

Database Design – Final Exam Study Guide

Name _____ Date _____

Part I Directions: answer each question.

1. What are the benefits the Oracle 10g Database Environment provides for business?
2. What services and products does Oracle provide?
3. What is a relational database?
4. What is the difference between application and system software? Provide an example.
5. How is data extracted from the database?
6. Name two benefits of a career portfolio?
7. What is the difference between a projection, selection, and join statement?
8. How are all rows in a table selected? Provide an example.
9. How are only specific rows in a table selected? Provide an example.
10. What is a query? Provide an example.
11. Give an example of a keyword?
12. Give an example of a clause?
13. Give an example of a statement?
14. What are the two statement terminators?
15. What symbol designates all columns select in a SQL query?
16. What keyword suppresses duplicates and why would you want to suppress duplicates?
17. What clause specifies the table containing the columns?
18. How do you tell a row from a column?
19. What is a database field?
20. What is the difference between a primary key and foreign key column?
21. How does the database application know what table to select to retrieve data?
22. What are the five simple guidelines, you use to construct valid SQL statements?

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23. What is a column alias?
24. What are the rules for using a column alias?
25. Why use a column alias?
26. Where are columns named in a SQL query? Provide an example?
27. What is an arithmetic expression? Provide an example.
28. What are the arithmetic operators? Provide an example.
29. How does the database application choose what arithmetic operations to do first?
30. What overrides the rules of precedence?
31. What exactly is a null value?
32. What results when a null is used in a calculation?
33. If a column alias is wanted a certain way, it should be enclosed by?
34. How does the concatenation operator function?
35. What is a literal value and what are literal values enclosed by?
36. What command displays the structure of a table?
37. List and define the four data types?
38. When a column is defined as NOT NULL, what does this represent to the SQL programmer?
39. Create a query that shows the structure of the EMPLOYEES table?
40. Create a query to display the last name, job id, hire date, and employee number for each employee. Label the column headings.

Part II Directions: answer each question.

1. What clause restricts rows used by a SQL query?
2. What is a condition?
3. The WHERE clause can compare values. It consists of three elements?

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4. Which operator would you use to make the following comparisons:
 - a. greater than or equal to _____
 - b. equal to _____
 - c. Less than _____
 - d. less than or equal to _____
 - e. not equal to _____
5. When does a column alias require double quotation marks?
6. All character strings and date values are enclosed in _____?
7. The default date format is _____?
8. On what clause can an alias not be used?
9. What is the BETWEEN condition used for? Give an example.
10. Is the BETWEEN condition inclusive or exclusive to its values?
11. What is the membership condition? Give an example.
12. What is the LIKE condition used for? Give an example.
13. List and describe the two wildcard symbols used with the ESCAPE Option.
14. Why does the WHERE clause use IS NULL when searching for a null condition?
15. Why does the WHERE clause use IS NOT NULL when searching for a not null condition?
16. List and describe the three logical operators?
17. What logical operator is calculated first?
18. What do you do to override the default order of the rules of precedence?
19. What clause is used to sort the rows?
20. Are all character searches case sensitive? True/False
21. The OR conditional operator requires either condition to be true. True/False
22. The AND conditional operator requires either condition to be true. True/False
23. The NOT conditional operator reverses the condition. True/False

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24. What is the default sort order of the rows of data?
25. Where in a SELECT statement does the ORDER BY clause go? Give an example.
26. If the ORDER BY clause is not used how is the data displayed?
27. What three ways can the sort condition of the ORDER BY clause be written? Give an example of each?
28. Create a query to display the last name, salary, and commission for all employees who earn a commission. Place the results in descending order by salary. Label the column headings.
29. Create a query to display the employees' last name, job id, start date of employees hired between February 11, 1997 and May 5, 1998. Place the results in order by start date. Label the column headings.
30. Create a query to display all the information about employee King.
31. Create a query to display the last names of all employees where the third letter of the last name is 'k' and who have an 'a' in their last name.

Part III Directions: answer each question.

1. Describe the difference between single-row functions and multi-row functions.
2. Think of the calculation (sal * 12) to view the annual salary of all employees, what concepts does it reinforce?
3. Name all of the character manipulation functions.
4. Name the “general” single row functions.
5. What does the Case Conversion “INITCAP” perform?
6. What is the purpose of using the CASE conversion UPPER?
7. Suppose you begin working for a company where all the employee names had been entered with only a first initial and last name, all in the same field. As a competent data modeler, you know that first names should be in a column by themselves. How could you remove the first initial from each name with one command?
8. How could you get rid of any extra spaces accidentally entered by the data entry clerk when names were entered?

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9. What keyword would be used to find the longest name in the database?

10. Why would we want to know the longest name?

11. Describe the difference between ROUND, TRUNC, and MOD.

12. What is the dual table?

13. What is SYSDATE?

14. What would
 SELECT sysdate
 FROM dual;
Return?

15. Why is the dual table needed?

16. What are three usages of “Arithmetic with dates?”