

KENDRIYA VIDYALAYA JALIPA CANTT

2nd Pre-Board Examination, 2009-10

Subject: Informatics Practices (065)

Class: XII

Time Allowed: 3 Hours

Max. Marks: 70

Instructions:

- i) All questions are compulsory & so attempt all.
- ii) Answer the questions after carefully reading the text.
- iii) Please check that this question paper contains 7 questions in three Sections.
- iv) Please write down the complete serial number of the question before attempting it.

SECTION A

1. Answer the following questions:

- (a) What do you mean by OSS? Define (i) Freeware (ii) Shareware. 2
- (b) Define (i) Apache (ii) W3C 2
- (c) What do you mean by ER Modeling? Identify the type of relationship represented in the following statements and draw an Entity Relationship Diagram to sketch it:
“A Person may be one or more junk mail lists. Each junk list may contain one or more persons.” 2
- (d) What do you mean by SDLC? What is the significance of phase ‘System Analysis’ in SDLC? How SDLC is different from DDLC? 2
- (e) Differentiate between Data Warehouse and Data Mining? 2

2. Answer the following questions:

- (a) What do you mean by implicit and explicit variable declaration? Give examples? 2
- (b) What is the need of MDI form? Write any two properties of it. Why it is not suggested to have menus in the MDI child forms? 2
- (c) What is ADO control? Write a VB code to set up a connection through ADODB to Oracle Database by passing connection string argument to connection open method. 2
- (d) What is module? Explain the various types of module in VB. Also write the extension of each. 2
- (e) What is an Iterative statement? Name any two iterative statements provided in visual basic and explain any one with an example. 2

3. Answer the following question:

- (a) What do you mean by transaction? Define the different types of transaction? Difference between commit and rollback commands. 2
- (b) What is a trigger? Differentiate between trigger and Constraints in PL/SQL? 2
- (c) What is the purpose of cursor in PL/SQL? Explain the two type of cursors used in PL/SQL? 2
- (d) What are differences between IN, OUT & IN OUT parameter passing mode in stored procedure? Which is by default? 2
- (e) What is anchored declaration. Explain the usage of %TYPE attribute for variable declaration with the help of example. 2

SECTION B

4. Read the following case study and answer the questions that follow:

Ms Warner Bro's have developed software to disburse salary to their employees. They have an interface as shown above.

Text box	txtName	Name of the Employee
Text box	txtBasic	Basic pay of regular employees
Text box	txtDays	No. of days of work by adhoc employees
Check Box	chkAdhoc	Check box for Adhoc Employees
Check Box	chkTax	Check box for tax of Rs 500
Option Button	Opt10	10% of basic as DA
Option Button	Opt15	15% of basic as DA
Label	lblWage	Label to display the total wage
List Box	lstWage	Wage Rate of Adhoc Employees
Command Btn	cmdReg	Calculates salary for Regular Employee
Command Btn	cmdAdh	Calculates salary for Adhoc Employees
Frame	frmReg	Contains controls for regular employees
Frame	frmAdhoc	Contains controls for Adhoc employees

- a) When the check box chkAdhoc is checked the controls in the frame for regular employees should be disabled and the command button cmdReg should be disabled. The action should reverse when the check box is unchecked. 2
- b) Check that in the Textbox txtDays, the data entered is numeric only. 2
- c) When the command button cmdReg is clicked, the salary should be displayed in a message box with the name of the employee. The Salary is calculated as:
Basic pay plus DA(depending upon the selected option, 10 or 15 percent of Basic) minus the tax if applicable as per the checked or unchecked check box chkTax. 3
- d) When the command button cmdAdh is clicked, the wages are calculated as the number of days multiplied by the wage rate as selected from the list box lstWage. When the list box lstWage is clicked, the total wage should be displayed in the label lblWage as the product of no. of days and the wage rate selected from the list box. 3

5. Answer the following questions:

(a) Convert the Do While Loop into For Next loop without affecting its output. 2

```
i = -10
Do While i < 5
    If i mod 2 = 0 Then
        num = num + i
    End If
    Print num
    i = i + 3
Loop
```

(b) Give the output of the following statements: 2

```
Print InStr("Technology", "Log")
Print Mid(Left("HAPPY NEW YEAR", 9), Len("HAPPY NEW YEAR")\6, 4)
Print Right(StrReverse("Technology"), 4)
PRINT VAL("100 Ways") + LEN("Year of Luck 2010")
```

(c) Find the output of the following code segment: 2

```
Sub show (a As Integer, c As String)
    Print a, c
    a = a + 3
End Sub

Private Sub Command1_Click()
    Dim i As Integer
    i = 1
    Do While i < 9
        If i < 3 Then
            Call show(i, "@")
        Else If i < 7 Then
            Call show(i, "#")
        Else
            Call show(i, "*")
        End If
    Loop
End Sub
```

(d) Write a VB function CountVowel that takes a string argument and return the number of vowels in the passed string. 4

SECTION-C

6. Answer the following questions:

(a) Find the errors in the following PL/SQL code and rewrite the corrected code underlining the correction made: 2

```
CREATE OR REPLACE PROCEDURE MYSALARY (eno IN NUMBER)
RETURN NUMBER
AS
    pay emp%type;
BEGIN
    SELECT salary TO pay from emp where empno := eno ;
    dbms_output.put_line('My salary is' || pay);
END;
```

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

```
DECLARE
  A NUMBER:= 5;
  B NUMBER:= 2;
  TEMP NUMBER;
BEGIN
  FOR X IN 1..2
  LOOP
    TEMP:=A;
    A:=B;
    B:=TEMP;
    A:=A+1;
    B:=B-1;
    DBMS_OUTPUT.PUT_LINE(A);
    DBMS_OUTPUT.PUT_LINE(B);
  END LOOP;
END;
```

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

```
Declare
  num number;
Begin
  num:=5;
  While num<=12
  Loop
    If mod (num, 3) =0 AND NUM>8 THEN
      Dbms_output.put_line ('@');
    Else
      Dbms_output.put_line (num);
    End if;
    num: =num+2;
  End loop;
End;
```

(d) Write a PL/SQL function that takes Roll number of a student as a parameter and returns "SUCCESSFUL" if total marks of that student are at least 33 in **student** table otherwise it returns "NOT SUCCESSFUL".

Student table has rollno, name, tmarks fields.

4

7. Answer the questions based on the table DRESS given below:

Table: **DRESS**

Column Name	Data Type	Size	Constraint	Description
DCode	NUMBER	4	Primary Key	Dress Code
Description	VARCHAR2	30	NOT NULL	Dress Description
Price	NUMBER	5	Can not be less than 200	Price of Dress
LaunchDate	DATE	8		Date of Launching
Color	VARCHAR2	15	NOT NULL	Color of Dress
MaterialType	VARCHAR2	15	DEFAULT is 'Cotton'	Type of material used eg. Cotton, Terelene etc.

- (a) Write the SQL command to create the table Dress including its constraints. 2
- (b) Write the SQL command to create a view consisting dress code, color, price and material type used who are launched after 31-12-2009. 2
- (c) Write a PL/SQL block to delete all the rows of a particular dress from the table Dress where the DCode to be deleted is accepted from the user. 2
- (d) Write a PL/SQL code to display the details of a particular dress whose material type is Cotton and it also display total price of these dresses. 2
- (e) Write PL/SQL code to create trigger **TotalRec**, which displays the numbers of dress after every Delete or Insert in Dress table. 2



A good plan for today is better than a great plan for tomorrow. Look backward with satisfaction and look forward with confidence.

All the Best for Board Exam 2010.

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(Marking Scheme)

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Q.No.	Answer	Marks
	SECTION A	
1. a	<p>OSS- It means open source software, whose source code is available and so it can be modified, copied and redistributed. It may come free of cost or with a payment of nominal charge.</p> <p>Freeware are the software which available free of cost and allows copying and further distribution, but not modification as source code not available.</p> <p>Shareware are the software which is available with right to redistribute copies, but often after a certain period of time a license fee should be paid.</p>	<p>1</p> <p>½</p> <p>½</p>
1. b	<p>Apache- It is an open source web server available for many platforms such as BSD, Linux, Unix, Windows etc. It is a component of LAMP (Linux, Apache, MySQL, PHP). It is downloaded from www.apache.org.</p> <p>W3C- It means World Wide Web Consortium. It is responsible for producing software standards for world wide web.</p>	<p>1</p> <p>1</p>
1. c	<p>ER Modeling- It is a method to develop an Entity Relationship (ER) model that is a high conceptual model which describes data as entities, attributes and relationships.</p> <p>Many to many relationship</p>	<p>1</p> <p>1</p>
	<pre> graph LR PERSON[PERSON] --- HAVE{HAVE} HAVE --- JUNKMAIL[JUNK MAIL] </pre>	
1. d	<p>SDLC- System Development Life Cycle- It is set of activities that develop and implement an information system. i.e. it emphasizes upon business application logic.</p> <p>DDLC- Database Development Life Cycle- It is set of activities that develop and implement a database system. i.e. it emphasizes upon data.</p> <p>System Analysis refers to the analysis of current system in order to reach at the specifications of proposed new system.</p>	<p>½</p> <p>½</p> <p>1</p>
1. e	<p>Data warehouse- It is a centralized database system for storing and delivering massive quantities of summarized data, for making appropriate environment for DSS and EIS applications.</p> <p>Data mining- It refers to the extraction of hidden predictive information patterns from large databases.</p>	<p>1</p> <p>1</p>
2. a	<p>Implicit Variable Declaration- It means VB automatically creates a variable with variant data type, if the variable being used has not been declared prior to it.</p> <p>Explicit Variable Declaration- It means a variable is declared explicitly by the user through Dim keyword.</p> <p>Eg. Dim temp As Integer temp= txtNum.Text</p>	<p>1</p> <p>1</p>

	<p>result= Int(temp) Print result Here temp is implicitly declared variable and result is explicitly declared variable.</p>	
2. b	<p>MDI (Multiple Document Interface) form is a parent form in an MDI Application which acts as a container form for its child forms. Properties- MDI Child, vbCascade, vbTileHorizontal, vbTileVertical. It is not suggested to have menus in the MDI Child forms because when a child form gets loaded, its menu (child menu) replaces the parent menu.</p>	<p>1 1</p>
2. c	<p>ADO (ActiveX Data Objects) control enable us to write an application to access and manipulate data in database server through OLE DB data provider. Dim adoConn As ADODB.Connection Dim ConnectionString As String Set adoConn= New ADODB.Connection ConnectionString= "Provider= MSDAORA; user id= Scott; password= tiger;" adoConn.Open ConnectionString</p>	<p>$\frac{1}{2}$ 1$\frac{1}{2}$</p>
2. d	<p>A Module is a code container in VB that is a collection of some procedures and definitions. Form Modules- It is a module that stores all the procedures and declarations pertaining to single form. The form modules are saved with extension .FRM. Standard Modules- The modules that store <i>general purpose code</i> of the application i.e the code and declarations that are not specific to one single form of the application. The standard modules is stored with extension .BAS. Class Modules- A class module is a special code module that stores the blueprint for user created custom objects. The class module is stored with extension .CLS.</p>	<p>$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$</p>
2. e	<p>The statements that execute instructions repeatedly depending upon a condition test. Till the time a Condition or Boolean Expression is <i>true</i> (or <i>false</i>), a set of statements are repeated again & again. As soon as condition becomes false (or true) repetition stop. Eg. Do While Loop, Do Until Loop, For Next Loop. For Number = 1 To 10 Print Number Next Number</p>	<p>1 1</p>
3. a	<p>A transaction is a logical unit of work which involve many sub-steps (DML statements) that must succeed or fail. Types: Serially (i.e Serial execution of transactions). Concurrently (i.e Simultaneous execution of transactions). The COMMIT reflected the changes permanently in the database after transaction completed successfully. ROLLBACK discard the changes in the database if any system failure occur during the transaction execution and the database is undo to the earlier state as it was before transaction.</p>	<p>1 1</p>
3. b	<p>A database trigger is a set of PL/SQL statements that execute each time automatically or implicitly when an event such as UPDATE, INSERT, or DELETE statements (i.e. DML statements) is issued against the associated table or occurs on the database. Trigger only affect those rows added after the trigger is enabled whereas constraints affect all rows in the table, including those that already exist when constraint is enabled.</p>	<p>1 1</p>

3. c	<p>A <i>cursor</i> is basically an memory area containing SQL statements (i.e. insert, update, delete, select) & information for processing these statements.</p> <p>Implicit Cursor: Declared implicitly (i.e. automatically) for all DML & PL/SQL SELECT statements including queries that return only one row.</p> <p>Explicit Cursor: Declared and named by the programmer for queries that returns zero or more than one row.</p>	1 1
3. d	<p>IN: It pass values to the procedure being called. It acts like a constant inside the procedure, therefore, it cannot be assigned a value. You cannot modify the value of IN type parameter.</p> <p>OUT: It returns values to the caller of a procedure. It acts like an uninitialized variable inside the procedure, therefore, its value cannot be assigned to another variable or reassigned to itself.</p> <p>INOUT: It pass initial values to the procedure being called & return updated values to the calling subprogram. It acts like an initialized variable inside the procedure, therefore, its value can be assigned to another variable or reassigned to itself.</p>	2
3. e	<p>It refers to a declaration where a variable is declared with another variable or a table-column used as its anchor.</p> <p>PL/SQL uses %TYPE declaration attribute for anchoring.</p> <p>Eg. num1 number(5); num2 num1%TYPE; <i>'declare variable num2 having same datatype as num1</i> empsal Emp.Salary%TYPE; <i>'declare variable empsal with same datatype as Salary column of Emp table.</i></p> <p>The advantages of anchoring datatype of variables is that the changes are automatically reflected to anchored variable.</p>	1 1
SECTION B		
4. a	<pre>If chkAdhoc.Value= True Then frmReg.Enabled= False cmdReg.Enabled= False Else frmAdhoc.Enabled= False cmdAdhoc.Enabled= False End If</pre>	2
4. b	<pre>Private Sub txtDays_KeyPress (k As Integer) If Not (k>=0 and k<=9) k=0 MsgBox ("Please enter only numeric value") End If End Sub</pre>	2
4. c	<pre>Private Sub cmdReg_Click Dim bp As Integer, da As Integer, total As Integer bp= val(txtBasic.Text) If opt10.Value= True Then da= bp* 10/100 Else da= bp * 15/100 End If total= bp + da If chkTax.Value= True Then total= total – 500 End If</pre>	3

	MsgBox(txtName.Text, &total) End Sub	
4. d	Private Sub cmdAdhoc_Click lblWage.Caption= val(txtDays.Text) * val(lstWage.Text) End Sub	3
5. a	For i = -10 to 4 Step 3 If i mod 2 = 0 Then num = num + i End If Print num Next i	2
5. b	0 APPY hceT 117	2 <i>(½ for each line)</i>
5. c	1@ 4# 7*	2
5. d	Private Function CountVowel (str As String) As Integer Dim s As String, c As Integer c=0 For i=1 to len(str) s= mid(str,i,1) If ucase(s)='A' or ucase(s)='E' or ucase(s)='I' or ucase(s)='O' or ucase(s)='U' Then c= c+1 End If Next i CountVowel= c End Function	4
SECTION C		
6. a	CREATE OR REPLACE PROCEDURE MYSALARY (eno IN NUMBER) AS <u>pay emp.salary%type;</u> BEGIN SELECT salary INTO pay from emp where empno = eno ; dbms_output.put_line('My salary is' pay); END;	2 <i>(½ for each error)</i>
6. b	3 4 5 2	2 <i>(½ for each line)</i>
6. c	5 7 @ 11	2 <i>(½ for each line)</i>
6. d	Create or replace function Result (rno student.rollno%Type) Return Char(20) As tm student.tmarks%Type; s char(20); Begin select tmarks into tm from student where rollno= rno; If tm>=33 then S= 'Successful';	4

	<pre> Else S= 'Not Successful'; End if; return s; End;</pre>	
7. a	<pre> Create table DRESS (DCode number(4) primary key, Description varchar2(30) not null, Price number(5) check(Price>=200), LaunchDate date, Color varchar2(15) not null, MaterialType varchar2(15) default='Cotton');</pre>	2
7. b	<pre> Create view V1 as select DCode, Color, Price, MaterialType from dress where LaunchDate > '31-12-2009';</pre>	2
7. c	<pre> Declare code Dress.DCode%type; Begin code:=&code; delete from dress where DCode= code; End;</pre>	2
7. d	<pre> Declare Cursor C1 is select * from dress where MaterialType= 'Cotton'; rec Dress%Rowtype; tprice number; Begin Open C1; Loop Fetch C1 into rec Exit when C1%Notfound; dbms_output.put_line(rec.DCode rec.Description rec.Price rec.LaunchDate rec.color rec. MaterialType); tprice:= tprice + rec.Price; End loop; dbms_output.put_line('Total price' tprice); Close C1; End;</pre>	2
7. e	<pre> Create or replace trigger TotalRec After Insert or Delete On Dress For each row Declare total number; Begin select count(*) into total from dress; dbms_output.put_line('Total dresses' total); End;</pre>	2