

SCIENCE AND TECHNOLOGY IN NEWS: PRELIMS 2026 READY NOTES

Science and Technology (S&T) has become a **decisive and dynamic section** in the UPSC Civil Services Preliminary Examination. In recent years, UPSC has consistently asked **10-15 questions** from S&T, most of which are **current-affairs driven but concept-based**.

For **UPSC Prelims 2026**, aspirants must focus on **science and technology developments in news**, while clearly understanding the **basic principles behind them**. This article provides **Prelims-ready, exam-oriented notes** covering the **most important Science and Technology areas**, along with a smart preparation strategy and FAQs.

Why Science and Technology is Important for UPSC Prelims 2026

- High relevance of **current affairs**
- Questions are mostly **application-based**
- Interdisciplinary linkage with **Economy, Environment, Defence & Health**
- Minimal syllabus but **high scoring potential**

☐☐ *UPSC does not test formulas; it tests awareness and understanding.*

PART I: SPACE TECHNOLOGY (VERY HIGH WEIGHTAGE)

1. Indian Space Missions

UPSC frequently asks about **ISRO missions in news**.

Important areas:

- Gaganyaan Mission
- Chandrayaan missions
- Aditya-L1
- XPoSat

- NavIC (Indian Regional Navigation Satellite System)

Focus on:

- Objectives
- Payloads
- Orbit type
- Significance

2. Launch Vehicles & Satellites

- LVM3, PSLV, SSLV
- Communication vs Earth observation satellites
- Geostationary vs Polar orbits

PART II: DEFENCE & STRATEGIC TECHNOLOGY

3. Missiles & Defence Systems

Commonly asked areas:

- Ballistic vs cruise missiles
- Agni, Prithvi, BrahMos
- Ballistic Missile Defence (BMD)
- Hypersonic technology

4. Indigenous Defence Initiatives

- DRDO developments
- Make in India in Defence
- Tejas aircraft
- Unmanned Aerial Vehicles (UAVs)

PART III: BIOTECHNOLOGY & HEALTH SCIENCE

5. Biotechnology in News

High-scoring if basics are clear.

Key topics:

- DNA, RNA, genome editing
- CRISPR-Cas9
- Stem cells
- GM crops
- Biofortification

6. Health & Medical Science

- Vaccines & immunisation
- mRNA vaccines
- Antimicrobial resistance (AMR)
- Emerging diseases
- One Health approach

PART IV: INFORMATION TECHNOLOGY & EMERGING TECH

7. Artificial Intelligence & Digital Technologies

Very frequent in recent Prelims.

Important concepts:

- Artificial Intelligence (AI)
- Machine Learning
- Big Data

- Internet of Things (IoT)
- Quantum computing

8. Cyber & Digital Infrastructure

- 5G and 6G technology
- Semiconductor chips
- Cybersecurity
- Blockchain
- Digital public infrastructure (DPI)

PART V: ENERGY, ENVIRONMENT & APPLIED SCIENCE

9. Renewable & Clean Energy

- Solar and wind energy
- Green hydrogen
- Biofuels
- Nuclear energy basics
- Energy storage systems

10. Nanotechnology & Advanced Materials

- Nanomaterials
- Graphene
- Smart materials
- Applications in health, defence & energy

PART VI: SCIENCE IN GOVERNANCE & INSTITUTIONS

11. Scientific Institutions & Initiatives

- ISRO
- DRDO
- Department of Science & Technology (DST)
- Biotechnology Industry Research Assistance Council (BIRAC)
- Indian Council of Medical Research (ICMR)

12. Government Schemes & Policies in S&T

- National Quantum Mission
- India AI Mission
- Semiconductor Mission
- National Bio-Energy Mission
- Space sector reforms

Smart Strategy to Prepare Science & Technology for Prelims 2026

1. Focus only on **S&T in news**
2. Understand **basic principles**, not technical depth
3. Link S&T topics with **current affairs**
4. Revise frequently with short notes
5. Solve previous year questions (PYQs)

Common Mistakes to Avoid

- Studying S&T like engineering textbooks
- Ignoring basic science concepts

- Memorising without understanding applications
- Skipping revision due to vastness

Conclusion

Science and Technology for UPSC Prelims 2026 is **highly scoring if prepared smartly**. By focusing on developments in news and understanding the underlying concepts, aspirants can confidently handle S&T questions. Consistent revision and PYQ analysis are the keys to mastering this section.

Frequently Asked Questions (FAQs)

Q1. How many questions are asked from Science & Technology in Prelims?

Usually 10-15 questions every year.

Q2. Is Science & Technology purely current-affairs based?

Mostly yes, but with strong linkage to basic concepts.

Q3. Do I need an engineering or science background?

No. UPSC tests awareness and understanding, not technical expertise.

Q4. Are government missions important for Prelims?

Yes. Missions and schemes in news are frequently asked.

Q5. Is Science & Technology important for Mains?

Yes. It overlaps with GS Paper III and Essay topics.

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