Informatics Practices   2006 (Compartment Delhi)

General Instructions :

1. This question paper is divided into 3 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

Q. 1. Answer the following questions:

i.	Explain the term Business Computing with two examples.	**2**
ii.	What do you understand by the term UML?	**2**
iii.	What is Client Server Computing?	**2**
iv.	Give an example for one-to-one and one-to-many entity relation.	**4**

Q. 2. Answer the following questions:

i.	Differentiate between Event Driven Programming and Object Oriented Programming.	**2**
ii.	What is Iteration? Name two statements which provide iteration in Visual Basic.	**2**
iii.	Explain the term ADO.	**2**
iv.	What is Variable Life Time? What is the Life Time of the following variables?	**4**

(i) Local variable
(ii) Public variable
(iii) Module variable

Q. 3. Answer the following questions:

i.	What is the Difference between Decision Control and Looping Control structure in context with PL/SQL.	**4**
ii.	What do you understand by the term Implicit Cursor in PL/SQL?	**2**
iii.	Differentiate between DBMS_OUTPUT.PUT_LINE ( ) and DBMS_ OUTPUT.PUT( ) statements.	**2**
iv.	Define a TRIGGER with two examples.	**2**

SECTION - B

Q. 4. Read the following case study and answer the questions given below:

ABC FINANCIAL company provides personal loans to customers on request. The programmer is assigned the responsibility of designing an EMI calculator. He decides to use Visual Basic to develop this and the following form is created.

The List for the above from is as follows:

Object Type	Object Name	Description

Form	FrmEMICALC	The Main Form Object
Text Box	xtName	To enter name of the customer
	txtInterest	To display the compound interest
	txtEMI	To display Equal Monthly Instalment
Option Buttons	opt5years	To select time as 5 years
	Opt10years	To select time as 10 years
	Opt15years	To select time as 15 years
Command Buttons	cmdCalculate	To calculate interest and EMI
	cmdclear	To clear all entered values
	cmdExit	To end the application

i. Write the code to disable the text boxes txtlnterest and txtEMI. **2**
ii. Write cmdClear to clear all text boxes and set default choice in the option button as 5 years. Also set focus to txtLoanAmt. **2**
iii. Write code to assign the caption to Command Buttons cmdCalculate and cmdClear. **2**
iv. Write code for the Click event of the Command Button cmdCalculate to calculate the interest using the formula P * (1 + R) "T — P, where P is the loan amount, R is the interest rate (fixed as 11%), and T is the number of years. And the value of EMI is calculated as EM! = (Loan Amount + Interest) I (no. of years*12) **4**

Q. 5. Answer the following questions:

i. The following code is to print all numbers which are squares but less than 50. Find the errors in the following code segment and rewrite the corrected code under lining the correction made. **2**
Dim square As integer, num As Integer
num = 1
square num * num
Do
        Print square
        square = num * num
Loop square > = 50

ii. Find the output of the following code segment: **2**
```
For x = ASC ("A") To ASC ("E")
    For y ASC ("A") to x
        Print Chr(y);
    Next y
    Print
Next x
```
iii. Rewrite the following code using If … Else instead of Select Case. **2**
```
Select Case     Round (Avg)
Case Is = 100
        Grade = "A"
Case 75 To 99
        Grade = "B"
Case 60 To 74
        Grade = "C"
Case 50 To 59
        Grade = "D"
Case Is <50
        Grade = "E"
End Select
Print Grade
```
iv. Write a Visual Basic procedure which will take two integer values X and Y as arguments and display the following : **4**
(i) X to the power of Y
(ii) The highest number among X and Y

SECTION - C

Q. 6. Read the questions given below and answer accordingly:

i. Write the output produced by the following part of code in PL/SQL: **2**
```
DECLARE
    Num NUMBER;
    V NUMBER : = 0;
BEGIN
    For Num IN 2 ...5
    LOOP
        V : = V + Num * Num;
        DBMS_OUTPUT.PUT_LINE(V);
    END LOOP;
END;
```
ii. Refer the following table STUDENT and give the output produced by the PL/SQL code given: 2
TABLE : STUDENT

NAME	AGE	MARKS

	17	325
RAJA	16	480
SIMON	18	390
WILSON	17	450
MARY		

iii. DECLARE
          T_NAME VARCHAR2(1 0);
          T_AGE NUMBER(2);
          T_MARKS NUMBER(3);
      BEGIN
          T_AGE : = 17;
          SELECT MARKS INTO T MARKS FROM STUDENT
              WHERE AGE > T_AGE;
          IF T_MARKS > 350
              DBMS_OUTPUT.PUT_LINE (T_MARKS);
      END;

iv. Differentiate between Scalar and composite data type in PL/SQL.   **2**

v.   Write a PL/SQL function chkPrime that takes one number as argument and returns a value 1
     if the number passed is Prime else will return a value zero.   **4**

Q. 7. Answer the questions based on the table CARS given below:

TABLE : CARS

Column Name	Data Type	Size	Constraint	Description
Model_No	VARCHAR2	20	Primary Key	Model number of the car
Manufacturer	VARCHAR2	20	NOT NULL	Name of the manufacturer
Colour	VARCHAR2	10		Colour of the car
Price	NUMBER	8		Price of the car
Capacity	NUMBER	5		Engine capacity

i.   Write SQL command to create the table CARS including the constraints.   **2**
ii.   Write the SQL command to display the details of all cars whose colour is the same as the
      colour of Model_No M_800.   **2**
iii. Write PL/SQL code to increase the Price of all cars by 5%.   **2**
iv.   ) Write FL/SQL block to delete all cars with a particular Model Number from the table CARS,
      where the value of Model Number is accepted from the user.   **4**