

1. First Farmers

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1.1 River Valley Civilisations

Homo habilis made the first stone tools. These tools were useful only for simple jobs like scraping meat from the hides of dead animals, splitting bones to extract marrow, breaking nuts, etc. To strike the stone with just enough impact and to remove flakes from a stone in order to shape a tool, was the mankind's first big step in the field of technology. The later species of mankind after *Homo habilis* were more evolved. They advanced human technology much further.

Through close observation of the seasonal cycles in the nature, the Mesolithic people could domesticate various plants and animals. It resulted into the rise of the 'Neolithic Age'. Cultivation and pastoralism (animal husbandry) became a way of life for neolithic people. It was the end of nomadic-semi nomadic life for them. Settled villages came into being. The archaeological evidence shows that systematic agriculture began some 12000-11000 years ago. Beginning of agriculture and rise of settled villages are the two phenomena that are inevitably associated with each other. The progress in the techniques of systematic cultivation resulted in the rise of the most ancient river valley civilisations

of the neolithic age. The river valley civilisations grew in four regions of the world. Those regions were Mesopotamia, Egypt, Indian Subcontinent and China. How did this all happen? We shall briefly review it in this lesson.

You would like to know : Scientists in the Bar Elan University of Israel have found out that ancient people had attempted cultivation, some 23000 years ago. They have recovered its archaeological evidence from 'Ohalo', a palaeolithic camp site near the Sea of Galili. At Ohalo the evidence of Barley and some other cereals, seeds of fruits has been found along with traces of human occupation. There were also a few seeds of various weeds. These weeds are of evolved types and they are found only with cultivated crops. This fact confirms that the cereals found at Ohalo were the remains of cultivated crops and not of the wild variety. Additional evidence of grinding stones also came forth from this site. They were used to grind the cereals before cooking them.

(1) The Valley of Euphrates and Tigris - Mesopotamia : Ancient Mesopotamia included modern Iraq, Syria as well as the western regions of Iran and south-eastern regions of Turkey.

Mesopotamia is the Greek name of the region between the two rivers, Tigris and Euphrates. Mesos means the 'middle one'.

Potamos means 'river'. The region between two rivers is 'Mesopotamia'. The Mesolithic people began to stay in this region for longer times because of the availability of ample water. Also both the rivers flooded annually, making the soil on their banks very fertile. The camps of Mesolithic people developed into the first settled neolithic villages. These first villages are dated to 10000 years B.C.E. The farmers in these villages grew wheat and barley.

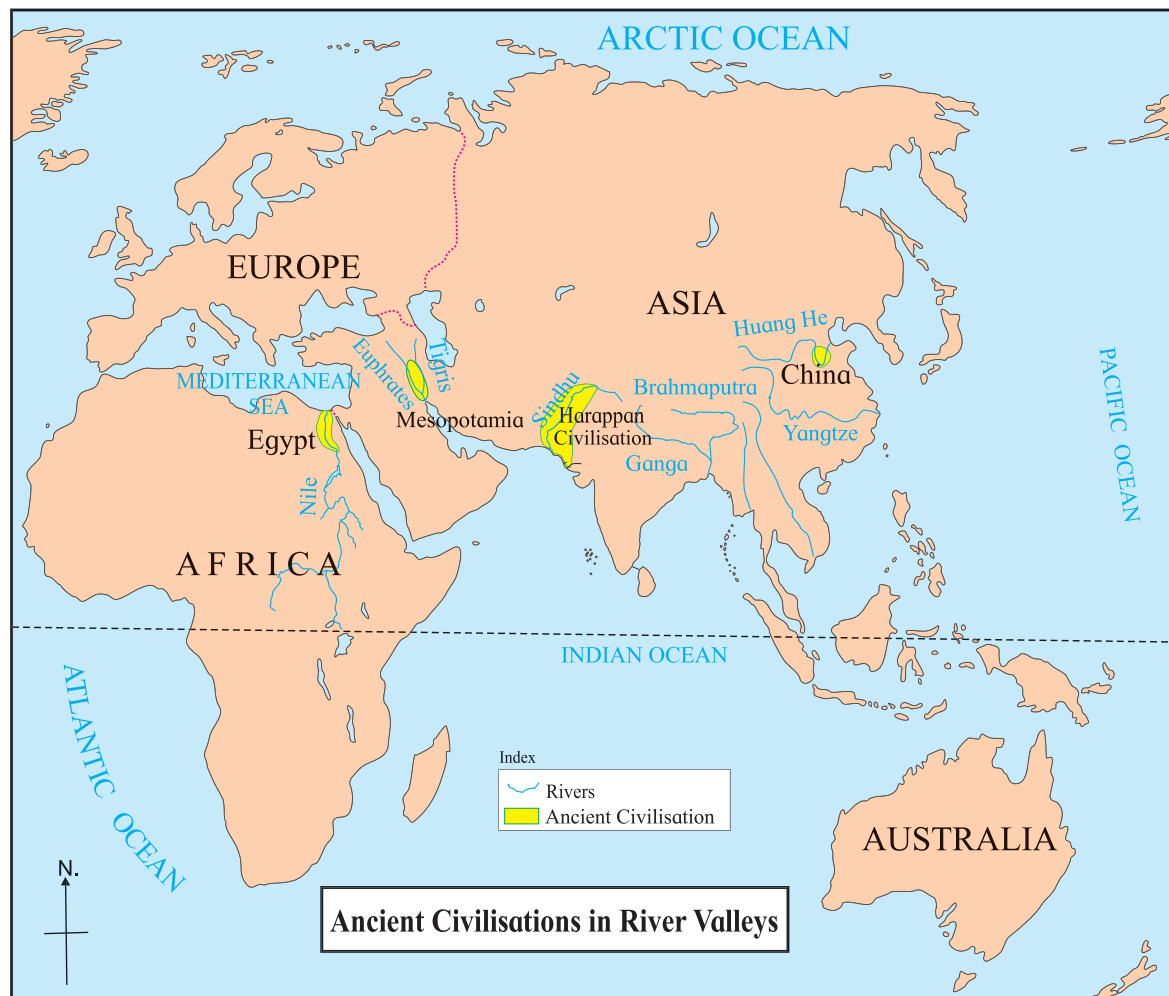
(2) The Valley of Nile - Egypt : The country in the northern parts of the African continent and in the valley of the Nile river is 'Egypt'.

Napoleon Bonaparte had taken along many scholars from various fields during his invasion of Egypt in 1798. They studied the

You would like to know : Egypt was originally known as 'Kemet'. Egypt got this name because of the black soil that was deposited by the Nile floods. Later Egypt came to be known as 'Hwat-ka-Pta'. It means the temple of God. The Greeks changed it to 'Egyptus'. In the course of time it was changed to 'Egypt'. The Arabic name of Egypt is 'Misra'.

ancient remains in Egypt and published it. These studies received a momentum because of the decipherment of the Rosetta inscriptions. It became possible to read the Egyptian hieroglyphs.*

**Hieroglyphs = pictorial script*



The first neolithic villages in Egypt came into being at about 6000 B.C.E. The beginning of agriculture in Egypt coincides with the same time. The first crops grown in these villages were wheat and barley.

(3) The Valley of the Huang He - China : The valley of Huang He river is considered to be the region of origin of the Chinese culture. The Chinese culture evolved here.

Agriculture in the neolithic villages of China began at about 7000 B.C.E. Wheat, foxtail millet and rice were grown by the farmers in these villages.

You would like to know : ‘Yellow River’ is the English translation of the Chinese name ‘Huang He’. The yellow silt brought by her has earned her this name. ‘River’ and ‘Mother’ are her other names. These names indicate her extraordinary place in the Chinese culture. The name ‘River’ indicates that she is considered to be the only river of importance. The fact that she is considered to be the mother of the Chinese culture, is obvious in the name, ‘Mother’.

Huang He and Yangtse in China are the rivers, which receive waters from the Himalayan glaciers as do the rivers Ganga, Sindhu and Brahmaputra. Huang He flows so rapidly that it continuously keeps changing its course. The torrential floods caused because of it used to be very disastrous causing great loss of life and assets. Hence, she had earned one more name, ‘Sorrow’ or the ‘River of Tears’. Now the terrible river has been brought under control by creating a number of dams and bunds on her.

(4) The Valleys of Sindhu (Indus) and Saraswati-Indian Subcontinent : The region of the valleys of Sindhu and Saraswati is now divided between India and Pakistan.

The archaeological excavations at Harappa on the banks of Ravi in Punjab and Mohenjo Daro on the banks of Sindhu in Sindh, indicate the existence of a fully developed civilisation in the Indian subcontinent which was dated to circa 3000 B.C.E.

A number of archaeological sites of neolithic villages have been now discovered. It proves that there were well settled villages in the Indian subcontinent as early as 8000 B.C.E. There is a general consensus among the scholars that the Harappan cities evolved from these early villages.

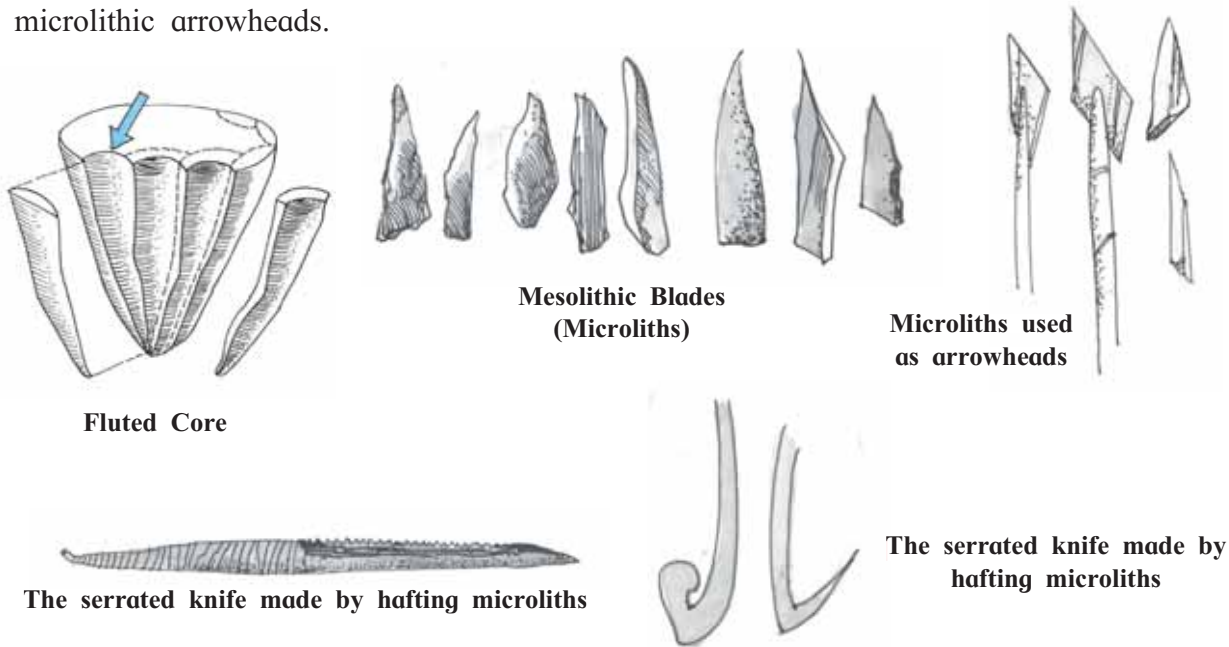
Barley was the main crop grown by the farmers in these villages. However, wheat was also grown on a smaller scale. The farmers in these villages were the **first farmers** of the Indian subcontinent. They kept cattle and goat-sheep. They lived in mud houses.

The archaeological site at Mehrgarh in Baluchistan has yielded evidence of the continuous human occupation from the neolithic times to the rise of Harappan civilisation and the material culture of the respective periods.

1.2 Beginning of Cultivation : Agricultural Production

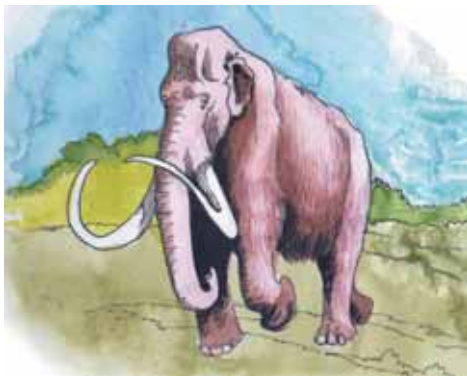
The transition from hunter-gatherer’s life to the beginning of cultivation was a very slow process drawn over thousands of years. Beginning of cultivation is also the beginning of the neolithic age. It spans through 10000 – 8700 B.C.E. It may vary to some extent from place to place. This period marked the beginning of domestication of animals along with the beginning of cultivation. Barley was the main crop in this period. Other crops were wheat and flaxseed.

The blades used for Mesolithic tools were removed from siliceous stones by the technique known as 'Fluted Core technique'. These blades are as tiny as our fingernails. So they are called 'microliths'. The Mesolithic people used wooden arrows fixed with microlithic arrowheads.



It is apparent that the common prerequisites were present in Mesopotamia, Egypt, China and Indian Subcontinent to initiate the onset of the Neolithic age and agriculture. The last Glacial period in the history of our planet came to an end at about 12000-11000 years ago. It was the beginning of a new epoch, which is known as 'Holocene'.

With the beginning of the Holocene, glaciers began to melt and the water volume in the water bodies like rivers and ocean increased. As a result, the availability of



Mammoth

animals and vegetation for food increased. This period had also witnessed extinction of species of gigantic animals like mammoth. However, varied species of fish and small animals like goat, sheep, deer, etc. were amply available for food. The heavy tools of Palaeolithic times were of no use either for fishing or for hunting small animals.

The technique of removing long stone blades had been developed in the Upper Palaeolithic age. In the Mesolithic age the same technique was used and blades as small as fingernails were removed to make tools. These blades known as microliths were either hafted* on the tips of wooden/bone shafts or in the grooves made on those shafts. Thus, modified composite tools like fishing harpoons, spears and arrows could be made. Ample cereals and fruits, grown naturally, were available. Tools like sickle and scythe were made by hafting microliths for harvesting the cereals and fruits.

**To haft - fix with the help of rope and resin/gum*

Thus, the technology evolved; the techniques of hunting and obtaining food improved; food became available in plenty. This resulted in making the Mesolithic people stay at one place for a longer time of the year. Harvesting of naturally grown cereals led them into systematic cultivation. The technique of agricultural and pastoral operations (animal husbandry) continued to evolve. The nature of these operations is such that the farmer is compelled to settle down permanently near the cultivated land. He doesn't need to go out in search of food. This is how the villages were settled on a permanent basis. This prepared the ground for the rise of the Neolithic Age. This

You would like to know : The Palestinian city of Jericho on the banks of the river Jordan, is a historical city with hoary past. It first settled as a village in 9000 B.C.E. It was one of the first neolithic permanent settlements. It started getting organised into a well-knit society at about 8000 B.C.E. The village at this time had a protective wall around it, complete with a watch tower. This is undoubtedly an evidence of an organised society.

The beginning of cultivation at Jericho and in the surrounding region began earlier than the establishment of the village by a few centuries. Its evidence has been discovered at Gilgal, a site near Jericho. A fire stricken house at Gilgal was excavated, which yielded burnt remains of figs. After carrying out laboratory analysis of these fig remains, scientists have concluded that the neolithic people at Gilgal had systematically planted fig cuttings. This stands to be the first attempt of planned cultivation.

transition was drawn over a prolonged period. Nevertheless, considering radical changes in the way of life during the Neolithic Age, the Australian archaeologist Gordon Childe coined the term 'Neolithic Revolution'.

1.3 First Farmers of India

Neo means 'new'. Lithic means 'of stone'. Neolithic age got its name because of the stone tools of completely new types. It included short and long heads of axe, made of polished stone and polished stone rings. The axe heads were hafted on wooden shafts and used for cutting trees, scraping wood to give it a desired shape, etc. It was essential to clear jungles by felling trees in order to obtain land for cultivation and settlement. The new tools came handy for this work.

We have already seen that the site of Mehrgarh came into existence around 7000 B.C.E. This site is of great importance among the neolithic villages in the Indian subcontinent established by the first farmers. The Mehrgarh farmers cultivated barley and wheat. There is another site of a neolithic village that is contemporary to Mehrgarh. The site was found at 'Lahuradeva' in Sant Kabirnagar district of Uttar Pradesh.

In Maharashtra, the mesolithic man existed during 10000-4000 B.C.E. He stayed in natural caves and under rock-shelters. He moved along the river banks. He made microliths from silicious* stones. However, no evidence of purely neolithic sites have been found in Maharashtra. What we have instead, are the Chalcolithic villages. The Chalcolithic people were the first farmers of Maharashtra. Inamgaon, in the Shirur taluka of Pune district, is an important site of the village of Chalcolithic farmers in Maharashtra.

**Siliceous stones - stones like quartz, chalcedony, agate, etc.*

1.4 Agricultural Settlements : Organisation and Administration

Researchers have attempted to estimate the population of neolithic villages with the help of various mathematical and statistical models. With the help of those estimates we may gather some idea with regards to population compositions of those villages. When Mesolithic people were witnessing the transition from nomadic-semi nomadic life to settled life, there could have been 25-40 people in any given group. Life dependent on regular cultivation would need that number to increase at least to 50. A village with at least a population of 100 could meet the needs of individual members who would be completely dependent on agriculture and animal husbandry.

Neolithic villages were small in size. Permanently occupied dwellings (mostly round huts) were characteristic of these villages. Other than these dwellings, some places in the central part of the village were perhaps used as common storage places of food-grains and other things. This internal settlement pattern of the village indicates that the transactions related to food production were centrally controlled. Accordingly a hierarchical chain of power positions must have been established. At the same time other social norms were also established. For example: boundaries of individual households-families, ownership of land, food production to meet the needs of individual household-family and rules of kinship. The tradition of imparting training of unique family skills of production to the younger members is supposed to have begun as early as the neolithic times. In other words, it may be said that the hierarchical social and family structure and the concept of inheritance have its roots in the neolithic times.

The culture known as 'Jomon Culture' of Japan was a mesolithic culture, which has yielded evidence of pottery making. Except this example, everywhere else in the world

making of pottery seems to have begun in the 2nd phase of the neolithic period. Pottery making, along with the polished stone tools, is supposed to be an essential characteristic of the neolithic cultures. The earthen pots were used for the purpose of cooking, serving food and for storage. In the beginning these pots were handmade. At a later stage, wheel-made pottery was introduced. The neolithic pottery in the beginning was in monochrome (single colour), with a burnished* surface. Some pots had carved designs. Also the techniques of stamping and applique work**. Gradually neolithic people began to decorate their pots with painted designs. Thus, in the latter half of the neolithic age, pottery making had become an art that required special skills.

**Burnished - polished by rubbing with a wooden or stone tool*

***applique work - pasting wet clay ribbons and making patterns on them*

To master the art of pottery-making one needs to possess knowledge of following things:

(1) To know the source of clay of excellent quality. (2) To manage to obtain clay. (3) To knead and prepare the clay for pottery production. (4) To be able to turn the pot to the desired shape. (5) To have artistic skill for decorating the pottery. (6) To know the technique of baking pottery at proper temperatures (approximately 850°-900° Celsius).

The class of skilled potters, equipped with essential knowledge of all stages of pottery-making, was already established in the 2nd phase of the neolithic period. Ancient pottery can throw light on various aspects of ancient cultures. We get to know about the cultural history, the material richness of the place where it was found. With the help of pottery we can also know about the contacts of the residents of the place with other cultures.

The neolithic period also saw rise of other skilled artisan classes based on specialised crafts. It is apparent that the skill of making beads of various types was acquired by neolithic artisans from the beginning. They made beads of various types of siliceous stones and chank shells.

For additional information :
Some important Neolithic sites in India

1. **The northwest region of the Indian continent :** Phase I (7000-6000 B.C.E.) No evidence of pottery (earthen pots). Phase II (6000-4000 B.C.E.) Beginning of pottery making, e.g. Mehrgarh.
2. **Jammu and Kashmir** - around 2500 B.C.E. neolithic settlements established at the sites of Burzhom and Gufkral.
3. **Uttar Pradesh** - around 6000 B.C.E. neolithic settlements established at the sites of Chopani Mando, Koldihwa and Mahagara.
4. **Bihar** - around 2000 B.C.E. neolithic settlements established at sites like Chirand, Senuwar, etc.
5. **Northeast India** - The evidence of neolithic settlement was first discovered at the site of Daojali Hading in Assam. The village was established around 2700 B.C.E. The neolithic tools found here show more affinity to neolithic tools found in China.
6. **South India** - The neolithic settlements in Karnatak, Andhra Pradesh and Tamilnadu first came into being around 4th - 3rd century B.C.E. Karnatak sites - Sangankallu, Maski, Brahmagiri, Tekkalkota, Piklihal, Hallur, etc. Andhra Pradesh site - Nagarjunikonda. Tamilnadu - Payyampalli

Excavations at neolithic sites yield beads, waste material cast away during bead making process, faulty and incomplete beads and the tools used by the bead maker. The following are the stages of bead making:

(1) To know the sources of siliceous stones and chank shells. (2) To obtain the raw material. (3) To transport the raw material to the manufacturing site. (4) To manufacture finished beads from the stones of irregular shape and the core of chank shells. The artisan has to be conversant with every stage of the bead manufacturing.

In brief, agricultural production, as well as production of agricultural tools, pottery, beads etc. is a chain of various skill based operations, which are completed step by step. It is a complex system, which calls for systematic division of labour and training of people for various skills. This process leads to craft specialisation and creates various classes of skilled artisans.

1.5 Trade and Transport

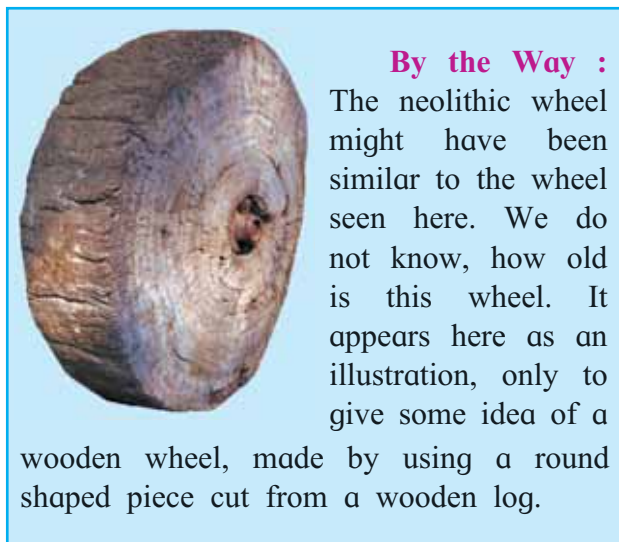
The nomadic-semi nomadic groups of Mesolithic people had a system of barter among themselves. The wheel was not yet invented. It means that the means of mechanical transport were not available to them. In the latter half of the neolithic age people had started using beasts of burden for transporting goods.

Tools like axe, scrapers and chisels enabled neolithic people to cut trees and to work on wood. Most probably round shaped pieces of wooden logs were used as wheels. Such round pieces can easily gain momentum.

The neolithic people invented wheel and the technology they had developed so far, underwent a revolution.

The neolithic people began to produce wheel-made pottery. The wheel technology made it possible to produce pottery on mass scale. The invention of wheel also made it possible to obtain raw material from distant places in much lesser time. It became easier

to send the finished goods to distant markets where it was in more demand. It helped to develop trade and transport on a greater scale.



By the Way :

The neolithic wheel might have been similar to the wheel seen here. We do not know, how old is this wheel. It appears here as an illustration, only to give some idea of a

wooden wheel, made by using a round shaped piece cut from a wooden log.

1.6 Beginning of Urbanisation

After settling down at one place for a long time, a feeling of ownership arose among the neolithic people. This feeling was focused on their individual dwellings and the piece of land cultivated by them. This has been already mentioned in the context of

social organisation and administration. Eventually the villages expanded. Along with it, awareness of collective land holdings and the village boundaries became prominent. Thus, it was felt that the village community had a natural right over the immediate territory around the village periphery. This kind of awareness of natural right over a particular region is known as 'territoriality'. Rules and social norms were created in order to manage the collective resources, water sources, crafts dependent on it, trade and community life, etc. Consequently rituals and their details gained importance. The need of managing and keeping records of trade, rituals, writing systems and administrative machineries developed. It gave rise to administrative centres. Such administrative centres attract large number of population which includes officials, people from various occupations. As a result, periphery of the original settlement kept expanding and cities came into being. Thus began the process of urbanisation in the neolithic age.

In the next lesson we shall learn about the first cities of India.

Exercise

Q.1 (A) Choose the correct alternative and write the complete sentences.

- (1) 'Yellow River' is the English translation of the Chinese name
 (a) Kemet (b) Mother
 (c) Sorrow (d) Huang He
- (2) The Australian archaeologist coined the term 'Neolithic Revolution'.
 (a) Gorden Willey
 (b) Gorden Childe

- (c) Herodotus
 (d) Collingwood
- (3) The neolithic people at Gilgal had systematically planted trees.
 (a) Guava (b) Sapodilla
 (c) Fig (d) Indian blackberry
- (4) in the Shirur taluka of Pune district, is an important site of the village of Chalcolithic farmers in Maharashtra.
 (a) Saradwadi (b) Ranjangaon
 (c) Pabal (d) Inamgaon

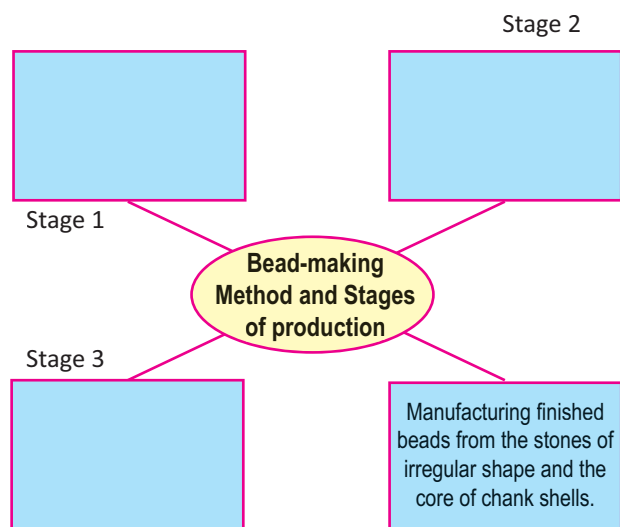
(B) Find the incorrect pair from set B and write the correct ones.

Set 'A'

Set 'B'

- | | |
|--|---------------------|
| (1) The valley of Tigris and Euphrates | Mesopotamia |
| (2) The valley of Nile | Iran |
| (3) The valley of Huang He | China |
| (4) The valley of Sindhu (Indus) and Saraswati | Indian subcontinent |

Q.2 Complete the concept map.



Q.3 Explain the following statements with reasons.

- (1) The camps of Mesolithic people developed into the first settled villages of neolithic people in Mesopotamia.
- (2) 'Huang He' river is considered to be the mother of the Chinese culture.
- (3) In the latter half of the neolithic age, pottery-making had become an art that required special skills.

Q.4 State your opinion.

- (1) There were radical changes in the way of human life during the neolithic age.
- (2) The neolithic people invented wheel and the technology they had developed so far, underwent a revolution.

Q.5 Observe the map on page 2 of your textbook and answer the following questions based on it.

- (1) What is the name of the sea at the north of the African continent?
- (2) In which continent did the Harappan civilisation originate?
- (3) What is the name of the ocean at the south of India?

Q.6 Write short notes.

- (1) Neolithic 'Jericho'
- (2) 'Holocene' epoch

Q.7 Answer the following questions in detail.

- (1) Write in detail about the 'first farmers' and beginning of agriculture in India.
- (2) What knowledge was essential for the neolithic people to make pottery?
- (3) Write about the trade and transport in the neolithic age.
- (4) Write about the beginning of urbanisation in the neolithic age.

Activity

Write in detail about any of the ancient civilisations.



Neolithic Age

8000-3000 B.C.E.

First Farmers

