

Informatics Practices (065)
Sample Question Paper –3
(Solution)

Note

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

Section – A																	
Q 1.	Answer the following questions:																
	(a) Solution: FLOSS: Free/Libre/Open Source Software, the term most commonly used when talking about either Free (Libre) Software or Open Source Software. PYTHON is freeware open-source cross-platform interpreted scripting language that can be used for many kinds of software development.	2															
	(b) Solution: In ER Modeling the term Entity is used to model a physical thing in question but in Object Modeling technique it is treated as Object. The collection of similar entities is termed as Entity Set but common collection of objects refers to a repository called Class.	2															
	(c) Solution: Relation is the term used to denote a Table. It is the other name given to Table. Tuple is also called as record, it is the row of a table In the following example the Relation is Dept and there are four tuples in it. <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">DEPTNO</th> <th style="text-align: left;">DNAME</th> <th style="text-align: left;">LOC</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>ACCOUNTING</td> <td>NEW YORK</td> </tr> <tr> <td>20</td> <td>RESEARCH</td> <td>DALLAS</td> </tr> <tr> <td>30</td> <td>SALES</td> <td>CHICAGO</td> </tr> <tr> <td>40</td> <td>OPERATIONS</td> <td>BOSTON</td> </tr> </tbody> </table>	DEPTNO	DNAME	LOC	10	ACCOUNTING	NEW YORK	20	RESEARCH	DALLAS	30	SALES	CHICAGO	40	OPERATIONS	BOSTON	2
DEPTNO	DNAME	LOC															
10	ACCOUNTING	NEW YORK															
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40	OPERATIONS	BOSTON															
	(d) Solution: In Banking we can use Business Computing for logging and maintaining daily transactions and reporting requirements. In Financial Accounting of small scale or large scale industries for entering transactions of financial nature and generation of Ledgers, Vouchers, P&L A/C, Balance Sheet etc.	4															
Q2	Answer the following questions:																
	(a) Solution: For comments we can use Single Quotation mark character (') and for breaking a long line of code to the next line we use _(underscore) character. E.g. ' This is a Comment in Visual Basic MsgBox "Here the Line Breaks into" &_ "New Line in code window"	2															
	(b) Solution: <ol style="list-style-type: none"> 1. Identify the problem 2. Propose Solutions 3. Identify a suitable solution 4. Write the Code 5. Test the solution 6. Deliver the solution For Example Task: Write a code segment to find out whether a number is Even or Odd	4															

		<ol style="list-style-type: none"> 1. Identify the problem The task is to check a number for Even or Odd 2. Propose Solutions There is one Solution which requires checking of the number to be divisible by 2 if it is then is a Even number otherwise it is a Odd number 3. Identify a suitable solution The proposed solution is ideal for this task 4. Write the Code Dim N as Integer N=13 IF N Mod 2 =0 Then MsgBox "Even Number" Else MsgBox "Even Number" End If 5. Test the solution Test the above code for different values of N and then finally 6. Deliver the solution 	
	(c)	<p>Solution:</p> <ol style="list-style-type: none"> (i) Modular Programming An approach of dividing a big programming task into small manageable program modules (ii) Object Oriented Programming A programming technique used to program with Object Oriented Programming languages and follows object oriented programming paradigms. (iii) Event Driven Programming In this type of programming the Events plays major role to execute a set of program code. Events are the actions such as Mouse Click, Double Click, Key Press etc. (iv) RAD Rapid Application Development is the current programming approach in which a prototype (or sample model) of the software application is made much before its actual implementation to give a feel of application before starting working with the actual code behind the application. 	4
Q3	Answer the following questions:		
	(a)	<p>Solution: SQL is called Structured Query Language and PL/SQL is called the Programming Language in SQL. SQL does not supports Decision Making and Looping constructs while PL/SQL does support all these features and also exploits benefits of SQL Commands in it.</p>	2
	(b)	<p>Solution: Cursors are the work areas for SQL SELECT statements to fetch records from a database table and work with each record on record-by-record basis. Triggers supports event based execution of code statements in database. A trigger gets initiated on the events such as Updating of records, Deletion of records etc. and can be triggered on Statement Level or Row Level.</p>	2
	(c)	<p>Solution: A NULL is not equal to a NULL", I strongly agree with the statement as NULL is a value that is not present and is a missing value, which cannot be compared to any other value unless it is substituted with some value. So Null is never equal to anything, not Even NULL.</p>	2

(d)

Solution:

PL/SQL block is a set of PL/SQL statements, which can be executed to perform some identifiable task
Following are the PL/SQL Block types with general syntax

Anonymous: PL / SQL Block without any name

Syntax for Declaring an Anonymous PL/SQL Block

```
[DECLARE]
BEGIN
--Statements

[EXCEPTION]

END;
```

Procedure: Sub programs, which can take arguments.

Syntax for Declaring a Procedure

```
CREATE OR REPLACE PROCEDURE proc_name
IS
BEGIN
--Statements

[EXCEPTION]

END;
```

Function: A function is similar to a procedure and must return a value.

Syntax for Declaring a Function

```
CREATE OR REPLACE FUNCTION name
RETURN datatype
IS
BEGIN
--Statements
RETURN value;

[EXCEPTION]

END;
```

4

Section – B		
Q4	Read the following case study and answer the questions that follows:	
	(a) Solution: <pre> END Or Unload Me </pre>	1
	(b) Solution: <pre> txtPage.text = "" </pre>	1
	(c) Solution: <pre> MsgBox "Message Sent" CmdCancel_Click </pre>	2
	(d) Solution: Write the following code in the Form Load Event and this will prevent any direct user entry in the txtPage text box. <pre> txtPage.Locked = True </pre>	2
	(e) Solution: <pre> txtPage .Alignment = vbRightJustify or txtPage .Alignment = 1 </pre>	2
	(f) Solution: <pre> Private Sub cmdClear_Click() If txtPage <> "" then txtPage.Text=Mid(txtPage.Text,1,Len(txtPage.Text)-1) End If End Sub </pre>	2
Q5		
	(a) Solution: <pre> Private Sub DrawShape () shpPlay.Height =2000 shpPlay.Width=3000 shpPlay.Top=1500 shpPlay.Left=4000 shpShape.Visible =True End Sub </pre>	2
	(b) Solution: <pre> Private Sub DisableControl () cmdDrawShape.Enable = True cmdRectangle.Enable =False cmdSquare.Enable =False cmdOval.Enable =False cmdCircle.Enable =False cmdRoundedRectangle.Enable =False cmdRoundedSquare.Enable =False cmdClearShape.Enable =False ShpPlay.Visible =False End Sub </pre>	2

	(c)	Solution: Private Sub EnableControl () cmdDrawShape.Enable = False cmdRectangle.Enable =True cmdSquare.Enable =True cmdOval.Enable =True cmdCircle.Enable =True cmdRoundedRectangle.Enable =True cmdRoundedSquare.Enable =True cmdClearShape.Enable =True ShpPlay.Visible =False End Sub	2
	(d)	Solution: The following code statement is to be embedded in the click event of each of the respective command button with the respective shape name (Such as vbShapeRectangle, vbShapeSquare etc.) For the Click event of Command Button cmdRectangle we will write the code fragment in it. shpPlay.Shape =vbShapeRectangle shpPlay.Visible=True	2
	(e)	Solution: DisableControl Or cmdDrawShape.Enable = True cmdRectangle.Enable =False cmdSquare.Enable =False cmdOval.Enable =False cmdCircle.Enable =False cmdRoundedRectangle.Enable =False cmdRoundedSquare.Enable =False cmdClearShape.Enable =False ShpPlay.Visible =False	2
Section C			
6	Answer the following questions		
	(a)	Solution: ACCOUNTING RESEARCH SALES	2
	(b)	Solution: A AB ABC	2

	(c) Solution: 100 80 60 40 20	2																					
	(d) Solution: CREATE OR REPLACE FUNCTION MySum (V_NumA IN NUMBER, V_NumB IN NUMBER) RETURN NUMBER AS V_Sum NUMBER; BEGIN V_Sum := V_NumA + V_NumB; RETURN V_Sum; END; /	4																					
7	Use the following structure of Customer table to answer the following questions <table border="1" data-bbox="220 730 1341 835"> <thead> <tr> <th>Column Name</th> <th>Cust_ID (Primary Key)</th> <th>Cust_Name</th> <th>Cust_Add1</th> <th>Cust_Add2</th> <th>Pin_Code</th> <th>Cust_Phone</th> </tr> </thead> <tbody> <tr> <td>Data type</td> <td>NUMBER</td> <td>VARCHAR2</td> <td>VARCHAR2</td> <td>VARCHAR2</td> <td>NUMBER</td> <td>VARCHAR2</td> </tr> <tr> <td>Length</td> <td>7</td> <td>30</td> <td>20</td> <td>30</td> <td>6</td> <td>10</td> </tr> </tbody> </table>	Column Name	Cust_ID (Primary Key)	Cust_Name	Cust_Add1	Cust_Add2	Pin_Code	Cust_Phone	Data type	NUMBER	VARCHAR2	VARCHAR2	VARCHAR2	NUMBER	VARCHAR2	Length	7	30	20	30	6	10	
Column Name	Cust_ID (Primary Key)	Cust_Name	Cust_Add1	Cust_Add2	Pin_Code	Cust_Phone																	
Data type	NUMBER	VARCHAR2	VARCHAR2	VARCHAR2	NUMBER	VARCHAR2																	
Length	7	30	20	30	6	10																	
	(a) Solution: CREATE TABLE Customer (Cust_ID NUMBER(7) PRIMARY KEY, Cust_Name VARCHAR2 (30), Cust_Add1 VARCHAR2 (20), Cust_Add2 VARCHAR2 (30), Pin_Code NUMBER (6), Cust_Phone VARCHAR2 (10));	2																					
	(b) Solution: BEGIN UPDATE Customer Set Cust_Phone = '2' Cust_Phone WHERE Length (Cust_Phone) =7; END;	2																					
	(c) Solution: BEGIN UPDATE Customer Set Cust_Phone = SUBSTR (Cust_Phone ,2 ,LEN(Cust_Phone)-1) WHERE Cust_Phone Like '2%'; END;	2																					

	(c)	<p>Solution: CREATE OR REPLACE TRIGGER TrigBeforeUpdateCustomer BEFORE UPDATE ON CUSTOMER BEGIN DBMS_OUTPUT.PUT_LINE ('Starting Update'); END; / And CREATE OR REPLACE TRIGGER TrigAfterUpdateCustomer AFTER UPDATE ON CUSTOMER BEGIN DBMS_OUTPUT.PUT_LINE ('End of Update'); END; /</p>	4
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