OUTPUT

```
mysql> CREATE TABLE communicable_diseases(
      -> serial_no INT AUTO_INCREMENT,
      -> state VARCHAR(20) NOT NULL,
      -> year INT ,
      -> month INT CHECK (month >=1 AND month <= 12),
      -> no_of_deaths INT,
      -> no_of_infections INT,
      -> PRIMARY KEY(serial_no));
Query OK, 0 rows affected (0.07 sec)
mysql> INSERT INTO communicable_diseases(state,year,month,no_of_deaths,no_of_infections)
VALUES
      -> ('Goa',2020,6,9,150),
      -> ('Goa',2021,12,5,20),
      -> ('Gujarat',2020,3,20,500),
      -> ('Gujarat',2020,4,15,700),
      -> ('Kerala',2020,3,10,200),
      -> ('Kerala',2020,5,20,300),
      -> ('Kerala',2021,1,18,150);
Query OK, 7 rows affected (0.01 sec)
Records: 7  Duplicates: 0  Warnings: 0
mysql> SELECT * FROM communicable_diseases;
+-----------+---------+------+-------+--------------+------------------+
| serial_no | state   | year | month | no_of_deaths | no_of_infections |
+-----------+---------+------+-------+--------------+------------------+
|     1 | Goa     | 2020 |    6 |         9  |              150 |
|     2 | Goa     | 2021 |    12|         5  |              20  |
|     3 | Gujarat | 2020 |    3 |         20 |              500 |
|     4 | Gujarat | 2020 |    4 |         15 |              700 |
|     5 | Kerala  | 2020 |    3 |         10 |              200 |
|     6 | Kerala  | 2020 |    5 |         20 |              300 |
|     7 | Kerala  | 2021 |    1 |         18 |              150 |
+-----------+---------+------+-------+--------------+------------------+
```

a)

```
mysql> SELECT state , AVG(no_of_deaths) AS average_deaths
      -> FROM communicable_diseases
      -> WHERE year = 2020
      -> GROUP BY state;
+---------+----------------+
| state   | average_deaths |
+---------+----------------+
| Goa     |       9.0000   |
| Gujarat |       17.5000  |
| Kerala  |       15.0000  |
+---------+----------------+
3 rows in set (0.00 sec)
```

b)

```
mysql> SELECT state, SUM(no_of_deaths) AS total_deaths
      -> FROM communicable_diseases
      -> GROUP BY state
      -> HAVING total_deaths > 10;
+---------+--------------+
| state   | total_deaths |
+---------+--------------+
| Goa     |       14     |
| Gujarat |       35     |
| Kerala  |       48     |
+---------+--------------+
3 rows in set (0.01 sec)
```

C)

```
mysql> SELECT t1.state, t1.year, max_deaths, t1.month
      -> FROM communicable_diseases t1 JOIN
      -> (SELECT state, MAX(no_of_deaths) AS max_deaths
      -> FROM communicable_diseases
      -> GROUP BY state
      -> HAVING max_deaths > 10 ) t2
      -> ON t1.state = t2.state AND t1.no_of_deaths = t2.max_deaths;
+---------+------+------------+-------+
| state   | year | max_deaths | month |
+---------+------+------------+-------+
| Gujarat | 2020 |      20 |  3       |
| Kerala  | 2020 |      20 |  5       |
+---------+------+------------+-------+
```

d)

```
mysql> SELECT * FROM communicable_diseases
      -> ORDER BY state DESC;
+-----------+---------+------+-------+--------------+------------------+
| serial_no   | state   | year | month | no_of_deaths| no_of_infections|
+-----------+---------+------+-------+--------------+------------------+
|     5 | Kerala  | 2020 |    3 |         10 |              200  |
|     6 | Kerala  | 2020 |    5 |         20 |              300  |
|     7 | Kerala  | 2021 |    1 |         18 |              150  |
|     3 | Gujarat | 2020 |    3 |         20 |              500  |
|     4 | Gujarat | 2020 |    4 |         15 |              700  |
|     1 | Goa     | 2020 |    6 |         9  |              150  |
|     2 | Goa     | 2021 |    12|         5  |              20   |
+-----------+---------+------+-------+--------------+------------------+
7 rows in set (0.00 sec)
```