

## **Prelim Bits 14-01-2019**

### **Super Blood Wolf Moon**

- It is a phenomenon wherein the Moon appears particularly large and bright with a reddish glow.
- A supermoon happens when the full moon coincides with the moon's closest approach to Earth in its orbit (perigee).
- It makes the moon appear a little brighter and closer than normal.
- Blood moon during a total lunar eclipse happens when the Earth passes in between the Sun and the Moon.
- Earth blocks the Sun's light from falling directly on the Moon so the only light the moon gets is reflected off of Earth.
- Earth's atmosphere scatters blue so only the red light gets reflected onto the Moon's surface and makes it look red.
- Wolf Moon is the name given by Native Americans to a full moon that appears in January.
- So Super Blood Wolf Moon = Full Moon + Perigee + Lunar Eclipse + January
- A lunar eclipse only takes place when there is a full Moon.

### **Collapse of a Star**

- Massive nuclear reactions at the centre of a star are hold the stars together.
- The reaction prevents it from collapsing in on itself due to the mass of the material it is made of.
- When those reactions come to an end, the star will collapse and become a smaller, denser object.
- Stars the size of our Sun will collapse to about one-hundredth of its original size, forming what is known as a white dwarf.
- However, when stars about five times bigger than the Sun collapse, there will be a supernova — the ejection of some outer material into space.
- Neutron star is the leftover and highly dense but exponentially smaller object in which the atoms of the matter the star was made of gets completely crushed.
- But if a collapsing star is bigger still, then the result of the collapse will likely be a black hole.
- A black hole is unimaginably dense and the gravitational pull of it will be so

strong that not even light will be able to escape it.

## **Magh Bihu (Bhogali Bihu)**

- Bihu is the most important festival of Assam, which is actually a set of three festivals.
- Bhogali Bihu or Maagh Bihu is celebrated during the month of January in Assam.
- It the second largest Bihu festival of Assam after Bohag Bihu.
- It marks the end of the harvest season.
- People worship Lord Indra, who according to the Hindu mythology is “God of rains and clouds”.

<b>Bihu</b>	<b>Month</b>	<b>Reason</b>
Kaati Bihu	October	Much duller than other two festival, praying for good harvest. Granaries are empty
Maagh Bihu	January	Harvest festival. Granaries are full
Bohaag/ Rongali Bihu	April	Assamese New Year & Spring festival

## **Galelian Moon**

- Io, Europa, Ganymede and Callisto - four satellites of Jupiter - are popularly referred to as the Galilean moons.
- This is because these moons were discovered by the famed Italian astronomer Galileo Galilei in January 1610.
- Galelian moons' discovery aided in our understanding of the solar system.
- Io is the innermost of the four Galilean moons and the fourth-largest moon in the solar system.
- Io's surface comprises of various colourful forms of sulphur and it is the most volcanically active body in the solar system.
- Europa is the smallest of these four satellites and is in fact slightly smaller than our moon.
- It has a surface mostly made up of water ice, and there is also evidence that it may be covering an ocean of water or slushy ice beneath.
- Ganymede is the largest moon in the solar system.
- An unique feature of Ganymede is the fact that it is the only known moon to have a magnetosphere, that is, an internally generated magnetic field.
- Callisto is the farthest of the four Galileans.
- Callisto's rocky, icy surface is about four billion years old and it is among the

oldest and most heavily cratered in our solar system.

**Source: PIB, The Hindu, Indian Express**

