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 staris the leftover and highly densebut exponentially smaller objectin 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”.

Bihu	Month	Reason
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

