

Question Bank

Class - VI

Chap - 1 (The Universe and the Solar System)

1) Fill in the blanks (1X5=5)

1. The milky way is barred large spiral shaped galaxy.
2. Mars is called red planet.
3. Saturn is called the Jewel planet.
4. Venus is Earth's twin.
5. Mercury is the smallest planet.

2) Write short notes on :- (2X5=10)

a) Constellations - While watching the clear night sky, you may notice various patterns formed by different groups of stars. These are called constellations. These ~~are~~ constellations were named in honour of mythological characters. They hardly bear ~~any~~ resemblance to names they are given. Today, 88 constellations are recognised.

b) Light year - A light year is the unit adopted for measuring distances in the Universe. A ray of the light travels at a speed of 300,000 km per second. A light year is the distance which a ray of light would cover in a year's time. This works out to 9.5 million million kilometres.

c) Epoch - A length of time, which is a division of a period.

d) Etymology - The word 'Universe' derives from the Old French word 'univers' which in turn derives from the Latin word 'Universum'. The Latin word was used by Cicero and ~~later~~ later Latin authors in many of the same senses as the modern English word is used.

e) Dwarf planet - Once it considered to be the ninth planet in the solar system. Pluto's orbit is ~~more~~ unusual. It is highly elongated and tilted at an angle of 17° as compared to the orbits of the rest of the planets and for these causes Pluto was declared to be a 'Dwarf Planet' by the astronomers in 2006. According to them, ~~there~~ dwarf planets cannot expel a celestial body that intrudes into its orbit and it is another cause for termed as dwarf planet Pluto, even smallest than the Moon, completes one revolution in 248 years. It has one satellite, named Charon (son of Pluto). Pluto was discovered in 1978.

3) Answer in short: — (3X5=15)

a) What is Nebula? Explain the types of Nebulae.

Ans - The word 'nebula' is derived from the Latin word for 'clouds'. A nebula is the cloudy luminous patch of gas (cosmic cloud), made up of dust, hydrogen, helium gas, whirling around the centre of an eddy in the space. More than one nebula is called nebulae.

The Nebulae belong to two types - (i) Galactic Nebulae

and (ii) Extra Galactic Nebulae. (i) Galactic Nebulae: These nebulae exist within our Milky Way. Their sizes are thousands times larger than our solar system. (ii) Extra - Galactic Nebulae: These nebulae are situated away from our Milky Way. They have a definite and similar shape. Some are spiral nebulae.

b) What are the difference between stars and planets. (Any 5 points)

A:- The ~~difference~~ difference between stars and planets are :-

<u>Stars</u>	<u>Planets</u>
1. A star is mad up of hot, burning gases	Planets are made up of solid material like rocks and stones.
2. Stars emit light of their own.	They shine because of the light they reflect from the Sun.
3. Stars twinkle.	Planets do not twinkle.
4. Stars are very big	Planets are very small as compared to the stars.
5. Stars are very hot	Temperature of planets depends on its distance from the Sun.

c) Why Venus is hotter than Mercury?

Ans:- It is all ~~for~~ for the atmosphere that venus has. The intense heat is the result of accumulation of CO_2 (Carbondioxide) and SO_2 (sulfur dioxide) gas in the atmosphere of this planet. Radiation from the Sun is absorbed by the planets (venus) and the heat emitted is trapped by the CO_2 in venus's atmosphere which create increase

of heat extensively. The atmosphere of the Venus is made up of mostly carbon dioxide which traps the heat of the Sun, making the surface temperature as high as 450°C .

d) What is Eclipse?

Ans- An eclipse is the darkening of a heavenly body when the shadow of one object in space falls on another object. 1. Lunar Eclipse: A lunar eclipse occurs when the earth (small object) is between the Sun (large light source) and the Moon, i.e., the Sun, Earth, and Moon are in a straight line with the Earth in between the Sun and the Moon. The shadow of the Earth falls on the Moon. 2. Solar Eclipse: A solar eclipse occurs when the Sun, Earth and Moon are in a straight line with the Moon positioned in between the Sun and the Earth. The shadow of the Moon is cast on the Earth.

e) Which is called the evening ~~star~~ and morning star? Why?

Ans- Venus is called the evening and morning star.

Venus is the first to be seen in western night sky. It is never seen throughout the night. It rises before dawn and sets at sunset. These happen due to clockwise rotation of Venus.

4) Explain with diagram :- (5 x 2 = 10)

a) Layers of the Sun.

Ans- From centre to the surface of the Sun, there are four distinctive layers; they are -

(a) Core: Interior core of the Sun, consists of hydrogen and helium gases with a temperature is called solar core. The temperature

at the core or centre of the Sun is around 1.4 million $^{\circ}\text{C}$.

(b) Photosphere - The visible yellow face around the core of the Sun is called the photosphere or the sphere of light where the temperature is about 6000°C . These rays and heat radiate from it.

(c) Chromosphere - Surrounding the photosphere is Chromosphere. (temperature $31,400^{\circ}\text{C}$) which is pink or reddish in ~~red~~ colour. The flames of the chromosphere go up thousands of kilometres and are called Prominences.

d) Corona - It is the uppermost layer of the Sun. It is visible to unaided eyes only during solar eclipses. Temperature of the Corona is about $2,700,000^{\circ}\text{C}$, hot enough to emit X-rays.



Layers of the Sun

b) Types of planet

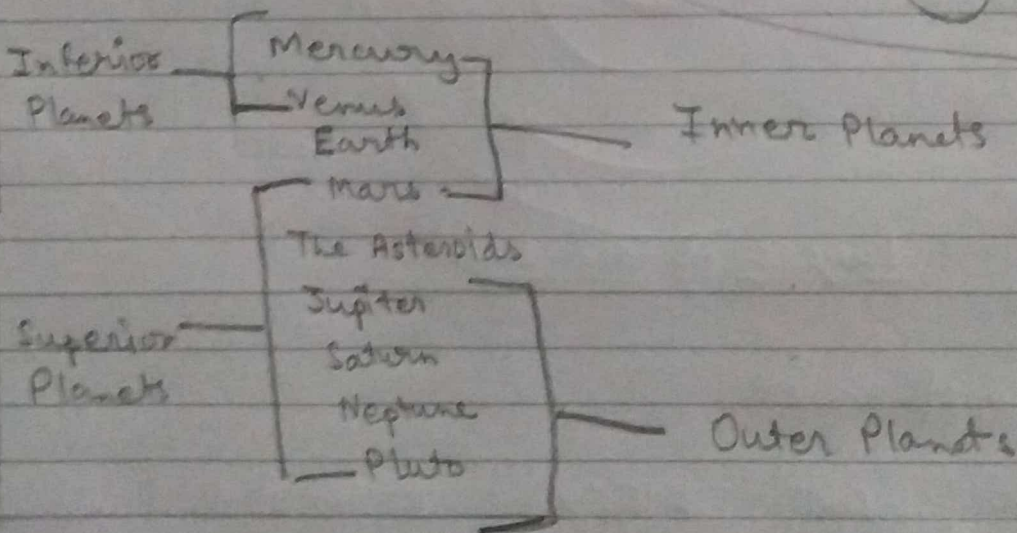
A:- ~~Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.~~

A:- Almost all the planets fall into two groups:

(a) Inner planets: Mercury, Venus, ~~Mars~~ Earth and Mars are called the ~~the~~ Inner planets. They are also known as terrestrial (earth like) planets. (b) Outer planets: These lie

beyond the orbit of Jupiter, Saturn, Uranus and Neptune are the outer planets. There is another way of grouping the planets —

- (a) Inferior planets: Mercury and Venus are called Inferior planets because they lie closer to the sun than the earth
- (b) Superior Planets: All the planets which have their orbits outside the Earth's orbit are called superior planets.



Classification of Planets