

**Informatics Practices (065)
Sample Question Paper –1**

Note

1. This question paper is divided into sections
2. Section – A consists 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					
	(a) Shareware: A method of marketing software where a program is distributed freely, and users may try it before paying for it. PHP: Hypertext Preprocessor is an open source server side programming language used to create dynamic Web content.	2				
	(b) Solution: SDLC is an abbreviation for Software Development Life Cycle. The essential components of SDLC are Analysis, Design, Develop, Test and Implement. . Case Study: A Restaurant owner approached a software company for the automaton of his daily operations and account keeping. The software Company performed the requirement Analysis and prepared an initial Design document for the proposed solution. After approval of the restaurant owner the Software company proceeded towards Development of the application. After completion of the Development processes the software company performed testing with dummy data and also with Client's original data. On the completion of testing process the software is Implemented at the client end (Client end is the Restaurant Owner.	4				
	(c) Solution: Data Modeling is the technique to Model or Design the Client Concept (The person who want the software to be made). It is a graphical method, which facilitate easy conversion of Client view or user View of the data into the form of tables in the database. For Example: ER Models are used as a design tool for data Modeling. It is called Entity Relationship model. UML is Called Unified Modeling Language based n Object Modeling Technique. The two commercially available packages are Rational Rose and Visio	4				
Q2	Answer the following questions					
	(a) Solution: An RDBMS is a Database Management System, which confirms 12 Codd rules, and Oracle database confirms all 12 Codd rules. An RDBMS is a database, which works on relations, and also stores its own data in the form of relations. The relationship between the tables in an RDBMS should not be an explicit relation; it must be an Implicit relationship.	2				
	(b) Solution: SQL is the Structure Query Language used to interact with the RDBMS. The SQL Subcategories are DML (SELECT, INSERT, UPDATE, DELETE) DDL (CREATE, DROP, RENAME, TRUNC) DCL (GRANT, REVOKE) TCL (COMMIT, ROLLBACK)	4				
	(c) Solution:	4				
	<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Decision Control</th> <th style="width: 50%;">Looping Control</th> </tr> </thead> <tbody> <tr> <td>Decision control structures are used to implement decisions based on conditions. We check the condition and are allowed to execute some set of code if the condition is found true else some other set of code is executed. This can be achieved using If then Else End if</td> <td>Looping means iterations or repetition of some set of code either fixed number of times or based on some condition. The same set of code can be executed more than once on entering into the Looping Construct.</td> </tr> </tbody> </table>	Decision Control	Looping Control	Decision control structures are used to implement decisions based on conditions. We check the condition and are allowed to execute some set of code if the condition is found true else some other set of code is executed. This can be achieved using If then Else End if	Looping means iterations or repetition of some set of code either fixed number of times or based on some condition. The same set of code can be executed more than once on entering into the Looping Construct.	
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	<p>command in PL/SQL. We can also NEST multiple IF's together.</p> <p>The syntax is: If <Condition> Then <Executable Statements> Else <Executable Statements> End If</p> <p>The basic difference in both lies in number of times the code statement is executed. Using IF THEN ELSE we can execute code maximum for one time but in looping controls it can be executed more than once also.</p>	<p>The Looping Control in PL/SQL are The basic LOOP FOR Loop and WHILE Loop</p>			
Q3	Answer the following questions				
	(a)	<p>Solution: The basic factor, which decides that a programming language is Object Oriented, is that whether it follows Object Oriented paradigms or not. Object Oriented Languages works on a belief that everything logical or physical present in the world is an object. An object is an instance of a Class. A Class is a repository to serve as a template for an object. A Class can be inherited from other Class's, and is the feature that is not available in Visual Basic. There are other features like Polymorphism (Function Overloading, Operator Overloading etc) that is also not available in visual basic. Due to these reason Visual Basic is a Object Based Language but not an Object Oriented Language.</p>	2		
	(b)	<table border="1"> <tr> <td> <p>Solution: MsgBox () As the name explains it's a mechanism to show a small dialog, which pops up over the existing application for displaying custom messages. Message Box can also be used to gather user responses but they are limited to the user actions such as whether the user has Clicked OK button, or Cancel Button or Yes button or No button etc.</p> <p>Example Dim strMessage as String Dim numA as Integer numA = 20 If numA >= 0 Then strMessage= "Positive Number" Else strMessage = "Negative Number" End IF MsgBox strMessage</p> <p>If we write the above code on the click event of a Command Button than it will display the message "Positive Number" in a message Box.</p> </td> <td> <p>InputBox () The InputBox is for displaying a message but besides that one extra functionality it performs is collecting User Inputs. The Input Box gathers user data in string form.</p> <p>Example Dim strMessage as String Dim numA as Integer Dim strNum as String strNum = InputBox("Enter The Number") numA = Val(strNum) If numA >= 0 Then strMessage= "Positive Number" Else strMessage = "Negative Number" End IF MsgBox strMessage</p> <p>If we write the above code on the click event of a Command Button than it will display the message either "Positive Number" or "Negative Number" in a message Box depending on the number entered by the user.</p> </td> </tr> </table>	<p>Solution: MsgBox () As the name explains it's a mechanism to show a small dialog, which pops up over the existing application for displaying custom messages. Message Box can also be used to gather user responses but they are limited to the user actions such as whether the user has Clicked OK button, or Cancel Button or Yes button or No button etc.</p> <p>Example Dim strMessage as String Dim numA as Integer numA = 20 If numA >= 0 Then strMessage= "Positive Number" Else strMessage = "Negative Number" End IF MsgBox strMessage</p> <p>If we write the above code on the click event of a Command Button than it will display the message "Positive Number" in a message Box.</p>	<p>InputBox () The InputBox is for displaying a message but besides that one extra functionality it performs is collecting User Inputs. The Input Box gathers user data in string form.</p> <p>Example Dim strMessage as String Dim numA as Integer Dim strNum as String strNum = InputBox("Enter The Number") numA = Val(strNum) If numA >= 0 Then strMessage= "Positive Number" Else strMessage = "Negative Number" End IF MsgBox strMessage</p> <p>If we write the above code on the click event of a Command Button than it will display the message either "Positive Number" or "Negative Number" in a message Box depending on the number entered by the user.</p>	4
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	<p>(c) Solution:</p> <p>ADODB is a object library available in visual basic and a reference can be added by going to the menu Project > References. This reference helps in writing program code and programmatic handling of data. All methods related to ADODB object are accessible to the programmer at Runtime or Design time. We are required to program it for its proper functioning. This is a Program reference which can be added to a project not to a Form</p> <p>ADO DC is a data control like other controls available in the toolbox. This control can be added by going to the Menu Project > Components. This is a control and is required to be added to the Form Window like other controls. On adding this control on the form this control requires initial settings for its properties to point to a table or other database objects. For basic functions there is no need of coding. This is a Control, which can be added to a Form after adding it to the Project toolbox.</p>	4
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Section – B		
Q4	Read the following case study and answer the questions that follows	
	(a) Solution: &Check Status	1
	(b) Solution: END Write the End command in the Click event of the Command Button	1
	(c) Solution: On KeyPress Event write the following code fragment If (KeyAscii >= 65 And KeyAscii <= 90) Or (KeyAscii >= 97 And KeyAscii <= 122) Then MsgBox "Please Enter Numeric Values Only" KeyAscii = 0 End If	4
	(d) Solution: Dim strDate as String strDate = trim(txtDD.Text) & "-" & trim (txtMM.text) & "-" & trim(txtYYYY.text) If Not IsDate(strDate) Then MsgBox "Please Enter a Valid Date" txtDD.Text = "" txtMM.Text="" txtYYYY.text="" txtDD.SetFocus End If	4

Q5	Read the following case study and answer the questions that follows	
	(a) Solution: txtName.text= " " txtFatherName.text = " " txtMotherName.text = " " txtAddress.text = " " optFemale.Value = False optMale.Value = False chkIntermediate = 0 chkGraduate = 0 chkPostGraduate = 0	2
	(b) Solution: Public Sub procCheckQualification () If chkPostGraduate.Value = 1 Then ChkIntermediate.Value = 1 chkGraduate.Value = 1 Else If chkGraduate.Value = 1 Then ChkIntermediate.Value = 1 End If End If End Sub	4
	(c) Solution: txtName.text= UCase(txtName.text) txtFatherName.text = Ucase(txtFatherName.text) txtMotherName.text = Ucase(txtMotherName.text) txtAddress.text = Ucase(txtAddress.text)	4

Section C		
5	Answer the questions	
	(a) Solution: CREATE TABLE Employee (EmpID NUMBER (6) PRIMARY KEY, EmpName VARCHAR2 (20) NOT NULL, EmpAddress VARCHAR2 (30), EmpPhone VARCHAR2 (10), EmpSal NUMBER (9,2));	2
	(b) Solution: BEGIN UPDATE EMP SET SAL = SAL+SAL*&SAL_PER; END; / Save the above text in a SQL file (File with .SQL extension) and execute it as @filename	4

	<p>(c) Solution: DECLARE V_Sal EMP.SAL%TYPE; CURSOR C_Emp IS SELECT SAL FROM EMP; BEGIN OPEN C_Emp; LOOP FETCH C_Emp INTO V_Sal; V_Sal := V_Sal * 1.1; EXIT WHEN C_Emp%NOTFOUND; DBMS_OUTPUT.PUT_LINE (' Raised Salary is: ' V_Sal); END LOOP; CLOSE C_Emp; END;</p>	4
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Assume that you are provided with the following two table

Table: Dept

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

Table: Emp

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-Dec-80	800		20
7499	ALLEN	SALESMAN	7698	20-Feb-81	1600	300	30
7521	WARD	SALESMAN	7698	22-Feb-81	1250	500	30
7566	JONES	MANAGER	7839	02-Apr-81	2975		20
7654	MARTIN	SALESMAN	7698	28-Sep-81	1250	1400	30
7698	BLAKE	MANAGER	7839	01-May-81	2850		30
7782	CLARK	MANAGER	7839	09-Jun-81	2450		10
7788	SCOTT	ANALYST	7566	09-Dec-82	3000		20
7839	KING	PRESIDENT		17-Nov-81	5000		10
7844	TURNER	SALESMAN	7698	08-Sep-81	1500	0	30
7876	ADAMS	CLERK	7788	12-Jan-83	1100		20
7900	JAMES	CLERK	7698	03-Dec-81	950		30
7902	FORD	ANALYST	7566	03-Dec-81	3000		20
7934	MILLER	CLERK	7782	23-Jan-82	1300		10

The table structure as

Table: Dept

Column Name	Data Type	Size	Constraint	Description
DeptNo	Number	2	PRIMARY KEY	
Dname	VARCHAR2	10	NOT NULL	
Loc	VARCHAR2	10		

Table: Emp

Column Name	Data Type	Size	Constraint	Description
EmpNo	Number	4	PRIMARY KEY	
Ename	VARCHAR2	10	NOT NULL	
JOB	VARCHAR2	10		
MGR	NUMBER	4		
HIREDATE	DATE			
SAL	NUMBER	(7,2)		
COMM	NUMBER	(7,2)		
DEPTNO	NUMBER	2	FOREIGN KEY	References DeptNo field of Dept Table

	<p>(a) Solution: CREATE VIEW VU_EMP AS SELECT EName, Dname, Job , Sal FROM Emp, Dept WHERE Emp.DeptNo = Dept.DeptNo AND Emp.DeptNo IN (10,20);</p>	2
	<p>(b) Solution: CREATE OR REPLACE FUNCTION FindBonus (V_Amount IN NUMBER) RETURN NUMBER AS V_Bonus NUMBER; BEGIN V_Bonus := V_Amount * 1.2; RETURN V_Bonus; END; / SQL> SELECT Ename, FindBonus(Sal) FROM Emp;</p>	4
	<p>(c) Solution: CREATE OR REPLACE PROCEDURE RAISE_SALARY (V_EmpNo IN EMP.EMPNO%TYPE, SAL_PERCENTAGE IN NUMBER) AS V_SAL NUMBER (10,2); BEGIN UPDATE EMP SET SAL= SAL+(SAL*(SAL_PER/100)) WHERE EMPNO = V_EMPNO; SELECT SAL INTO V_SAL FROM EMP WHERE EMPNO = V_EMPNO; DBMS_OUTPUT.PUT_LINE ('The Salary is : ' V_SAL); END; /</p>	4