



Deciphering the Indus Valley Script

For Prelims: [Indus Valley Civilisation](#), [Artificial Intelligence](#), Indus Valley Script, Boustrophedon Style.

For Mains: Ancient Indian Civilizations, Language Evolution in Ancient India, Deciphering Ancient Scripts

Source: [IE](#)

Why in News?

Recently, Tamil Nadu's Chief Minister, MK Stalin announced a USD 1 million prize for anyone who can successfully **decipher the Harappan (Indus Valley) script of the [Indus Valley Civilisation](#)**.

- It has reignited the century-old mystery of the **Harappan script**, which has eluded over 100 attempts by scholars to decode its meaning.

Note: Deciphering refers to the process of translating unknown symbols or scripts into a readable language.

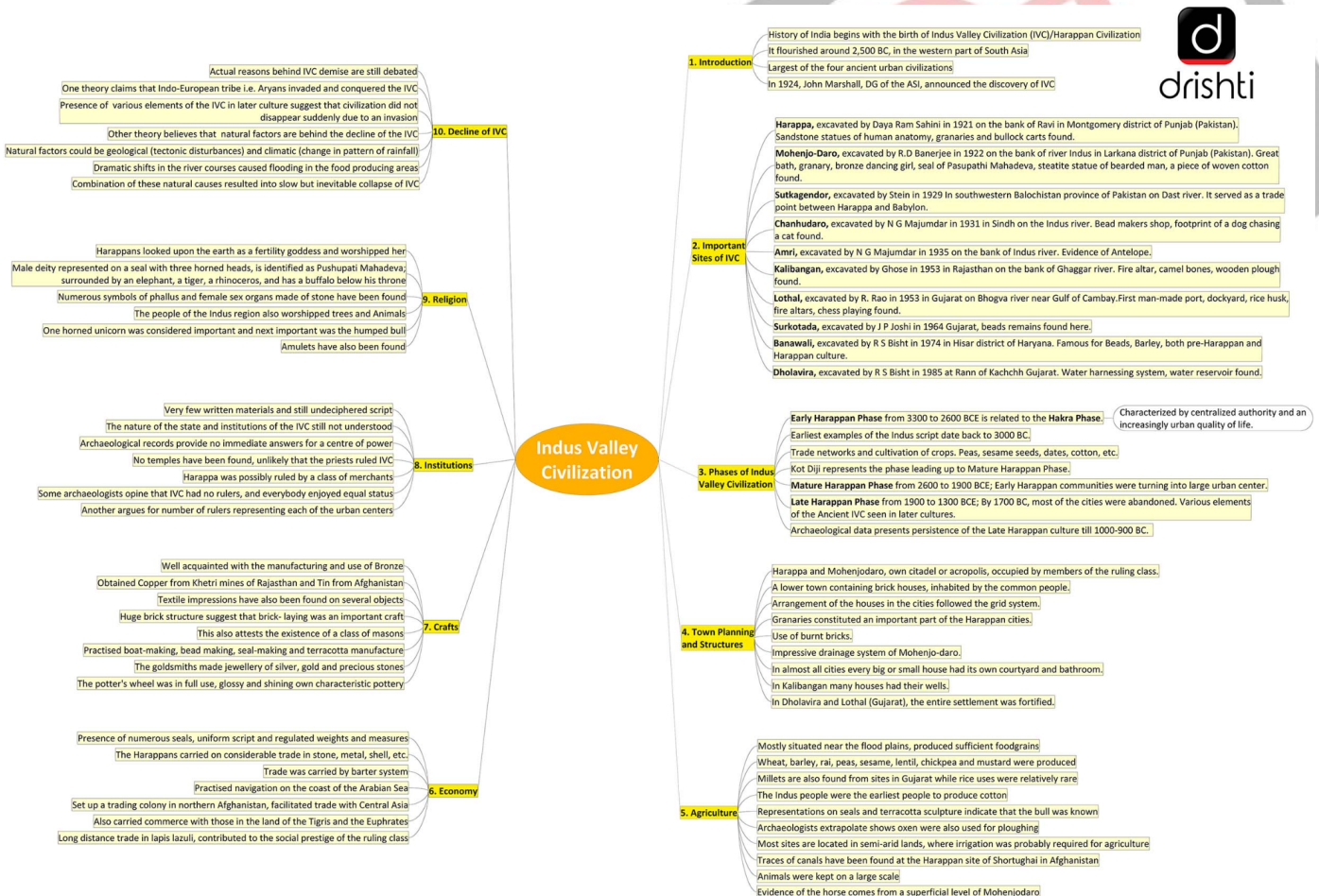
What is the Indus Valley Script?

- **About:** The Indus Valley Script, used by the **Indus Valley Civilization (2600-1900 BCE)** in present-day Pakistan and north-western India, remains undeciphered.
 - The script was discovered in the 1920s by [Sir John Marshall's team](#). It appears on **seals, terracotta tablets, and metal**, featuring **pictograms** and **animal or human motifs**.
- **Writing Style:** Generally **written right to left**, longer texts sometimes used **Boustrophedon Style** (alternating directions between lines).
- **Brevity of Inscriptions:** Most inscriptions are **short**, averaging 5 characters, with the longest known text containing **26 symbols**.
 - The **brevity** has led to debates about whether it represents a full-fledged language or merely symbolic notations.
- **Nature of the Script:** Likely a **logosyllabic system**, combining pictograms and syllables, similar to other scripts of its era.
 - Scholars propose a **rebus principle**, where symbols represent sounds or ideas indirectly.
- **Purpose and Function:** The script may have been used for trade, tax records, and identification, but its full role remains unclear. Some symbols, resembling multiplication, addition, and the swastika, might also have educational or religious significance.
 - Some believe it was a marking system, not a language-based script.
- **Theories About Its Language:**
 - **Dravidian Hypothesis:** Supported by **Asko Parpola** and Indian researcher **Iravatham Mahadevan**.

- Claims the script has **Dravidian roots**, with connections to Old Tamil.
- **Example:** Parpola suggests the 'fish' symbol in the Indus script represents "**meen,**" meaning both "**fish**" and "**star**" in Dravidian languages, aligning with Old Tamil terminology.
 - Some 'number + fish' sequences are believed to refer to star groups, though this remains unproven. //

	SIGN	IDENTIFICATION	READING	MEANING
a		fish	<i>mīn</i>	1. fish 2. star
b		3 + fish	<i>mu(m) mīn</i>	three stars (Mrigasiras)
c		6 + fish	<i>caru mīn</i>	six stars (Pleiades)
d		7 + fish	<i>elu mīn</i>	seven stars (Ursa Major)

- **Sanskrit Linkage:** Early scholars like **S.R. Rao** linked the script to **Sanskrit**, tying it to the **Vedic period (1500 - 600 BCE)**.
 - This theory has been contested due to the **timeline mismatch between the Harappan and Vedic cultures.**
- **Non-Linguistic Symbols:** Critics like Steve Farmer and Peggy Mohan argue the symbols were not a language but a system for **political, economic, or religious insignias.**



Note:

- **Script:** A system of writing using symbols or characters to represent the words of a language, such as Latin, Devanagari, or Indus script.
- **Language:** A system of communication involving sounds, words, and grammar to convey meaning, such as English, Hindi, or Tamil.

What are the Challenges in Decipherment of Indus Valley Script?

- **Lack of Bilingual Texts:** The decipherment of ancient scripts often depends on **bilingual texts**, like the Rosetta Stone, which provided a **Greek translation of Egyptian hieroglyphs**.
 - The Indus script, however, lacks such comparative inscriptions, making it difficult to link symbols to sounds or meanings.
 - The Rosetta Stone, discovered in 1799 near the **Nile** Delta, contains a message written in **Greek, Demotic, and hieroglyphs**. It helped scholars to decipher ancient **Egyptian hieroglyphs**.
- **Short and Fragmentary Texts:** Most inscriptions are brief, with an average of five characters per text.
 - The lack of long texts limits the ability to **analyze grammar, syntax, or patterns** typically used in linguistic decipherment.
- **Unknown Language:** The script likely represents a language with no surviving descendants, making comparisons challenging.
 - Theories suggest **Dravidian, Indo-Aryan**, or a lost language family, but none are conclusive.
- **Symbol Variations:** S.R. Rao (1982) proposed 62 signs in the script, but later Asko Parpola suggested 425 signs (1994).
 - In 2016, Bryan K. Wells proposed 676 signs, but the exact number and their meanings remain debated, leading to confusion.
- **Limited Archaeological Evidence:** The **limited corpus of 3,500 Harappan seals**, unexplored sites, and erosion of artifacts hinder comprehensive script analysis.
- **Technological Constraints:** While **Artificial Intelligence (AI)** and **machine learning** are being applied, current models struggle with **sparse datasets** like the Indus script. Identifying patterns in brief inscriptions remains a significant challenge.

What is the Significance of Deciphering the Indus Script?

- **Unlocking Harappan Language:** Identifying the language family (Dravidian, Indo-Aryan, or others) would offer insights into the linguistic roots of ancient India.
- **Understanding Harappan Culture:** Decipherment could uncover Harappan religious beliefs, societal norms, and sociopolitical structures, including administration and governance.
- **Historical Continuity:** Establishing connections between the Harappans and later civilizations could help trace India's cultural and linguistic evolution.
- **Global Relevance:** The script's study contributes to understanding ancient writing systems, **human communication evolution**, and **cross-cultural exchanges** with Mesopotamia and beyond.
 - Deciphering may reveal ties to Vedic practices and links to Dravidian or Indo-European languages.

MAJOR CIVILISATIONS OF THE WORLD

MESOPOTAMIA, 4000-3500 BC

- ↳ Modern-day Iraq and parts of **Iran, Syria, Kuwait, and Turkey**, between **Tigris and Euphrates Rivers**
- ↳ Known as **Fertile Crescent/Cradle of civilization**
- ↳ Diverse collection of cultures bound by their script, gods, and views on women
- ↳ **Highly esteemed education system** (law, medicine, and astrology, reflecting rich cultural and religious landscape)
- ↳ Both **men and women were involved in diverse occupations**
- ↳ **Cities built around ziggurats**, step-pyramid temples, honoured their patron deity
- ↳ Cities, made of **sun-dried brick**, were the world's first

ANCIENT EGYPT, 3100 BC

- ↳ Set along fertile **Nile River**
- ↳ Most known for **pyramids, tombs, and mausoleums** practice of mummification to prepare corpses for afterlife
- ↳ Left legacy of monumental writing and mathematics systems
- ↳ Civilization **ended in 332 BC** with Alexander the Great's conquest

INDUS VALLEY CIVILISATION, 3300 BC

- ↳ Located in modern-day **India, Afghanistan, and Pakistan**
- ↳ Relatively peaceful compared to other ancient civilizations, with little evidence of widespread warfare
- ↳ **Organised city planning**, complete with **uniform baked-brick homes**, a grid structure, and drainage, sewage, and water supply systems
- ↳ **Declined around 1800 BC**, actual reasons behind demise still debated (theories propose Aryan invasion or climatic & natural factors for decline)

ANCIENT CHINA, 2000 BC

- ↳ Protected by the Himalayan Mountains, Pacific Ocean, and Gobi Desert, and **situated between Yellow and Yangtze rivers**
- ↳ Flourished in isolation from invaders and other foreigners for centuries
- ↳ Generally divided into four dynasties—**Xia, Shang, Zhou, and Qin** - ancient China was ruled by a succession of emperors
- ↳ Credited with developing the **decimal system, abacus, and sundial**, as well as **the printing press**
- ↳ Mobilised populations to build massive infrastructure projects (like Egyptians)



Drishhti Mains Question:

Examine the challenges faced in deciphering the Indus Valley Script and their implications for understanding the Harappan Civilization.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Regarding the Indus Valley Civilization, consider the following statements: (2011)

1. It was predominantly a secular civilization and the religious element, though present, did not dominate the scene,
2. During this period, cotton was used for manufacturing textiles in India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (c)

Q. Which of the following characterize/characterises the people of the Indus Civilization? (2013)

1. They possessed great palaces and temples.
2. They worshiped both male and female deities.
3. They employed horse-drawn chariots in warfare.

Select the correct statements using the codes given below:

- (a) 1 and 2 only
- (b) 2 only
- (c) 1, 2 and 3
- (d) None of the above

Ans: (b)

Mains

Q1: The ancient civilisation in the Indian sub-continent differed from those of Egypt, Mesopotamia and Greece in that its culture and traditions have been preserved without a breakdown to the present day. Comment. **(2015)**

Q2: To what extent has the urban planning and culture of the Indus Valley Civilization provided inputs to present-day urbanization? Discuss. **(2014)**