SCIENCE

STD VIII

OUR UNIVERSE

1. Is the light year a unit of time or distance ?Define a light year?

Ans - A light year is the unit of distance. The distance travelled by light in one year is called light year.

Q2. What is the source of a star's energy?

Ans- *Stars are huge balls of hydrogen and Helium gases.

* Nuclear Fusion occurs to release energy.

*The lighter and the smaller hydrogen atom fuses to form bigger and heavier Helium atom.In this process,a large amount of energy is liberated.

*This energy is the source of heat and light of a star

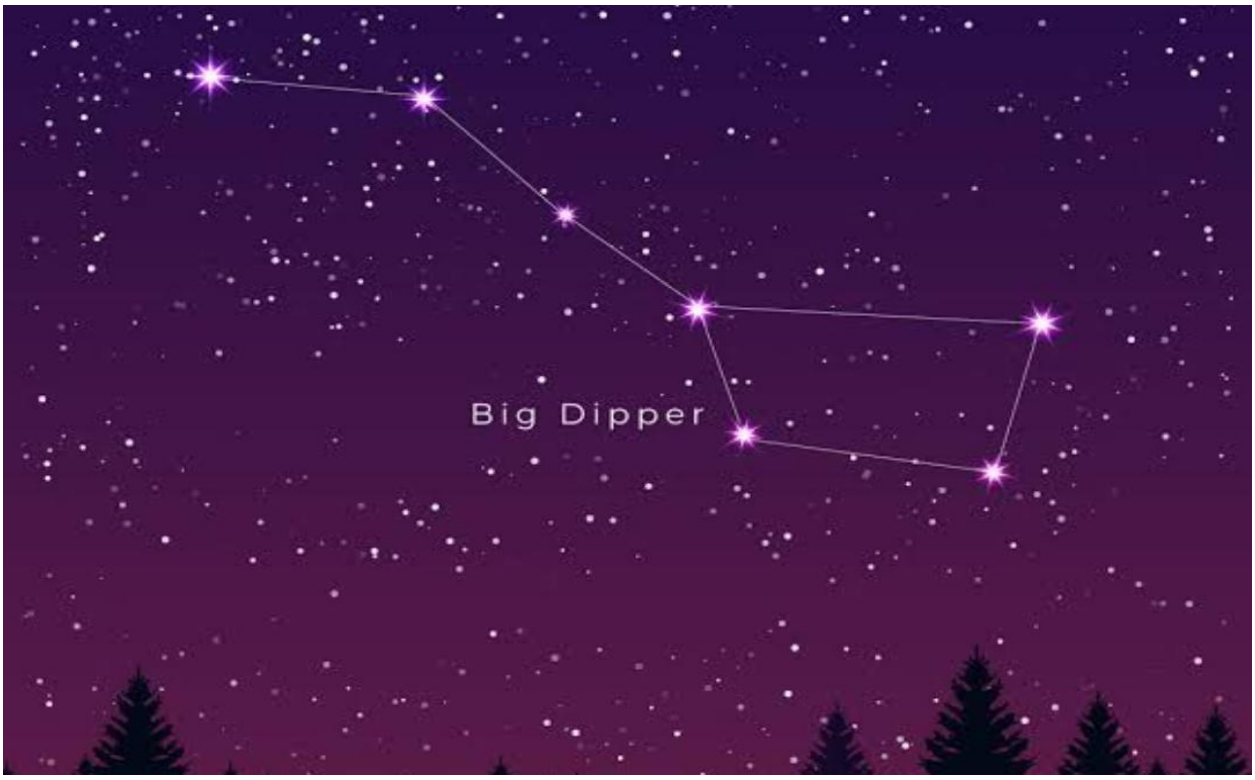
Q3. What gives Galaxies different shape? Name of few common shape of galaxies?

Ans- The distribution of celestial bodies in the Galaxy gives it different shapes like spiral,ring and elliptical.

*Milky Way is a spiral galaxy.

Q4. What is the Big Dipper?

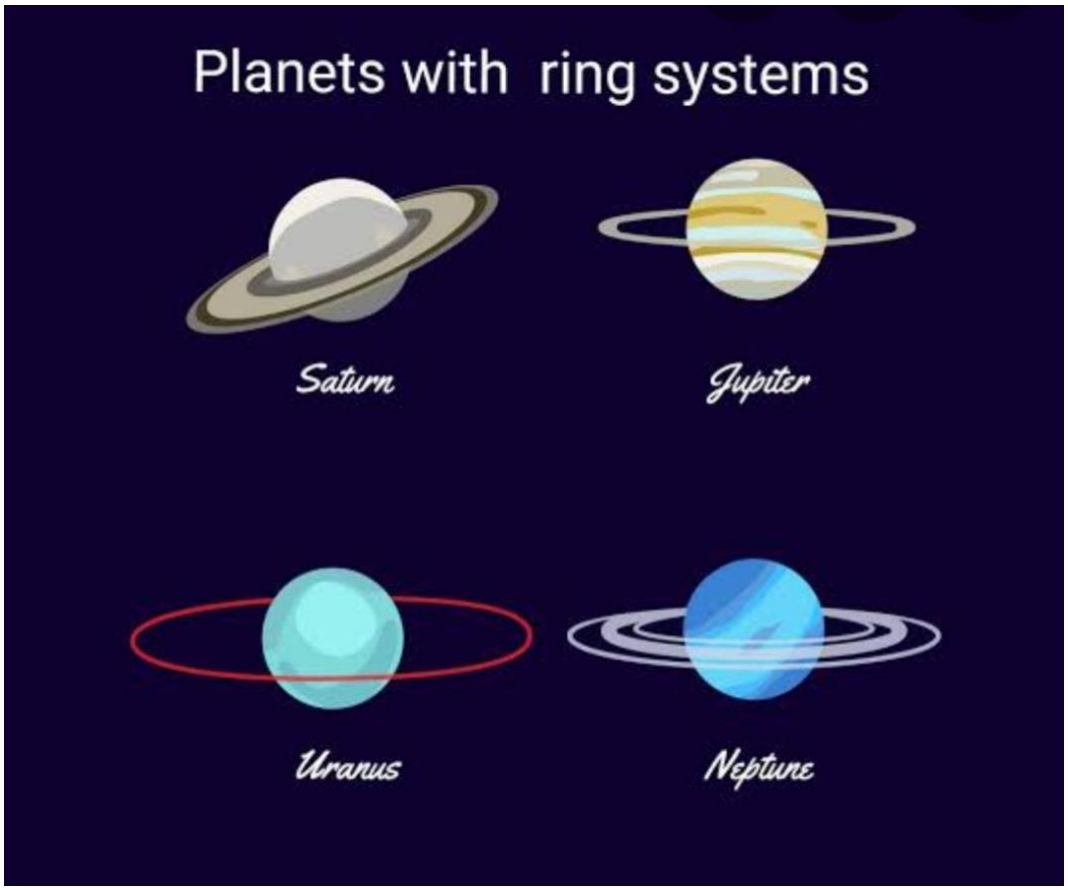
Ans- The Big Dipper is a contellation of seven bright stars, which when joint together look like Dipper.



Q5. Name the two types of planets.

A5. The two types of planets are-

*Jovian planets - They are gaseous planets and have rings around them. Eg. Jupiter, Saturn, Uranus and Neptune



*Terrestrial planets- They are rocky planets. Eg. Mercury, Venus, Earth and Mars.

Q6. Name two dwarf planets ?

Ans- Ceres and Eris are two dwarf planets.

Q8. How is a star different from a planet?

Ans- *Stars are huge celestial bodies which have their own heat and light whereas planets are the celestial bodies comparatively small and don't have their own heat and light but reflect the light coming from the Sun.

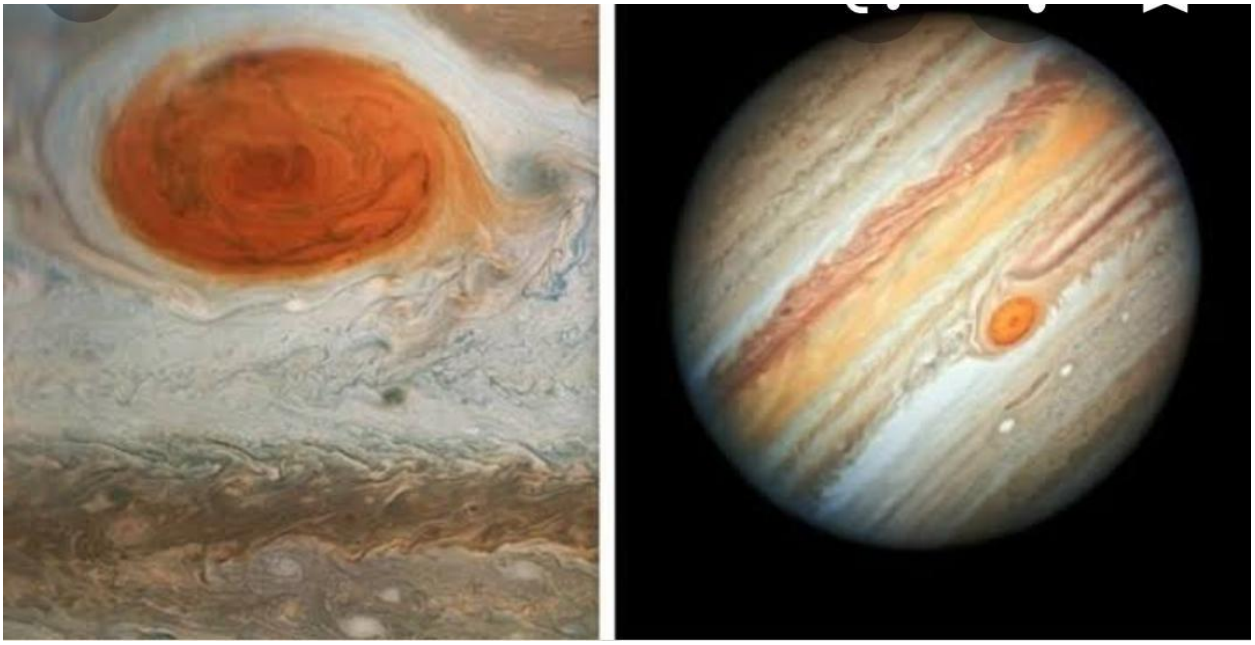
* Planets revolve around the sun(that is they are moving) while stars don't (they are constant).

*Stars have a twinkling effect while planets don't.

*Most planets have natural satellites but stars do not.

Q9. What is the huge spot on Jupiter?

Ans- The huge spot on Jupiter ia a big storm which has been raging there for more than 300 years.



Q10. Write the condition that makes a dwarf planet different from a planet.

Ans- A dwarf planet is a small, round body that orbits the sun. At the time of its formation, it could not pull in other object near its Orbit (due to its small size and thus less gravity),so it is not considered a planet.

Q11. What is the difference between a Galaxy and constellation?

Ans- GALAXY:

*A Galaxy is a group of stars and other celestial bodies bound together by gravitational force. It can have shape as spiral, ring or elliptical.

Example: Milky Way (spiral).

*A galaxy has luminous as well as non luminous objects.

CONSTELLATION:

*A group of stars which seem to form of recognisable pattern is called constellation .

*It consist of only luminous objects.

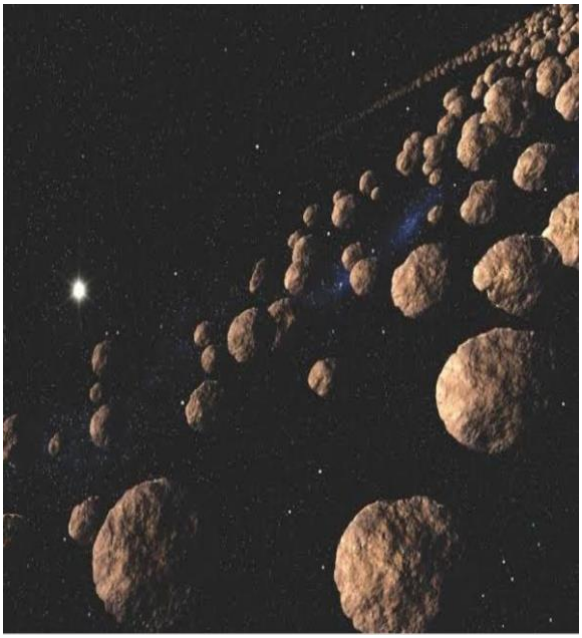
Example: Great Bear, Orion.

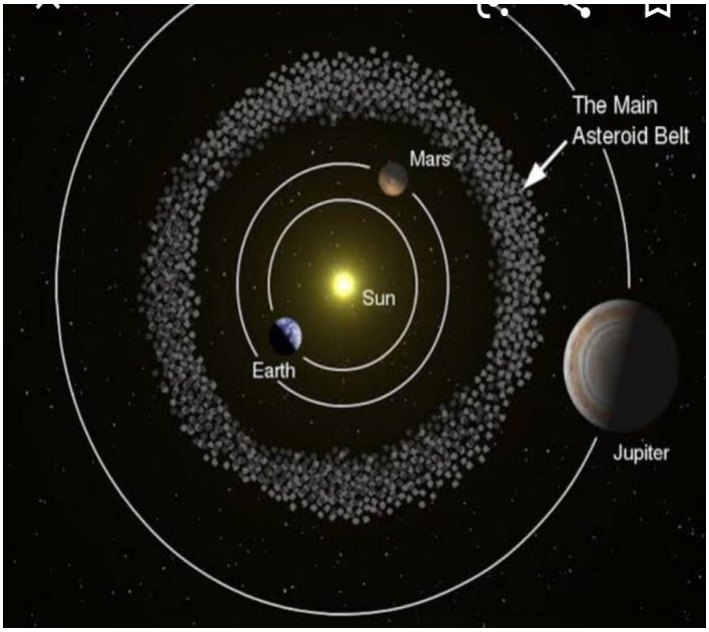
Q12. What are asteroids?

Ans- Asteroids are small, irregular, rocky bodies that revolve around the sun in a belt between the orbit of Mars and Jupiter.

*The belt is called the asteroidal belt.

* These are the rocky remains that failed to agglomerate into planets.

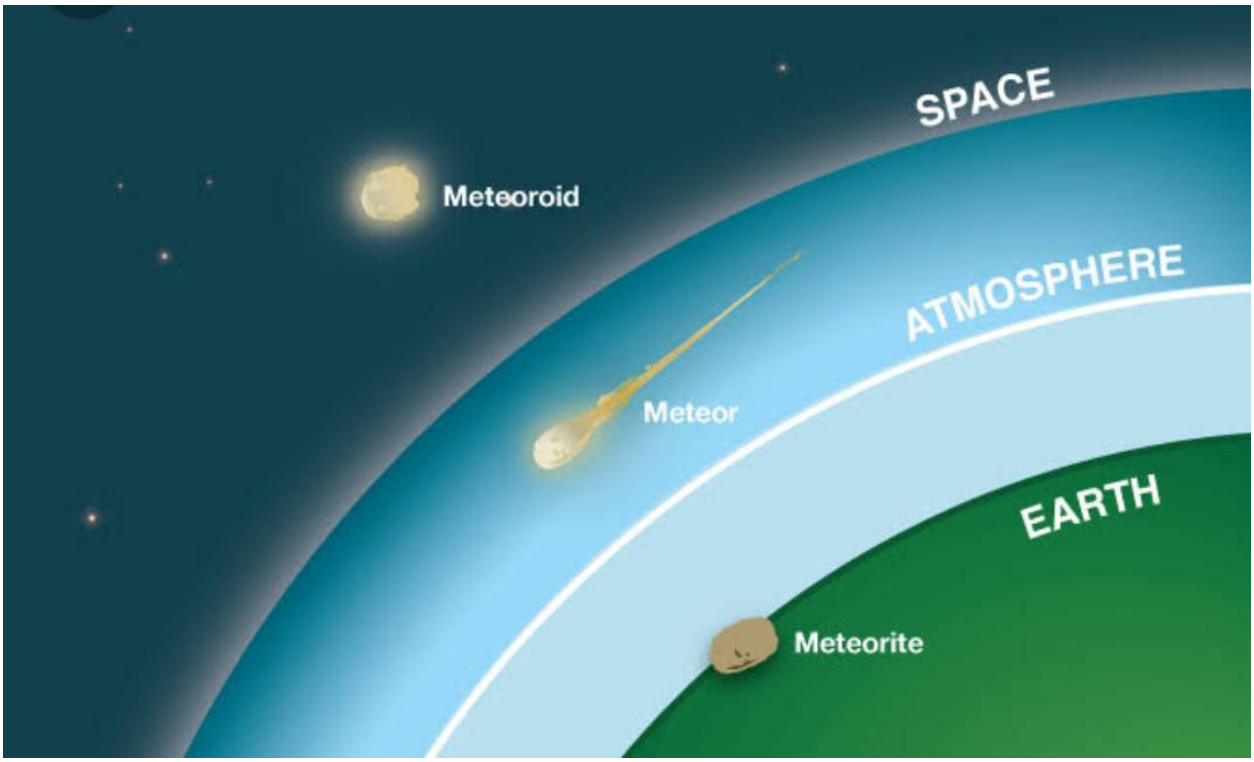




Q13 . What are meteorites? In which bodies are meteorite craters more commonly found and why?

Ans -* Meteroids which fall on a planet or a moon are called meteorites.

* Meteorite craters are commonly found on planet or moon that have no or little atmostphere and thus these rocks don't get burnt in the atmosphere due to friction and reach the surface, thus causing craters.



Q14. What is a comet ?How is its tail formed?

Ans- *A Comet is a small body of Ice and dust that moves around the sun in an elongated Orbit.

*As a comet approaches the sun it heats up and leaves behind a stream of hot, glowing gases and dust particles which appears to be the tail of the of comet. Thus comets are also called Tailed stars.

*Comet appears after a fixed period .

Example: Haley's comet appears after 76 years.

Q15. What conditions make life possible on earth ?

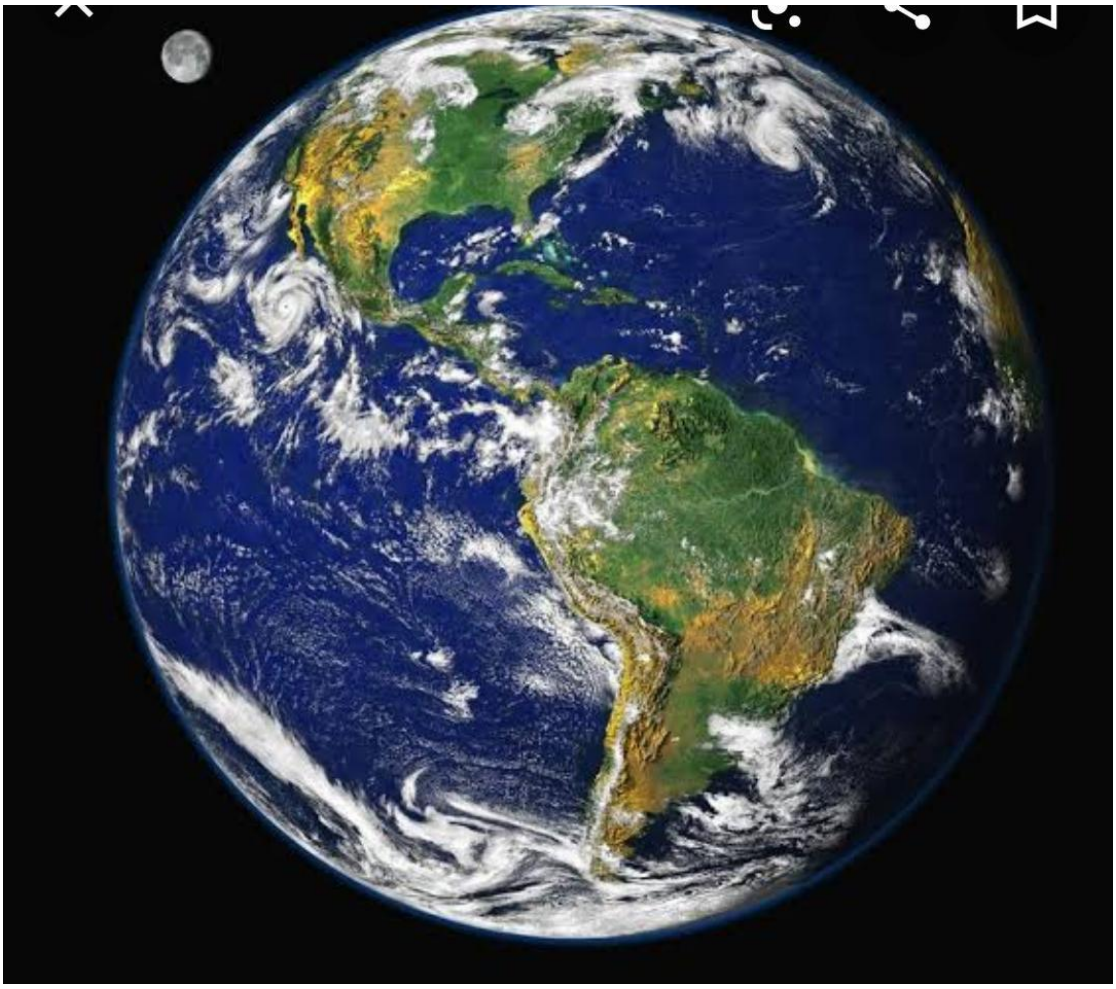
Ans -The conditions that make life possible on Earth are :-

A. The ideal distance of Earth from the Sun (favourable temperature)

B. The presence and composition of the atmosphere .It has gases like oxygen that

support life or CO_2 that makes photosynthesis possible and also keeps the Earth warm.

C. The presence of water in liquid form.



Q16. Describe how the appearance of the moon changes?

Ans- *As the moon revolves around the earth ,it keeps going in and out of the shadow of the Earth.

*We see only that part of the moon on which the sunlight falls.

* The changing shapes of the lighted part are called the phases of the moon.

When the lighted part of the moon is increasing in size from New moon to Full moon ,it is said to be waxing and when it is decreasing from Full moon to New moon, it is said to be waning.