

# (Practice-1)

## Q-1) CSS 2021 Q#6(c)

$$\text{Total = Bill} = \text{Rs. } 15000/-$$

$$\text{Discount} = 10\%$$

$$\text{Bill after discount} = 15000 - 10\% (15000)$$

$$= 15000 - \frac{10}{100} (15000)$$

$$= 15000 - 1500$$

$$= \text{Rs. } 13500/-$$

$$\begin{array}{r} 15000 \\ - 1500 \\ \hline 13500 \end{array}$$

$$\text{Service charges} = 10\%$$

$$\text{GST} = 17\%$$

$$= 17 + 10 = 27\%$$

$$\text{Total amount to be paid} = \text{Rs. } 13500 + 27\% (13500)$$

$$= 13500 + \frac{27}{100} (13500)$$

$$= 13500 + 3645$$

$$= \text{Rs. } 17145$$

$$\begin{array}{r} 13500 \\ + 3645 \\ \hline 17145 \end{array}$$

Total amount to be paid is  
**Rs. 17145.**

## Q-2) CSS 2019 Q#6(c)

$$\text{Cost in 2018} = \text{Rs. } 264$$

$$\% \text{ more than 2018} = 20\%$$

$$\text{Cost in 2013} = ?$$

Let,

$$\text{cost in 2013} = x$$

Then,

$$x + 20\% (x) = 264$$

$$x + \frac{20}{100} (x) = 264$$

$$x + 0.2x = 264$$

$$1.2x = 264$$

$$x = \frac{264}{1.2}$$

$$x = \text{R.S } 220$$

The cost for hiring a car in 2013 for 2 days is R.S 220.

**Q-3:- Define eclipse. Explain solar and lunar eclipse also.**

**Answer:-**

→ **Eclipse:-**

Eclipse occurs when two heavenly bodies e.g. Moon and planet move and one heavenly body casts a shadow over the other.

These are two types of eclipse:-

i) Solar eclipse

ii) Lunar eclipse

Let,

$$\text{cost in 2013} = x$$

Then,

$$x + 20\% (x) = 264$$

$$x + \frac{20}{100} (x) = 264$$

$$x + 0.2x = 264$$

$$1.2x = 264$$

$$x = \frac{264}{1.2}$$

$$x = \text{R.S } 220$$

The cost for hiring a car in 2013 for 2 days is R.S 220.

**Q-3:- Define eclipse. Explain solar and lunar eclipse also.**

**Answer:-**

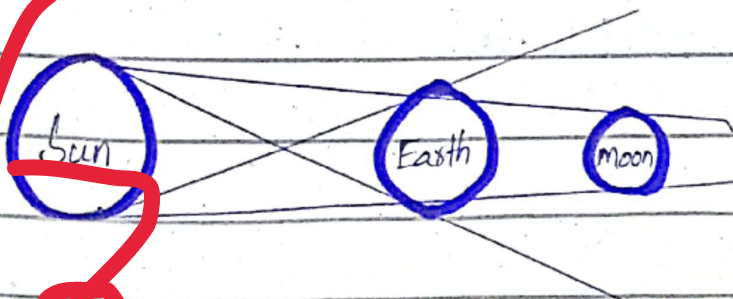
→ **Eclipse:-**

Eclipse occurs when two heavenly bodies e.g. Moon and planet move and one heavenly body casts a shadow over the other.

These are two types of eclipse:-

i) solar eclipse

ii) lunar eclipse



These are following types of lunar eclipses.

- penumbral lunar eclipse
- partial lunar eclipse
- total lunar eclipse

Discuss this in more detail

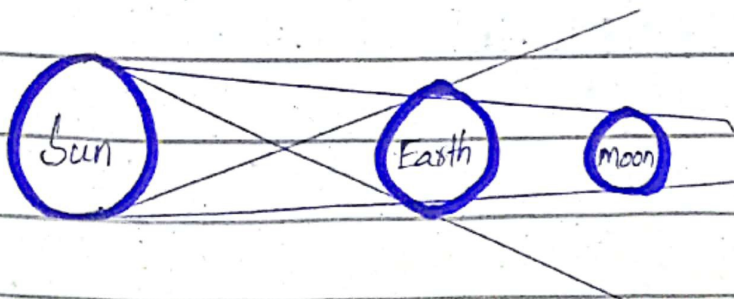
Q-4:- CSS 2016 Q # 7 (b)

### Earthquake:-

"The shaking of Earth's surface from sudden release of energy as a result of seismic waves."

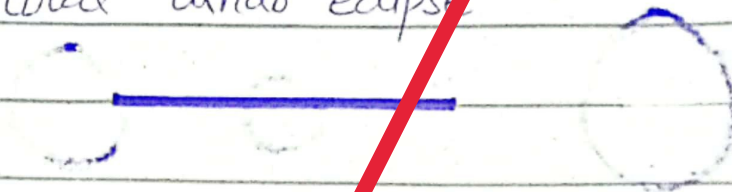
### Richter scale:-

It is an instrument used to record the intensity / severity of earthquake. It is the algorithmic scale, which is numbered from 0 to 10. The graph on which magnitude of the earthquake is plotted called as the



There are following types of lunar eclipse.

- penumbral lunar eclipse
- partial lunar eclipse
- total lunar eclipse



Q-4:- CSS 2016 Q # 7 (b)

### Earthquake:-

"The shaking of Earth's surface from sudden release of energy as a result of seismic waves."

### Richter scale:-

It is an instrument used to record the intensity / severity of earthquake. It is the algorithmic scale, which is numbered from 0 to 10. The graph on which magnitude of the earthquake is plotted called as the

## Formation of tsunami:-

There are four main stages of tsunami formation: initiation, split, amplification, run-up.

### i) Initiation:-

When two parts of the earth's crust move against each other, they can lead to earthquakes under the sea. These earthquakes are the most causes of tsunamis that happen in the world. The

**Global Historical Tsunami database** says that over **80%** of tsunamis that happened since 1900 came from earthquakes.

### ii) Split:-

After the initiation, the water starts to move far and wide, making long waves. During this stage, a tsunami wave is divided into two components as it encounters different characteristics of the ocean. First component is ocean wave and second one is coastal wave.

### iii) Amplification:-

This stage occurs as the wave approaches the coastline and meets

shallower waters. At this time, tsunami waves undergo significant changes in their characteristics including wave height and energy concentration.

#### iv) Run-up:-

At the final stage of tsunami formation, the amplified tsunami wave reaches the coastline and interacts with the land. As a result, the water rushes inland and causes widespread flooding and devastation.

### Tsunami characteristics:-

- **Long wavelength**:- They are characterized by long wavelengths, which refer to the distance between successive wave crests.

- **High Speed**:- They can reach speeds of tens to hundreds of miles per hour.

- **Great destructive potential**:-

Destructive tsunamis carry a tremendous amount of water, often resulting in a surge reaching far inland upon landfall.

Q\_6 = COMPUTER is written as RFUVQNPC. How will MEDICINE be written in code language?

A B C D E F G H I J K L M N  
O P Q R S T U V W X Y Z

C = R → 15 steps forward

O = F → 17 steps forward

M = U → 8 steps forward

P = V → 6 steps forward

U = Q → 4 steps backward

T = N → 6 steps backward

E = P → 11 steps forward

R = C → 15 steps backward

So, Medicine is coded as:

M = B → 15 steps forward

E = V → 17 steps forward

D = L → 8 steps forward

I = O → 6 steps forward

C = Y → 4 steps backward

I = C → 6 steps backward

N = Y → 11 steps forward

E = P → 15 steps backward

MEDICINE is coded as ~~MB~~ BVLOYCYP.



Q-7:- What are pesticides? Write also the types of them and their lethal effects.

## Pesticides:-

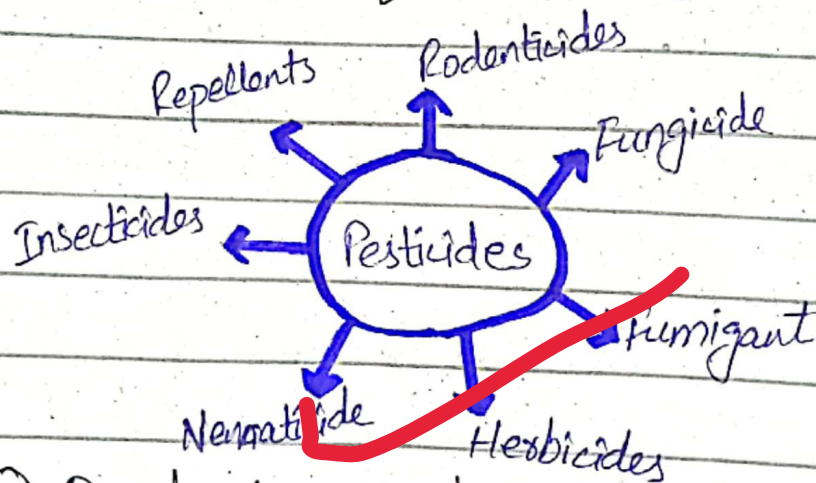
Pesticides are the chemicals which help in preventing, destroying and mitigating any pests.

Pests can be defined as the organisms which causes losses to mankind.

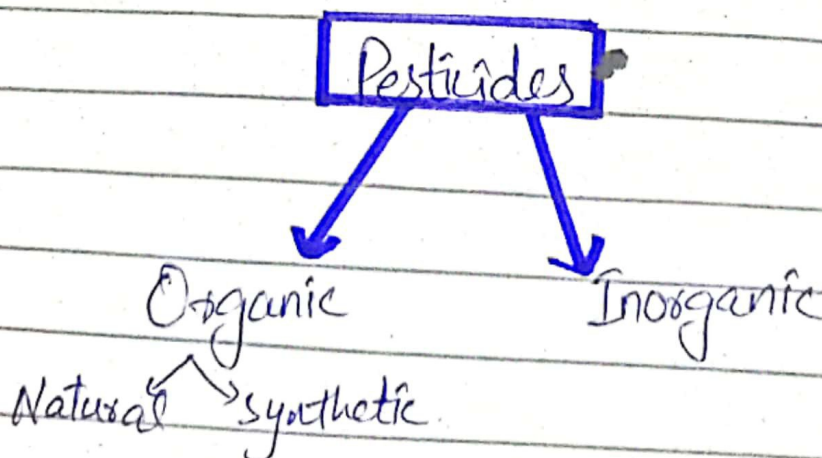
For example: ✓ weeds, insects, rodents etc.

## Types of pesticide

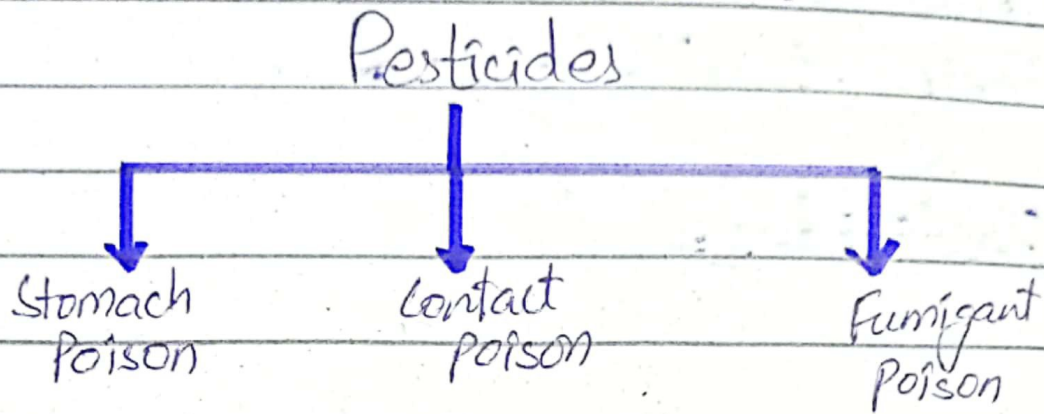
① On basis of pest target:-



② On basis of chemical nature:-



③ On basis of mode of entry:-



## Hazards of pesticides:-

→ Pesticides are used to kill harmful insects but it kills beneficial insects too.

→ They can ~~produce~~ resistance. Many pests have become resistant due to over-use of pesticides.

→ They also affect the human health adversely.

→ Their side effects on humans include respiratory problems etc.

→ These can contaminate air and contribute to spread air pollution.

→ These affect groundwaters too.

→ Waterbodies are not safe due to the usage of pesticides.