ANCIENT INDIAN HISTORY
MODULE 2
THE INDUS VALLEY CIVILIZATION

The Indus valley civilization, a bronze age civilization, like the other three civilizations of the ancient world which developed along the river banks (Egyptian on Nile, Mesopotamian on Tigris–Euphrates, Chinese on the Yangtze), had developed on banks of Indus and several other nearby rivers such as Ghaggar-Hakra, the now dried up Saraswati and the Drasadvati. The centre of this civilization was in Sind and Punjab and from there, it spread in all directions. This civilization was largest of the four ancient urban civilizations of Egypt, Mesopotamia, South Asia and China and covered an area of around 1.3 million square kilometres. This area is triangular in shape and no other ancient civilization was extended to such a large area. According to recent researches, the Indus valley civilisation broadly covered a time span from around 8000 BC to 1200 BC.

THE RECENT BHIRRANA DISCOVERY

According to new research, by a team of researchers from prestigious Indian institutes and Archaeological Survey of India (ASI), it’s discovered that the Bronze-Age civilization which spreads across parts of Pakistan and India, may be 8000 years old, taking root well before the Egyptian (7000BC to 3000BC) and Mesopotamian (6500BC to 3100BC) civilizations. The researchers used carbon dating techniques on animal remains and pottery fragments from the Bhirrana site in India to reach this conclusion. Bhirrana is now considered the oldest discovered Indus valley site, with some of the oldest mounds dating back to 7500 B.C.E. Previously, Mehrgarh, in the Pakistani province of Baluchistan, dating from around 7000 B.C.E. was considered the oldest Indus valley site.

GEOGRAPHICAL IDENTITY OF INDUS VALLEY CIVILISATION

The Indus Valley Civilization covered most of Pakistan and parts of north-western India, Afghanistan and Iran, extending from Jammu in the north to Narmada estuary in the south and from the Makran coast of Baluchistan in the west to Meerut in the north east. The geography of the Indus Valley put the civilizations that arose there in a highly similar situation to those in Egypt and Peru, with rich agricultural lands being surrounded by highlands, desert, and ocean. It flourished in the basins of the Indus River and the now dried up Sarasvati River, which once coursed through northwest India and eastern Pakistan together with its tributaries flowed along a channel, identified as that of the Ghaggar-Hakra River. The course of the Indus River in the third millennium BC was more south-easterly and it flowed into the Arabian Sea in the vicinity of the Rann of Kutch. Coastal settlements extended from Sutko Dor in Western Baluchistan to Lothal in Gujarat.

EARLY HARAPPAN PHASE (3300 BCE- 2600 BCE):

The Early Harappan is related to the Hakra Phase, identified in the Ghaggar-Hakra River Valley and coincides the Kot Diji Phase (2800–2600 BCE, Harappan 2), named after a site in northern Sindh, Pakistan, near Mohenjo Daro. The earliest examples of the Indus script dated to 3rd millennium BC. Discoveries
from Bhirana indicate that Hakra ware from this area dates from as early as around 7500 BC.

Kot Diji represents the phase leading up to Mature Harappan, with the citadel representing centralised authority and an increasingly urban quality of life. Another town of this stage was found at Kalibangan in India on the Hakra River. Trade networks linked this culture with related regional cultures and distant sources of raw materials, including lapis lazuli and other materials for bead-making. Villagers had, by this time, domesticated numerous crops, including peas, sesame seeds, dates, and cotton, as well as animals, including the water buffalo. Early Harappan communities turned to large urban centres by 2600 BCE, from where the mature Harappan phase started.

MATURE HARAPPAN (2600 B.C 1900 B.C)

By 2600 BCE, the Early Harappan communities had been turned into large urban centres. Such urban centres include Harappa, Ganeriwala, Mohenjo-Daro in Pakistan, and Dholavira, Kalibangan, Rakhigarhi, Rupar, and Lothal in India.

MOST IMPORTANT SITES OF INDUS CIVILISATION

HARAPPA
Harappa is the first discovered site of this civilization excavated in 1921 by a team led by Daya Ram Sahni. It was a major urban centre during its mature phase surrounded by extensive walls. It is located in Punjab Province, Pakistan, on an old bank / bed of the River Ravi. Its location along old course of Ravi provided access to trade networks, aquatic food and water for drinking and cultivation. Due to this, Harappa remained occupied for a long time. Further, Harappa was also a meeting point of trade routes coming from east. The major findings include, two rows of six granaries with brick platforms (12 granaries together had the same area as the Great Granary at Mohenjodaro), workmen quarters, 2 sandstone statues depicting human anatomy, dog attacking deer, little bullock carts (ekkas) and it’s the only site which had the evidence of coffin burial.

MOHEN-JO DARO
Mohenjo-Daro (mound of dead) was excavated by a team led by R.D. Banerjee in 1922. It is located in the Larkana District of Sindh Pakistan on bank of Indus River. The major findings in Mohen-jo Daro include a college, a multi-pillared assembly hall, the Great bath (the most important public place of the city), a large granary (the largest building of Mohenjo-Daro), a piece of woven cotton along with spindle whorls and needles, a pot-stone fragment of Mesopotamian origin, evidence of direct trade contact with Mesopotamia, a bronze dancing girl, discovery of human skeletons put together, a seal representing Mother Goddess with a plant growing from her womb, a bearded man; and a seal with a picture suggesting Pashupati Mahadev.

KOT DIJI
Kot Diji was a Pre-Harappan site and located on the left bank of River Sindh. This city was destructed by force or some fire. A tar is the major object found here. Statues of bull and mother goddess are other things found in Kot diji.
KALIBANGAN
Kalibangan is in Hanumangarh district of Rajasthan. It was located on the banks of now dried up Sarwaswati River, kalibangan literally means 'black bangles'. It got its name from the myriad pieces of terracotta bangles excavated here. Kalibangan was an early Harappan fortified settlement, having houses on both sides of streets, bathrooms and drains of baked bricks. The major findings of the site include, the oldest ploughed field, fire-Altars, charging bull, tiled floor, two kinds of burials (circular and rectangular graves), bones of camels etc.

BANAWALI
It is situated in Hissar district of Haryana. Banawali has provided two phases of culture during its excavations; the pre-Harappan (Phase I) and the mature Harappan (Phase II). Though phase II belonged to the Harappan period, chess-board or grid pattern of town planning was not always followed as in other Harappan sites. But remains of drains and streets identified from here. High quality barley has been found in excavations. Other important material remains include ceramics, steatite seal, and a terracotta plough.

LOTHAL
Lothal is located in Ahmadabad, Gujarat. It was a coastal town and had different type of town planning. The city was divided into six sections and each section was built on a wide platform of unripe bricks. Entry to the houses were on Main Street while other sites of IVC have lateral entry. Important Findings of Lothal an artificial dockyard (which makes it an important sea link), rice husk (rice husk has been found only at Lothal and Rangpur), bead making factory etc. Lothal is thought to have direct sea trade links with Mesopotamia because of finding of an Iranian seal from there.

THE DOCKYARD
Lothal developed as the most important port and a centre of the bead industry until 1900 B.C. A long wharf connected the dockyard to the main warehouse, which was located on a plinth of some 3.5 meters above the ground. The whole town was situated on a patch of high ground, rising up from the flat alluvial plains of Bhal, a wall was erected to encircle the town and a platform was built for the warehouse where goods were checked and stored. The warehouse was divided into 64 rooms of around 3 1/2 sq meters each, connected by 1.2-meter-wide passages, and 12 of these cubical blocks are visible even today. Seals were used to label the imports and exports from the dock, and some of these labels have been found during digs. Klin fired bricks, which the Harrapans had learnt from experience were unaffected by tidal waters, were used in making passages to protect the cargo.

SURKOTADA: Situated in Kutch (Bhuj) district of Gujarat and excavated by J.R Joshi in 1972, Surkotada was an important fortified Harappan settlement. The site is important particularly because it has provided the remains of horse bones. But its identity is doubtful. A cemetery with four pot burials with some human bones has also been found. A grave has been found in association with a big rock, a rare finding of the Harappan culture.
DHOLOVIRA
Dholavira is located in Rann of Katch of Gujarat. It is excavated in 1990s by a team led by R S Bisht. It had several large reservoirs, an elaborate system of drains to collect water from the city walls and house tops to fill these water tanks. Harappa, Mohenjo-Daro and Dholavira are called the nucleus cities of the civilization. Unlike the Harappa and Mohenjo-Daro where there are two settlements, in Dholavira 3 citadels or principal divisions have been found which have been duly protected by fortifications. There is an open ground out of the fortifications. In Dholavira there has been found the inner enclosure of the citadel too which has not been found in any other cities of the Harappan culture. One of the most important findings of Dholavira has been a signboard with Indus Script.

WATER CONSERVATION OF DHOLOVIRA
Water conservation of Dholavira speaks volume of the ingenuity of the people who developed a system based on rainwater harvesting to support life in a parched landscape, with scanty sweet water. Relying partly on rain-water and little from the ground a complex water system comprising of large rock-cut reservoirs, located at the eastern and southern fortification and rock-cut wells were developed. Huge stone drains can be seen in the city the directed storm water to the western and northern section of the lower town separated by broad bunds, creating in-effect a series of reservoirs. The most imposing well was located in the castle and is possibly the earliest example of a rock cut well. The city also drew water from the seasonal streams flowing on the northern and southern faces of the fortification. The water from these streams was slowed by a series of dams and partly channelized water into the lower town. Every drop of water was conserved to ensure survival.

CHANHU DARO
Excavations at Chanhu-daro have revealed three different cultural layers from lowest to the top being Indus culture, the Jhukar culture and the Jhangar culture. The site is especially important for providing evidences about different Harappan factories. These factories produced seals, toys and bone implements. It was the only Harappan city without a citadel. Some remarkable findings at Chanhu-daro include bronze figures of bullock cart and ekkas; a small inkpot, footprints of an elephant and a dog chasing a cat.

SUKTAGENDOR
Suktagendor was located around 55 kms from the shore of Arabian Sea on the Bank of Dasht River near the Iran Border. It was an important coastal town along with Lothal and Balakot (in Pakistan) and is considered to be the western border of Indus Valley Civilization. It was originally a port and later cut off from the sea due to coastal upliftment. The conclusion has been drawn up that Suktagendor had trade relationships with Babylon.

RAKHIGARHI
Rakhigarhi in Hissar, Haryana is now considered as the largest site of Indus Valley civilisation. The archaeological excavations at Rakhigarhi revealed all the
definite features of Indus civilization such as potter's kiln, an elaborate drainage system, a granary, ritualistic platforms and terracotta figurines.

CHARACTERISTICS OF INDUS VALLEY CIVILISATION- MATURE PHASE

TOWN PLANNING:- One of the most interesting features of this civilisation was the emergence of the first urban societies in South Asia. The most remarkable aspect was the high level of sophistication in town planning, and urban amenities the people lived in well-planned cities. To the west of each was a 'citadel' mound built on a high podium of mud-brick and the citadel housed public buildings and to the east was the lower town or the main hub of the residential area. The citadel and the town were further surrounded by a massive brick wall. In fact, careful planning of the town, fine drainage system, well arranged water supply system prove that all possible steps were carefully adopted to make the town ideal and comfortable for the citizenry. The main streets and roads were set in a line, sometimes running straight for a mile, and were varying in width from 4 meters to 10 meters. Most of these roads and streets were paved with fire brunt bricks. The main streets intersected at right angles, dividing the city into squares or rectangular blocks each of which was divided length wise and cross wise by lanes.

Apart from the living houses in the lower town, big multi–pillared halls have also been discovered at the citadel area in Mohenjo-Daro. Here, the most striking feature was the Great Bath (180 ft long and 108 ft wide). The bathing pool in it was 39 feet long, 23 feet wide and 8 feet deep. The Great Granary was another important building. The surplus produced by the peasants was stored here.

THE DRAINAGE SYSTEM:- The Drainage System of the Indus Valley Civilization was far advanced. The drains were covered with slabs. Water flowed from houses into the street drains. The street drains had manholes at regular intervals. All soak pits and drains were occasionally cleaned by workmen. In every house there was a well-constructed sink, and water flowed from the sink into the underground sewers in the streets. This elaborates drainage system shows that the Indus Valley people were fully conversant with the principles of health and sanitation.
HOUSES:- The houses were of different sizes varying from a large building to one with two small rooms. The houses had a well, a bathroom, and a covered drain connected to the drain in the street. The buildings were made of burnt bricks, which have been preserved even to this day. Sun-dried bricks were used for the foundation of the buildings and the roofs were flat and made of wood. The doors of houses never opened into streets. The special feature of the houses was that rooms were built around an open courtyard. Some houses were double storied. Some buildings had pillared halls; some of them measured 24 square meters. It is assumed that there also must have been palaces, or municipal halls.

POLITICAL UNITY:- The Harappans made the first ever experiment to bring about political unity of the divergent geographical units of the civilisation without the use of force. The total absence of internecine wars, religious or political, speaks volumes about the peaceful administration of the Indus state. It would be wrong to think that priests ruled in Harappa, as they did in the cities of lower Mesopotamia for we have no exact religious structures of any kind except the Great Bath. There are some indications of the practice of fire cult at Lothal in the later phase, but no temples were used for the purpose. Perhaps the Harappan rulers were more concerned with commerce than with conquests, and it was possibly ruled by a class of merchants.

AN EFFICIENT AND EFFECTIVE MUNICIPAL ADMINISTRATION
The quality of municipal town planning is an outstanding feature of the Harappan civilization. The uniform chess-board or grid-iron pattern planning of towns and cities, systematic drainage suggests the presence of efficient municipal governments which placed a high priority on hygiene. There is evidence that town administrators enlisted the cooperation of the people in order to efficiently execute public works.

The Harappans were highly disciplined people who were very conscious of their civic duties. The citizens kept their cities clean, and also had various other responsibilities. For example, residents would ensure that the underground drains were not choked by the solid waste carried by private drains from the baths. Moreover, the Harappans cooperated wholeheartedly when planning the towns and rebuilding damaged public buildings such as the docks, warehouses, fortification walls and platforms. The Harappan administration also functioned to standardize industrial products such as metal tools and weapons, and even the units that were used to measure length. In fact, an efficient system of distribution of agricultural and industrial products, and raw materials, indigenous as well as imported, is the high watermark of Harappan administration.

The Harappans could grow surplus food to feed the various specialized workers through an efficient distributory channel which presupposes an equally efficient administration of towns and cities and regulation of trade. The central government could regulate trade and ensure the efficient and equitable distribution of agricultural and industrial products throughout the vast Empire, and to all socio-religious groups, by establishing a network of market towns. The high degree of homogeneity in Harappan products, the uniform planning of Indus towns, the
rigorous enforcement of trade and municipal regulations and the efficient Harappan distribution system all confirm that there was a highly effective and efficient administration in the ancient Indus Valley civilization.

**INDUS CIVILIZATION AND MODERN URBANISATION**

The **Indus Valley Civilization** displayed remarkable planning in its urban towns, especially in the area of **sanitation** and **drainage**. In the **Indus Valley Civilization**, the streets were built on grid-like patterns, which allowed for methodical and planned growth. In modern times, **Le Corbusier’s plans** for Chandigarh provided for a **rectangular shape** with **grid iron pattern**, which enabled **fast movement of traffic** and **reduced the area**. In the **Indus Valley Civilization**, the town was also demarcated clearly between residential areas and common/public areas.

Drainage system was designed such a way that all the houses are connected to street drains. These drains lead to an outer drain and provision for loose bricks for cleaning. Also every house was built with bathrooms. Present day **urbanization** focuses on **proper sanitation** and **cleanliness** through various initiatives like **Swachh Bharat** to avoid open defecation.

The concept of **Indus town division** (citadel with public places such as parks, religious centers and lower town with residential quarters) is identical with current urban planning with slight modifications. Great bath is assumed for some special rituals. It can be seen even today that before any religious events people used to take a dip in holy lakes or rivers. A sophisticated and technologically advanced **urban culture** is evident in the **Indus Valley Civilization**. The quality of **municipal town planning** suggests the **knowledge of urban planning** and **efficient municipal governments** which placed a **high priority on hygiene**. The Indus civilization’s economy appears to have depended significantly on trade, which was facilitated by major advances in transport technology. Thus to a great extent, it can provide inputs to the present day urbanization.

**SCIENCE AND TECHNOLOGY**

A sophisticated and technologically advanced urban culture is evident in the Indus Valley civilization. An amazing **sewage and drainage system**, **uniform standard of weights and measures**, and advanced buildings are evidence of this. The Harappans were among the first to develop a system of uniform weights and measures. The advanced architecture of the Harappans is shown by their **impressive dockyards, granaries, warehouses, brick platforms and protective walls**. The massive citadels of Indus cities that protected the Harappans from floods and attackers were larger than most Mesopotamian ziggurats. Unique Harappan inventions include an instrument which was used to measure whole sections of the horizon and the tidal dock. In addition, the Harappans evolved new **techniques in metallurgy**, and **produced copper, bronze, lead and tin**.

The designing of the **Lothal dock** and **warehouse** and the **provision of manholes and sewers** in cities are other examples of the **Harappan scientific approach to human problems**. The scientific approach of the people of the Indus Valley is indicative of their **technologically advanced and efficient lifestyle**. Clearly, the
contributions of the Indus Valley civilization to the fields of science and technology are numerous.

**ART AND CRAFT**
The Harappan culture belongs to the **Bronze Age**. The people of Harappa used many **tools and implements of stone**, but they were very well acquainted with the manufacture and use of bronze. Bronze was made by the smiths by **mixing tin with copper**. Numerous tools and weapons recovered from the Harappan sites suggest that the **bronze smiths** constituted an important group of artisans in the Harappan society. **Objects of gold** are reasonably common, **silver** makes its **earliest appearance** in the Indus civilization and was **relatively more common than gold**. **Lead, arsenic, antimony** and **nickel** were also used by the Harappan people.

The **axes, chisels, knives, spearheads**, etc., were made of bronze and stone. They seem to have been produced on a mass-scale in place like Sukkur. **Two short copper swords** found in Mohenjodaro are of the slashing type and not cutting type. As for craft specialization, the towns of Chanhudaro and Lothal have yielded evidence of the presence of **workshops of bead-makers**. Balakot, Lothal and Chanhudaro were centres for **shell-working and bangle-making**. Apart from them the evidences indicate the presence of potters, stone masons, brick makers, seal cutters, traders, priests, etc. The Harappans also practised **boat making**. Weavers wove **cloth of wool and cotton**. Spindle whorls were used for spinning.

**HARAPPAN POTTERY**
The **potter's wheel was in full use**, and the Harappans produced their own **characteristic pottery**, which was made glossy and shining. Plain undecorated pottery is more common at Mohenjo-Daro than painted ware. But the well-known **painted red and black wares** were adorned with black coloured designs on red background. Most popular design is a **series of intersecting circles**, which has probably not been used by any other ancient civilization. Other designs included tree pattern, the chess board pattern, figures of animals and birds. **No human figure** is depicted on the pottery from Mohenjo-Daro but a few pottery pieces discovered from Harappa portray a man and a child. The Harappan pottery was highly **utilitarian in character with artistic touch**.

**HARAPPAN SEAL**
The most interesting part of the discovery relates to the seals—more than 2000 in number, made of **soapstone, terracotta and copper**. The **seals** give us useful information about the **civilization of Indus valley**. Some seals have human or animal figures on them. But the **cow was not represented** on the **seals** and **terracotta art of the Harappan culture**. Most of the seals have the **figures of real animals** while a few bear the **figure of mythical animals**. The seals are rectangular, circular or even cylindrical in shape. The seals even have an **inscription of a sort of pictorial writing**. Most of the seals have a knob at the back through which runs a hole. It is said that these seals were used by different associations or merchants for **stamping purposes**. They were also worn round the neck or the arm. The **seals show the culture and civilization of the Indus Valley people**. In particular, they indicate:
Dresses, ornaments, hair-styles of people.
Skill of artists and sculptors.
Trade contacts and commercial relations.
Religious beliefs.
Script.

IMPORTANT SEALS:
THE PASHUPATI SEAL: This seal depicts a yogi, probably Lord Shiva. A pair of horns crown his head. He is surrounded by a rhino, a buffalo, an elephant and a tiger. Under his throne are two deer. This seal shows that Shiva was worshipped and he was considered as the Lord of animals (Pashupati).

THE UNICORN SEAL: The unicorn is a mythological animal. This seal shows that at a very early stage of civilization, humans had produced many creations of imagination in the shape of bird and animal motifs that survived in later art.

THE BULL SEAL: This seal depicts a humped bull of great vigour. The figure shows the artistic skill and a good knowledge of animal anatomy.

DRESS, HAIRSTYLES AND ORNAMENTS:
The Harappan men wore robes which left one shoulder bare, and the garments of the upper classes were often richly patterned. Beads were worn, and men and women alike had long hair. The elaborate head-dresses of the Mother Goddess probably had their counter-parts in the festive attire of the richer women. The women wore a short skirt that reached up to the knee; and it was held by a girdle-a string of beads. The coiffures of the women were often elaborate, and pigtails were also popular, as in present-day India. Women loved jewellery and wore heavy bangles in profusion, large necklaces, and earrings. Mirrors of bronze were very common. It appears that the ladies at Mohenjo-Daro knew the use of collyrium, face-paint and other cosmetics. Chanudaro finds indicate the use of lipsticks. Bronze razors of various types served for the toilet of the male.

COTTON TEXTILE
Evidences for textiles in Indus Valley Civilisation are not available from preserved textiles but from impressions made into clay. The only evidence found for clothing is from iconography and some unearthed Harappan figurines which are usually unclothed. These little depictions show that usually men wore a long cloth wrapped over their waist and fastened it at the back (just like a close clinging dhoti). Turban was also in custom in some communities as shown by some of the male figurines. Evidences also show that there was a tradition of wearing a long robe over the left shoulder in higher class society to show their opulence. The normal attire of the women at that time was a short skirt up to knee length leaving the waist bare. Cotton made head dresses were also worn by the women.

RELIGIOUS PRACTICES
The chief female deity was Mother Goddess. In one terracotta figurine found at Harappa, a plant is shown growing out of the embryo of a woman. Probably the image represents the goddess of earth. The Harappans, therefore, looked upon the earth as a fertility goddess and worshipped her.
The most striking deity of the Harappan culture is the horned-deity of the seals. He is depicted on three specimens, in two, seated on a small dais, and in the third on the ground; in all three his posture is cross-legged (sitting posture of a yogi). On the largest of the seals, he is surrounded by four wild animals, an elephant, a tiger, a rhinoceros and a buffalo, and beneath his feet appear two deer. Marshall boldly called this god Proto-Siva, and the name has been generally accepted; certainly the horned god has much in common with the Siva of later Hinduism, who is, in his most important aspect a fertility deity, is known as Pasupati, the Lord of Beasts. Phallic worship was an important element of Harappa religion.

The people of the Indus region also worshipped trees. The picture of a deity is represented on a seal in the midst of the branches of the pipal tree which continues to be worshipped to this day. Animals were also worshipped and many of them are represented on seals. The most important of them is the humped bull. The inhabitants of the Indus region thus worshipped gods in the form of trees, animals and human beings. Amulets have been found in large numbers. Probably the Harappans believed in ghosts and evil forces.

**BURIAL PRACTICES**

Cemeteries excavated at several Indus sites like Mohenjodaro, Harappa, Kalibangan, Lothal and Ropar throws light on the burial practises of the Harappans. Three forms of burials have been found at Mohenjo-Daro, viz., complete burials, (means the burial of the whole body along with the grave goods) fractional burials, (burial of some bones after the exposure of the body to wild beasts and birds) and post-cremation burials. From the Lothal cemetery comes evidence of another burial type with several examples of pairs of skeletons, one male and one female in each case, buried in a single grave. Bodies were always placed in the north-south direction with the head in the north.

**ECONOMIC LIFE OF INDUS PEOPLE**

The Harappan economy was based on irrigated surplus agriculture, cattle rearing, proficiency in various crafts and brisk trade both internal and external.

**AGRICULTURE:**

The Harappan villages mostly situated near the flood plains, produced sufficient food grains not only to feed themselves but also the town people. No hoe or ploughshare has been discovered, but the furrows discovered in the pre-Harappan phase at Kalibangan show that the fields were ploughed in Rajasthan in the Harappan period.

The Harappans probably used the wooden ploughshare. But it’s not known whether the plough was drawn by men or oxen. Stone sickles may have been used for harvesting the crops. Gabarbands or nalas enclosed by dams for storing water were a feature in parts of Baluchistan and Afghanistan, but channel or canal irrigation seems to have been absent. The Indus people produced wheat, barley, rai, peas, etc. They produced two types of wheat and barley. A good quantity of barley has been discovered at Banawali in Hisar district of Haryana. In addition to this, they produced sesameum, mustard, dates and varieties of leguminous plants.
In Banawali a **terracotta plough** has also been found giving strength to the idea of plough cultivation.

At Lothal and Rangpur, rice and spike-lets were found **embedded in clay and pottery**. The Indus people were the earliest people **to produce cotton**. Because **cotton was first produced** in this area the Greeks called it **Sindon**, which is derived from Sindh.

**DOMESTICATION OF ANIMALS:**
Although the Harappans **practised agriculture**, animals were kept on a large scale. **Oxen, buffaloes, goats, sheep and pigs** were domesticated. The **humped bulls** were favoured by the Harappans. From the very beginning **dogs** were regarded as pets.

Cats were also domesticated. Asses and camels were used as beasts of burden. **Camel bones** are reported at **Kalibangan**. Even though horse bones are discovered from Surkotada, its authenticity is doubtful. Indus civilization was not horse centered. While Rigvedic Aryans had domesticated the horse, there is no evidence of domestication of horse by Indus Valley people.

**TRADE:**
The importance of trade in the life of the Indus people is attested not only by **granaries** found at Harappa, Mohenjo-Daro and Lothal but also by the **presence of numerous seals, uniform script and regulated weights and measures** in a wide area. **They did not use metal money.** Most probably they carried on **all exchanges through barter.**

In return for finished goods and possibly food grains, they **procured metals from the neighbouring areas** by boats and bullock-carts. **Inter-regional trade was carried on with Rajasthan, Saurashtra, Maharashtra, parts of western Uttar Pradesh and Bihar. Foreign trade was conducted mainly with Mesopotamia or Sumeria (modern Iraq) and Iran.**

Their cities also carried commerce with those in the land of the **Tigris and the Euphrates**. Discovery of many **Indus seals** in Mesopotamia and evidence of imitation by the Harappans of some cosmetics used by the urban people of Mesopotamia suggests that some of the **Harappan merchants** must have resided or visited Mesopotamia.

About two dozen **Indus type seals** were also discovered **from different cities** of Mesopotamia like, Ur, Susa, Lagash, Kish and Tell Asmar. **Reciprocal** evidence comes from the Indus cities also-discovery of a circular button seals which belongs to a class of Persian Gulf seals, several bun-shaped copper ingots of Mesopotamian origin and the **'Reserved Slip Ware'** of the Mesopotamian type at Lothal.

All these provide conclusive proof of trade links between the **two civilisations**. The Mesopotamian records from about 2350 B.C. onwards refer to **trade relations with Meluha**, which was the ancient name given to the Indus region, and they also speak of two intermediate stations called **'Dilmun'** (identified with Bahrain on the Persian Gulf) and Makan (Makran Coast). Shortughai located near Badakhsan in north-east
Afghanistan was one of the Harappan trading outpost, beyond the high passes of the Hindukush.

The Harappan cities did not possess the necessary raw material for the commodities they produced and hence depended upon the products imported from distant places. **Main imports** consisted of precious metals like gold (from North Karnataka), silver (probably from Afghanistan or Iran), Copper (from Khetri copper mines of Rajasthan, Baluchistan and Arabia), lead (East and South India), tin (Afghanistan and Hazaribagh in Bihar), and several semi-precious stones like lapis lazuli (Badakshan in North-East Afghanistan), turquoise (central Asia and Iran), amethyst (Maharashtra), agate (Saurashtra), jade (central Asia), and chalcedonies and carnelians (from Saurashtra and west India).

**Main exports** were several agricultural products and a variety of finished products such as cotton goods, carnelian beads, pottery, shell and bone inlays etc.

**WEIGHTS AND MEASURES:**
The knowledge of script must have helped the *recording of private property and accounts-keeping*. Numerous articles used for weights have been found. They show that in weighting mostly 16 or its multiples were used; for instance, 16, 64, 160, 320 and 640.

The Harappans also knew the *art of measurement*. The *measures of length* were based upon a *foot of 13.2 inches* and a *cubit of 20.6 inches*. Several sticks *inscribed with measure marks*, one of these made of bronze have been discovered.

**SCRIPT AND LANGUAGE:**
The Harappans invented the *art of writing* like the people of ancient Mesopotamia. Although the earliest specimen of Harappan script was noticed in 1853 and the complete script discovered by 1923, it has not been deciphered so far. Unlike the Egyptians and Mesopotamians, the Harappan *did not write long inscriptions*. Most inscriptions were *recorded on seals*, and contain only a few words.

These seals may have been used by propertied people to mark and *identify their private property*. Altogether there are about *250 to 400 pictographs*, and in the form of picture each letter stands for some sound idea or object. The Harappan script *is not alphabetical* but *mainly pictographic* since its *sign represent birds, fish, varieties of the human form*, etc. and it was *written from right to left like modern Urdu*.

There are two main arguments as to the nature of the language; that it belongs to the *Indo- European* or even *Indo-Aryan family*, or that it belongs to the *Dravidian family*.

**THE ANCIENT INDIAN CIVILIZATION VS ANCIENT CIVILIZATIONS OF EGYPT, MESOPOTAMIA AND GREECE**
The *ancient Indian civilization* differed from those of *Egypt, Mesopotamia and Greece* because *culture and traditions* have been preserved without a breakdown to the present day unlike the latter. The ancient past of *Egypt, Mesopotamia*
(modern Iraq) and Greece (Europe) had a complete break with the past, as evident with the changes seen in terms of religion, culture, values, etc.

The ancient Greeks were a deeply religious people. They worshipped many gods in human form e.g. Zeus, Athena, but Religion in modern Greece is dominated by Greek Orthodox Church (role of Church). In Egypt, construction of large structures called ‘pyramids’ have now almost disappeared. It has now got Islamized while in the past it was dominated by varying polytheistic beliefs and Christianity. Mesopotamia produced multiple empires and civilizations rather than any single civilization. Ancient Indian Civilization (Harappan and Vedic) express its continuity in modern times in multiple aspects.

I. RELIGIOUS ASPECT
The worship of mother goddess, fertility cult, Proto-Shiva, worship of trees(pipal), fire altars (at lothal and Kalibangan) during Harappan Civilization and increasing significance of ‘yajnas’ or sacrifices from Vedic age continue without breakdown till today. Significance of ‘ritual bathing’ and holy bath traced back to Harrapan times ('Great Bath- Mohenjo-Daro) is continued till today e.g. taking dip in Holy Ganges, Yamuna, etc. is still practiced by people. In the case of the cultural life of Indus people -the traditional pottery making and decoration, making of terracotta figurines, game of dice, cosmetics like lipsticks, beaded necklaces, comb, bangles, etc. resemble a lot with modern life of Indians.

II. ECONOMY-AGRICULTURE & TRADE
Indus people knew the use of ploughshare, cultivation of seasonal crops, irrigational techniques wheels and bullock carts for movement of goods, multiple grains (barley, wheat, rice, etc.) which have been in motion even in present day. Indus people practiced trade of cotton, grains and imported precious metals and jewels.

III. POTTERY
Some of the forms and features of the pots used by the Harappans can be seen in traditional kitchens even today.

IV. HOUSE PLANS
People lived in houses of different sizes, mostly consisting of rooms arranged around a central courtyard, which can be seen in Indian villages even today.

V. LOST-WAX METHOD
It was used in the making of the famous “dancing girl” of the Mohenjo-Daro. This technique is still used in certain parts of India.

VI. COTTON
Mesopotamian texts mention cotton as one of the imports from Meluhha and traces of cotton cloth were also found at Mohenjo-Daro. India still continues to produce and export cotton. The beginning of the system of binary and decimal and other measurements and weights which were used by the Harappans have continued into later India. For example- 1 rupee = 16 annas.

VII. GARMENTS
Use of dhoti like lower garment which still continues in the countryside, and an upper garment consisting of a shawl or cloak worn over one shoulder and under the other was in vogue during the historical periods. For ex- this style is visible in the images of Buddha also. Use of talisman and amulets still continues in the Indian society. The practice of building ritual bathing tanks and taking holy bath and ablation can be traced back directly to the Harappan period. Thus it would be appropriate to say that the continuity of the
Indus Civilization into later ages covers all the walks of life not just the religious and spiritual fields.

**THE DECLINE OF THE INDUS VALLEY CIVILIZATION**

**DIFFERENT THEORIES**

**NATURAL CALAMITIES:** seem to be one of the causes of the decline of this civilisation. Recurring floods, drying up of rivers, decreasing soil fertility, deforestation due to constant consumption of wood, earthquakes, scanty rainfall, extension of desert seem to have played havoc with this civilisation. According to some scholars, the *decline of overseas trade with Mesopotamia* may have contributed to the decline of this civilisation. With its decline, literacy and urban life disappeared in India for more than a thousand years.

Due to *tectonic activity*, the flood plains of the lower Indus river were raised which led to prolonged submergence of cities like *Mohenjo-Daro* and *Chanhu-daro* and hence their abandonment. But the cause for the decline of some of the other Indus cities like *Kalibangan* and *Banawali* seems to be not the floods but the *drying up of rivers*. But the Aryans invasion is regarded the weakest reason ever cited for its decline.

**RECENT DISCOVERY**

Recent *archaeological studies* claim that climate change did not lead to sudden decline of *Harappa civilization*. According to discoveries described in the paper, the Harappan civilization didn’t collapse per se but de-urbanized. At Farmana, a site near Bhirrana, there is sharp decrease in the production of wheat and barley from the mature to the declining period. This represents a pattern where people adapted to *changing monsoon patterns*—something they chose not to do during previous droughts and climatic shifts. Perhaps, this time around, rice, introduced from East Asia, had become a widespread alternative crop. Thus, during the period between 1,900-1,300 BCE, Harappans “shifted their *crop patterns* from the large-grained cereals like *wheat and barley*... to *drought-resistant species of small millets and rice* in the later part of *declining monsoon* and thereby changed their *subsistence strategy*.”

The result was the *transformation of society* into a more widely dispersed, clan-centered culture. It should be noted that other *rice-based cultures* like *China* were also largely agrarian and rural while mercantile cities and city-states played a larger role in the *wheat-producing regions* of the Middle East and Mediterranean. This is because millet and rice “generally have much lower yield” than wheat. Thus, “the organized large *storage system* of mature Harappan period was abandoned giving rise to smaller more individual household based *crop processing* and *storage system*.”

By the time the next strata of literature emerge in India during the *Vedic period*, this form of *social structure is evident*. The famous Indus Valley Civilization thus never collapsed; its large structures were only expedient buildings reflecting a *wheat-based culture*. Once crop patterns shifted, most cities lost their purposes and were abandoned, but most people didn’t die out. Instead, they fanned out, south and east, shifting the demographics of the subcontinent toward the *Gangetic Valley*.

**POST HARAPPAN PHASE**

The collapse of the *urban system* does not necessarily imply a complete breakdown in the *lifestyle of the population* in all parts of the *Indus region*, but it seems to have involved the end of whatever system of social and political control had preceded it. After that date the cities, as such, and many of their distinctively urban traits—the use of writing
and of seals and a number of the specialized urban crafts—disappear. The succeeding era, which lasted until about 750 BCE, may be considered as Post-Harappan or, perhaps better, as “Post-Urban.”

In Pakistan’s Sind province the Post-Urban phase is recognizable in the Jhukar culture at Chanhu-daro and other sites. There certain copper or bronze weapons and tools appear to be of “foreign” type and may be compared to examples from farther west (Iran and Central Asia); a different but parallel change is seen at Pirak, not far from Mehrgarh. In the Kachchh and Saurashtra regions there appears to have been a steady increase in the number of settlements, but all are small and none can compare with such undoubtedly Harappan cities as Dholavira. In this region, however, the distinctive foreign metal elements are less prominent.

An intriguing development occurs along the Saraswati valley: there the early Post-Urban stage is associated with the pottery known from the Cemetery H at Harappa. This coincides with a major reduction in both the number and size of settlements, suggesting a deterioration in the environment. In the eastern Punjab too there is a disappearance of the larger, urban sites but no comparable reduction in the number of smaller settlements. This is also true of the settlements farther east in the Ganges-Yamuna valleys. It is probably correct to conclude that, in each of these areas during the Post-Urban Period, material culture exhibited some tendency to develop regional variations, sometimes showing continuations of features already present during the Pre-Urban and Urban phases.

CONCLUSION

The underlying efficiency of the ancient Indus Valley civilization is remarkable. The Harappan government was very complex, and yet very efficient. An efficient and technologically advanced urban culture is clearly evident in the Indus Valley civilization. Advanced Harappan art indicates that the people of the ancient Indus Valley had fine artistic sensibilities. Moreover, the underlying efficiency of this civilization is accurately reflected by the complex Harappan social structure, which integrated several different ethnic and religious groups and ensured enduring peace and prosperity. The ancient Indus Valley civilization was quite clearly advanced, to a great extent.

PREVIOUS YEARS’ QUESTIONS (PRELIMS)

1. With reference to the difference between the culture of Rigvedic Aryans and Indus Valley people, which of the following statements is/are correct? (2017)
   1. Rigvedic Aryans used the coat of mail and helmet in warfare whereas the people of Indus Valley Civilization did not leave any evidence of using them.
   2. Rigvedic Aryans knew gold, silver and copper whereas Indus Valley people knew only copper and iron.
   3. Rigvedic Aryans had domesticated the horse whereas there is no evidence of Indus Valley people having been aware of this animal.

Select the correct answer using the code given below:
   (a) 1 only   (b) 2 and 3 only   (c) 1 and 3 only   (d) 1, 2 and 3

2. Which of the following characterizes/characterize the people of Indus Civilization? (2013)
   1. They possessed great palaces and temples
   2. They worshipped both male and female deities.
   3. They employed horse-drawn chariots in warfare.

Select the correct statement/statements using the codes given below.
   (a) 1 and 2   (b) 2 only   (c) 1, 2 and 3   (d) None of these
3. Regarding the Indus Valley Civilization, consider the following statements (2011)

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

Which of the statements given is/are correct?
(a) 1 only  (b) 2 only  (c) Both 1 and 2  (d) Neither 1 nor 2

4. Match List I with List II and select the correct answer using the codes given below the lists:

List I (ancient site)  List II (Archaeological finding)
A. Lothal            1. Ploughed field
B. Kalibangan           2. Dockyard
C. Dholavira            3. Terracotta replica of a plough
D. Banawali           4. An inscription comprising ten large sized signs of the Harrappan Script

A B C D
(a) 1 2 3 4  (b) 2 1 4 3  (c) 1 2 4 3  (d) 2 1 3 4

5. Which one of the following animals was not represented on the seals and terracotta art of the Harappan culture? (2001)
(a) Cow  
(b) Elephant
(c) Rhinoceros  
(d) Tiger

MODEL QUESTIONS (PRELIMS)

1. Which one among the following is not the characteristic feature of the Harappan settlement?
(a) Doorways and windows generally faced the side lanes and rarely opened onto the main streets
(b) Houses generally had separate bathing area and toilets
(c) The citadel was walled but the lower town was not walled
(d) Drains and water chutes from the second storey were often built inside the wall

2. Which one of the following statements regarding Harappan civilization is correct?
(a) The standard Harappan seals were made of clay
(b) The inhabitants of Harappa had neither knowledge of copper nor bronze
(c) The Harappan civilization was rural-based
(d) The inhabitants of Harappa grew and used cotton

PREVIOUS YEARS’ QUESTIONS (MAINS)

1. The ancient civilization in 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. (12.5) (2015)

2. To what extent has the urban planning and culture of Indus valley civilization provided inputs to the present day urbanization? Discuss. (2014)

3. Write about the chief features of the following: Town Planning in Indus Valley Civilization (1996)