Subjective Practice Paper-2
(Unsolved)

Section A

1. a. SMTP: Simple Mail Transfer Protocol
   b. POP: Post Office Protocol
   c. FTP: File Transfer Protocol
   d. VoIP: Voice over Internet Protocol

2.

Static Web page	Dynamic Web page
1. Content of this type of webpage cannot be changed at run time.	1. Content of this type of webpage can be changed at run time.
2. No interaction with server's database is possible in case of static web pages.	2. Interaction with server's database is possible in case of dynamic web pages.

3. a. `SELECT ROUND(8459.2654);`
   b. `SELECT ROUND(8459.2654,-2);`

4. The order by clause is used to show the contents of a table/relation in a sorted manner with respect to the column mentioned after the order by clause. The contents of the column can be arranged in ascending or descending order.
   The group by clause is used to group rows in a given column and then apply an aggregate function e.g. max(), min() etc. on the entire group.

5. a. 4
   b. 24

Section B

6. a. In a LAN, network devices are connected over a relatively short distance. They are generally, privately owned networks within a single building or campus, of up to a few kilometers in size. Home Wi-Fi networks and small business networks are common examples of LANs.
   b. A Personal Area Network is a computer network organized around an individual person. Personal area networks typically involve a mobile computer, a cell phone and/or a hand-held computing device such as a PDA and are used to transfer files including email and calendar appointments, digital photos and music, etc.

c. A cookie is a text file, containing a string of information, which is transferred by the website to the browser when we browse it. The computer stores it in a file located inside the web browser.

7. a. `SELECT COMPANY, SUM(PRICE) FROM STATIONARY GROUP BY COMPANY HAVING COUNT(*)>1;`

   b. `SELECT S_ID, STATIONARYNAME FROM STATIONARY ORDER BY S_ID;`

   c.

STATIONARYNAME	PRICE
Pencil	6
Pencil	5
Gel Pen	15

8. a. `SELECT INSTR ('PREOCCUPIED', 'CUP');`

   b. `SELECT LEFT ('PREOCCUPIED',4);`

   c. `SELECT UPPER("PREOCCUPIED");`

9.

Count()	Count(*)
When the argument is a column name or an expression based on a column, COUNT() returns the number of non-NULL values in that column.	If the argument is a *, then COUNT() counts the total number of rows satisfying the condition, if any, in the table.
It returns the non-null values.	It returns the null values and duplicate values.
SELECT COUNT(column_name) FROM table_name;	SELECT COUNT(*) FROM table_name;

10. a. `SELECT CATEGORY, AVG(SALARY) FROM HOTEL GROUP BY CATEGORY HAVING AVG(SALARY)<40000;`

    b. `SELECT CATEGORY, COUNT(CATEGORY) FROM HOTEL GROUP BY CATEGORY;`

    c. 65000

Section C

11. a. `SELECT ADDRESS FROM CLUB WHERE ADDRESS LIKE "%New%";`

    b. `SELECT ROUND(FEE,1) FROM CLUB;`

    c. `SELECT UPPER(MEMBER_NAME) FROM CLUB;`

    d. `SELECT LEFT(MEMBER_NAME,4) FROM CLUB;`

    e. `SELECT MOD(AGE,2) FROM CLUB;` a. S FUN

b. 500
c. 4
d. 1002
e. unity is strength

12. Bus topology is also known as Linear Topology. In this type of topology, each node attaches directly to a common cable which acts as the backbone and therefore functions as a shared communication medium onto which various nodes are attached.
Advantages:
- Cable length is short.
- Additional nodes can be easily connected to the existing bus network at any point along the length of the transmission medium.

Disadvantages:

- Fault detection and isolation is difficult. If a node is faulty on the bus, detection of fault may have to be performed at many points on the network.
- The use of repeaters becomes mandatory to amplify the signal if the central bus length becomes too long.

Section D

13. a. LAN (Local Area Network)
b. Alpha block as it has the maximum number of computers.
c. Repeater: It should be placed between Alpha and Gamma block as the distance between Alpha and Gamma block is more than 70m.
d. Switch should be placed in each of the buildings for better traffic management.
e. Radio wave/microwave.