

SAMPLE PAPER - 1

INFORMATICS PRACTICES – Class - XII

SET – INNOVATION

Time allowed: 3 hours

Maximum Marks : 70

Note:

- (i) This question paper is divided into 3 sections.
- (ii) Section A consists of 30 marks.
- (iii) Section B and Section C are of 20 marks each.
- (iv) Answer the questions after carefully reading the text.

SECTION-A

Q1. Answer the following questions: -

- a) Why GNU is known as GNU not Unix? 2
- b) What is an Inventory Control System? Name any two entities or tables that could be a part of this system? 2
- c) Differentiate between ER Modeling and Object Modeling Techniques. 2
- d) Write down the characteristics of Data Ware house. 2
- e) Give the difference b/w Shareware and proprietary software. 2

Q2. Answer the following questions:-

- a) Differentiate between a form module and class module of Visual Basic. 1
- b) Explain the methods for loading and unloading forms. 2
- c) What is DSN? 1
- d) When the GotFocus and LostFocus Events occurs. 2
- e) Differentiate between 4
- f) i) Date and Date\$ function ii) Call ByVal and Call ByRef

Q.3) Answer the following questions:

- a) Normalize the table with the following specification: 2
Employee (empno, dept_no, dept_name, salary, DOJ, dept_no, dept_name).
- b) If a table is dropped what happens to views and indexes dependent upon this table. 2
- c) How will you drop a constraint from a table? 2
- d) Find the join of the following two tables: 2

TEACHER		
Tno.	Tname	Tcity
T1	Mr.Nayak	Delhi
T2	Mrs.Dubey	Mumbai

STUDENT		
Roll	Name	City
1	Divakar	Delhi
2	Puneet	Mumbai
3	Rohit	Kolkata

- e) What is the advantage of an anchored data type?

SECTION –B

Q 4. Answer the following questions:

- a) Write a VB program to compare two strings using function. 2
- b) Write a sub program to find the largest, smallest, sum and average number of array of ten numbers. 4
- c) What will be the output of the following program. 2

```
Private Sub Command_click()
Dim str1 as string
str1 ="Computer"
n=1
Do While n<=len(str1)
Print left(str1,n)
n=n+1
Loop
End Sub
```

- d) Write a VB procedure to reverse the digits of given number. 2

Q 5. Do the following:

- a. **Find the Error:** 3

```
Sub Fibonacci(S1 as NUMBER,S2 as INTEGER,N as INTEGER)
Output S1,S2
Dim count as Integer,dim term as Integer
For count EQUAL 3 TO N
Term = S1+S2
Print term
S1=S2
S2=term
Next value
End sub
```

- b. **Write the output of the given code:** 3

```
Sub first()
Dim x as integer
x=20
Print x
Call second(x)
Print x
End Sub

Sub second (y as integer)
```

y=40

Print y

End Sub

Private Sub Command1_click()

Call first

End Sub

- c. Find the output of the following: 2

```
Dim String1 as string
Dim String2 as string
String1="VB IS NOT AN OOP"
String2="an"
S=Instr(3,String1,String2)
Print S
```

- d. If today's date is 21/09/08 then what is the o/p of the statement
Print Format(Now,"ddd,mmmm dd,yyyy") 2

SECTION -C

Q 6. Answer the following questions:

- a) Write the output of the following PL/SQL code block: 2

```
DECLARE
S NUMBER :=0;
BEGIN
I :=2;
FOR X IN 1..5
LOOP
IF MOD(X,2) = 1 THEN
S:=S + X;
ELSE
S:=S - X;
END IF;
DBMS_OUTPUT.PUT_LINE(TO_CHAR(I*10));
END LOOP;
END;
```

- b) Find the errors from the following PL/SQL code and rewrite the corrected code
underlining the correction made. 2

Declare

B_No Number(4);

Begin

B_No := %Book_No;

Select Title Into B_Title from Books for Book_No = B_No

If B_Title := 'Leaarning ABC'

Update B_Title = 'Learn ABC' Where Book_No = B_No;

Else

Dbms_output.Put_Line('No Change');

End

c) Write a PL/SQL block to create a trigger KVS to display a message WELCOME TO KVS before each insert operation on the table KVS_EMP. 2

d) Write a PL/SQL procedure **PRO_NUMBER** to find the sum of first 10 natural numbers. 4

Q 7. Answer the following questions based on the STUDENT table:

Column Name	Data Type	Size	Constraint
RNo	NUMBER	4	PRIMARY KEY
Name	VARCHAR2	20	Not Null
Stipend	NUMBER	7,2	Stipend is greater than 0
Stream	VARCHAR2	15	Not Null
Grade	CHAR	1	

a) Create the above table including constraints. 2

b) Write a Cursor to display all the students whose stream is 'Medical' and Grade 'A'. 2

c) Write a Procedure MYSTIPEND to display the stipend of the student whose RNo is entered by user.

d) Write a PL/SQL FUNCTION **Power** that takes two numbers as argument and returns the value of the first number raised to the power of the second. 4

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SECTION-A

Q 1. Answers to the given questions :

- a) GNU. Its name is a recursive acronym for “GNU’s Not Unix”, which was chosen because its design is Unix-like, but it contains no actual UNIX code.
- b) Inventory Control System is used to process inventory data. It can be used to improve the inventory control so that it become easier to reduce the storage cost and increase the working capability. For example, Order and Purchase table for a manufacture Company.
- c) The Entity-Relationship modeling (or ER modeling) is a graphical representation of entities and their relationships to each other, used in organization of data within databases. An entity represents a discrete object and a relationship captures how two or more entities are related to one another.

Object Modeling technique is based on the concept of an “object” which is a data structure, which consists of data, and a set of routines, called methods/messages/functions, which operate on the data. It is used for figuring out what the objects of a system are, how they are related, and how they collaborate with each other.

- d) Characteristics of Data Warehouse are:
 - i) Subject Oriented
 - ii) time Variant
 - iii) Integrated
 - iv) Non volatile
- e) Shareware : It is made available with the right to redistribute copies.
Proprietary : It is neither open nor freely available.

Q. 2 Answers to the given questions:

a) **Form Modules:** A project is made up of modules, such as form modules. Form modules consist of small pieces called **procedures**. Their extension is .frm, can contain textual descriptions of the form and its controls, including their property setting. In Form modules we can use general procedure also.

Class Module: .cls are the foundation of object-oriented programming in Visual Basic. You can write code in class modules to create new objects. These new objects can include your own customized properties and methods.

- b) To load and unload Forms, use the Load and Unload statements. The Load/Unload statement has the following syntax:

Load formName

Unload formName

The formName variable is the name of the Form to be loaded or unloaded. Once a form is loaded, it takes over the required resources, so you should always unload a Form that is no longer needed. When a Form is unloaded, the resources it occupies are returned to the system and can be used by other Forms and/or applications.

c) A DSN is a set of values that an application needs to correctly connect to a database. It includes the name of ODBC driver, the name of the host database server machine, the path of the specific database, the timeout connection, the name of the calling workstation, etc.

d) GotFocus event occurs when an object receives focus, and LostFocus occurs when an object loses focus.

e) Date- Will display date in variant form and in mm/dd/yy format where leading 0 is not kept like

Suppose the date is 09-JULY-2008 then it displays 9/7/08.

Date\$ - Will display date in string form and in mm-dd-yyyy format where leading 0 is there like

Suppose the date is 09-JULY-2008 then it displays 09-07-2008.

Call ByVal – This is a parameter passing mechanism in which a copy of the actual parameter is passed to the called procedure. After the called procedure terminates the changes made to the formal parameter by the called procedure are not reflected in actual parameters.

Call ByRef – Reference to the actual parameter is passed to the calling procedure. After the called procedure terminates the changes made to the formal parameter by the called procedure are reflected in actual parameters.

3.)

a) To normalize the given relation we break the relation into two relations:

Employee(Empno, Empname, address, Salary, Doj, Deptno)

Department(Dept_no, Dept_name)

b) If a table is dropped, the views and indexes are no more in the same user. It will cause an error while viewing the view.

c) To drop a constraint you can identify the name of the constraint from the

Syntax:

```
ALTER TABLE tablename DROP PRIMARY
KEY|UNIQUE(column)|CONSTRAINT constraint[CASCADE];
```

d) Result of JOIN is:

ROLL	NAME	CITY	TNO	TNAME	TCITY
1	Divakar	Delhi	T1	Mr.Nayak	Delhi
2	Puneet	Mumbai	T2	Mr.Dubey	Mumbai

e) It becomes easy to declare composite variables to hold entire rows from a table or a query.

SECTION-B**Q-4 Answers to the given questions:**

- a) Public Function compareStr (ByVal str1 As string, ByVal str2 As string) As Integer

```

    Dim ans As Integer
    If str1 = str2 Then
        ans=0
    ElseIf str1 < str2 Then
        ans = -1
    Else
        ans=1
    End If
    compareStr = ans
End Function

```

```

Private Sub cmdComp_Click()

```

```

    Dim st1,st2 As String
    Dim opt As Integer
    St1=Text1.text
    St2=Text2.Text
    Opt=compareStr(st1,st2)
    If opt = 0 Then
        Label3.Caption = "Strings are Equal"
    ElseIf opt=1 Then
        Label3.Caption = "First string greater than second string"
    Else
        Label3.Caption = "Second string greater than first string"
    End if

```

```

End Sub

```

- b) Option Explicit

```

Dim arnum(10) as integer

```

```

Public Sub ArrayOperation(Byref arnum() As integer)

```

```

    Dim nstr As string
    Dim max,min,sum,avg opt as integer
    max=arnum(0)
    min=arnum(1)
    opt=1
    print arnum(2)
    Do while opt<=4
        Nstr=nstr+str(arnum(opt))+", "
        If Max<arnum(opt) THEN
            Max=arnum(opt)
        End if
        If Min>arnum(opt) THEN
            Min=arnum(opt)
        End
        Sum=Sum+arnum(opt)
        Opt=opt+1
    LOOP
    Avg=Sum/(opt-1)
    Text1.text=nstr
    Text2.text=Max
    Text3.text=Min
    Text4.text=Avg
    Text1.Enabled =False

```

```

Text2.Enabled =False
Text3.Enabled =False
Text4.Enabled =False
End Sub
Private Sub Form_Load()
Dim ctr,nm As integer
Ctr=1
Do while ctr<=4
Nm=Val(InputBox("Enter any no"))
Arnum(ctr)=nm
Ctr=ctr+1
LOOP
Call ArrayOperation(arnum)
End Sub

```

c)

- C
- Co
- Com
- Comp
- Compu
- Comput
- Compute
- Computer

d) Private Sub Command1_Click()

```

Dim a As long
Dim r as Integer
Dim num as Long
A=val(Text1.text)
Num=reverse(a)
Text2.text=num
End Sub
FUNCTION reverse(By Val anum As Long) As Long
Dim rev As Long
Do While anum<>0
R=anum Mod 10
Rev=rev*10+r
Anum=Int(anum/10)
Loop
Reverse=rev
End function

```

Q-5. Answers to the given questions:

a) Sub Fibonacci(S1 as NUMBER,S2 as INTEGER,N as INTEGER)

```

Output S1,S2
Dim count as Integer,dim term as Integer
For count EQUAL 3 TO N
Term = S1+S2
Print term
S1=S2
S2=term
Next value
End sub

```

Corrected Code:

```

Sub Fibonacci(S1 as INTEGER,S2 as INTEGER,N as INTEGER)

```

```

Print S1,S2
Dim count as Integer, term as Integer
For count =1 to N
Term = S1+S2
Print term
S1=S2
S2=term
Next count

```

End sub

- b) 20
 40
 40
- c) 0
- d) Mon,September22,2008

SECTION C

6.)

- a) 20
 20
 20
 20
 20
- b) Declare
 B_No Number(4);
 Begin
 B_No := &Book_No;
 Select Title Into B_Title from Books **WHILE** Book_No = B_No ;
 If B_Title = 'Leaarning ABC'
 Update Books set B_Title = 'Learn ABC' Where Book_No = B_No;
 Else
 Dbms_output.Put_Line ('No Change');
 End if;
 End;
- c) Create or Replace Trigger KVS BEFORE INSERT ON EMP_KVS FOR EACH ROW
 Dbms_output.put_line('WELCOME TO KVS');
 END;
- d) CREATE OR REPLACE PROCEDURE PRO_NUMBER(result OUT number)AS
 I number;
 Tot number :=0;
 BEGIN
 FOR I IN 1..10
 LOOP
 Tot := Tot+i;
 END LOOP;
 RESULT := Tot;
 END;

Q-7 Answers to the given questions:

- a) Create table STUDENT (RNo number(4) Primary key, Name varchar2(20) Not Null,

Stipend Number(7,2) check (stipend > 0), Stream varchar2(15) Grade varchar2(1))

b) DECLARE

BEGIN

FOR student_record In (SELECT rno, name, stipend, stream, avgmark, grade FROM
STUDENT)

LOOP

IF student_record.stream ='Medical' and student_record.grade ='A' Then

Dbms_output.put_line(student_record.rno||' '||student_record.NAME||' '||
student_record.stipend||' '||student_record.avgmark);

END IF;

END LOOP;

END;

c) CREATE OR REPLACE PROCEDURE MYSTIPENED(rno IN NUMBER)

AS

St NUMBER;

BEGIN

SELECT stipined INTO st from STUDENT where rno=&rno;

Dbms_output.put_line('my stipened is'||st);

END ;

d) CREATE OR REPLACE FUNCTION fun_Power(a NUMBER,b NUMBER)

RETURN NUMBER AS pw NUMBER;

BEGIN

Pw := a ** b;

RETURN pw;

END;

* * *