

INFORMATICS PRACTICES

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.

QUESTION PAPER CODE NO. 90/1

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: "DPD", "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.
- Bill Amount:** A numeric input field.
- Buttons:** "Clear All", "Calculate", and "Exit" buttons are located at the bottom of the form.

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

QUESTION PAPER CODE NO. 90

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

MARKING SCHEME — INFORMATICS PRACTICES

Important Note:

- All answers provided in the marking scheme are SUGGESTIVE.
- Examiners are requested to accept all possible alternative correct answers.
- Case sensitivity to be ignored in Visual Basic for commands and identifiers.
- Semicolon termination and case sensitivity to be ignored in SQL statements.
- In case of answers for a SQL query, commands that produce identical output should be considered as correct.

QUESTION PAPER CODE 90/1

EXPECTED ANSWERS

Section - A

Q1. Answer the following questions

(a) Name any four application areas of business computing. 2

- Ans. 1. Inventory Control
2. Financial Accounting
3. Pay-Accounting System
4. Invoice Management System
5. Personal Management System / HRD System
6. Fee Management System
7. Result Analysis System
8. Admission Management System
9. Income Tax Management System

(½ Mark each for mentioning any 4 correct application areas)

(b) What are the following software used for? 2

- (i) Python
(ii) Linux

Ans. (i) Python is used in application domains such as :

- Web and internet development (writing CGI scripts)

- Database Access
- Scientific and numeric computing
- Also provides support for network/game programming

(ii) Linux is an open source operating system used as a server or desktop (PC).

(1 Mark for mentioning anyone correct point for Python)

(1 Mark for mentioning usage of Linux or specifying it as an Operating System)

(c) Expand the terms OSI and GNU. 2

Ans. OSI - Open Source Initiative / Open System Interconnection

GNU-Not Unix or GNU Not Unix

(1 Mark for each expansion)

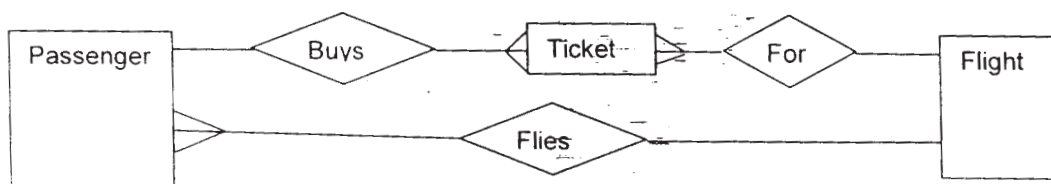
(d) Mention any two types of relationships that can be set up between two relations. Explain the concept of ER Model using the case study of a Air Ticketing System that has three entities Ticket, Passenger and Flight. Assume that each passenger can buy more than one ticket. 4

Ans: i) Many to Many relationships

ii) Many to One relationship

iii) One to One relationship

iv) One to Many



(1 mark each for any 2 types of relationships)

(2 marks for showing any two of three relationships with equivalent representation as there are many ways to represent the concept of one-to-one, one-to-many)

NOTE: Relationship between entities can be represented by any name. Each relationship may be shown independently also.

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

DO While.....Loop	DO.....Loop While
<p>1. Entry Controlled loop in which condition is checked before the entry into the loop</p> <p>2. Minimum number of times loop execute is zero.</p> <p>Example :</p> <pre>X=10 DO WHILE x>1 PRINT X X=X-1 LOOP</pre>	<p>1. Exit controlled loop in which condition is checked at the end.</p> <p>2. Minimum number of times loop executes is once.</p> <p>Example :</p> <pre>X=10 DO PRINT X X=X-1 LOOP WHILE x>1</pre>

(1 Mark for anyone correct difference)

(1 Mark for anyone correct example)

OR

(2 Marks for example with explanation)

- (b) Name and explain the usage of any two types of procedures available in Visual Basic. 2

- Ans: i) Function Procedures
 ii) Sub Procedures
 iii) Property Procedures
 iv) Event Procedures

Usage: These are sub-programs or modules containing instructions, which can be called and executed from any other part of the program/project.

(1/2 Mark each for mentioning any two correct procedure names)

(1/2 Mark each for their valid usage)

- (c) What are data-bound controls? Name any two intrinsic data-bound controls that can be used on a form. 2

Ans: A data bound control connects a control in Visual Basic to a database table.

Intrinsic data-bound controls used on a form are:-

- i) Checkbox
- ii) Combobox
- iii) Image control
- iv) Label
- v) Listbox
- vi) PictureBox
- vii) Textbox

(1 Mark for explanation)

(1/2 Mark each for any 2 intrinsic/standard controls)

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

4

Ans. ADO stands for ActiveX Data Objects. ADO enables us to write an application to access and manipulate data in a database server through an OLEDB/ADODC/ODBC provider.

Methods:

Movenext

Movefirst

MovePrevious

Movelast

Move

(1 Mark for Explaining ADO)

(1/2 Mark each for naming any three of the above mentioned methods)

(1/2 Mark each for explaining any three of the above mentioned methods)

Q3. Answer the following questions

- (a) Differentiate between TCL and DCL commands. Name one TCL and one DCL command.

2

Ans:	TCL	DCL
	<p>Transaction Control (TCL) statements are used to manage the changes made to the table by DML statements. It allows statements to be grouped together into logical transactions.</p> <ul style="list-style-type: none"> ● COMMIT ● SAVE POINT ● ROLLBACK (ROLLBACK TO) 	<p>Data Control Language is used for controlling access to data. That is a user can access any data based on the privileges given to him/her.</p> <p>Some examples:</p> <ul style="list-style-type: none"> ● GRANT ● REVOKE

(1 Mark for difference)

(½ Mark for giving one example of each)

- (b) Name the keyword used to: 2
- (i) Allow duplicate rows in a query.
 - (ii) Avoid duplicate rows in a query.

- Ans: (i) ALL (By default)/SELECT*
(ii) DISTINCT

(1 Mark for each keyword)

- (c) Mention any two limitations of SQL. 2

- Ans: 1. Procedural programming not supported in standard SQL
2. No Exception handling capabilities
3. Does not support Object Oriented Programming
4. Does not Support Report writing

(1 Mark each for mentioning any 2 limitations)

- (d) Define the terms Primary key and Alternate key with respect to a database. 2

Ans: Primary Key is any attribute(s) which uniquely identify a row/tuple in a relation/table. Alternate key is any other attribute(s) which can serve as a Primary Key but has not been chosen as a primary key.

(1 Mark for each correct definition)

(e) Differentiate between Before and After type triggers.

2

Ans: 'Before Trigger' is executed/fired/activated/invoked before any DML statement.

'After Trigger' is executed/fired/activated/invoked after any DML statement.

(2 Marks for correct difference OR examples explaining the difference)

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". It contains several input fields and buttons. The fields are: "Patient Name" (text box), "Patient Type" (radio buttons for OPD, ICU, Private, and Dormitory), "Admission Date" (text box), "No. of Days" (text box), "Discharge Date" (text box), "Daily Charges" (text box), and "Bill Amount" (text box). At the bottom, there are three buttons: "Clear All", "Calculate", and "Exit".

Object type	Object Name	Description
Form	FrmBili	The main form
Text Box	TxtPname	To enter patient name
	TxtAdDate	To enter admission date
	TxtDiDate	To display discharge date as the system date

	TxtDays	To display number of days spent in hospital
	TxtCharge	To enter the daily charges
	TxtAmt	To display the final bill amount
Option Buttons	OptOPD	To select patient type of OPD
	OptICU	To Select patient type as ICU
	OptPrivate	To select patient type as Private
	OptDorm	To select patient type as Dormitory
Command Button	CmdClear	To clear all textboxes
	CmdCalc	To calculate bill amount
	CmdExit	To Exit from the application

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

1

Ans:

<pre>Txtpname.Text = " " TxtAdDate.Text = " " TxtDays.Text = " " TxtCharge.Text = " " TxtAmt.Text = " "</pre>	OR	<pre>Txtpname.Text = VbEmpty TxtAdDate.Text = VbEmpty TxtDays.Text = VbEmpty TxtCharge.Text = VbEmpty TxtAmt.Text = VbEmpty</pre>
---	----	---

(1 Mark for clearing any 2 textboxes)

Note: .Text is optional

- (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.

Ans: (i) `TxtDiDate.text = Date` OR `TxtDiDate.text =Date()`

<pre>OR TxtDiDate.text = NOW OR TxtDiDate.text =NOW()</pre>

(ii) `TxtDiDate.ENABLED = FALSE`
`TxtDays.ENABLED = FALSE`

(1 Mark for each correct answer)

- (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

Ans: DIM DAYS AS INTEGER

```
LOGIC TO CALCULATE NUMBER OF DAYS
```

```
IF DAYS < 0 THEN
```

```
MSGBOX " ADMISSION DATE CANNOT BE LATER THAN DISCHARGE DATE"
```

```
OR
```

```
PRINT" ADMISSION DATE CANNOT BE LATER THAN-DISCHARGE DATE"
```

```
END IF
```

(1 Mark for attempting to calculate the number of days)

(1 Mark for checking the condition)

(1 Mark for displaying the warning message)

- (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

Ans. DIM days As INTEGER

```
DIM charges As INTEGER
```

```
days = Val (TxtDays.Text)
```

```
IF OptOPD.Value = True THEN
```

```
charges = 300
```

```
ELSEIF OptICU.Value = True THEN
```

```
charges = 4000
```

```

ELSEIF OptPrivate.Value = True THEN
    charges = 2000
ELSE IF OptDorm.Value = True THEN
    charges = 1000
END IF
TxtCharge.Text = charges
TxtAmt.Text = charges*days

```

(1 Mark for converting TxtDays into numeric)

(1 ½ Marks for computing charges)

(½ Mark for storing charges in TxtCharge textbox)

(1 Mark for calculating & storing amount in TxtAmt textbox)

NOTE: Any other equivalent logic must be accepted

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

```

Ans: Sub Fibo (S1 As Integer, S2 As Integer, N As Integer)

```

Dim count As Integer , term As Integer
Print S1
Print S2

```

```

For count = 3 TO N
    term = S1 + S2
    Print term
    S1 = 52
    S2 = term
Next count

```

OR Next

```
End Sub
```

(1/2 Mark for identifying and correcting each error)

(1 Mark for Only identifying all errors)

- (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

```

Ans. Dim a as Integer

```

a = 4
SELECT CASE a
    CASE 1
        Print "Sunday"
    CASE 2 TO 6 OR CASE IS > =2 AND IS <=6
        Print "WeekDay"

```


CASE 7

Print "Nearing Weekend"

END SELECT

(1/2 Mark for each case)

(1/2 Mark for select case)

(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
```

Ans: K

NK

ANK

KANK

(1/2 Mark for each correct line of output)

(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

Ans: Public Function strcmp (Str1 As String, Str2 As String) As Integer

OR Private Function strcmp (Byval Str1 As String, Byval Str2 As String) As Integer
--

```
If Str1 < Str2 Then
```

```
strcmp = -1
```

```
ElseIf Str1 = Str2 Then
```

```

        strcmp = 0
Else
        strcmp = 1
End If
End Function

```

(½ Mark for function header (Name and arguments))

(½ Mark for return type of the function)

(1 Mark for each condition)

NOTE: Any ether equivalent logic must be accepted

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;

```

(2 Marks for attempting or identifying that variables have not been initialized)

(2 Marks to be awarded if either Q6.(b) or (c) or (d) ;s answered correctly)

- (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;
```

Ans: DECLARE

```
    V_MNO MOVIES. MOVIENO%TYPE;
    V_TITLE MOVIES.TITLE%TYPE;
    V_PRICE MOVIES.PRICE%TYPE;
    V_RATE MOVIES.RATING%TYPE;

BEGIN

    V_MNO := 101;    OR DEFAULT CAN BE USED I

    LOOP

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

            WHERE MOVIENO = V_MNO;
```

```

        DBMS_OUTPUT. PUT_LINE (V_TITLE || ' ' || V_PRICE);
        EXIT WHEN V_RATE < 4;
        V_MNO := V_MNO + 1;
    END LOOP;

```

END;

(½ Mark each for identifying and correcting any 4 errors)

(1 Mark for ONLY identifying any 4 errors)

- (c) Differentiate between the OUT and IN OUT modes of a parameter in a PL/SQL block. 2

- Ans: 1. OUT mode is used to send formal argument value to the actual argument in the calling environment/block.
2. IN OUT mode is used to receive and send formal argument value to the actual argument in the calling environment/block.

(2 Marks for correct difference)

OR

(2 Marks for correct explanation of difference with the help of example)

- 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. 4

Ans: CREATE OR REPLACE FUNCTION CheckDiv (Num1 NUMBER,
Num2 NUMBER) RETURN NUMBER

AS/IS

```

    BEGIN
        IF MOD (Num1, Num2)=0 THEN
            RETURN 1;
        ELSE
            RETURN 0;
        END IF;
    
```

END;

OR

Any other equivalent code

(1 Mark for Function header)

(1 Mark for IF)

(1 Mark for MOD)

(1 Mark for Returning value)

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

Ans: REATE TABLE APARTMENT

```
{
A_No NUMBER (2) PRIMARY KEY, OR NOT NULL UNIQUE ,
A_cat CHAR CHECK(A_Cat='D' OR A_Cat= 'S'),
OR CHECK(A Cat IN('D' .'S'))
Pur_Name VARCHAR2 (30) ,
A_Cost NUMBER (8, 2),
Dt_Sold DATE
};
```

(1/2 Mark for CREATE TABLE)

(1/2 Mark for fields with data types)

(1/2 Mark for PRIMARY KEY constraint)

(1/2 Mark for CHECK constraint)

- (b) Write the SQL command to display the category and number of apartments in each category. 2

Ans.

```
SELECT A_Cat, COUNT (*) OR COUNT (A_CAT)
FROM Apartment
GROUP BY A_Cat ;
```

(1 Mark for grouping)

(1 Mark for projection)

- (c) Write the PL/SQL code to increase the apartment cost by 5% for an apartment number accepted as parameter and display the update details. 3

Ans.

```
CREATE OR REPLACE PROCEDURE INC_COST(Apno IN NUMBER)
IS/AS
```

```
Cost Apartment.A_Cost%TYPE;
```

```
BEGIN
```

```
UPDATE Apartment
```

```
SET A_Cost = A_Cost + 0.05*A_Cost
```

```
where A_No = Apno;
```

```
Select A_Cost INTO Cost from Apartment
```

```
Where A_No = Apno;
```

```
DBMS_OUTPUT.PUT_LINE( Apno || ' ' || Cost);
```

```
END;
```

(1 Mark for Header)

(1 Mark for Update)

(1 Mark for Display)

Any other equivalent code must be accepted

- (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 apartment. 4

Ans:

```
CREATE OR REPLACE PROCEDURE NOTSQLD()
IS/AS
```

```

CURSOR C1 IS
    SELECT * FROM Apartment
    WHERE Dt_Sold IS NULL; OR WHERE Pur Name IS NULL
REC C1%ROWTYPE;
Tcost Number (10,2) := 0;
BEGIN
    OPEN C1;
    LOOP
        FETCH C1 INTO Rec.
        EXIT WHEN C1%NOTFOUND;
        Tcost :=Tcost+ Ree.A_Cost;
        DBMS_OUTPUT.PUT_LINE (Rec.A_No || ' ' || Rec.A_Cat
                                || ' ' || Rec.A_Cost);
    END LOOP;
    CLOSE C1;
    DBMS_OUTPUT. PUT_LINE (Tcost);
END;

```

(1/2 Mark for procedur header)

(1 Mark for Cursor Declaration)

(2 Marks for Cursor Processing Loop)

(1/2 Mark for displaying total cost)

NOTE: Any other form of Loop for processing cursor must be accepted

QUESTION PAPER CODE 90

EXPECTED ANSWERS

Section - A

Q1. Answer the following questions

(a) Expand the terms OSS and W3C.

2

Ans: Open Source Software
World Wide Web Consortium

(1 Mark for each expansion)

(b) What are the following software used for?

2

- (i) PHP
- (ii) MySQL

Ans: i) Hypertext Preprocessor is open source software used for server side scripting applications.

ii) MySQL is multiuser, multithreaded open source RDBMS

(1 Mark for each correct usage)

(½ Mark only for expanding the acronym PHP)

(c) Name any four application areas of databases.

Ans: Application areas:

1. Inventory Control
2. Financial Accounting
3. Pay-Accounting System
4. Invoice Management System
5. Personal Management System/HRD System
6. Fee Management system
7. Result Analysis System
8. Admission Management System
9. Income Tax Management System

(½ Mark each for mentioning any 4 correct application areas)

(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.

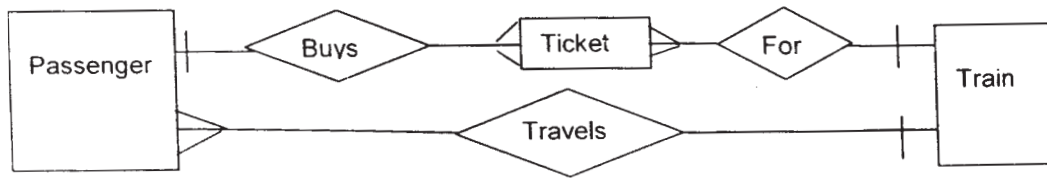
4

Ans: i) Many to Many relationship

ii) Many to One relationship

iii) One to One relationship

iv) One to Man



(1 Mark each for any 2 types of relationships)

(2 Marks for showing any two of three relationships)

NOTE: Relationship between entities can be represented by any name

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.

Ans: FOR.. NEXT is executed for a given number of times.

Example

```
FOR i=1 to 5
```

```
PRINT i
```

```
NEXT i
```

FOR EACH.. NEXT LOOP is executed for each element of a collection.

```
DIM i AS Variant
```

```
FOR EACH i IN Form1.Controls
```

OR Any collection can be used for example

```
MsgBox i.Name
```

```
NEXT
```

(1 Mark for any correct difference)

(1 Mark for any correct example)

OR

(2 Marks for any-correct example with explanation)

- (b) Name and explain the usage of any two types of modules available in Visual Basic.

Ans: Form Module - contains code pertaining to form objects.

Standard Module - contains code pertaining to a project.

Class Module - contains code for user declared objects.

(1/2 Mark each for mentioning any two modules)

(1/2 Mark each for explaining their usage)

- (c) What are data-aware controls? Name any two ActiveX data aware controls that can be used on a form 2

Ans: A data aware control connects a control in Visual Basic to a database table.

ActiveX data-aware controls used on a form are:

- i) DataList
- ii) DataGrid
- iii) DataCombo
- iv) MSFlexgrid

(1 Mark for explanation)

(½ Mark each for any 2 ActiveX controls)

- (d) Explain the term ADO object model. Differentiate between the Connection Timeout and Command Timeout properties of the Connection object. 2

Ans: ADO stands for ActiveX Data Objects. ADO enables us to write an application to access and manipulate data in a database server through an OLEDB/ADODC/ODBC provider. Connection timeout is the time specified after which the connection process is aborted. Command Timeout is the time specified after which the command execution is aborted.

(4 Marks for any answer bringing out the meaning of the ADO concept)

Q3. Answer the following questions

- (a) Differentiate between row-level and statement-level triggers. 2

Ans: Row level Triggers are fired I executed once for each row in a table. FOR EACH ROW clause is included in the Trigger Definition.

Statement level Triggers are fired I executed once for a DML Statement. FOR EACH ROW clause is not included in the Trigger Definition.

(2 Marks for difference)

OR

(2 Marks for giving one example of each)

- (b) Define the terms Candidate key and Foreign key with respect to a database. 2

Ans: Candidate key is any attribute(s) which can serve as a Primary Key.

Foreign Key is any non key attribute which references a primary key of some other table.

(1 Mark for each correct definition)

- (c) Differentiate between DDL and DML commands. Give one example of each type of command

DDL	DML
Data Definition language commands create, alter or delete the structure of a table. Example CRE.ATE. ALTER DROP	Data manipulation language commands manipulate and process data in a table. Example INSERT UPDATE, DELETE

(1 Mark for difference)

(1/2 Mark for giving one example of each)

- (d) Mention any two advantages of PL/SQL as compared to SQL

2

- Ans: 1. Support for Procedural programming.
2. Support for Exception handling capabilities.
3. Support for report writing.

(1 Mark each for mentioning any 2 advantages)

- (e) Name the keyword used to

2

- (i) Allow duplicate rows in a query.
(ii) Avoid duplicate rows in a query.

- Ans: (i) ALL (By default) / SELECT*
(ii) DISTINCT

(1 Mark for each keyword)

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	FrmBili	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

1

Ans: TxtBillno.Text=" "

TxtIname.Text=" "

Text is optional

TxtPrice.Text=" "

TxtDisc.Text=" "

instead of " " vbEmpty can be accepted

TxtFinal.Text=" "

(1 Mark for clearing any 2 textboxes)

- (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

Ans. (i) TxtBillDate.text = Date OR TxtBillDate.text =Date()

OR

TxtBillDate.text = NOW OR TxtBillDate.text=NOW()

(ii) TxtBillDate.ENABLED = FALSE

TxtDise.ENABLED = FALSE

TxtFinal.ENABLED = FALSE

(1 Mark for displaying system date)

(1 Mark for disabling any 2 text boxes)

- (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

Ans: V=Val(TxtPrice.text)

IF v <=0 then

Msgbox" Re-enter a positive value greater Than 0"

TxtPrice.text=" "

END IF

(1 Mark for conversion of txtPrice to numeric)

(1 Mark for checking the condition)

(½ Mark for displaying the warning message)

(½ Mark for clearing txtPrice)

NOTE: If code is written under lost Focus or Validate event procedure full marks must be awarded.

- (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%

Ans. Price=Val (TxtPrice. text)

```
IF OptMens.value=True THEN
    IF price<1000 THEN disc=0.3
        ELSE disc=0.5
    END IF
ELSEIF OptWomens.Value=True THEN
    IF price<1500 THEN disc=0.4
        ELSE disc=0.5
    END IF
```

```

ELSEIF OptKids.Value =True THEN
    IF price<500 THEN disc=0.2
    ELSE disc=0.3
    END IF
END IF
IF ChkMember.Value=1 THEN
    Disc=disc+0.05
END IF
END IF
TxtDisc.text=disc
TxtFinal.text=price-price*disc

```

(1 Mark for converting TxtPrice into numeric)

(1½ Marks for computing discount)

(½ Mark for storing discount in TxtDisc textbox)

(1 Mark for storing amount in TxtFinal textbox)

NOTE: Any other equivalent logic must be accepted

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

```

```

Ans: PRIVATE FUNCTION IsPrime (num As Integer) As Boolean

    DIM limit As Integer

    limit = num / 2

    FOR ctr = 2 TO limit

        IF num Modulo ctr = 0 THEN

            EXIT FOR

        END IF

    NEXT

    IsPrime = IIf(ctr > limit, True, False)

End FUNCTION

```

(1/2 Mark for identifying and correcting each error)

(1 Mark for ONLY identifying all errors)

NOTE: If ctr is identified as undeclared variable, it can be counted as an error.

(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

```

Ans: Come

ome

me

e

(1/2 Mark for each correct line of output)

- (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
```

Ans: DIM a As Integer

```
a = 1
IF a = 1 THEN
    Print "Sunday"
ELSEIF a >= 2 and a <= 6 THEN
    Print "WeekDay"
ELSEIF a = 7 THEN
    Print "Nearing Weekend"
END IF
```

(1/2 Mark each for checking a=1 and a=7)

(1 Mark for checking a >= 2 and a <= 6)

- (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

Ans: PRIVATE SUB SumDigits (ByVal n As Integer)	PRIVATE SUB SumDigits (ByVal n As Integer)
--	---

<pre>OR Public Sub SumDigits (n As Integer)</pre>	<pre>OR Public Sub SumDigits (n As Integer)</pre>
<pre>DIM i, sum As Integer sum = 0 DO WHILE n > 0 i = n Mod 10 sum = sum + i n = n \ 10 LOOP MsgBox "sum=" & sum END SUB</pre>	<pre>DIM i, sum As Integer sum = 0 For I=1 to LEN(Str(n)) sum=sum+Val(Mid(Str(n),I,1)) NEXT MsgBox "sum=" & sum END SUB</pre>

(1 Mark for initializing sum variable)

(1 Mark for loop).

(1 Mark for summation of digits)

(1 Mark for displaying sum)

NOTE: Any other equivalent logic must be accepted

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;

```

(2 Marks for attempting or identifying that variables have not been initialized)

OR

(2 Marks to be awarded if either Q6.(b) or (c) or (d) is answered correctly)

- 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;

```

Ans: DECLARE

```

    V_MNO MOVIES. MOVIENO%TYPE;

```

```

V_TITLE MOVIES.TITLE%TYPE;
V_PRICE MOVIES.PRICE%TYPE;
V_RATE MOVIES.RATING%TYPE;

```

```

BEGIN

V_MNO := 101;      OR DEFAULT CAN BE USED

LOOP

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

    WHERE MOVIEENO = V_MNO;

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

    EXIT WHEN V_RATE < 4;

    V_MNO := V_MNO + 1;

END LOOP;

END;

```

(1/2 Mark for identifying and correcting each error)

(1 Mark for ONLY identifying all errors)

- c) Differentiate between the IN and IN OUT modes of a parameter in a PL/SQL block. 2

Ans: 1. IN mode is used to receive actual argument value into the formal argument.

2. IN OUT mode is used to receive and send formal argument value to the actual argument in the calling environment/block.

(2 Marks for correct difference)

OR

(2 Marks for correct explanation of difference with the help of example)

- 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

Ans: Create OR Replace FUNCTION Power(n IN Number, m IN number)

RETURN number as/is

```
BEGIN
```

```
Return n**m;
```

```
OR Power function can also be used
```

```
END;
```

(2 Marks for Function header)

(1½ Marks for Logic to compute power)

(½ Mark for returning the power value)

Note: Since POWER is a predefined function in PUSQL, accept as correct a change in name of the function

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
It_Cat	CHAR	1	'H' or 'S'	Item category as 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.

Ans: CREATE TABLE CompLab

(

```
It_Code NUMBER(2) PRIMARY KEY,
```

```
OR NOT NULL UNIQUE
```

```
It_Cat CHAR CHECK(It_Cat = 'H' OR It_Cat = 'S'),
```

```
OR CHECK (It_Cat IN ('H','S'))
```

```
It_Name VARCHAR2(30) NOT NULL,
```

```
It_Cost NUMBER(8, 2),
```

```

        It_Oty    NUMBER (3) ,
        Dt_pur    Date
    );

```

(½ Mark for CREATE TABLE table name)

(½ Mark for fields with data types)

(½ Mark for PRIMARY KEY and NOT NULL constraint)

(½ Mark for CHECK constraint)

- (b) Write the SQL command to display the details of the item with the maximum It_Cost. 2

Ans: `SELECT * FROM CompLab`

`WHERE It_Cost=(SELECT MAX(It_Cost) FROM CompLab) ;`

(1 Mark for outer query)

(1 Mark for sub query)

- (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

Ans: `CREATE OR REPLACE PROCEDURE INC_COST (p_It_Code IN NUMBER)`

`IS/AS`

`V_Cost CompLab.It_Cost%TYPE;`

`BEGIN`

`UPDATE CompLab`

`SET It_Cost = IT_Cost + 0.1*IT_Cost`

`WHERE It_Code = p_It_Code AND Dt_Pur>'12-0et-2005';`

`END;`

(1 Mark for Header) (1 Mark for Update)

(1 Mark for Where Clause)

Note : Value for Item code to be updated can be accepted within the procedural block Any other equivalent code must be accepted

- (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

```
Ans: CREATE OR REPLACE PROCEDURE Disp_Details
AS/IS
CURSOR C1 IS
    SELECT * FROM CompLab
    WHERE It_Cat = 'H';
Rec c1%ROWTYPE;
Tqty Number (5) :=0;
BEGIN
OPEN C1;
LOOP
    FETCH C1 INTO Rec;
    EXIT WHEN C1%NOTFOUND;
    Tqty :=Tqty+ Rec.It_Qty;
    DBMS_OUTPUT. PUT_LINE ( Rec.It Code || ' ' || Rec.
    It_Name || ' ' || Rec. It_Qty);
END LOOP;
CLOSE C1;
DBMS_OUTPUT. PUT_LINE (Tqty) ;
END;
```

(1/2 Mark for procedure header)

(1 Mark for Cursor Declaration)

(2 Marks for Cursor Processing Loop)

(1/2 Mark for displaying total quantity)

NOTE: Any other form of Loop for processing cursor must be accepted