IST370 Exam 4 Review Spring 2017

**Chapter 10** 1. When used in a a. SELECT clause, the case conversion functions (e.g., UPPER and LOWER) only change the way the data is displayed, not how it is stored in the database table. 2. When the case conversion functions (e.g., UPPER and LOWER) used in the WHERE clause, they will change the way the data is displayed and how it is stored in the database table.a. True3. Which of the following is correct SQL statement that displays a customer’s name in all lower characters? a. SELECT LOWER(firstname), LOWER(lastname) FROM customers4. Which of the following is an executable query?b. SELECT INITCAP ('HELLO WORLD') FROM dual; 5. Which of the following is a correct way of specifying the SUBSTR function for extracting the area code (i.e., the first three digits) of the customer’s phone number in the format of '999-999-9999'? a. SUBSTR (phone, 1, 3) 6. Which of the following lists only the last four digits of the contact person’s phone number at American Publishing? a. SELECT SUBSTR(phone, -4, 4) FROM publisher WHERE name = 'AMERICAN PUBLISHING'7. Which of the following is a correct way of filling in 10 asterisks to the left of the customer’s address? a. SELECT LPAD(address, 10, '\*') 8. You are to create mailing labels that are wide enough to accommodate the longest mailing address of your customers. To determine the maximum number of characters that will be entered to the address column, what function should be used to address this need? ENGTH(address) 9. To concatenate two character strings, which of the following is a correct way of specifying the CONCAT function? a. SELECT CONCAT('Order No', order#) "Order Number" FROM orders; 10. What result will be returned by running the following query? SELECT ROUND(20.1934, 1) FROM DUAL; 20.2 11. What result will be returned by running the following query? SELECT TRUNC(20.1934, 1) FROM DUAL; 20.1 12. What is the purpose of the following query? SELECT order#, shipdate-orderdate FROM orders; Show how many DAYS between the order date and shipdate 13. What is the purpose of the following query? SELECT order#, SYSDATE-orderdate FROM orders WHERE shipdate IS NOT NULL; How many DAYS ago that those shipped orders were placed. 14. What is the purpose of the following query? SELECT order#, SYSDATE-shipdate FROM orders WHERE shipdate IS NOT NULL How many DAYS ago that those shipped orders were shipped. 15. Select the correct date function that determines the number of months between order date and publication date of each book: SELECT title, MONTHS\_BETWEEN(shipdate,orderdate) FROM books JOIN orderitems USING (isbn) JOIN orders USING (order#); 16. Study the following query: 1 SELECT order#, title, 2 ROUND(MONTHS\_BETWEEN (orderdate, pubdate), 2), What does Line 2 do? It counts the months between when the book was published and when it was ordered and rounds it to two decimal places 3 ROUND(MONTHS\_BETWEEN(SYSDATE, pubdate)/12,2) What is the purpose of Line 3? It counts the years between today's date and the publication of the book 4 FROM books JOIN orderitems USING (isbn) JOIN orders USING (order#); 17. Complete the following query that compute the age of each book: SELECT title, pubdate, TO\_NUMBER (TO\_CHAR(SYSDATE, 'YYYY')) - TO\_NUMBER (TO\_CHAR(pubdate, 'YYYY')) "Age of Book" FROM books; 18. Select a proper function to complete the following query: SELECT cost, retail, TO\_CHAR (retail-cost, '$999,999.99') profit FROM books; 19. Which of the following will display the retail price in the format as desired? a. SELECT cost, retail, TO\_CHAR(retail-cost, '$999,999.99') profit FROM books; 20. Which of the following is a correct use of the NVL function? c. SELECT lastname, NVL (referred, 'Not Referred') FROM customers; 21. Which of the following is a correct use of the NVL2 function? SELECT order#, NVL2 (shipdate, 'Shipped', 'Not Shipped' ) FROM orders; 22. The following query will prompt an error message. What’s wrong with it? SELECT order#, NVL (shipdate, 'Not Shipped') FROM orders; This fuction essentially tests the first result "Shipped" if the order has been shipped it will show this value if it is not shipped the NVL2 function looks for another result that this query can produce. Since this statement only has one value the function cannot test for another value. 23. Which of the following queries will produce the query output displaying a list of all customer numbers along with text indicating whether the customer has been referred by another customer? The output displays the text “NOT REFERRED” if the customer wasn’t referred to JustLee Books by another customer or “REFERRED” if the customer was referred. SELECT customer#, INITCAP(firstname) || ' ' || INITCAP(lastname) "Name", zip, SUBSTR(zip, 1, 3) "Distribution", NVL (referred, 'Not Referred') "Referral" FROM customers ORDER BY 5; 24. What’s the name of the table provided by Oracle for completing queries that don’t involve a table? (It is a dummy table created by default in Oracle and consists of one column and one row and stores no data.) dual 25. How do you extract only the p.o. box number from the ‘address’ column (disregarding the wording ‘P.O. Box’? SELECT firstname, SUBSTR(address, 4(address, 'BOX ')+4) “P.O. BOX#” FROM customers';

**Chapter 11** Which of the following is a multiple-row function?COUNTMAX MIN AVG SUM A Multiple-row function returns one result per group of data processed. The MIN and MAX function can be used with data types of a. both numbers and dates The AVG function can be used with a. numeric data only Which of the following statements is true? The SUM and AVG functions include duplicate values. Which of the following group functions will include NULL values? a. COUNT(\*) The WHERE clause restricts which rows are processed while the HAVING clause determines which groups are displayed in the query results.If a non-aggregate column (e.g., title) is listed in the SELECT clause, along with an aggregate column associated with a group function, such as AVG(retail), then the GROUP BY column must be listed in a SELECT clause. Which of the following statements is correct? The HAVING clause is always processed before the WHERE clause. Which of the following is true? b. Column aliases can be used in the ORDER BY clause. Which of the following is true? b. Column positions can be used in the ORDER BY clause. Complete the following SQL statement that displays the number of computer and children books with a retail price of more than $30.00. SELECT COUNT(\*) "# of Books Over $30" FROM books WHERE retail > 30 AND category IN ('COMPUTER','CHILDREN'); Complete the following SQL statement that counts all the orders have been placed (including in the results those orders that have been shipped and those not shipped. SELECT COUNT(\*)"All Orders Placed" FROM orders; Complete the following SQL statement that counts all the orders that have been shipped. SELECT COUNT(\*) "Orders Shipped" FROM orders WHERE shipdate IS NOT NULL; SELECT COUNT(shipdate) "Orders Shipped FROM orders; Complete the following SQL statement that counts all the orders have NOT been shipped. SELECT COUNT(\*) "Orders Not Shipped FROM orders WHERE shipdate IS NULL; Complete the following SQL statement that determines how many customers were NOT referred by other customers? SELECT COUNT(\*) FROM customers WHERE referred IS

NULL; Which of the following queries determines how many customers were referred by other customers? a. SELECT COUNT(referred) FROM customers; Display the oldest and most recent publication dates of all books sold by JustLee Books. SELECT MAX(pubdate) "Oldest",MIN(pubdate) "Newest" FROM books; Complete the following query that displays the number of books with a retail price of more than $10.00 in each category. SELECT category, COUNT(\*) "Books Over $10" FROM books WHERE retail > 10 GROUP BY category; What does the following query do? SELECT customer#, COUNT(\*) FROM orders JOIN customers USING (customer#) GROUP BY customer#; b. It will return the number of orders placed by each customer. SELECT customer#, COUNT(\*) FROM customers; It will return the total number of customers in the customers table

**DEBUGGING** SELECT order#, SUM(retail) FROM orderitems JOIN books USING (isbn) GROUP BY order# ORDER BY order#; SELECT order#, SUM(retail) FROM orderitems JOIN books USING (isbn) GROUP BY ~~isbn~~ order#; SELECT order#, isbn, SUM(retail) FROM orderitems JOIN books USING (isbn) GROUP BY isbn,order# ORDER BY order#; SELECT category, AVG(retail-cost) FROM books GROUP BY category ~~WHERE~~ HAVING AVG(retail-cost) > 8.56 ; SELECT category, AVG(retail-cost) FROM books ~~GROUP BY 1~~ ORDER BY category HAVING AVG(retail-cost) > 8.56 ;

**LABS** For this purpose, produce a list of each customer number, complete zip code, and the first three digits of the zip code. SELECT DISTINCT zip, SUBSTR(zip, 1, 3) "Distinct Code" FROM customers; The query output should include each customer's complete email address, local-part, and domain. SELECT email, SUBSTR(email, 1, INSTR(email, '@')-1) LOCAL\_PART, SUBSTR(email, -7,7) EMAIL\_DOMAIN FROM customers; DISTINCT firstname || ' '|| lastname "Customer name", zip, SUBSTR(zip, 1, 3) "Distinct Code", SUBSTR(zip, -2, 2) "Code2", email, SUBSTR(email, 1, INSTR(email, '@')-1) LOCAL\_PART,SUBSTR(email, -7,7) EMAIL\_DOMAIN FROM customers;Create a list of all customer numbers and order number, along with text indicating whether the customer has been referred by another customer. Display the text “NOT REFERRED” if the customer wasn’t referred to JustLee Books by another customer or “REFERRED” if the customer was referred. SELECT DISTINCT c.firstname || ' '||c. lastname “Customer name”,o.order#, NVL2(TO\_CHAR(referred), 'Referred', 'Not Referred') AS "Referral" FROM customers c, orders o WHERE c.customer# = o.customer#Order by "Referral" asc;List all the orders with order# and shipdate. Display “Not shipped” under the shipdate column for those orders that have not been shipped. Also show the delay between the ship date and order date for each order in terms days and months. SELECT c.customer# "C#", order#, NVL(TO\_CHAR(shipdate), 'Not Shipped') "Ship Date",TRUNC(shipdate) - TRUNC(orderdate) "Lead Time (Days)",ROUND(MONTHS\_BETWEEN(shipdate,orderdate),2) "Lead Time (Months)"FROM customers c, orders o WHERE c.customer# = o.customer# ORDER BY shipdate desc; Determine the amount of profit for each computer book on variable orders. The profit should be formatted to display a dollar sign and two decimal places (e.g., $999,999.00).

SELECT c.customer# “C#”, o.order#, DISTINCT title, pubdate TO\_CHAR(PUB\_DAT(pubdate), ‘ MONTH DD-DAY-‘) PUB\_DATE,

TO\_CHAR(oi.quantity\*(oi.paideach-b.cost), '$999.99') “Profit” FROM customers c, orders o, books b, orderitems oi WHERE oi.ISBN = b.ISBN AND o.customer# = c.customer# AND category = 'COMPUTER'; Determine the number of books in each categories, along with the average retail price of the books in each category. SELECT category, COUNT(title)"# of Books", TO\_CHAR(AVG(retail), '$999.99') "Avg$" FROM books GROUP BY category;Determine the number of placed orders for each customer, along with the number of shipped orders for each customer. It is required that those customers who did not place any order should also be listed in the result (such as C1002).SELECT c.customer# "c#", COUNT(order#) "Placed Orders", COUNT(shipdate)"Shipped Orders"

FROM customers c, orders o WHERE c.customer# = o.customer#(+) GROUP BY c.customer#;Figure out the purchase frequency of each book (number of times of purchase). Sort the result in ascending of purchase frequency. SELECT b.isbn, b.title, COUNT(\*) "Purchase Frequency" FROM books b, orderitems oi WHERE b.ISBN = oi.ISBN GROUP BY b.isbn, b.title Order By "Purchase Frequency"; Figuring out the most expensive (most$) and least expensive (least$) books purchased by each of the customers living in Florida. Computing the average retail price (average$) of the books bought by each of those customers (who live in Florida).

Computing the total profit generated from each of those customers (residing in Florida), where the profit of each order line equals (retail – cost)\*quantity. Restricting the search for only those rows with a total profit great than $100. Sorting the result in ascending order total profit. SELECT customer# c#, firstname ||' ' || lastname "Customer", state "State", TO\_CHAR(MAX(retail), '999,999.99')"Most$", TO\_CHAR(MIN(retail), '999,999.99')"Least$",AVG(retail) "Average$",TO\_CHAR(SUM((retail-cost)\*quantity), '999,999.99') "Total Profit" FROM customers JOIN orders USING (customer#) JOIN orderitems USING(order#) JOIN books USING(isbn) WHERE state = 'FL' HAVING SUM((retail-cost)\*quantity) >100 GROUP BY customer#, firstname ||' ' || lastname, state

ORDER BY "Total Profit" asc;Determine the average total profit generated from all of the orders in the ORDERS table. (Hint: The total profit by order must be calculated before finding the average total profit.) You need to round the figure to the nearest hundredth. SELECT TO\_CHAR(AVG(SUM((retail-cost)\* quantity)), '999,999.00') "Avg Total Profit" FROM orderitems JOIN books USING(isbn)

GROUP by order#;

**QUIZ** Select the correct date function that determines the number of months between order date and publication date of each book: SELECT title, MONTHS\_BETWEEN (orderdate, pubdate) FROM books JOIN orderitems USING (isbn) JOIN orders USING (order#);Which of the following is correct SQL statement that displays a customer's name in all lower characters? SELECT LOWER(firstname), LOWER(lastname) FROM customers;Which of the following lists only the last two digits of the contact person's phone number at American Publishing? SELECT SUBSTR(phone, -2, 2) FROM publisher WHERE name = 'AMERICAN PUBLISHING'; You are to create mailing labels that are wide enough to accommodate the longest mailing address of your customers. To determine the maximum number of characters that will be entered to the address column, what function should be used to address this need? LENGTH(address) What is the purpose of the following query?

SELECT order#, shipdate-orderdate FROM orders;Determine the duration (in days) between the order date and ship date of each order.