

# Practice Paper - 1

Maximum Marks : 70]

[Time : 3 Hours

- Note.** 1. This question paper is divided into three sections.  
2. Section–A consists of 30 marks.  
3. Section–B and Section–C are of 20 marks each.  
4. Answer the questions after carefully reading the text.

## SECTION–A

- Q1.** Answer the following questions :
- (a) Explain the term Metadata using suitable example. 2
  - (b) What is a Financial Accounting system ? Name any two entities or tables that could be a part of this system. 2
  - (c) What is feasibility study with reference to SDLC ? Explain. 2
  - (d) Explain the concept of object-oriented modeling. 2
  - (e) Define Data Warehousing using suitable example. 2
- Q2.** Answer the following questions :
- (a) What are conditional or decision control statements ? Name the two conditional statements used in Visual Basic. 2
  - (b) Differentiate between public and private variables and discuss their scope of visibility. 2
  - (c) Explain the terms ODBC and OLE-DB. 2
  - (d) Differentiate between SDI Form and MDI Form in Visual Basic. In the similar context, explain the concept of parent and child forms. 4
- Q3.** Answer the following questions :
- (a) How do we restrict duplicate rows in SQL SELECT query ? Give example. 2
  - (b) What is the classification of SQL statements ? 2
  - (c) What is the DEFAULT option of CREATE TABLE command ? 2
  - (d) Define the term Common Dialog Box. Explain the process to include and a Common Dialog Box in a Visual Basic form and write the code segment to show File Open Dialog when mnuFileNew is clicked. 4

## SECTION–B

- Q4.** Read the following case study and answer the questions that follow :
- Mr. Vidyarthi works in Blossoms Public School as a programmer. He is required to develop a student record. The school offers two different streams, medical and non-medical, with different grading criteria. The school also offers incentive to the NCC cadets in the form of a 3% increment in percentage for all the NCC cadets. The grading criteria for the two streams is given below :

Stream	Percentage	Grade
Medical	$\geq 80$	A
	60-80	B
	$< 60$	C
Non-Medical	$\geq 75$	A
	50-75	B
	$< 50$	C

Object Type	Object Name	Description
Form	FrmStudRec	The main form object
Text Box	txtFirstTerm	To enter first term marks
	txtSecondTerm	To enter second term marks
	txtPercentage	To display the percentage of the student
	txtGrade	To display the grade of the student
Check Box	chkCadet	To be checked if student is an NCC Cadet
Option Button	optMedical	To provide Stream Information
	optNonMedical	
Command Button	cmdCalcPer	To calculate the percentage
	cmdCalcGrade	To calculate the grade
	cmdClear	To clear the entered values
	cmdExit	To close the application

- (a) Write the commands to disable the textboxes txtPercentage and txtGrade. 1
- (b) Write the code for cmdClear Command Button to clear all the textboxes and the checkbox. 1
- (c) Write the code for cmdClacPer to calculate the percentage after finding the total marks of first term and second term (assuming that both marks are out of 100). Also ensure that NCC cadets get an increment of 3% in their percentages. 4
- (d) Write the code for cmdCalcGrade to calculate the grade depending on the stream selected according to the criteria given above. 4

**Q5.** Answer the following questions :

- (a) A student wants to write a procedure to find if a given year is a leap year or not. He had written the following code segment and he is unable to correct some of the errors in the code. Find the Errors and rewrite the corrected code underlining the correction made. 2

Note : A leap year is a year which is divisible by 4 or divisible by 400.

‘Program code to check if a year is a leap year or not

```
Private Sub cmdLeapyear_ONClicking()
```

```
    Y = Val(txtYear)
```

```
    IF Y Mod 100 = 0 AND Y Mod 400 = 0 Then
```

```
        MsgBox "It is a Leap Year"
```

```
    ELSEIF Y Mod 4 = 0
```

- ```

    MsgBox "It is a Leap Year"
ELSE
    MsgBox "It is not a Leap Year"
Sub End

```
- (b) Find the output of the following code segment : 2
- ```

Private Sub cmdClickMe_Click()
    Dim N1, N2, Counter
    Counter = 1
    N1 = 0
    N2 = 0
    Do While Counter <= 4
        Print N1
        Print N2
        N1 = N1 + N2
        N2 = N2 + N1
        Counter = Counter + 2
    Loop
End Sub

```
- (c) Rewrite the following code segment using If ... ElseIf ... EndIf instead or Select ... Case. 2
- ```

Select Case marks
    Case Is >= 85
        comment.Caption = "Excellent"
    Case Is >= 60
        comment.Caption = "Above Average"
    Case Is >= 50
        comment.Caption = "Average"
    Case Else
        comment.Caption = "Need to work harder"
End Select

```
- (d) Write a Visual Basic function that takes an integer argument N and returns the sum of all even numbers less than the given number N. 4

### SECTION-C

- Q6.** Read the questions given below and answer accordingly :
- (a) Write the output produced by the following part of code in PL/SQL : 2
- ```

DECLARE
    P NUMBER;
    Q NUMBER;
BEGIN
    P := 5;
    FOR Q IN 1..4
    LOOP
        P := P + Q;
        DBMS_OUTPUT.PUT_LINE(P);
    END LOOP;
END;

```
- (b) Write the output of the following PL/SQL code segment : 2
- ```

BEGIN

```

```

FOR I IN REVERSE 1..10
LOOP
  IF MOD(I, 2)=0 THEN
    DBMS_OUTPUT.PUT_LINE(TO_CHAR(I*10));
  END IF;
END LOOP;
END;

```

- (c) What are the three parts of PL/SQL block ? Name any two advantages of PL/SQL. 2
- (d) Write a PL/SQL procedure to return a value for finding the sum of first 10 natural number using OUT parameter. 4

**Q7.** Answer the questions based on the table Flight given below :

**Table : Flight**

| Column Name | Data Type | Size | Constraint  | Description                    |
|-------------|-----------|------|-------------|--------------------------------|
| Flight_No   | NUMBER    | 4    | PRIMARY KEY | Flight number                  |
| Origin      | VARCHAR2  | 30   | NOT NULL    | Place of origin of flight      |
| Destination | VARCHAR2  | 30   | NOT NULL    | Destination of the flight      |
| Seats       | NUMBER    | 3    |             | Number of seats available      |
| Flt_Date    | DATE      |      |             | Date of flight                 |
| Rate        | NUMBER    | 7,2  |             | Rate of a ticket on the flight |

- (a) Write the SQL command to create the table **Flight** including the constraints. 2
- (b) Write the SQL command to display the details of all the flights whose **Destination** is the same as the destination of Flight\_No **9001**. 2
- (c) Write a PL/SQL code to increase the **Rate** of all the flights by 5%. 2
- (d) Write PL/SQL code to create two Statement level triggers **B\_D\_Flight** and **A\_D\_Flight** before and after DELETE statement respectively on the table Flight which displays the message 'Ready for Deletion' and 'Records Deleted' respectively. 4

## Practice Paper - 2

Maximum Marks : 70]

[Time : 3 Hours

- Note.** 1. This question paper is divided into three sections.  
2. Section–A consists of 30 marks.  
3. Section–B and Section–C are of 20 marks each.  
4. Answer the questions after carefully reading the text.

### SECTION–A

**Q1.** Answer the following questions :

- (a) Give one major difference between Front End technology and Back End Technology in terms of Software Projects. Give one example of each. **2**
- (b) Differentiate ER Modeling and Object Modeling Techniques. **2**
- (c) Define the following terms in the context of Database : **2**
- (i) Relation
- (ii) Tuple
- (d) Name two areas in industries where business computing can be applied. Describe application of business computing in those industries. **4**

**Q2.** Answer the following questions :

- (a) How do we restrict duplicate rows in SQL SELECT Query ? Give example. **2**
- (b) Define SQL Functions. Explain Single Row Functions and its subcategories giving examples in each category. **4**
- (c) Differentiate between Row Level Triggers and Statement Level Triggers using suitable example. **4**

**Q3.** Answer the following questions :

- (a) “Visual Basic is not an Object Oriented Language”. Justify this statement. **2**
- (b) Differentiate using a suitable example, between MsgBox () and InputBox () functions in Visual Basic. **4**
- (c) Differentiate between ADODB project reference and ADO DC in a form using suitable Example. **4**

### SECTION – B

**Q4.** Simbosis Public School wants to computerize the employee salary section of the school. The school is having two types of employees : teaching and non-teaching. The school also offers Rs. 2000 incentive to all the employees who are working for more than 10 years. The calculation criteria for DA and HRA are :

| Category     | Basic | DA  | HRA |
|--------------|-------|-----|-----|
| Teaching     | ≥6500 | 35% | 37% |
|              | <6500 | 25% | 30% |
| Non-Teaching | ≥6500 | 33% | 35% |
|              | <6500 | 23% | 25% |

- (a) Write the command to disable the textboxes txtBasic, txtMedical and txtConv. **1**
- (b) Write the code for cmdClear command button to clear all the textboxes and the checkboxes. **1**

(c) Write the code for cmdGross to calculate gross salary as the sum of basic, medical and conveyance. Also add Rs. 2000 if the employee is working for more than 10 years. 4

(d) Write the code for cmdNext to calculate DA, HRA and Net (Net = Gross + DA + HRA). 4

**Q5.** Read the following text and answer the questions that follows :

(a) A student of ABCD School, Davis Mathews wanted to make an application to find Even or Odd out of a given number. He had written the following code snippet and he is unable to correct some of the errors in the code. You are required to help him in correcting the code segment. Find the Errors and rewrite the corrected code underlining the correction made.

‘Program code to check Even or Odd out of a number in a textbox txt

```
Private Sub cmdFind_Click()
    if Val(txtNumber) Mod 2 = 0
        MsgBox "It is an Even Number"
    Else
        MsgBox "It is an Odd Number"
```

End Sub

2

(b) Shankar Giri, a student of Informatics Practices, wanted to make an application to print a message up to some number of times as mentioned in a textbox. The code is given to you for correction, do the required correction and rewrite the corrected code underlining the corrections done. 2

‘Program code to display a message on Clicking of cmdClickMe command button

```
Private Sub cmdClickMe_Click()
    For i = 1 To Val(txtNumber.Text)
        MsgBox "I will say Hello at least: " & txtNumber.Text & " times"
```

End Sub

(c) The following code segment is giving error “Overflow” on execution. Find and write the code statement giving this error and also give the reason for the same.

‘Program code to divide a number with another

```
Private Sub cmdClickMe_Click()
    For i = 0 To 10
        For j = i To 10
            Print j / i
        Next
```

- ```

Next
End Sub
(d) Examine the code given in the following code snippet and find how many times the Message will be
printed.
‘Program Code to print a message in a Message Box using Loops
Private Sub cmdClickMe_Click()
    For i = 1 To 3
        For j = i To 3 Step -1
            MsgBox “I am a message box”
        Next
    Next
End Sub
(e) A visual basic project contains Project menu having the options Components and References.
Differentiate between these two options.

```

**SECTION – C**

- Q6.** Answer the questions :  
 (a) Write a SQL (DDL) query to create the following table Employee : 2

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

- (b) Write PL/SQL Code to increase the salary of all the employees by some percentage amount accepted from the user. 4  
 (c) Write program code to declare and use an Explicit Cursor to display the Salary increased by 10%. 4
- Q7.** Use the following structure of Customer table to answer the following questions :

Column Name	Cust_ID (Primary Key)	Cust_Name	Cust_Add1	Cust_Add2	Pin_Code	Cust_Phone
<b>Data type</b>	NUMBER	VARCHAR2	VARCHAR2	VARCHAR2	NUMBER	VARCHAR2
<b>Length</b>	7	30	20	30	6	10

- (a) Write the SQL Command to create the above table including its Constraints. 2  
 (b) 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  
 (c) Write a PL/SQL code to modify all the CUST\_PHONE numbers by removing ‘2’ if it starts with ‘2’. 2  
 (d) 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

## Practice Paper - 3

Maximum Marks : 70]

[Time : 3 Hours

- Note.** 1. This question paper is divided into three sections.  
 2. Section–A consists of 30 marks.  
 3. Section–B and Section–C are of 20 marks each.  
 4. Answer the questions after carefully reading the text.

### SECTION–A

- Q1.** Answer the following questions :
- (a) Differentiate between ER modeling & Object Modeling Techniques 2  
 (b) Give any four application areas of Databases. 2  
 (c) What are the difference between software, Hardware & Firmware ? 2  
 (d) Explain, what is meant by Generalization and Specialization ? 4
- Q2.** Answer the following questions in the references of Oracle :
- (a) How is the primary key Constraint different from the Unique Constraint ? 2  
 (b) Differentiate between Decision Control and Looping Control Structure in context with PL/SQL. 4  
 (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. 4
- Q3.** Answer the following questions in the references of Visual Basic:
- (a) What do you understand by *option explicit* statement? How and where we can set it ? 4  
 (b) Explain the use of Access Keys and Shortcut Keys for menus? How can you add a menu separator to your menu ? 2  
 (c) Define Recordset and all its types. How can we apply the recordset in a project ? 4

### SECTION – B

- Q4.** Read the following case study and answer the questions that follow :
- Harison Furnishing is a company that manufactures and sells various furnishing items in three qualities (Economy, Business and Elite) and three sizes (Kids, Adults and Giants). The cost of each furnishing item is calculated on basis of a Base Cost, which is the cost of the item in Business quality and Adults size. The cost is changed by – 10% and +20% in case of Economy and Elite quality respectively. Similarly the cost is changed by –5% and +15% in case of Kids and Giants sizes respectively. The interface for gathering users choice is as given below :

(4.8)

Add the following functionality to the interface :

- (a) The combo box cmbQuality must contain economic, Business and Luxury when the form loads in the memory. 2
- (b) The combo boxes cmbQuality and cmbSize should respectively be set to default values of Economy and Adults initially. 1
- (c) What is the caption of cmdCalculate button and lblSize ? 1
- (d) When a user chooses a choice other than the default choices, the labels *txtchangeformquality* and *txtchangeformsize* should display the message. 3  
 ‘Percent Increase / Decreases in cost ....% according to the logic explained above.
- (e) When user clicks the Calculate button the final message should be displayed in the label lblyourchoice as indicated in the form image. 3

**Q5.** Read the following text and answer the questions that follows :

- (a) A student of ABCD School, Davis Mathews wanted an application to find Even or Odd out of a given number. He had written the following code snippet and he is unable to correct some of the errors in the code. You are requested to help him in correcting the code segment. Find the errors and rewrite the corrected code underlining the correction made.

```
Dim n as integer
N = val(txtnumber)
If n mod 2 = 0
    MsgBox "It is an Even"
Else
    MsgBox "it is an odd"
Endif
```

2

- (b) What is the output of the following programs :

```
Dim i as integer, num as integer
For i = -10 to 5 step 3
    If i mod 2 = 0 then
        Num = num + i
    End if
    Print num
Next
```

2

- (c) Discuss various types of errors that may encountered in VB. Specify with examples ? 3
- (d) What is ADO ? How is it useful as a database access technology ? Specify the steps to connect ADODC to the oracle and specify recordsource. 3

### SECTION – C

**Q6.** Read the questions given below and answer accordingly :

- (a) Write the output produced by the following part of code in PL/SQL :

```
DECLARE
    Y NUMBER;
    X NUMBER;
BEGIN
    Y:=2;
    FOR X IN 1..5
    LOOP
```

```
        Y:=X+(Y*2);
        DBMS_OUTPUT.PUT_LINE(Y);
```

END LOOP;

END;

2

- (b) Find the error(s), if any, in the following code :

2

DECLARE

v\_empno NUMBER[4];

v\_empname VARCHAR2(20);

begin BOOLEAN := 'True'

BEGIN

SELECT empno,ename,salary

into v\_empno,v\_ename

FROM emp

FOR empno = 1234 and 2345

END

- (c) What happens when you close and then re-open a cursor ? Create a view VU\_EMP2 which should include columns Empno, Ename and Deptno from the table Emp and change the column headings as Empnumber, Employee, Department.

3

- (e) Write a PL/SQL Function ISODDEVEN to return value True if the number passed to it is odd else will return False.

3

**Q7.** Answer the following questions based on the following Employee Table :

Column Name	Data Type
ID	Number(4)
First_Name	Varchar2(30)
Last_Name	Varchar2(30)
Email_ID	Varcharr2(10)
Salary	Number(9,2)

- (a) Write the difference between a Cursor and a Trigger.
- (b) Write a PL/SQL procedure EDSAL to find out the salary of an Employee with ID=1234 is less than 5000 or not. If it is less then 5000, modify the salary of employee by increasing it by 15%.
- (c) Write a PL/SQL block to create a trigger to display a Hello message before each insert operation on the table.

2

4

4



Object Type	Object Name	Description
Form	FrmMcDonald	The Main Form Object
Text Box	TxtTotCost	To display the selected item and total Cost
Check Box	chkMcBrg chkFshFrd chkChkBrgr chkVegBrgr chkFrchFrs chkNugg chkHB chkMcTikki	
Command Button	CmdTotCost CmdClear	To calculate the total cost To clear the entered Values

- (a) Write the commands to disable the text box and to set the Total Cost Command Button as default command button. 4
- (b) Write the code for cmdClear Command Button to clear all the checkboxes and TextBox. 2
- (c) Write the code for cmdTotCost to calculate the Total Cost for the selected dishes. 4
- Q5.** (a) Find the errors and rewrite the corrected code underlining the correction made: 2
- ```
Private function icsk ( I as integer) as currency
    Do While I <=15
        If mod (I , 5) = 0 then
            MsgBox "Divisible by 5 "
        Else
            MsgBox " I "
        End if
        I = I + 2
    End loop
End sub
```
- (b) Find the output of the following code segment : 2
- ```
S = "School"
I = 0
Do while I <= len(s)
    I = I + 1
    Print Ucase ( mid (s , I) ) + Lcase ( mid ( s, -I, 1) )
    If I mod 2 = 0 then
        Print Left ( S, I-1 )
    Else
        Print Right( S, I-1 )
    End if
    I = I + 2
Next I
```
- (c) Rewrite the following code segment using Select Case: 2
- ```
c = 20
If c = 20 or c = 40 or c = 80 then
    Print " Santhi "
Else if c = 100 then
    Print " Seva "
```

```

Else if c > 100 then
    Print " Shayog "
Else
    Print " Santhosh "
End if
    
```

- (d) Write a Visual Basic Function to check the given date (dd / mm / yy) is valid or not, and return the value true if it is valid, else return false. 4

**SECTION – C**

**Q6.** Answer the questions :

- (a) Write the output produced by the following part of code in PL/SQL. 2

```

Begin
    For I in 2 .. 3 loop
        For J in reverse - 6 .. - 4 loop
            Dbms_output.put ( ' ');
        End loop;
        Dbms_output.put_line ( I + J * 2 );
    End loop;
    Dbms_output.put_line ( I - J / 2 );
End;
    
```

- (b) Look at the Emp table given below and give the output produced by the following PL/SQL code on execution: 2

**TABLE : EMP**

| EMPNO | ENAME  | JOB      | MGR  | HIREDATE  | SAL  | COMM | DEPTNO |
|-------|--------|----------|------|-----------|------|------|--------|
| 7369  | SMITH  | CLERK    | 7902 | 17-Dec-80 | 900  | 200  | 20     |
| 7499  | ALLEN  | SALESMAN | 7698 | 20-Feb-81 | 1700 | 300  | 30     |
| 7566  | JONES  | MANAGER  | 7839 | 2-Apr-81  | 3075 | 100  | 20     |
| 7698  | BLAKE  | MANAGER  | 7839 | 1-May-81  | 2950 |      | 30     |
| 7782  | CLARK  | MANAGER  | 7839 | 9-Jun-81  | 2550 | 400  | 10     |
| 7788  | SCOTT  | ANALYST  | 7566 | 19-Apr-87 | 3100 |      | 20     |
| 7876  | ADAMS  | CLERK    | 7788 | 23-May-87 | 1200 | 250  | 20     |
| 7900  | JAMES  | CLERK    | 7698 | 3-Dec-81  | 1050 |      | 30     |
| 7902  | FORD   | ANALYST  | 7566 | 3-Dec-81  | 3100 | 350  | 20     |
| 7934  | MILLER | CLERK    | 7782 | 23-Jan-82 | 1400 | 170  | 10     |

```

Declare
    Name emp.ename%type;
    Salary emp.sal %type;
Begin
    Select max(sal) - min(sal) / 2 into salary from emp where deptno = 20 and sal > 500;
    Select ename into name from emp where empno = 7934;
    Dbms_output .put_line ( trunc ( salary, 2 ) || initcap ( substr ( name, 3 ) ));
End;
    
```

- (c) Write a PL/SQL Procedure that takes a parameter , and return the reversed digits of the number: **2**  
 Consider the table Emp & Dept .Write a Explicit cursor called maxhalf to increase the salary of particular department , where department number will be passed as parameter. Your Procedure will

increase the salary of the employee to 2 times of the minimum salary , if the salary < 3000. Display employee number, name, department name and updated salary of the employee.

(d) Write a cursor to print all the records of department number 20 from EMP table using cursor For loop.

4

**Q7.** Answer the following questions based on the following two Tables :

TABLE : EMP

| Name     | Type               |
|----------|--------------------|
| EMPNO    | NOT NULL NUMBER(4) |
| ENAME    | VARCHAR2(10)       |
| JOB      | VARCHAR2(9)        |
| MGR      | NUMBER(4)          |
| HIREDATE | DATE               |
| SAL      | NUMBER(7,2)        |
| COMM     | NUMBER(7,2)        |
| DEPTNO   | NUMBER(2)          |

TABLE : DEPT

| Name   | Type               |
|--------|--------------------|
| DEPTNO | NOT NULL NUMBER(2) |
| DNAME  | VARCHAR2(14)       |
| LOC    | VARCHAR2(13)       |

(a) Write a SQL Command to display the no of months between the hiredate and 31-jan-2004. **1**

(b) Write a SQL Command to insert a new column called pincode and store the default value “560000”. **1**

(c) Write a SQL Command to Create a virtual table called employee to store emp name, department name, salary, location and 2% increase in commission for all the employee who are from Scott’s department **2**

(d) Write a SQL Command to modify the record of the employee 8100. The new values should be as follows : **2**

(i) Deptno of Research department

(ii) Salary is the maximum salary already given.

(e) Write a Database Trigger that allows Changes to employee table only during the business hours ( i.e. from 8:00 am to 5:00 pm ) from Monday to Friday . **4**

## Practice Paper - 5

Maximum Marks : 70]

[Time : 3 Hours

- Note.**
1. This question paper is divided into three sections.
  2. Section–A consists of 30 marks.
  3. Section–B and Section–C are of 20 marks each.
  4. Answer the questions after carefully reading the text.

### SECTION–A

- Q1.** Answer the following questions :
- (a) What is Front End and Back End ? 2
  - (b) What are the properties of the relational database ? How many types of relations are there ? 4
  - (c) Explain the term Data Modeling. What does UML mean ? Give the name of two commercially available packages supporting Object Modeling Technique. 4
- Q2.** Answer the following questions
- (a) “Oracle Database is an example of an RDBMS” Justify this statement 2
  - (b) Define SQL. Explain SQL subcategories giving at least one example command in each category. 4
  - (c) Differentiate between Decision Control and Looping Control Structure in context with PL/SQL. 4
- Q3.** Answer the following questions:
- (a) What is the function of ODBC ? 2
  - (b) Write step by step Procedure for the creation of a MDI form. 4
  - (c) Describe the various elements of the form dialog box. 4

### SECTION – B

- Q4.** Read the following case study and answer the questions that follows:  
Mr. Ram Kumar wants to create a software where he wants to maintain a record for his friends in his computer.

The image shows a screenshot of a Visual Basic form titled "Friend's Information". The form has a light blue background with a dotted pattern. It contains four text boxes labeled "Name", "D.O.B.", "E-mail", and "Address", each followed by a text box labeled "Text1", "Text2", "Text3", and "Text4" respectively. At the bottom of the form, there are four buttons labeled "NEW", "SAVE", "EDIT", and "EXIT". The form is displayed within a window titled "Project1 - frmFriend (Form)".

(4.15)

- (a) Write the code to perform the operation of NEW button. 2
- (b) What could be the unique field which can be used to search the friends information from the database ? Write the coding for SEARCH Button ? 4
- (c) Write the code to perform the operation of SAVE button. 2
- (d) How can we maintain the cursor position always at the name text at the time of addition of NEW friend name ? 2

**Q5.** Answer the following questions :

- (a) Write a code to calculate Simple interest. 2
- (b) Write a code to display multiplication table of a given number between 2 to 12. 2
- (c) Write a code to check for Palindrome.  
Note: Palindrome is a word which can be spell from Front and Back are same  
Eg: MADAM 4
- (d) Write a code to display in Message Box that given number is Odd or even. 2

### SECTION – C

**Q6.** Read the question given below and answer accordingly:

- (a) Write the output produced by the following part of code in PL/SQL: 2

```

DECLARE
    COUNTNUMBER :=0;
    SUMNUMBER :=0;
BEGIN
    LOOP
        SUM = SUM + COUNT
        DBMS_OUTPUT.PUT_LINE (TO_CHAR (SUM));
        COUNT :=COUNT - 2;
        IF COUNT = 2 THEN
            EXIT;
        END IF;
    END LOOP;
END;
```

- (b) Consider the data from EMP table :

| EMPNO | ENAME  | DEPTNO | SAL  |
|-------|--------|--------|------|
| 7839  | KING   | 10     | 5000 |
| 7782  | RAVI   | 10     | 2450 |
| 7934  | ANIL   | 10     | 1300 |
| 7788  | SCOTT  | 20     | 3000 |
| 7902  | SUMIT  | 20     | 3000 |
| 7566  | JAMES  | 20     | 2975 |
| 7876  | AMIT   | 20     | 1100 |
| 7369  | SUMIT  | 20     | 800  |
| 7698  | RAJESH | 30     | 2850 |
| 7499  | SURESH | 30     | 1600 |
| 7844  | TURNER | 30     | 1500 |

Look at the Emp table given above and give the output produced by the following PL/SQL code on execution: 2

```

DECLARE
    Sum_Sal Emp.Sal%TYPE;
    S_Sal Emp.sal%Type :=2000;
    S_Dept Emp.Deptno%Type :=20;
BEGIN
    SELECT SUM(SAL) INTO Sum_Sal FROM Emp WHERE Deptno=s_Dept AND Sal > s_Sal ;
    DBMS.OUTPUT.PUT_LINE(TO_CHAR(Sum_Sal));
END;

```

(c) What is normalization ? Define BCNF. 2

(d) Write PL/SQL code to increase salary of an employee by 5% whose salary is more than 3000. Get the empno from the user. 4

**Q7.** (a) Assume that z has been initialized to 50. The values from 0 to 50 should be totalled. Identify and correct the errors. 2

```

DECLARE
BEGIN
    While (z >= 0)
        Sum = sum + z
END;

```

(b) Assume that y and total are declared as Integers. Identify and correct the errors. 2

```

DECLARE
BEGIN
    total = 0;
    LOOP
        total = total + y;
        DBMS_OUTPUT.PUT_LINE(total)
        y := y - 1;
        EXIT WHEN y = -1;
    END LOOP;
END;

```

(c) Write a PL/SQL block to check whether the number is prime or not. 4

(d) How does the FETCH statement works ? Explain with its syntax and an example. 2

## Practice Paper - 6

Maximum Marks : 70]

[Time : 3 Hours

- Note.** 1. This question paper is divided into three sections.  
 2. Section–A consists of 30 marks.  
 3. Section–B and Section–C are of 20 marks each.  
 4. Answer the questions after carefully reading the text.

### SECTION–A

- Q1.** Answer the following questions :
- (a) Explain any two application areas of database. 2  
 (b) What is meant by Relationship. Explain any two relation with diagram. 2  
 (c) Explain the term Data Dictionary and Data mining. 2  
 (d) Elaborate the term SDLC explaining four essential components using a sample case study. 4
- Q2.** Answer the following questions :
- (a) Explain the terms ODBC and OLE - DB. 2  
 (b) Define the term Errors .Give an two general types of errors with respect to Visual Basic error object. 2  
 (c) What do you understand by scope and lifetime of variable ? State the use and significance of Static, Local and Global variables. Explain with example. 2  
 (d) Differentiate between a ADO DB project reference and ADO DC in a form using suitable example. 4
- Q3.** Answer the following questions :
- (a) Explain the terms DDL and DML .Give one example of each categories. 2  
 (b) Differentiate between Function and Procedure. 2  
 (c) What is a cursor ? What types of cursors are supported in PL/SQL ? 2  
 (d) What are the different types of triggers ? Explain with an example. 2  
 (e) Briefly explain the numeric For and Cursor For loops with example. 2

### SECTION – B

- Q4.** Read the following case study and answer the questions that follows:  
 An institute offers two courses MBA and MCA of duration 2 years and 3 years respectively. The interface given to capture the marks secured by student in the semester exam.

| Object Type | Object Name |
|-------------|-------------|
| MCA         | optmca      |
| MBA         | optmba      |
| GPA         | cmdgpa      |
| Report      | cmdreport   |
| Total       | txttotal    |
| Average     | txtavg      |
| Report      | lblreport   |

- (a) Add a clear button and write code to clear all the textboxes. 2
- (b) When the user clicks cmdgpa ,the total marks and the average marks secured by the student should be displayed in text boxes txttotal , txtavg respectively depending upon the option MCA or MBA. An overall GPA in the range 0-10 should be displayed in the message box when the user click it .  
 $GPA = \text{Average} / 10$ . ( Assume that the marks in each semester are out 600) 4
- (c) When the user clicks cmdreport , the final report should be displayed in the label lblreport. 2
- (d) What will be the VB coding to intercnage the captions of two option buttons. 2
- Q5.** (a) What is meant by cardinality of a table ? 1
- (b) What do you understand by the term alternate key ? 1
- (c) Differentiate between CREATE TABLE and ALTER TABLE commands. 4
- (d) What is trigger ? Write the syntax for defining a trigger. 2
- (e) Find the error(s), if any, in the following code : 2
  - (i) `x := y + 200;`  
`if x < 10`  
`Y = 30;`  
`Else if x < 40 then`  
`Y := 30`  
`End`
  - (ii) `DECLARE`  
`v_empno NUMBER[4];`  
`v_empname varchar2(20);`  
`BEGIN;`  
`SELECT empno, ename, salary`  
`INTO v_empno, V-ename`  
`FROM emp`  
`FOR empno = 1234;`  
`END;`

## SECTION – C

**Q6.** Read the question given below and answer accordingly:

(a) Write the output produced by the following part of code in PL/SQL :

2

```

DECLARE
    Mnum NUMBER := 1;
BEGIN
    For I in 1 .. 3 LOOP
        FOR J IN 1 .. 3 LOOP
            DBMS_OUTPUT.PUT_LINE(Mnum);
            Mnum = Mnum + 1;
        END LOOP
        DBMS_OUTPUT.NEWLINE;
    END LOOP;
END;
```

(b) **TABLE : STUDENT**

| SNAME | TOTAL |
|-------|-------|
| Rohit | 290   |
| Mohit | 250   |
| Rohan | 275   |
| Sneha | 280   |

Look at the STUDENT table given above and give the output produced by the following PL/SQL block :

2

```

DECLARE
    V_Sname STUDENT.Sname%TYPE;
    V_Total STUDENT.Total%TYPE;
    V_Tot NUMBER(2) := 1;
BEGIN
    LOOP
        SELECT SNAME INTO V_Sname FROM STUDENT WHERE Total > 270;
        DBMS_OUTPUT.PUT_LINE(V_Sname);
        V_TOTAL := 280;
        V_Tot := V_Tot + 1;
        EXIT WHEN V_Tot > 2;
    END LOOP;
END;
```

(c) Explain the usage of the %ROWTYPE in PL/SQL with the help of an example.

2

(d) Create a PL/SQL function that will accept an argument N and return the salary of employee number N from EMP table.

4

**Q7.** Consider a relation Employee as : (ID NUMBER(4) PRIMARY KEY, First\_Name VARCHAR2(15), Last\_Name VARCHAR2(15), Email\_ID VARCHAR2(15), Salary NUMBER(10) then

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

2

(b) Write a PL/SQL procedure to find out whether the Salary of an employee with ID = 1234 is less than 5000 or not. If it is less than 5000, modify the salary of employee by increasing it 15%.

4

(c) Write a PL/SQL block to create two statement level triggers B\_D\_Employee and A\_D\_Employee before and after DELETE statement respectively on the table EMPLOYEE which displays the message 'Ready for Deletion' and 'Records Delete' respectively.

4