.**  
  
**SELECT MAX(SALARY) FROM TESTING.QA**  
  
**3) The MAX and MIN functions tell you the maximum and minimum value of a numeric column.**  
  
**SELECT MIN(SALARY) FROM TESTING.QA**  
  
**4) The SUM function tells you the sum value of a numeric column.**  
  
**SELECT SUM(SALARY) FROM TESTING.QA**  
  
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**46. Question. What does DML stand for?**  
**A. DML is Data Manipulation Language statements. (SELECT)**  
  
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**47. Question. What does DDL stand for?**  
  
**A. DDL is Data Definition Language statements. (CREATE)**  
  
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**48.  Question. What does DCL stand for?**  
  
**A. DCL is Data Control Language statements. (COMMIT)**  
  
-----------------------------------------------------------------------------------------------------------   
**49.  Question: Describe SQL comments.**  
  
  
**A. SQL comments are introduced by two consecutive hyphens**  
  
**(--) and ended by the end of the line.**  
  
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**50.   Q. In what sequence SQL statement are processed?**  
  
**A. The clauses of the subselect are processed in the following sequence (DB2):**  
  
**1. FROM clause**  
  
**2. WHERE clause**  
  
**3. GROUP BY clause**  
  
**4. HAVING clause**  
  
**5. SELECT clause**  
  
**6. ORDER BY clause**  
  
**7. FETCH FIRST clause**