

## Differentiate between the occurrence of lunar and solar Eclipse?

Answer:-

### Eclipse:

An Eclipse is formed when one heavenly body such as moon or planet passes through to another heavenly body.

### Two types of Eclipse occurs:

- i) Lunar Eclipse
- ii) Solar Eclipse

### Lunar Eclipse:

This eclipse occurs when earth comes between moon and sun. As we know, moon is an artificial satellite of Earth which borrows light from sun.

When the earth comes between moon and sun, the light of sun passes on earth, it shadows

reflects on moon, which makes moon partially or completely invisible to earth. The shadow of earth contains two important regions, one is **umbra** and other is **penumbra**.

### Types of Lunar Eclipse:

#### i) **Penumbral Lunar Eclipse:**

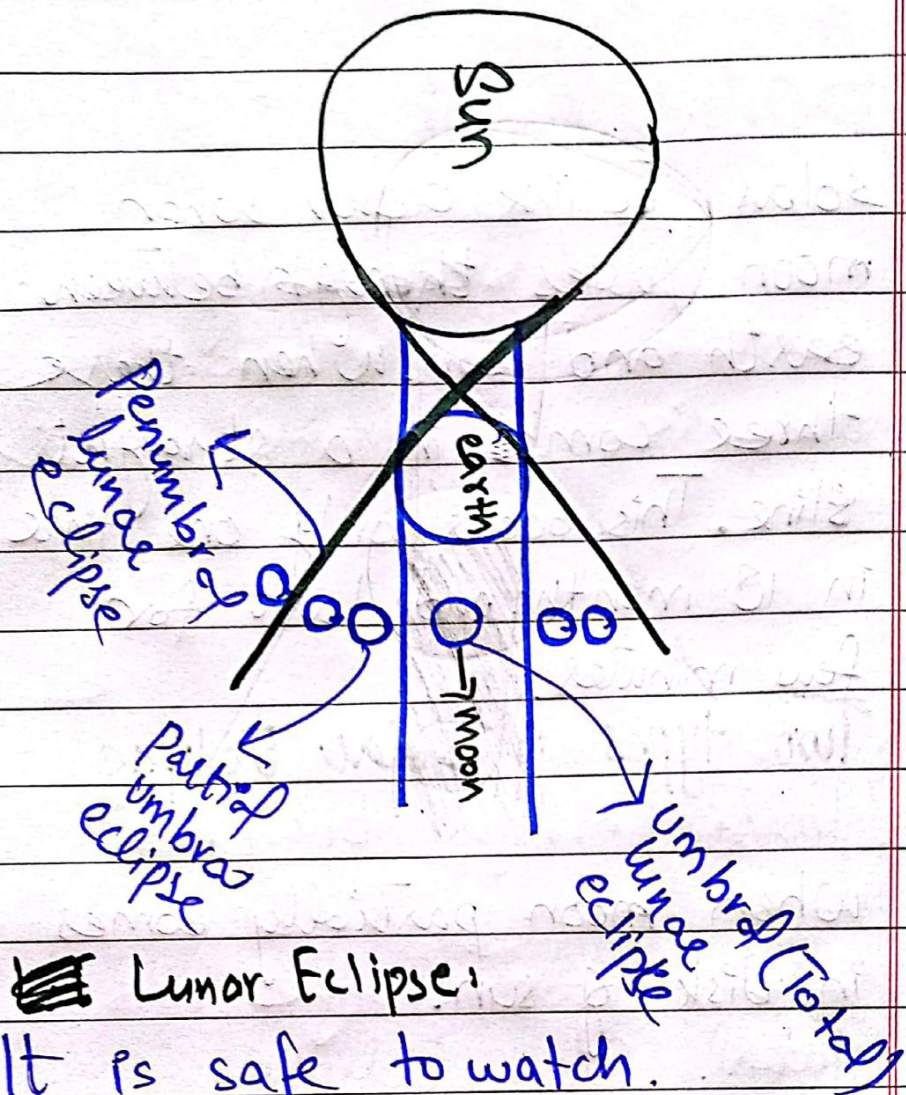
This occurs when moon passes through penumbral region of earth. In this phase, moon <sup>slightly</sup> changes its color.

#### ii) **Umbra Lunar Eclipse:**

This occurs when <sup>moon</sup> ~~earth~~ passes through umbra's shadow of earth.

#### iii) **Total Lunar Eclipse:**

This occurs when moon passes through the umbral region of earth, it becomes invisible.



**Lunar Eclipse:**

- \* It is safe to watch.
- \* When new moon occurs, it happens.
- \* Last for few minute.
- \* Visible from earth at night.

**Solar Eclipse:**

- \* It is not to safe watch with naked eye, wear goggles.
- \* It lasts for few & minute, occurs in <sup>every</sup> 18 month
- \* It occur on smallest region earth wide (160km), long (16,100km)

# Solar Eclipse:

Solar Eclipse occurs when moon passes ~~through~~ between earth and sun. When these three come in a straight line. This occurs only one time in 18 months and last for few minutes.

## Two types of solar Eclipse

### i) Partial solar Eclipse

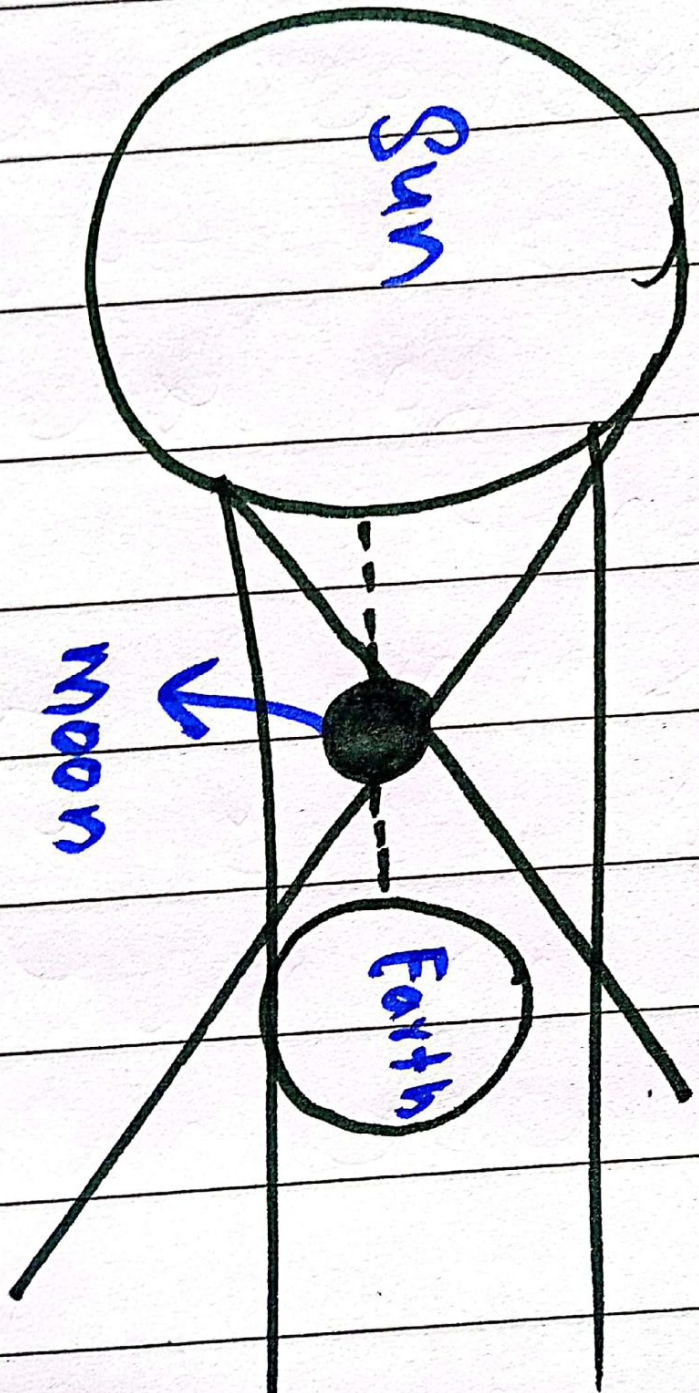
When moon partially comes in disk of sun:

### ii) Total solar Eclipse

When moon completely covers the sun, and shadow of moon reflects on sun. When sun, moon and earth come in straight line

### iii) Annular solar Eclipse

When moon looks smaller than sun, it makes ring like shape.



→ Total solar Eclipse

Q) Briefly describe the Big Bang theory.

Answer:-

The big bang theory is one of most supported or accepted theory regarding the evolution of universe.

It was suggested by Georges Lemaitre, in 1920, that that beginning of universe was result of exploding of singular atom known as primordial atom and cosmic egg.

The universe was started about 13.7 billion years ago by explosion of singularity. It was thousands of times smaller than pinhead. It more denser than anything which one can imagine. When singularity is exploded, in the fraction of second, matter started expanding. The matter

was divided into matter and anti matter. They two opposite matter started fighting each other, largely matter destroyed. In, one second, the temperature started cooling down. The matter which ~~ex~~ left was became proton and neutrons. When the more temperature cooled down, the protons and neutrons started to combine and make first atom named hydrogen. When the atoms of hydrogen made, due to gravitational pull matter falls apart and made the stars, universe we know today. In this way, universe came into being.

# The Big Bang

↓  
Singularity

↓  
Expansion

→ Formation of Fundamental Forces

→ Formation of Particles

↓  
Formation of Atoms

↓  
Galaxy formation

↓  
Cosmic Evolution

↓  
Formation of Earth and life

Big Bang

Zero seconds

Quantum fluctuations

inflation

Proton formed

Nuclear Fusion Begins

Nuclear Fusion Ends

Cosmic Microwave Background

Neutral Hydrogen Forms

Modern Universe