Pre-Harappan and Sindhu Valley Civilization, Laboratory and Apparatus, Juices, Dyes, Paints and Cements, Glass and Pottery, Metallurgy, Vedic Age and Post-Vedic Records Engineering Science and Technology

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Outline

Overview

The Pre-Harappan and Sindhu Valley civilizations were among the earliest urban cultures in the world. They developed along the Indus River and were known for their advanced city planning, trade systems, and use of standardized measurements.

- Early settlements and urbanization
- Trade, agriculture, and economy
- Architecture and drainage system

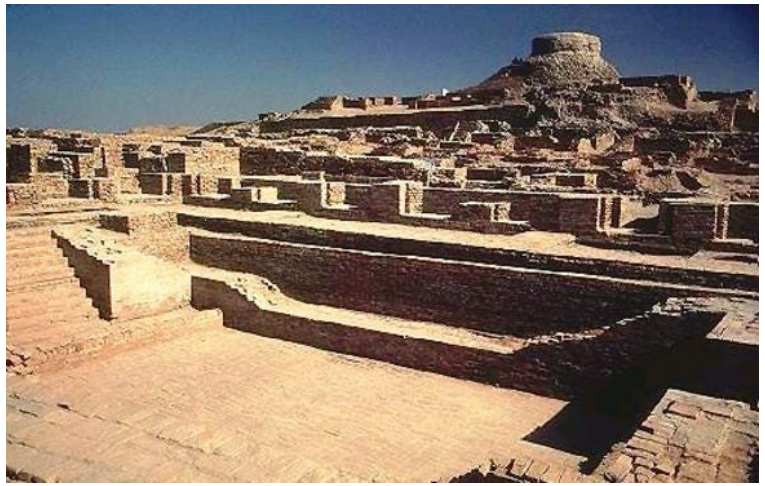

Figure 1: Ancient Harappan City Layout

Achievements

- Planned cities with structured layouts
- Advanced water management (Great Bath)
- Standardized weights and measures

Figure 2: The Great Bath of Mohenjo-Daro

Ancient Laboratory Techniques

- Alchemy and early chemistry
- Use of furnaces and crucibles
- Measurement instruments

Figure 3: Ancient Alchemical Practices

Natural and Artificial Extracts

- Herbal juices and medicinal applications
- Indigo and madder dyes
- Lime-based cements

Figure 4: Ancient Dye Extraction Methods

Development of Pottery

- Early handmade pottery
- Introduction of wheel-made pottery
- Glazing techniques in glass production

Figure 5: Evolution of Pottery Techniques

Metallurgical Advances

- Copper, bronze, and iron metallurgy
- Advanced casting techniques
- Use of alloys in weaponry and tools

Figure 6: Ancient Metallurgical Techniques

Engineering and Science

- Contributions in astronomy and mathematics
- Hydraulic engineering and irrigation
- Temple architecture and urban planning

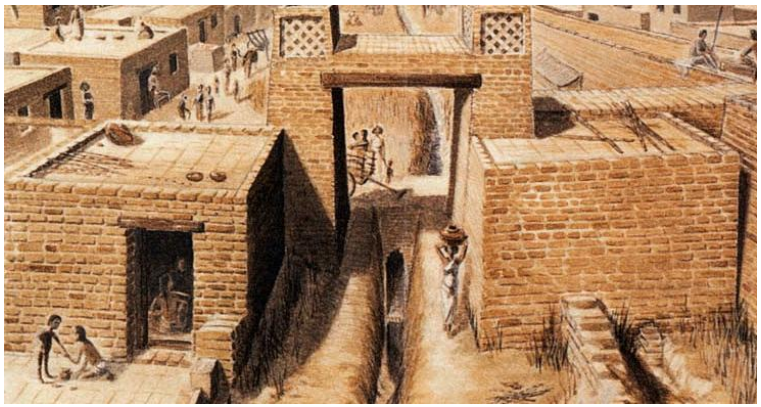

Figure 7: Vedic Scientific Developments

Conclusion

- Evolution of ancient science and technology
- Long-lasting impact on modern engineering
- A foundation for future innovations

Figure 8: Future of Ancient Technologies

Thank You