



Term-2 PRE-BOARD EXAMINATION, feb (2021-22)
SUBJECT – INFORMATICS PRACTICES(065)
CLASS – XII

Time Allowed: 2 hrs

Maximum Marks: 35

General Instructions:

1. The question paper is divided into 3 sections – A, B and C
2. Section A, consists of 7 questions (1-7). Each question carries 2 marks.
3. Section B, consists of 3 questions (8-10). Each question carries 3 marks.
4. Section C, consists of 3 questions(11-13). Each question carries 4 marks.
5. Internal choices have been given for question numbers – 1 , 3, 8 and 12.

Section A

Section A, consists of 7 questions (1-7). Each question carries 2 marks.

Q.1	<p>During an international exchange programme the students need to connect to a classroom in Russia using Skype. Samarth helps the students to connect. Which type of network service is being used ?Explain</p> <p>Or</p> <p>Define hub and write its functions and types.</p>
Q.2	<p>Write one advantage of bus topology of network. Also, illustrate how four computers can be connected with each other using star topology of network?</p>
Q.3	<p>What will be the output of the following command?</p> <ol style="list-style-type: none">i) SELECT POWER(10,2)ii) SELECT ROUND(14.4743, 1)iii) SELECT MOD(15,3)iv) SELECT TRUNCARE(6543,768,2) <p>Or</p> <ol style="list-style-type: none">I. Consider the decimal number x with value 8459.2654. Write commands in SQL.<ol style="list-style-type: none">i) To round it off to a whole number.ii) To round it to 2 places before the decimal.II. Given a number n, write commands in SQL to<ol style="list-style-type: none">i) compute cube of this number using SQL function.ii) compute remainder on division of n by another number m using SQL function.

Q.4

Create the given table with following details

Table : Order

Column Name	Constraint
OrderId	Primary Key
OrderDate	Not Null
OrderAmount	
StoreId	

Also list the difference between unique key and primary key constraint

Q.5

- I. List the difference between static and dynamic website.
- II. Mr. Chandervardhan is not able to identify the domain name in the given URL. Identify and write it for him.
<http://www.cbsenic.in/aboutus.htm>

Q.6

Anita has been given the below given orders table:

```
+-----+-----+
| oid  | cuid | item  |
+-----+-----+
| 1001 | 101  | Fan   |
| 1002 | 101  | Pen   |
| 1003 | 102  | Book  |
| 1004 | 103  | Pencil|
| 1005 | 104  | Pen   |
| 1006 | 104  | Fan   |
+-----+-----+
```

- i) How will she generate the following output using group by and aggregate functions where in the count of items for cuid are arranged in descending order?
- ii) How will she count the number of distinct items in the orders table?

```
+-----+-----+
| cuid | count(*) |
+-----+-----+
| 101  | 2        |
| 104  | 2        |
| 102  | 1        |
| 103  | 1        |
+-----+-----+
```

Q.7

- i. What is the purpose of GROUP BY clause in MySQL? How is it different from ORDER BY clause?
- ii. Shanya Khanna is using a table EMPLOYEE. It has the following columns:

Admno, Name, Agg, Stream [column Agg contains Aggregate marks]

She wants to display highest Agg obtained in each Stream.

She wrote the following statement:

```
SELECT Stream, MAX(Agg) FROM EMPLOYEE;
```

But she did not get the desired result.

Rewrite the above query with necessary changes to help her get the desired output.

Section B

Section B, consists of 3 questions (8-10). Each question carries 3 marks.

Q.8

Write the output of the following SQL queries:

- i) Select concat(left (' india is great ',6), substr(' india is great ',10,5)
- ii) select power(instr('abcd412','1'),3);
- iii) select length(substr(lower('abc 123'),1,3));

OR

Consider the following tables

Table : STOCK

ICODE	INAME	DCODE	QTY	UNITPR	STKDATE
444	Drawing Copy	101	110	21	31-July-2010
445	Sharpener Camlin	102	235	3	01-Aug-2010
450	Eraser Natraj	101	40	2	17-Aug-2010
452	Gen Pen Montex	103	50	5	30-Dec-2009
457	Geometry Box	101	35	45	15-Nov-2009
467	Parker Premium	102	60	205	27-Oct-2009
469	Office File	103	32	25	13-Sep-2010

- i. To fetch last two characters from the column INAME.
- ii. To display the name of the weekday(like monday,tuesday...) of STKDATE.
- iii. To display the position of 'p'in the column INAME

Q.9

How are aggregate functions different from other SQL functions?

Write two different SQL queries (using group by

1.along with having clause

2. Along with where clause)..

Empno	Name	Dept	Salary	CITY
1	Ram Singh	IT	15000	Delhi
2	Shyam Singh	HR	18000	Noida
3	Nidhi Gupta	IT	9000	U.P
4	Pooja Sharma	EXE	24000	GOA
5	Rohan Malik	HR	20000	DELHI

Q.10

Ritu is confused while executing sysdate() and now() functions. Help her to understand the concept of these functions with suitable examples.Did it accept any parameters?mention

Section C

Section C, consists of 3 questions(11-13). Each question carries 4 marks.

Q.11 Consider the table sales given below. Write commands in SQL
A Salesman relation is given below:

Scode	Sname	Address	Dojoin	Sales	Area
100	Amit	Delhi	2017/09/29	5000.90	East
101	Sushant	Gurgaon	2018/01/01	7000.75	East
102	Priya	Noida	2018/04/25	3450.45	West
103	Mohit	Delhi	2018/11/03	6000.50	North
104	Priyanshi	Delhi	2019/12/15	8000.62	North

- (i) To display details of all salesmam of East and West area in ascending oreder of sname.
- (ii) TO display the area wise total of sales amount.
- (iii) To display the area-wise count of salesmen for those areas who have more than 1 salesman.
- (iv) To display the Sname Sname and Dojoin of the salesman who has joined most recently.

Q.12 Consider the Vehicles table given below and perform the following

A relation Vehicles is given below:

V_no	Type	Company	Price	Qty
TT25	Wagon	Maruti	200000	20
J0043	Jeep	Mahindra	3500000	19
SV98	SUV	Mitsubishi	5000000	20
MV76	Mini van	Datsun	7800000	25
SV599	SUV	Maruti	8000000	26
MV880	Mini van	Mahindra	5600000	19

Find out the output of the following SQL commands :

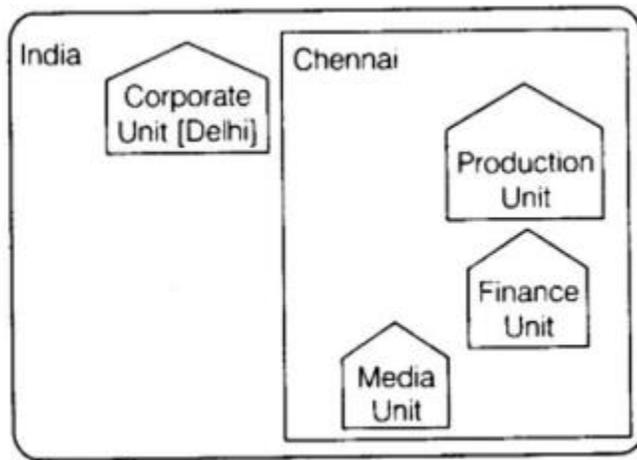
- i. `select avg(price) from vehicles where name"%n";`
- ii. `select count(type) from vehicles group by company;`
- iii. `select sum(price) from vehicles group by company having qty<20.`
- iv. `select type, left(company, 3) from vehicles where qty>20;`

OR

Write the SQL functions which will perform the following operations:

- i. To display the position of space character in your name (myname).
- ii. To display day, month and year from today's date.
- iii. To compute 5 raised to the power remainder on dividing 15 by 4.
- iv. To display the leftmost as well as the rightmost character of the string 'PYTHON'.

Q.13 China Middleton Fashion is planning to expand their network in India, starting with two cities to provide infrastructure for distribution of their products. The company has planned to setup their main office in Chennai at three different locations and have named their offices as Production Unit, Finance Unit and Media Unit. The company has its Corporate Unit in Delhi. A rough layout of the same is as follows:



Approximate distance between these units is as follows:

From	To	Distance
Production Unit	Finance Unit	70 m
Production Unit	Media Unit	15 m
Production Unit	Corporate Unit	2112 m
Finance Unit	Media Unit	15 m

In continuation of the above, the company experts have planned to install the following number of computers in each of these units.

To	Distance
Production Unit	150
Finance Unit	35
Media Unit	10
Corporate Unit	30

(i) Suggest the kind of network required (out of LAN, MAN, WAN) for each of the following units.

- (a) Production Unit and Media Unit
- (b) Production Unit and Finance Unit

(ii) Which of the following devices will you suggest for connecting all computers with each of their office units?

- (a) Switch/Hub
- (b) Modem
- (c) Telephone

(iii) Suggest a cable/wiring layout for connecting the company's local office units located in Chennai.

	Also, suggest an effective method/technology for connecting the company's office unit located in Delhi	
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