

**Code No. 065**

- Please check that this question paper contains 4 printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains 7 questions.
- Please write down the serial number of the question before attempting it.

## INFORMATICS PRACTICES

**Time allowed: 3 hours**

**Maximum Marks: 70**

***Note:***

- (i) **All** questions are compulsory.
- (ii) **Section A** consists of 30 marks.
- (iii) **Section B** and **Section C** are of 20 marks each.
- (iv) Answer the questions after carefully reading the text.

### SECTION A

**1. Answer the following questions**

- (a) "Oracle Database is an example of an RDBMS" Justify this statement **2**
- (b) Differentiate between Decision Control and Looping Control Structure in context with PL/SQL **2**
- (c) How do we restrict duplicate rows in SQL SELECT Query? Give example **2**
- (d) What are PL/SQL blocks? How many types of PL/SQL block definition

exist? Explain with suitable examples.

4

**2. Answer the following questions**

(a) Differentiate between Row Level Triggers and Statement Level Triggers using suitable example

2

(b) What is the difference between ROLLBACK and ROLLBACK TO statements

2

(c) What are Cursor attributes? What do these attributes evaluate to when associated with IMPLICIT and EXPLICIT cursors? Write a PL/SQL block to find the factors of a number entered by user.

3

(d) Define SQL. Explain SQL subcategories giving at least one example command in each category.

3

**3. Answer the following questions.**

(a) How do we specify comments in visual basic? How do we break a long line of code to a new line?

2

(b) Differentiate between a ADODB project reference and ADO DC in a form using suitable Example

4

(c) Explain the usage of %TYPE attribute in variable declaration in a PL/SQL block within the help of an example.

2

(d) Write the difference between a Cursor and a Trigger.

2

**SECTION B**

**4. Answer the following questions.**

(a) Write a SQL (DDL) query to create the following table Employee **2**

Column Name	Data Type	Size	Constraint	Description
EmpID	NUMBER	6	PRIMARY KEY	
EmpName	VARCHAR2	20	NOT NULL	
EmpAddress	VARCHAR2	30		
EmpPhone	VARCHAR2	10		
EmpSal	NUMBER	9,2		

(b) Write SQL query to create the following Student table **3**

Column name	Data type	Constraint
Rollno	Number -5	Primary key
Name	Character - 15	Not null
Address	Character - 20	
City	Character - 10	Mumbai, Chennai, Kolkata
Total Mark	Number - 4	<=500

(c) Write SQL command to display maximum value of total mark in the above table student

**2**

(d) Write an SQL command to create a view **student\_view**, which includes

Roll no, Total mark & city of students who is staying in Kolkata **3**

**5. Answer the questions based on the table Transactions given below:**

Table : Transactions

Column Name	Data Type	Size	Constraint
Invoicenumbe r	Number	10	Primary Key

Itemcode	Number	10	Referenced from item Table
Transactiondate	Date	--	Not null
Transactionmode	Varchar2	10	Allowed Values : SALE, PURCHASE
Transactionunits	Number	5	>0

(a) Write SQL command to create the table Transactions including its constraints.

4

(b) Write SQL command to display Invoicenumber, Transactiondate, Transactionunits and Itemcode from Transactions table whose Itemcode is equivalent to Item table's Itemtype = 'Soap'

4

(c) Write SQL command to create view Item\_view which contains Invoice Number, Item Code, Transaction Mode whose transaction date is between 15/08/2006 to 31/12/2006

2

### SECTION C

#### 6. Answer the following questions:

Use the following structure of Customer table to answer the following questions

Column Name	Cust_Id	Cust_Name	Cust_Add1	Cust_Id2	Pin_Code	Cust_Phone
Data type	Number	Varchar2	Varchar2	Varchar2	Number	Varchar2
Length	7	30	20	30	6	10

(a) Write a PL/SQL code to modify all the CUST\_PHONE numbers by joining

'2' before each phone number if it contains 7 characters. **2**

(b) Write a PL/SQL code to modify all the CUST\_PHONE numbers by removing '2' if it starts with '2'. **2**

(c) Write PL/SQL code to create two Statement level triggers  
TrigBeforeUpdateCustomer and TrigAfterUpdateCustomer before and after  
UPDATE statement respectively on the table Customer which signals  
'Starting Update' to signify that modification of records has started and  
'End of Update' message to signify that modification is over. **4**

(d) Read the following Dept table and write the output produced by the following PL/SQL code on execution: **2**

Deptno	Dname	Loc
10	Accounting	New York
20	Research	Dallas
30	Sales	Chicago
40	Operations	Boston

```
DECLARE
v_DeptID Dept.DeptNo%TYPE := 10;
v_DeptName Dept.DName%Type;
v_Counter NUMBER (2) := 1;
BEGIN
LOOP
SELECT DName INTO v_DeptName FROM Dept
WHERE DeptNo = v_DeptID ;
DBMS_OUTPUT.PUT_LINE (v_DeptName);
v_DeptID = v_DeptID + 10
```

```
v_Counter = v_Counter + 1  
EXIT WHEN v_Counter >3;  
END LOOP;  
END;
```

**7. Answer the following questions:**

- (a) Write a PL/SQL procedure that calculates and displays the volume of a cuboid. The procedure takes three parameters for length, width and height of the cuboid respectively. The last two parameters are optional having a default value of -1. If the last two parameters are not passed then the volume of a cube having sides equal to the first parameter is to be calculated. **4**
- (b) Differentiate between the IN and OUT parameters of a PL/SQL procedure. **2**
- (c) Write a PL/SQL Function Power that takes two numbers as arguments and returns the value of the first number raised to the power of the Second. **4**