

PRACTICE PAPER

Class : XII

Subject : Informatics Practice

Time allowed : 3 hours

Maximum Marks : 70

Instruction:

- (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) Name **any** four application areas of business computing. 2
- (b) What are the following software used for? 2
 - (i) Python
 - (ii) Linux
- (c) Expand the terms OSI and GNU. 2
- (d) Mention any two types of relationships that can be set up between two relations. Explain the concept of ER Model using the case study of a Air Ticketing System that has three entities Ticket, Passenger and Flight. Assume that each passenger can buy more than one ticket. 4

Q2. Answer the following questions

- (a) Differentiate between the Do While.....Loop and Do.....Loop While loops of Visual Basic giving a suitable example of each. 2
- (b) Name and explain the usage of any two types of procedures available in Visual Basic. 2
- (c) What are data-bound controls? Name any two intrinsic data-bound controls that can be used on a form. 2

- (d) Explain the term ADO. Name and explain three different methods used to navigate through ADO recordsets. 4

Q3. Answer the following questions

- (a) Differentiate between TCL and DCL commands. Name one TCL and one DCL command. 2
- (b) Name the keyword used to: 2
- (i) Allow duplicate rows in a query.
 - (ii) Avoid duplicate rows in a query.
- (c) Mention any two limitations of SQL. 2
- (d) Define the terms Primary key and Alternate key with respect to a database. 2
- (e) Differentiate between Before and After type triggers. 2

SECTION - B

Q4. Read the following case, study and answer the questions that follow:

Xtra Care Hospital has computerized its billing. A new bill is generated for each patient. The hospital allows four different types of patients to take admission. The daily charges are based on the type of patient. The following is the data entry screen used to generate the bill at the time of discharging the patient :

The screenshot shows a window titled "Patient Bill Form" for "Xtra Care Hospital". The form contains the following fields and controls:

- Patient Name:** A text input field.
- Patient Type:** A group box containing four radio buttons: OPD, ICU, Private, and Dormitory.
- Admission Date:** A date input field.
- No. of Days:** A numeric input field.
- Discharge Date:** A date input field.
- Daily Charges:** A numeric input field.
- Est Amount:** A numeric input field.
- Buttons:** Three buttons at the bottom: "Clear All", "Calculate", and "Exit".

The list of controls for the above form is as follows:

Object type	Object Name	Description
Form	FrmBili	The main form
Text Box	TxtPname TxtAdDate TxtDiDate TxtDays TxtCharge TxtAmt	To enter patient name To enter admission date To display discharge date as the system date To display number of days spent in hospital To enter the daily charges To display the final bill amount
Option Buttons	OptOPD OptICU OptPrivate OptDorm	To select patient type as OPD To Select patient type as ICU To select patient type as Private To select patient type as Dormitory
Command Button	CmdClear CmdCalc CmdExit	To clear all textboxes To calculate bill amount To Exit from the application

- (a) Write the code for the CmdClear command button to clear all the textboxes except the txtDiDate textbox. **1**
- (b) Write the code for the form load event of FrmBill so as to: **2**
- (i) Display the system date in the TxtDiDate textbox.
- (ii) Disable the TxtDiDate and the TxtDays textboxes.
- (c) Write the code for the change event of the TxtAdDate textbox to display the number of days the patient has spent in the hospital. The number of days should be calculated as discharge date - admission date. The code should also display a warning message the admission date is input as a date later than the discharge date. **3**
- (d) Write the code for the CmdCalc command button to display the final bill amount in the TxtAmt textbox. Note that Final bill amount is calculated as: **4**

(No. of Days* Daily Charge)

The Daily Charges are calculated according to the following criteria:

Patient Type	Daily Charge
OPD	300
ICU	4000
Private	2000
Dormitory	1000

Q5. Answer the following questions

- (a) Find the errors from the following code segment and rewrite the corrected code underlining the correction made. 2

```
Sub Fibo (S1 As Integer, S2 As Integer, N As Integer)
Dimension count As Integer; term As Integer
Print S1
Print S2
For count = 3 Till N
    term = S1 + S2
    Print term
    S1 = S2
    S2 = term
Next Value
End Sub
```

- (b) Rewrite the following code using Select Case construct without affecting the output: 2

```
Dim a As Integer
a = 4
If a = 1 Then
    Print "Sunday"
Elseif a >= 2 and a <= 6 Then
```

```

        Print "WeekDay"
Elseif a = 7 Then
        Print "Nearing Weekend"
End If

```

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

```

Dim a as String
Dim I as Integer
a = "KANK"
I = Len (a)
Do
    Print Mid (a, I)
    I = I - 1
Loop While I > 0

```

- (d) Write a Visual basic function that takes two String arguments and compares the two strings. The function return 0 if both the arguments are equal. The function returns - 1 if the first argument is smaller than the second and 1 if the second argument is smaller then first. 4

SECTION - C

Q6. Read the questions given below and answer accordingly:

- a) Write the output produced by the following PL/SQL code: 2

```

DECLARE
    A NUMBER; B
    NUMBER; TEMP
    NUMBER;
BEGIN
    FOR X IN 1..4 LOOP
        TEMP:= A;
        A := B;

```

```

        B := TEMP;

        A := A + 1;

        B := B-1;

        DBMS_OUTPUT . PUT_LINE ( 'A =' || A );

        DBMS_OUTPUT . PUT_LINE ( 'B =' || B );

    END LOOP;

END;

```

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

2

```

DECLARATION

    V_MNO  MOVIES.MOVIENO%TYPE;

    V_TITLE MOVIES.TITLE%TYPE;

    V_PRICE MOVIES.PRICE%TYPE;

BEGIN

    V_MNO EQUALS 101

    LOOP

        SELECT TITLE, PRICE, RATING INTO V_TITLE,
        V_PRICE, V_RATE FROM MOVIES

        WHERE MOVIENO = V_MNO;

        DBMS_OUTPUT.PUTTEXT(V_TITLE || ' ' || V_PRICE);

        EXIT WHEN V_RATE<4;

        V_MNO:= V_MNO + 1;

    LOOP END;

END;

```

- (c) Differentiate between the OUT and IN OUT modes of a parameter in a PL/SQL block.
- (d) Write a PL/SQL Function CheckDiv that takes two numbers as arguments and returns that value 1 if the first argument passed to it is divisible by the second argument else it should return the value 0.

2

4

Q7. Answer the questions based on the table Apartment given below:

Table: Apartment

Column Name	Data Type	Size	Constraint	Description
A_No	NUMBER	4	PRIMARY KEY	Apartment number
A_Cat	CHAR	1	'D' or 'S'	Apartment category as Delux or SuperDelux
Pur_Name	VARCHAR2	30		Name of the purchaser
A_Cost	NUMBER	8.2		Cost of apartment
Dt_Sold	DATE			Date of Selling

- (a) Write the SQL command to create table Apartment including the constraints. **2**
- (b) Write the SQL command to display the category and number of apartments in each category. **2**
- (c) Write the PL/SQL code to increase the apartment cost by 5% for an apartment number accepted as parameter and display the updated details. **3**
- (d) Write the PL/SQL code to create a stored procedure NOTSQLD to display the details of all the apartments which have not been sold. The code should also display the total cost of all such apartments. **4**

PRACTICE PAPER

Class : XII

Subject : Informatics Practice

Time allowed : 3 hours

Maximum Marks : 70

SECTION A

Q1. Answer the following questions

- | | |
|--|----------|
| (a) Expand the terms OSS and W3C. | 2 |
| (b) What are the following software used for? | 2 |
| (i) PHP | |
| (ii) MySQL | |
| (c) Name any four application areas of databases. | 2 |
| (d) What are the different types of relationships that can be depicted through an ER model? Explain the concept of ER Model using the case study of a Ticket | |

Reservation System that has three entities Ticket, Passenger and Train. Assume that each passenger can buy more than one ticket. 4

Q2. Answer the following questions

- (a) Differentiate between the FOR ... NEXT and FOR EACH ... NEXT loop of Visual Basic giving a suitable example of each. 2
- (b) Name and explain the usage of any two types of modules available in Visual Basic. 2
- (c) What are data-aware controls? Name any two ActiveX data aware controls that can be used on a form 2
- (d) Explain the term ADO object model. Differentiate between the Connection Timeout and Command Timeout properties of the Connection object. 2

Q3. Answer the following questions

- (a) Differentiate between row-level and statement-level triggers. 2
- (b) Define the terms Candidate key and Foreign key with respect to a database. 2
- (c) Differentiate between DDL and DML commands. Give one example of each type of command 2
- (d) Mention any two advantages of PL/SQL as compared to SQL. 2
- (e) Name the keyword used to 2
 - (i) Allow duplicate rows in a query.
 - (ii) Avoid duplicate rows in a query.

SECTION - B

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

Mr. Presi of Super Store decided to computerize the billing department. The accounts manager at Super Store is creating billing software to generate the bill during the sale period. A new bill is generated for each item sold. The discount is given based on the item category. An additional discount of 5% is given to the Store Membership Card holders. The following is the data entry screen used at the store:

The list of controls for the above form is as follows:

Object Type	Object Name	Description
Form	FrmBill	The main form
Text Box	TxtBillno	To enter Bill Number
	TxtBillDate	To display System Date
	TxtlName	To input Item Name
	TxtPrice	To input Item Price
	TxtDisc	To display Discount
	TxtFinal	To display Final Price
Option Buttons	OptMens	To select Men's Category
	OptWomens	To Select Women's Category
	OptKids	To select Kid's Category
Command Button	ChkMember	To be checked for members
	CmdCalc	To calculate discount and Final Price
	CmdClear	To clear all textboxes
	CmdExit	To Exit from the application

- (a) Write the code for the CmdClear command button to clear all the textboxes except the TxtBillDate textbox

- (b) Write the code for the form load event of FrmBill so as to: 2
- (i) Display the system date in the TxtBillDate textbox.
 - (ii) Disable the TxtBill Date, TxtDisc and TxtFinal textboxes
- (c) Write the code for the change event of the TxtPrice textbox to ensure that the user does 'not enter a negative or a zero value. If a negative or a zero value is entered then the textbox should be made blank and a warning message should be displayed. 3
- (d) Write the code for the CmdCalc command button to display the discount and final price in the TxtDisc, and TxtFinal textboxes respectively. Note that Final price is calculated as price - discount and the discount is calculated based on the category and price according to the following table. Also remember to give an additional 5% discount for membership card holders i.e. if the ChkMember check box is checked. 4

Category	Price	Discount
Men's	<1000	30%
	>=1000	50%
Women's	<1500	40%
	>=1500	50%
Kid's	<500	20%
	>=500	30%

Q5. Answer the following questions

- (a) Find the errors from the following code segment and rewrite the corrected code underlining the correction made. 2

```

Private Function IsPrime (num As Integer) As Bool
Dim limit As Integer
limit = num / 2
FOR ctr = 2 TO limit
    If num Modulo ctr = 0 Then
        Exit For loop

```

```

        End If
    Next
    IsPrime = IIf(ctr > limit, True, False)
End Sub

```

- (b) Find the output of the following code: 2

```

Dim astr as string
Dim I as Integer
I = 1
astr = "Come"
Do while I <= Len (astr)
    Print Mid (astr, I)
    I = I + 1
LOOP

```

- (c) Rewrite the following code using If Then Else construct without affecting the output: 2

```

Dim a As Integer
a = 1
Select Case a
    Case 1
        Print "Sunday"
    Case 2 To 6
        Print "WeekDay"
    Case 7
        Print "Nearing Weekend"
End Select

```

- (d) Write a Visual Basic procedure that takes a number as argument and displays the sum of all the digits in the number. For example, if the argument passed is 354, the procedure should display 12 (i.e. 3+5+4). 4

Section - C

Q6. Read the questions given below and answer accordingly:

- a) Write the output produced by the following PL/SQL code:

2

```
DECLARE
    A NUMBER; B
    NUMBER; TEMP
    NUMBER;
BEGIN
    FOR X IN 1.. 4 LOOP
        TEMP:= A;
        A := B
        B := TEMP;
        A := A + 1;
        B := B - 1;
        DBMS_OUTPUT. PUT_LINE ('A = ' | | A);
        DBMS_OUTPUT. PUT_LINE ('B = ' | | B);
    END LOOP;
END;
```

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

2

```
DECLARATION
    V_MNO MOVIES.MOVIENO%TYPE;
    V_TITLE MOVIES.TITLE%TYPE;
    V_PRICE MOVIES.PRICE%TYPE;
BEGIN
    V_MNO EQUALS 101
    LOOP
```

```

SELECT TITLE, PRICE, RATING INTO V_TITLE, V_PRICE,
V_RATE FROM MOVIES

WHERE MOVIEENO = V_MNO;

DBMS_OUTPUT.PUTTEXT (V_TITLE || ' ' || V_PRICE);

EXIT WHEN V_RATE < 4;

V_MNO := V_MNO + 1;

LOOP END;

END;

```

- c) Differentiate between the IN and IN OUT modes of a parameter in a PL/SQL block. 2
- d) Write a PL/SQL Function POWER that takes two numbers as arguments and returns the value of the first number raised to the power of the second. 4

Q7. Answer the questions based on the table CompLab given below:

Table: CompLab

Column Name	Data Type	Size	Constraint	Description
It_Code	NUMBER	4	PRIMARYKEY	Item Code Item category as
It_Cat	CHAR	1	'H' or 'S'	Hardware or Software
It_Name	VARCHAR2	25	NOT NULL	Name of the item
It_Cost	NUMBER	8.2		Cost of each unit of an item
It_Qty	NUMBER	3		Item Quantity In the Lab
Dt_Pur	Date			Date of Purchases

- (a) Write the SQL command to create the table CompLab including the constraints. 2
- (b) Write the SQL command to display the details of the item with the maximum It_Cost. 2

- (c) Write the PL/SQL code to increase the item cost by 10% for an item code accepted from the user if the date of purchase of the item is later than 12-Oct-2005. 3
- (d) Write the PL/SQL code to create a stored procedure Disp_Details to display the details of all the items with It_Cat as 'H'. The code should also display the total quantity of all such Items. 4

