

## 13. THE EARTH AND THE SOLAR SYSTEM

### A. Choose the Correct Answer

**Question 1: The Sun is a —**

- a) Planet                      b) Star                      c) Satellite                      d) Moon

**Solution:** b) Star

**Explanation:** The Sun is a huge ball of hot gases and is a star.

**Question 2: The Earth takes 365 days and 6 hours to —**

- a) Rotate on its axis                      b) Revolve around the Sun  
c) Spin around the Moon                      d) Move in space

**Solution:** b) Revolve around the Sun

**Explanation:** One full revolution of Earth around the Sun takes 365 days and 6 hours.

**Question 3: The Moon is —**

- a) A planet                      b) A star  
c) Earth's natural satellite                      d) An asteroid

**Solution:** c) Earth's natural satellite

**Explanation:** The Moon orbits the Earth naturally, so it is a natural satellite.

**Question 4: Day and night occur because of the Earth's —**

- a) Revolution                      b) Rotation  
c) Shape                      d) Atmosphere

**Solution:** b) Rotation

**Explanation:** Rotation on its axis causes day on one side and night on the other.

**Question 5: Pluto is now known as a —**

- a) Planet                      b) Dwarf planet                      c) Star                      d) Satellite

**Solution:** b) Dwarf planet

**Explanation:** In 2006, Pluto was reclassified as a dwarf planet.

### B. TRUE OR FALSE

**Question 1: The Sun is a planet that gives heat and light.**

**Solution:** False

**Explanation:** The Sun is a star, not a planet.

**Question 2: The Earth is the only planet where life exists.**

**Solution:** True

**Explanation:** Earth is the only known planet with life.

**Question 3:**The Earth takes 24 hours to revolve around the Sun.

**Solution:** False

**Explanation:** Earth takes 24 hours to rotate, not revolve. It takes 365 days to revolve.

**Question 4:**Pluto is now called a dwarf planet.

**Solution:** True

**Explanation:** Pluto was reclassified as a dwarf planet by scientists.

**Question 5:**The Earth's rotation causes day and night.

**Solution:** True

**Explanation:** Rotation causes one side to face the Sun (day) and the other to face away (night).

### C. FILL IN THE BLANKS

**Question 1:**The \_\_\_\_\_ is the center of the Solar System.

**Solution:** Sun

**Explanation:** All planets revolve around the Sun.

**Question 2:**The Earth takes \_\_\_\_\_ hours to complete one rotation.

**Solution:** 24

**Explanation:** One rotation takes 24 hours.

**Question 3:**The \_\_\_\_\_ is the only planet known to have life.

**Solution:** Earth

**Explanation:** Earth has air, water, and suitable temperature for life.

**Question 4:**The Earth's \_\_\_\_\_ causes day and night.

**Solution:** Rotation

**Explanation:** Rotating on its axis creates day and night.

**Question 5:**\_\_\_\_\_ was the first Indian astronaut to go into space.

**Solution:** Rakesh Sharma

**Explanation:** He went to space in 1984 aboard the Soyuz spacecraft.

### D. ANSWER THE QUESTIONS

**Question 1:**What is the Solar System made up of?

**Solution:**The Solar System is made up of the Sun, eight planets, their moons, and many other objects like asteroids and comets.

**Explanation:** All these objects revolve around the Sun.

**Question 2: Why is the Sun important for the Earth?**

**Solution:** The Sun gives us heat and light and helps plants make food.

**Explanation:** Without the Sun, life on Earth would not be possible.

**Question 3: How long does the Earth take to complete one revolution around the Sun?**

**Solution:** The Earth takes 365 days and 6 hours to complete one revolution.

**Explanation:** This time period makes one year.

**Question 4: Who was the first Indian astronaut to go into space?**

**Solution:** Rakesh Sharma

**Explanation:** He flew into space in 1984.

**Question 5: What causes day and night on Earth?**

**Solution:** Day and night are caused by the rotation of the Earth on its axis.

**Explanation:** The side facing the Sun has day; the side away from the Sun has night.

### E. Picture Study



**Question 1: What is at the center of the Solar System?**

**Solution:** The Sun

**Explanation:** The Sun contains more than 99.8% of the Solar System's total mass and its gravity controls the orbits of every planet, as shown by the curved orbital paths radiating from it in the diagram.

**Question 2: Name the third planet from the Sun.**

**Solution:** Earth

**Explanation:** Counting outward from the Sun in the image: 1. Mercury (small yel-

low), 2. Venus (pale orange), 3. Earth (blue-green with white clouds).

**Question 3: Which planet is known as the Red Planet?**

**Solution:** Mars

**Explanation:** Mars is the small reddish-orange world fourth in line from the Sun; its rusty color comes from iron oxide on its surface.

**Question 4: What is the largest planet in the Solar System?**

**Solution:** Jupiter

**Explanation:** Jupiter is the massive striped giant fifth from the Sun—its diameter is more than 11 times Earth's and it holds over 70% of the planetary mass outside the Sun.

**Question 5: Which planet was once considered the ninth planet, but is now called a dwarf planet?**

**Solution:** Pluto

**Explanation:** Pluto (not visible in this diagram) was reclassified by the IAU in 2006 as a dwarf planet because it does not clear its orbital neighborhood of other objects.