

# ASPECTS OF INDIAN HISTORY FOR THE ENGINEERS

## INDUS VALLEY CIVILIZATION

### SALIENT FEATURES OF HARAPPAN CULTURE

#### TOWN PLANNING , DRAINAGE SYSTEM , GREAT BATH , BUILDINGS , SEALS , SOCIAL AND ECONOMIC CONDITIONS , REASON OF DECLINE ]

Till the beginning of 20<sup>th</sup> century it was believed that the Indian history began from the Vedic culture but this belief was shattered with the discovery of the Indus Valley Civilization. The archaeological excavations during the early decades of the 20<sup>th</sup> century brought to light an extensive civilization which flourished in Indian subcontinent. It was contemporary civilization of Egyptian and Mesopotamian civilization. It was 20 times greater than the area of Egyptian civilization. It is also known as Harappan civilization because it was one of the first sites to be excavated.

The IVC can be broadly divided into three phases

1. Early Harappa phase :- (3300 BCE – 2600 BCE)
2. Mature Harappa phase :- (2600 BCE – 1900 BCE)
3. Late Harappa phase :- (1900 BCE – 1300 BCE)

S.NO	SITES	EXCAVATED BY	YEAR OF EXCAVATION	RIVER
1	HARAPPA	D.R SAHNI	1921	RAVI
2	MOHENJODARO	R.D.BANERJEE	1922	INDUS
3	CHANHUDARO	N.G. MAJUMDAR	1931	INDUS
4	LOTHAL	S.R. RAO	1954	BHOGWA
5	KALIBANGAN	AMLANAND GHOSH	1961	HAKRA
6	DHOLAVIRA	R.S. BHIST	1968	KIM
7	ROPAR	M.S VATSA/Y.D. SHARMA	1953	SUTLEJ
8	ALAMGIRPUR	Y.D. SHARMA	1958/1959	HINDAN

MANDA (J&K) (NORTHERN MOST)

(SOUTHERN MOST) SUTKAGENDOR

ALAMGIRPUR (UP) (EASTERN MOST)

DAIMABAD(MAHARASHTRA) (SOUTHERN MOST)

The harappan civilization is known for its various features such as town planning , housing patterns , darainage system , roads , cemetery , seals , buildings , great bath , granaries , sculptures etc...

When a well developed harrapan civilization came to light the issue of its origin appeared to be controversial.it was due to the fact that there was a lack of sufficient sourcematerial. Indus valley belongs to the proto era which has archaeological sources but did not have lioterary sources as the script of the ivc is pictographical and still undeciphered. As the civilization was well developed so some of the scholars says that it did not have any preceeding culture in india. Wheeler believes that Mesopotamia was the author of ivc whereas dd kaushambi thinks that Mesopotamia, Egyptian , ivc belongs to the sae stock. But when we see minutely there is difference in town planning of Mesopotamia and Harappa.

### **TOWN PLANNING , HOUSING PATTERNS AND DRAINAGE SYSTEM**

A sophisticated and technologically advanced urban culture is evident, in the Indus Valley civilisation. The quality of town planning suggest knowledge of urban planning which pleased a high priority on hygiene, the streets of major cities, such as Mohenjo Daro and Harappa were laid out in perfect grid patterns. The houses were protected from noise , odour and thieves. As seen in these cities, the urban plan included world's first urban sanitation system. Within the city, individual homes or group of homes, obtain water from wells. From a room that appears to have been set aside for bathing, waste, water was directed to covered drains, which were lined along the major streets. Houses opened only to inner courtyard and smaller lanes. The house buildings in some villages in the region still resembles in some respects the house buildings of the Harappan.

The ancient Indus system of sewerage and drainage that were developed and used in cities throughout the Indus region, were far, more advanced than any found in contemporary urban sites in middle east, and even more efficient than those in some areas of India and Pakistan today . The advanced architecture of harappan is shown by their impressive, dockyard, granaries, warehouses, Brick platforms and protective walls. The massive citadel of Indus cities that protected the Harappan's from floods and attackers where larger than most Mesopotamian structures. The purpose of citadel remain debated. In contrast to this civilisation, contemporary Mesopotamia and ancient Egypt, no large monumental structures were built, there is no conclusive evidence of palaces, all temples or of kings, armies or priests, all or based on assumption of the historians. There is no conclusive evidences for all these. Some structures are thought to have been granaries Found at one city is an enormous well built great Bath Which May have been a public bath, although the citadels were walled, it is far from clear that the structures were defensive. They may have been built to divert flood waters. Most city dwellers appears to have been traders or artisans who lived with other person in the same occupation in well defined neighbourhoods. Materials from distant region were used in cities for constructing seals and other objects. The seals have images of animals, gods and other types of inscriptions. Some of the seals were used to stamp play on trade goods and most probably had other uses. Although some houses were larger than the others, Indus civilisation cities were remarkable for their apparent systems. All the houses had access to water and drainage facilities. This gives the impression of a society with egalitarian wealth concentration.

Harappan cities had great uniformity in town planning, the fundamental layout of prominent urban settlements were similar to a large extent. Town planning was based on grid pattern or chess board pattern. The streets and lines cut each other at right angles dividing the city into a number of rectangular blocks. Main Street ran from north to South, the streets and lines were not paved. Entire city was complexly divided into two distinct parts that is the upper town and the lower town. The citadel was the upper town and was fortified area which housed important civic and religious public buildings, including granaries and residences of the ruling class and the lower town, the lower part was invariably bigger in area and was invariably located east of the former. The lower town was meant for common public. The Citadel and the lower town were separated by a ground. The archaeological excavations have brought to light evidence of fortification of the lower towns as well as some urban centres like Kalibangan and Surkotda. The archaeological excavations have indicated that elaborate and planned underground drainage system existed as most of the settlements. The houses were connected to the main drain equipped with manholes. The drains were mostly made of bricks with lime mortar and also bitumen was used. The mixture of gypsum and lime was used to make the drains water tight. The houses of Harappan people were plain without much decoration. The living standard did not exhibit any refinement and beauty. So far as the decorative value of the house was concerned, they lacked it. This shows the utilitarian outlook of Harappan people. An average house comprised a courtyard, 4 to 6 living rooms, a bedroom a kitchen and a well presence of staircase gives indication of the second story. Houses had sideline entrances.

### **GREAT BATH , BUILDINGS AND SEALS**

In Harappa, Mohenjo Daro and Kalibangan, the citadel areas contained monumental structures which must have had special functions. This is clear from the fact that they stood on a high mud brick platform. Among these structures is the famous great bath of Mohenjo Daro. This brick built structure measures 12m by 7m and 3 m deep. it is approached at either ends by flight of stairs. The bed of bath was made watertight by use of bitumen. Water was supplied by a large well in an adjacent room. There was K drain for discharging water too. The bath was surrounded by porticoes and sets of rooms. Scholars generally believe that the bath was used for ritual bath of kings or priest.

Another important structure discovered in the Citadel of Mohenjo Daro is the great granary. It consists of 27 blocks of brick work crisscrossed by ventilation channels. Below the granary were the brick loading bays from which grains were raised into Citadel for storage. Though some scholars have questioned the identification of the structure with the granary, but it is certain that this large structure must have had some important function.

To another side of the great bath is a large building which has been identified as the residence of a very high official. It includes an open court of 33 feet Square onto which three veranda is open.

Yet another significant building was an assembly hall. It had four rows of five brick plinths upon which wooden columns were erected

A no. of large buildings has been found in the citadel and lower towns at Mohenjodaro are believed to be temples of gods.

Seals were one of the most important features of Indus Valley civilisation. The designs on the seals included a wide range of animals. Some seals have only scripts carved on them and some other bear human form.

Some seals show the use of various kinds of geometrical patterns. The animal motifs used are the Indian bison, bull, rhinoceros, tiger and elephant. A series of composite animals are also shown. Some seals might have been used for religious purpose. It could have also been used for exchange of goods between cities. The seal of a horned deity sitting in a yoga posture and surrounded by animals has been identified with the God Pashupati.

### **SOCIAL AND ECONOMIC CONDITIONS OF THE PEOPLE**

Under the Harappan civilisation, the developed planning reflects the polity of an organised administrative system but what was the nature of the government is a matter of dispute among the scholars.

Yeah, the basis of urbanisation was prepared by agrarian suppliers as well as the developed trade and commerce. Yeah Harappan people were using stone, copper and bronze implements in agriculture. Wooden ploughshares were in use and we get evidence from furrowed field at pre-Harappan level of Kalibangan. Usually Harappan people were taking two crops in a single season. They were producing three varieties of wheat and barley. They also produced legume in crops like peas. Apart from that they were producing mustard. From Gujarat, we have the evidence of production of rice as well. Surplus grain production fulfilled the need of urban population. The evidence of granaries from a number of Harappan sites just gives a hint towards the export of grains as well. It was the trade and commerce which prepared the basis of urbanisation. Under Harappan civilisation, both external and internal trade developed. In internal trade, the trade partners were region of Karnataka, Hazaribagh in Bihar and Rajasthan et cetera. Likewise in external trade, the trading partners were the region like Bahrain, Persian Gulf, Mesopotamia and Afghanistan. The developed external trade would result into urbanisation. We have the evidence of external trade for some Harappan seals have been unearthed from the region like Mesopotamia and Bahrain. Further more from Mesopotamia inscription dated 2350 BCE we get the information about the trade (Sargao inscription)

Yeah, gold, silver, copper et cetera, were the imported goods of the Harappans. The exported goods were manufactured goods made of shell and ivory from Lothal, Blackwood, some quantity of gold and copper, cotton and grains were exported.

The balance of trade should have been in favour of Harappans. We find that although agriculture as well as trade and commerce, both played the important role in urbanisation but one thing about Harappan civilisation was that the trade and commerce played a more decisive role than agriculture. In another word, we can say that prosperous urban centres like

Sutkagendor and Surkotda appeared in Balochistan. Despite the fact that it was the desert region.

Yeah, moving forward to the society and culture while observing the level of economic development under Harappan civilisation. We come to the conclusion that the Harappan society should be stratified at the upper level of the society. They should be the people of elite class, the presence of Citadel gives a strong hint to the presence of elite class. Likewise, the statue of a priest from Mohenjo Daro, as well as the evidence of fire altars from Lothal and Kalibangan reflects the possibility of presence of a priest class. Apart from that there should have been a vast population of merchants and craftsmen. This group represented the middle class. At the lower ladder of the society, they should have been working class people. Labour houses were evident from Mohenjo Daro. There was a vast population of farmers in Harappan society.

It was matriarchal or patriarchal. It is a disputed in fact the availability of a number of female terracotta figurines gives a hint towards matriarchal society, but on the other hand, the burial type graves from Lothal and Kalibangan represents the couple burial as wife along with husband denotes patriarchal nature of society. In the options of sufficient evidences, it is much difficult to specify the philosophical side of Harappan religion. But on the basis of seals, the great bath and terracotta figurines we come to the conclusion that polytheism was prevailing in Harappan religion and number of gods were prevailing there for example, Pashupati Shiva, mother goddess, the animal cult, the tree cult etc. The multiplicity of gods just corresponded to the Metropolitan character of Harappan people. Apart from this, we underline the art and craft of the Harappan people. Harappan people developed art in forms like bronze dancing girl, shell inlay work and bead making etc. They were also making potteries.

### **THEORIES OF DECLINE**

Due to dearth of sufficient source material, the perception about the origin and decline of Harappan civilisation is not clear. So a number of theories have been propounded explaining the decline of Harappan civilisation. In this context, theory of Aryan invasion came into existence. For the first time it was an Indian officer under John Marshall named Ramprasad Chandra, who gave a strong hint towards the phenomena like Aryan invasion. Later Mortimer Wheeler emphasised this aspect and brought it to the level of theory. He declared that the decline was gradual and long drawn out, but the end was catastrophic. In the favour of this statement, he presented some literary as well as archaeological evidences. For example, he gives the reference to the words like Purandar (destroyer of forts) mentioned in Rigveda. He also mentioned Harappia and compare it to the analogy with the term Harappa. But when we observe minutely, we find that the literary and archaeological sources, he presented are quite unable to support his view. Archaeological sources were insufficient and literary sources were not authentic.

Other archaeologists and scholars turned towards environmental factors in order to discuss the issue of decline of Harappan civilisation. Thus, some scholars came to prove that it was those

rivers, in lap of which civilisation is sprang up themselves became a factor in the decline of the civilisation. It was on that basis. The evidence of lad was presented. For the first time John Marshall gives the preferences of lad. Add the successive level at Mohenjo Daro. Other archaeologist presents the evidence of flood at chanhudaro.

Other scholars propounded the theory of gradual decline and there are some scholars who talks about the excessive exploitation of natural resources and there are some who state the reason such as ecological imbalance as the factor of decline.