## St. Mary's School, Dwarka Holiday Homework <br> Class XII <br> Subject: Informatics Practices

## Answer the following:

Q1 Write SQL commands for the following queries :
Table: Club

$$
1 * 5=5
$$

| Coach-ID | CoachName | Age | Sports | date_of_app | Pay | Sex |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | Kukreja | 35 | Karate | $27 / 03 / 1996$ | 1000 | M |
| 2 | Ravina | 34 | Karate | $20 / 01 / 1998$ | 1200 | F |
| 3 | Karan | 34 | Squash | $19 / 02 / 1998$ | 2000 | M |
| 4 | Tarun | 33 | Basketball | $01 / 01 / 1998$ | 1500 | M |
| 5 | Zubin | 36 | Swimming | $12 / 01 / 1998$ | 750 | M |
| 6 | Ketaki | 36 | Swimming | $24 / 02 / 1998$ | 800 | F |
| 7 | Ankita | 39 | Squash | $20 / 02 / 1998$ | 2200 | F |
| 8 | Zareen | 37 | Karate | $22 / 02 / 1998$ | 1100 | F |
| 9 | Kush | 41 | Swimming | $13 / 01 / 1998$ | 900 | M |
| 10 | Shailya | 37 | Basketball | $19 / 02 / 1998$ | 1700 | M |

a) To show all information about the swimming coaches in the club.
b) To list the names of all coaches with their date of appointment (date_of_app) in descending order.
c) To display a report showing coach name, pay, age, and bonus (15\% of pay) for all coaches.
d) To insert a new row in the Club table with ANY relevant data:
e) Give the output of the following SQL statements:
i) Select COUNT(Distinct Sports) from Club;
ii) Select Min(Age) from Club where SEX = "F";

Q2 Write SQL commands for the following queries :
$1 * 7=7$

## FURNITURE

| NO | ITEMNAME | TYPE | $\begin{array}{\|l} \hline \begin{array}{l} \text { DATEOFSTOCK } \\ \text { PRICE } \end{array} \\ \hline \end{array}$ |  | DISCOUNT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | White lotus | Double Bed | 23/02/02 | 30000 | 25 |
| 2 | Pink feather | Baby cot | 20/01/02 | 7000 | 20 |
| 3 | Dolphin | Baby cot | 19/02/02 | 9500 | 20 |
| 4 | Decent | Office Table | 01/01/02 | 25000 | 30 |
| 5 | Comfort zone | Double Bed | 12/01/02 | 25000 | 25 |
| 6 | Donald | Baby cot | 24/02/02 | 6500 | 15 |
| 7 | Royal Finish | Office Table | 20/02/02 | 18000 | 30 |
| 8 | Royal tiger | Sofa | 22/02/02 | 31000 | 30 |
| 9 | Econo sitting | Sofa | 13/12/01 | 9500 | 25 |
| 10 | Eating Paradise | Dining Table | 19/02/02 | 11500 | 25 |

ARRIVALS

|  |  |  |  |  |  |
| :--- | :--- | :--- | :---: | :--- | :--- |
| NO |  |  | ITEMNAME | TYPE |  |
| DATE OF STOCK |  |  |  |  |  |
| PRICE | DISCOUNT |  |  |  |  |
| 1 | Wood Comfort | Double Bed | $23 / 03 / 03$ | 25000 | 25 |
| 2 | Old Fox | Sofa | $20 / 02 / 03$ | 17000 | 20 |
| 3 | Micky | Baby cot | $21 / 02 / 03$ | 7500 | 15 |

A. To show all information about the Baby cots from the FURNITURE table.
B. To list the ITEMNAME which are priced at more than 15000 from the FURNITURE table.
C. To list ITEMNAME and TYPE of those items, in which date of stock is before 22/01/02 from the FURNITURE table in descending of ITEMNAME.
D. To display ITEMNAME and DATEOFSTOCK of those items, in which the discount percentage is more than 25 from FURNITURE table.
E. To count the number of items, whose TYPE is "Sofa" from FURNITURE table.
F. To insert a new row in the ARRIVALS table with the following data:

```
14,"Valvet touch", "Double bed", {25/03/03}, 25000,30
```

G. Give the output of following SQL statements

Note: Outputs of the above mentioned queries should be based on original data given in both the tables i.e., without considering the insertion done in (f) part of this question. $1 / 2 \times 4=2$

1. Select COUNT(distinct TYPE) from FURNITURE;
2. Select MAX(DISCOUNT) from FURNITURE,ARRIVALS;
3. Select $\mathrm{AVG}(\mathrm{DISCOUNT})$ from FURNITURE where TYPE="Baby cot";
4. Select $\operatorname{SUM}$ (Price) from FURNITURE where DATEOFSTOCK $<\{12 / 02 / 02\}$;

Q3 Write SQL queries for (i) to (vi) and write the outputs for the SQL queries mentioned shown in (g1) to (g4) parts on the basis of tables ITEMS and TRADERS $1 * 6=6$
Table Items

| CODE | INAME | QTY | PRICE | COMPANY TCODE |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1001 | DIGITAL PAD 12i | 120 | 11000 | XENITA | T01 |
| 1006 | LED SCREEN 40 | 70 | 38000 | SANTORA | T02 |
| 1004 | CAR GPS SYSTEM 50 | 21500 | GEOKNOW | T01 |  |
| 1003 | DIGITAL CAMERA 160 | 8000 | DIGICLICK | T02 |  |
| 1005 | PEN DRIVE 32GB | 600 | 1200 | STOREHOME |  |
|  |  |  |  |  |  |

## Table: TRADERS

TCode TName
T01
T03
T02 BUSY STORE CORP
DISP HOUSE INC

## CITY

MUMBAI
DELHI
CHENNAI
i) To display the details of all the items in the ascending order of item names (i.e. INAME).
ii) To display item name and price of all those items, whose price is in range of 10000 and 22000 (both values inclusive).
iii) To display the number of items, which are traded by each trader. The expected output of this query should be:

T01 2
T02 2
T03 1
iv) To display the price, item name and quantity (i.e. qty) of those items which have quantity more than 150 .
v) To display the names of those traders, who are either from DELHI or from MUMBAI.
vi) To display the names of the companies and the names of the items in descending order of company names.
$1 / 2 \times 4=2$
g1) SELECT MAX(PRICE), MIN(PRICE) FROM ITEMS;
g2) SELECT PRICE*QTY AMOUNT FROM ITEMS WHERE CODE-1004; g3) SELECT DISTINCT TCODE FROM ITEMS;
g4) SELECT INAME, TNAME FROM ITEMS I, TRADERS T WHERE I.TCODE=T.TCODE AND QTY<100;

Q4 Research on the topic "IMPORTANCE OF MOBILE APPLICATIONS IN EVERYDAY LIFE". Find out ten such applications and their use. Prepare a report to justify it's importance

Q5 Define the following terms: -
a. Cyber Crime.
b. Plagiarism
c. Data Encryption
d. Digital footprint

Q6 Why are privacy settings of a social networking site so important?
Q7 What is a spam? Why has it become a big internet issue? ..... 2
Q8 List the safety rules for web browsing. ..... 2
Q9 Pharming and Phishing are the examples of potential security issues. Explain. ..... 2
Q10 Consider the following python programs and answer the following: ..... $2 * 4=8$
a. $\mathrm{N}=\operatorname{int}($ input("Enter number ")) sum=0
$\mathrm{i}=1$
while $\mathrm{i}<\mathrm{N}$ :
if $\mathrm{i} \% 2=0$ :
sum=sum+i
$\mathrm{i}=\mathrm{i}+1$
print (sum)
i. What is the output when input value is 5 ?
ii. What is the output when the input value is 0 ?
b. L=["These","are","a",["few","words"],"that","we","will","use"]

AL=L[3:4]
$\mathrm{BL}=\mathrm{L}[0:: 2]$
print (AL)
print (BL)
c. adict=\{"Bhawna":1,"Sahil":2,"Naman":10,"Rahul":20\}
temp=0
for value in adict.values():
temp=temp+value print(temp)
b. adict=\{"Bhawna":1,"Sahil":2,"Naman":10,"Rahul":20\}
temp=""
for key in adict:
if temp<key:
temp=key
print(temp)
11. Write the Python program to do the following: $3 * 9=27$
a. Area of triangle is given by the formula: $\sqrt{ }(\mathrm{s} a)(\mathrm{s}-\mathrm{b})(\mathrm{s}-\mathrm{c})$ where $\mathrm{a}, \mathrm{b}$ and c are the sides of the triangle and $\mathrm{s}=(\mathrm{a}+\mathrm{b}+\mathrm{c}) / 2$. Calculate the area of the triangle.
b. To calculate Pearson's Correlation Coefficient from the given set of values
c. That reads a string and checks whether it is a palindrome string or not.
d. To generate a list of elements of Fibonacci Series.
e. To calculate the amount payable after sales discount, which is $12 \%$ upto the sales amount of 25000 and $18.5 \%$ on amounts above that. There is a sales tax payable (in range $5-12 \%$ ) at the discounted price
f. To calculate Standard Deviation from the given set of values. The number of entered values should not be less than 5 .
g. To calculate average of numbers entered by the user.
h. To read an integer > 1000 and reverse the number.
i. To create a list and search a particular element with its position in the list

