

Very Short Answer Questions

Q.1. Define celestial bodies.

Ans. The heavenly bodies which shine in the sky are called celestial bodies.

Q.2. On what basis are the stars classified?

Ans. The stars can be classified according to their physical characteristics like;

- i. size
- ii. temperature
- iii. colour and
- iv. brightness.

Q.3. What are planets?

Ans. Some celestial bodies don't have their own light and heat. They are lit by the light of the stars. Such bodies are called planets. These are eight planets in our solar system—Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. They revolve around the Sun.

Q.4. What are orbits?

Ans. All planets in solar system move around the sun in fixed path. These paths are elongated and they are called orbits.

Q.5. Why is earth called blue planet?

Ans. From the outer space, the earth appears blue because its 2/3rd surface is covered by water. It is therefore, called a blue planet.

Short Answer Questions

Q.1. What are stars?

Ans.

- i. Stars are the heavenly bodies which are extremely hot and have their own heat and light.
- ii. They continuously radiate heat and light energy in the space.
- iii. A star is made up of hydrogen and helium gases and the dust. The heat and light energy is generated by burning of these gases.

Q.2. What are the various types of stars?

Ans.

- i. It is surprising that sun is not the biggest star in the universe. It is only a medium-sized star. It looks big because of its nearness to the earth (150 million kilometres).
- ii. Other bigger stars are far away from our earth due to which they look smaller than the sun.
- iii. Stars account for about 98 per cent of the matter in a galaxy dust.

Q.3. Describe the sun.

Ans.

- i. The sun is the centre of solar system.
- ii. The surface temperature of the sun is about 6000° Celsius.
- iii. It is huge and made of extremely hot gases.
- iv. It provides the pulling force that binds the solar system.
- v. The sun is the ultimate source of heat and light for the solar system.
- vi. The sun is about 150 million kilometres away from the earth.

Q.4. Define Geoid and give reason for life on earth.

Ans.

- i. The earth is the third nearest planet to the sun.
- ii. In size, it is the fifth largest planet.
- iii. It is slightly flattened at the poles. That is why its shape is described as a Geoid.

Geoid means earth-like shape. The conditions favourable to support life on earth are:

- i. The earth is neither too hot nor too cold.
- ii. It has water and air which is very essential for our survival.
- iii. The air has life-supporting gases like oxygen.

Q.5. What is a galaxy?

Ans.

- i. heavenly bodies bounded by the force of gravitation.
- ii. The word 'Galaxy' has been taken from the Greek word 'Galaxias' which means milky, a reference to the Milky Way Galaxy.
- iii. One of the bright bands on the clear night sky is known as 'Milky Way Galaxy' or 'Akash Ganga'.
- iv. It is the home to the solar system and to one of the unique planets, earth.

Q.6. How has solar system affected man?

Ans. It has led to new inventions and discoveries with the realisation that man should preserve nature.

Long Answer Questions

Q.1. What are constellations? What are its types?

Ans.

- i. There are millions of stars in the sky, which are distributed randomly.
- ii. But few of the stars are found in cluster or in groups.
- iii. Such grouping of the stars is known as constellation.
- iv. These can be seen only during the night. As they have a definite shape, hence they acquire different names.
- v. There are around 88 known constellations. Some of them are as follows:
 - a. Ursa Major (or Great Bear)
 - b. Ursa Minor (or Little Bear)
 - c. Orion (or Hunter)
 - d. Pegasus
 - e. Scorpius
 - f. Cassiopeia.

One of the well-known constellations in the sky is Saptarishi Mandal or *Great Bear*. It is also known as Ursa Major.

Q.2. Write a short note on the moon.

Ans.

- i. The moon is the natural satellite of the earth.
- ii. It revolves around the earth and completes one revolution in 27 days and 8 hours.
- iii. At the same time, it takes equal time for completing one rotation on its axis.
- iv. It is smaller in size thereby exerts very little gravitational force, i.e., only one-sixth of the earth.
- v. Moon has a volume that is only 2 per cent of earth's volume and a tiny fraction of the size of the sun.
- vi. Like our Earth, the moon has no light of its own. It reflects light of the Sun.

Q.3. Write a short note on meteoroids. Give an example.

Ans.

- i. The small pieces of rocks which move around the sun are called meteoroids.
- ii. Sometimes they come near the earth.
- iii. During this process due to friction with the air they get heated up and burn.
- iv. It creates a flash of light.
- v. It is also known as 'Shooting star'.

Q.4. How is earth a unique planet?

Ans.

- i. Our Earth is a unique planet in the whole of the solar system in the sense that it provides all things which are necessary for the growth and development of life like water, oxygen and soil, etc.
- ii. It is also called blue planet because 71 per cent of its surface is covered with the water.
- iii. Condition favourable to support life are probably around only on the earth. The earth is neither too hot nor too cold.
- iv. The Earth has seasons, day and night, elements of weather and climate like pressure, temperature, winds, etc. which provide uniqueness to it.

HOTS (Higher Order Thinking Skills)

Q.1. How are the planets divided?

Ans. The planets have been divided as follows:

- i. **Inner Planets:** There are four planets namely Mercury, Venus, Earth and Mars. They are dense and have rocky composition. Mercury and Venus do not have any satellite or moons whereas Earth has one and Mars has two moons.
- ii. **Outer Planets:** The outer planets are Jupiter, Saturn, Uranus and Neptune. These are very big and giant in size as compared to the inner planets. They are lighter and less dense as they are made up of gases and liquids.

Q.2. Write a short note on Asteroids.

Ans.

- i. Asteroids are planet-like bodies revolving round the sun between the orbits of Mars and Jupiter.
- ii. These are made up of rocks and metal pieces.
- iii. They are also called Planetoids or Inferior Planets or Minor Planets.
- iv. There are millions of asteroids scattered in the orbits of Mars and Jupiter and are far away from the earth hence not visible through naked eyes.
- v. The largest asteroids are known as "Ceres".