

XII. 2009

Series SSO

Code No. 90

Candidates must write the Code on the title page of the answer-book.

Roll No.

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- Please check that this question paper contains 8 printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains 7 questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the student will read the question paper only and will not write any answer on the answer script during this period.

INFORMATICS PRACTICES

Time allowed : 3 hours

Maximum Marks : 70

Note :

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

SECTION A

1. Answer the following questions :

- Expand UML. Write its purpose.

2

- (b) Write in brief the purpose of the following software : 2
- (i) Linux
 - (ii) MySQL
- (c) Write an example of a many to many relationship and depict the relationship with an ER diagram. 2
- (d) How does Data Mining help in decision making process ? 2
- (e) Write the purpose of "Cost Benefit Analysis" done during System Development Life Cycle. 2
- 2. Answer the following questions :**
- (a) Write the default names given to a command button and Text box. 2
- (b) Name one property of Text box control which is not present in Label control. 2
- (c) What is the use of Call statement ? Explain in brief with the help of example. 2
- (d) Define Interface. Name two Interface styles supported by VB. 2
- (e) Write the purpose of a Bound control. Name two Data aware properties of data bound controls. 2
- 3. Answer the following questions :**
- (a) Write one similarity and one difference between Char and Varchar2 data types. 2
- (b) What is the purpose of the following commands : 2
- (i) Commit
 - (ii) Rollback
- (c) When are implicit cursors used by PL/SQL ? 2
- (d) Distinguish between Before and After triggers. 2
- (e) Define a cursor. List two statements associated with cursors. 2

SECTION B

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

Get Well Hospital has computerized its billing. The following is the Data Entry screen in Visual Basic used by them :

The screenshot shows a data entry form titled "GET WELL HOSPITAL". The form contains several input fields and a list of service categories. The fields are arranged as follows:

- Top left: A small text box.
- Top right: A small text box.
- Second row: "Patient Name" (text box) and "No. of Doctor" (text box).
- Third row: "Doctor" (text box) and "Sex" (text box).
- Fourth row: "Consultant" (text box) and "CATEGORY OF SERVICES" (list box).
- Fifth row: "Specialist" (text box) and a list box with options: "GENERAL", "SURGERY", "MEDICAL", "DENTAL".
- Sixth row: "Physician" (text box) and a list box with options: "GENERAL", "SURGERY", "MEDICAL", "DENTAL".
- Seventh row: "Patient Age" (text box) and a list box with options: "GENERAL", "SURGERY", "MEDICAL", "DENTAL".
- Bottom section: A table with columns "Category", "Rate", and "Fee".
- Below the table: "Advance" (text box) and "Amount To Pay" (text box).

The Form details of the above form are given in the following table :

Object Type	Object Name	Description
Form	FrmHospital	The Main Form Object
Text Box	TxtPNO	To enter Patient Identification Number
	TxtPName	To enter Patient's name
	TxtDocFee	To enter Doctor's Consultancy Charges
	TxtOTFee	To enter Operation Theatre Charges
	TxtMedicines	To display charges for Medicines given to Patient
	TxtMeal	To enter charges for Meals given to Patient
	TxtDays	To enter number of days for which the patient stayed in the hospital
	TxtSub	To display Total charges to be paid by the patient (before tax is added)
	TxtTax	To display the tax to be paid by the patient
	TxtAdvance	To enter Advance amount paid by the patient
	TxtAmount	To display the net amount to be paid by the patient
Option Button	OptPrivate OptSemi OptGeneral	To enter information whether the patient has opted for Private or Semi Private or General Category of Treatment
Command button	cmdCalculate	To calculate Sub Total, Tax and Amount to be paid by the Patient
	cmdClear	To clear all the values in Text boxes and option button in the form
	cmdExit	To close the application

Write code to implement the following :

- (a) When the form loads text boxes for Sub Total (TxtSub), Tax (TxtTax) and Amount to pay (TxtAmount) are disabled. 2
- (b) Check that Number of days of Stay entered is numeric only. 2
- (c) When the user clicks Clear button, Patient Number and Patient Name should be set as blank, other text boxes should be set to zero. 2
- (d) When the command button with caption "Calculate" (cmdCalculate) is clicked, Sub Total, Tax (12% of Sub Total), Total amount to be paid by the patient are computed and displayed.

The criterion for calculation of Sub Total Charges is as given below :

Category of patient	Stay Charges
Private	Rs. 2000.00 per day
Semi Private	Rs. 1000.00 per day
General	Rs. 100.00 per day

- Sub Total is calculated by adding Stay charges, Doctor Consultancy fee, Operation theatre fee, Medicines charges, Meal Charges.
- Tax is levied at 12% of Sub Total.
- Advance paid is entered.
- Amount to Pay is : (Sub Total + Tax) – Advance paid by the Patient. 4

5. Answer the following questions :

- (a) Write the output of the following code : 2

```
t = 16
FOR c = 4 TO 1 STEP -1
    x = c * t
    PRINT x
    t = t - 4
NEXT c
```

- (b) Rewrite the corrected program after removing syntax errors, underline the corrections : 2

```
x = 20
  WHILE x >= 10
    IF x < 12 THEN
      x = 0
    otherwise
      x = x - 2
    x = x - 2
    PRINT x
  END LOOP
```

- (c) Write the value of P after the following code is executed : 2

```
x = 2
  SELECT CASE x
    CASE 1
      p = 1000 * x
    CASE 2
      p = 100 - x
    CASE 3
      p = 10 + x
  END SELECT
```

- (d) Write a Visual Basic function that takes age as argument and returns whether the person is eligible to vote. (Assume 18 years is the minimum voting age) 4

SECTION C

6. Read the questions given below and answer accordingly :

- (a) Write the output produced by the following part of code in PL/SQL : 2

```
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;
```

- (b) Find the error(s) in the following PL/SQL code and rewrite the correct code after underlining the corrections made. 2

```

I := 3;
LOOP
    IF I > 8
        DBMS_OUT(I);
        X := 5;
        I + 1 := I;
    END LOOP;

```

- (c) Rewrite the following PL/SQL loop using FOR loop : 2

```

c:= 10;
WHILE c >= 4 LOOP
    DBMS_OUTPUT.PUT_LINE(c);
    c := c - 1;
END LOOP;

```

- (d) Write a PL/SQL function that takes Roll Number of a student as a parameter and returns "Passed" 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 STUDENT given below :

Table : STUDENT

Column Name	Data Type	Size	Description	Constraint
RollNo	NUMBER	2	Roll number of Student	PRIMARY KEY
Name	VARCHAR2	25	Name of Student	NOT NULL
Stream	VARCHAR2	15	Stream (Medical/Computers/Commerce) opted by student	NOT NULL
TMarks	NUMBER	9,2	Total Marks scored by the Student	

- (a) Write the SQL command to Create the above table with constraints. 2
- (b) Write the SQL command to create a view consisting of roll numbers, names of students who are in "COMPUTERS" stream. 2
- (c) Write the SQL command to display roll numbers, names and Total marks of students in descending order of total marks. 2
- (d) Create a Trigger to display the message "Work Hard" whenever Total marks (TMARKS) entered in the table are below 250. 4