**SPACE SCIENCE QUESTIONS AND ANSWERS**

1. **What do you mean by the term space?  
   Ans.:** Universe outside the Earth’s atmosphere
2. **Which was the first living creature to orbit around the Earth?**  
   **Ans.:** Laika (It was in Sputnik-II in November 1957). It was a female dog.
3. **Who was the first man to go round the Earth or to move in space?**  
   **Ans.:** Flight Major Yuri Gagarin of Russia
4. **Who is the first woman in space?**  
   **Ans.:** Valentina Tereshkova.
5. **Who is the first Indian to go into space and when?**  
   **Ans.:** Squadron Leader Rakesh Sharma on 3rd April 1984 in Indo-Soviet space flight
6. **Which was the first interplanetary space probe sent towards Jupiter?**  
   **Ans.:** Pioneer 10
7. **Expand NASA.**  
   **Ans.:** National Aeronautics and Space Administration (American Space Agency)
8. **Who was the first man to land on the moon?**  
   **Ans:** Neil Armstrong
9. **Which is the first artificial satellite of india?**  
   **Ans:** Aryabhata
10. **Which was the first Indian remote sensing satellite?**  
    **Ans:** IRS-1A
11. **When was INSAT-2D launched?**  
    **Ans:** 3rd June 1997
12. **What are artificial satellites?**  
    **Ans:** Man-made objects launched into space to orbit around Earth
13. **What is PSLV,** **GSLV?**  
    **Ans:** **GSLV** - Geosynchronous Satellite Launch Vehicle  
     **PSLV** - Polar Satellite Launch Vehicle
14. **What is the full form of ISRO?**  
    **Ans:** Indian Space Research Organisation
15. **Which satellite is used for educational purposes in India?**  
    **Ans:** EDUSAT  
    It was India’s first satellite exclusively for educational services.
16. **What is Chandrayaan-1?**  
    **Ans:** India’s first unmanned mission to the Moon.  
    Launched by ISRO on 22nd October 2008.
17. **What is Mangalyaan (Mars Orbiter Mission)?**  
    **Ans:** India’s first interplanetary mission to Mars.  
    Launched on 5th November 2013 by PSLV-C25.
18. **What is a launch vehicle?**  
    **Ans:** A rocket used to carry satellites or spacecraft into space.
19. **What is INSAT?**  
    **Ans:** Indian National Satellite System
20. **What is the full form of GPS?**  
    **Ans:** Global Positioning System
21. **What are the weather forecasting satellites used by ISRO?**  
    **Ans:** ISRO uses satellites like INSAT-3D, INSAT-3DR,
22. **What is the role of satellites in agriculture?**  
    **Ans:** Satellites help in monitoring crop growth, estimating yield,
23. **Name some important Indian satellites.**  
    **Ans:**

* INSAT Series – for communication and meteorology
* IRS Series – for resource monitoring
* EDUSAT – for education
* GSAT – advanced communication satellites

**1. What is the natural satellite of the Earth?**

**Answer:** The Moon is the Earth's only natural satellite.

**2. What is the shape of the Earth's orbit around the Sun?**

**Answer:** **elliptical** shape (slightly oval).

**3. Why doesn’t the Moon crash into the Earth?**

**Answer:** Because the speed of the Moon is more than the earth gravity

If moon speed decrease it will crash

If moon speed increase it will go away from earth

**4. What speed is needed to escape Earth's gravity and enter space?**

**Answer:** Approximately **11.2 km/s (40,270 km/h**.

**5. When and where is a satellite used for internet?**

**Answer:** Satellites provide internet in **remote, rural, or disaster-hit areas** where ground-based connections are unavailable.

**6. Which Indian satellite series helps to monitor agriculture?**

**Answer:** The **Resourcesat** series.

**7. Which Indian satellite series helps to monitor air quality?**

**Answer:** **INSAT** satellites help monitor air quality.

**8. Which type of satellite is mainly used for urban planning?**

**Answer:** **Earth Observation Satellites** like **Cartosat**.

**9. Which satellite provides weather updates useful in disaster management?**

**Answer:** **INSAT** and **Kalpana-1** satellites.

**10. Which type of satellite helps connect doctors with rural areas?**

**Answer:** **Communication satellites** (e.g., **GSAT series**).

**11. How do satellites observe the Earth?**

**Answer:** Using **remote sensing** with cameras and sensors that detect **visible light, infrared, radar**, and other data.

**12. What are the types of electromagnetic radiation?**

**Answer:**

* Radio waves
* Microwaves
* Infrared
* Visible light
* Ultraviolet
* X-rays
* Gamma rays

**13. Which Indian satellite is specially used to monitor natural resources?**

**Answer:** The **Resourcesat** series.

**14. How are satellites helping fishermen?**

**Answer:** By providing information about **potential fishing zones (PFZ)**, sea surface temperature, and ocean conditions using satellites like **Oceansat**.

**15. Name the telescope used for deep space observation.**

**Answer:** **Hubble Space Telescope** (international); India also has **Astrosat**.

**16. Name any application or device developed from space spin-offs.**

**Answer:**

* GPS
* Infrared thermometers
* Memory foam
* Water purification systems
* Satellite TV