DIRECTORATE OF DISTANCE EDUCATION

UNIVERSITY OF NORTH BENGAL

MASTER OF ARTS-HISTORY

SEMESTER -I

ANCIENT INDIAN HISTORY UPTO 650 A.D.: SOCIETY AND ECONOMY

SOFT CORE-103

BLOCK-2

UNIVERSITY OF NORTH BENGAL

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FOREWORD

The Self Learning Material (SLM) is written with the aim of providing simple and organized study content to all the learners. The SLMs are prepared on the framework of being mutually cohesive, internally consistent and structured as per the university's syllabi. It is a humble attempt to give glimpses of the various approaches and dimensions to the topic of study and to kindle the learner's interest to the subject

We have tried to put together information from various sources into this book that has been written in an engaging style with interesting and relevant examples. It introduces you to the insights of subject concepts and theories and presents them in a way that is easy to understand and comprehend.

We always believe in continuous improvement and would periodically update the content in the very interest of the learners. It may be added that despite enormous efforts and coordination, there is every possibility for some omission or inadequacy in few areas or topics, which would definitely be rectified in future.

We hope you enjoy learning from this book and the experience truly enrich your learning and help you to advance in your career and future endeavors.

ANCIENT INDIAN HISTORY UPTO 650 A.D.: SOCIETY AND ECONOMY

BLOCK-1

BLOCK-2

BLOCK-2 ANCIENT INDIAN HISTORY UPTO 650 A.D.: SOCIETY AND ECONOMY

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UNIT 8 EARLY IRON AGE AND MEGALITHIC CULTURE

STRUCTURE

8.0 OBJECTIVES

In this unit we shall learn about the early Iron Age cultures of northern, western, central and eastern India. After reading this unit you will be able to know about the geographical location and the adaptation of the people

to local conditions, the kind of houses they lived in, the varieties of food they grew and the kinds of tools and implements they used, the varieties of potteries used by them, the kinds of religious beliefs they had, and the changes occurring during the early Iron age.

This unit will also deals with the early farming communities and the subsequent Iron Age inthe region of South India. After reading this unit, you will be able to know about the successive phases of the early farming culture of southern India and theirsalient features,the nature of settlements, economy and other traits of these cultures andthe characteristic features of the early Iron Age in this region.

8.1 INTRODUCTION

By the second millennium B.C. several regional cultures sprang up in different partsof the Indian subcontinent. These were non-urban, non-Harappan and were characterized by the use of stone and copper tools. Hence, these cultures are termed as early Iron Age cultures cultures or more specifically Chalcolithic cultures. The Chalcolithic cultures are identified on the basis of their geographical location. Thus, we have the Banas culture (located in the Banas basin) in Rajasthan,Kayatha culture (type site Kayatha on the bank of river Kalisindh, an affluent of the Chambal) and represented by other sites in central India (in the Narmada, Tapi and Mahi valleys), Malwa culture (Malwa, and extending into other parts of Madhya Pradesh andMaharashtra), andthe Jorwe culture (Maharashtra).

As type sites of these cultures have been excavated we have been able to form adetailed idea about such dimensions of them aspattern of settlement, pattern of economy, mortuary practices and religious beliefs.

In addition to cultural material of this phase, found at excavated sites, in parts of Uttar Pradesh, Haryana, Rajasthan, Bihar, West Bengal, Orissa and Karnataka are found catches of copper/bronze objects. As these have been found in hoards (about a thousand objects altogether from 85 sites in the above mentioned states) these sites were thought to represent a distinct Copper Hoard culture. At Saipai (Etawah Distt.) a site in Uttar Pradesh, a copper harpoon has been found in association with a pottery

known as Ochre Coloured Pottery (OCP). Though some of the other Copper Hoard sites have yielded OCP, the copper objects are not found in direct association with OCP. As more than a hundred sites have yielded this characteristic pottery in the Ganga-Yamuna doab, these sites are described as belonging to the OCP culture.

The OCP culture is succeeded by Black and Red Ware (BRW) and Painted Grey Ware (PGW) cultures, which are distinguished by diagnostic pottery types. In North India, there is a distinct concentration of Painted Grey Ware sites in Haryana and Upper Ganga Valley, of which 30 have been excavated. Iron makes its appearance in the Painted Grey Ware culture, and in the ensuing phase, known as the Northern Black Polished Ware (NBP) culture, its use becomes more widespread. Starting from the sixth century B.C. we also see the beginnings of urbanisation.

By now you must be well familiar with the evolution of human beings from hunter-gatherers into settled agricultural communities. You have also learnt aboutthe existence of the Harappan Civilization and the various aspectsrelated to it. In thepreview units you have seen how different cultures emerged following the decline of the Harappan Civilization, covering the time span from the second millennium B.C. to first millennium B.C. In this unit, we will review the developments in south Indiaduring the same period. The focus of the study will be on the nature of the changethat came about in thisperiod in material culture, in settlement patterns and socialorganisation.

8.2 EARLY IRON AGE CULTURES IN INDIA

There were several local Chalcolithic early farming cultures in western, central andeastern India which flourished during the second and first millennia B.C. Thesecultures were basically village settlements and they shared certain common elements.The distinctive features of these cultures are:painted pottery, which is mostly black-on-red, anda highly specialized stone blade/flake industry of siliceous stones.

Copper was known but its use was on a limited scale as the metal was scarce. The settlements consisted of circular and rectangular huts and in some cases pit dwellingsare also known. The economy was based on farming and animal husbandry. Thesecultures are named after their type sites. In the Tapi Valley of Maharashtra, late Harappan non-urban habitations (about 50)are known (1800 - 1600 B.C.). The excavations at Daimabad have shown that theLate Harappans moved further south into the Pravara Valley (Maharashtra).

The Kayatha culture is named after the site of Kayatha (25 km. east of Ujjain)located on the bank of the Kalisindh and affluent of the river Chambal. The Ahar or Banas culture is named after the river Banas and its type site is Ahar (Udaipur inRajasthan). More than 50 sites of this culture are known in the valleys of Banas andBerach in south-east Rajasthan. The type site of Savalda culture is Savalda (Dhuliadistrict, Maharashtra). It is mostly confined to the Tapi valley but the evidence fromDaimabad suggests that it reached up to the Pravara valley. The Malwa culture wasdiscovered in the excavations at Maheshwar and Navadatoli (Nimar district, MadhyaPradesh) on the banks of Narmada. This culture is so named as a large number ofsites were brought to light in the Malwa region. The Malwa people began to migrateto Maharashtra around Ca. 1600 B.C., and several settlements have been discoveredin the Tapi, Godavari and Bhima valleys. Prakash (Dhulia district), Daimabad(Ahmednagar district) and Inamgaon (Pune district) were the most extensivesettlements of the Malwa culture in Maharashtra. The Prabhas and Rangpur cultures,respectively, are known after the type sites Prabhas Patan and Rangpur in Gujarat.The type site of Jorwa culture is Jorwe (Ahmednagar district) in Maharashtra.Extensive occupations of the Jorwe culture succeed the Malwa culture at Prakash,Daimabad and Inamgaon.

Stone and Copper using agricultural communities have been reported from easternIndia too. In northern Bihar at a place called Chirand remains of an ancient villagesettlement have been found. People lived in small houses made of bamboo and mudplaster. They ate rice and fish and hunted many wild animals. They too used blackand red ware pottery. Similar kinds of settlements have been reported from Sahgaurain Gorakhpur (U.P.) and Sonpur in Gaya (Bihar) where people seen to have

grownwheat and barley also. In West Bengal the sites of Pandu-Rajar-Dibi in the Burdwandistrict and Mahisdal in the Birbhum district have yielded similar evidences. Allthese settlements have been dated between 1500 to 750 B.C.Let us examine the various characteristics of these cultures.

8.2.1 Pottery

We will briefly review the pottery of early Iron Age cultures.

The Kayatha ware is characterized by three fabrics:

1) thick and sturdy red slipped ware painted with designs in dark brown;

2) red painted buff ware (this ware is thin with a fine fabric); and

3) combed ware having incised patterns, and generally without a slip.

The majority of the pots of the sturdy red slipped ware have a ring base. The ringbase recalls the pre-Harappan Sothi types.Sothi culture (in Rajasthan) is known from several sites in the valley of Ghaggar (Sarasvati) which have yielded a pottery that is akin to the pre-Harappan pottery ofKalibangan.There are seven kinds of wares in Ahar pottery but its most characterstic type is theblack and red ware painted in white. The Savalda culture is characterised by ablack-on-red painted pottery which is decorated with naturalistic designs such asbirds, animals and fishes.The Malwa ware is to some extent coarse in fabric and has a thick buff slip overwhich patterns are executed in black or dark brown colour.The Prabhas Patan and Rangpur wares are both derived from the Harappan black-on-redpainted ware, but since the latter has a gloss it is referred to as the lustrous RedWare.The Jorwe Ware is painted black-on-red and has a matt surface treated with a redwash.

In addition to these characteristic forms, all these cultures have other associatedwares which are mostly red or grey. The pottery is wheel made but there are alsohandmade forms. The pottery shapes which are usual to these cultures are bowls,basins, globular jars with concave necks, dishes, lotas (a small pot with a carinated body, a bulbous bottom and a flaring rim), etc. A distinctive feature of the Malwapottery is seen in the series of small goblets on solid pedestals; and the distinctiveforms of the Jorwe culture are carinated bowls, spouted jars with flaring mouths, andhigh necked globular vases.

8.2.2 Economic Development

A greater part of the region in which these Chalcolithic/early Iron Age cultures flourished is the zoneof black cotton soil. The climate is semi-arid and the rainfall varies between 400 to1000 mm. The mainstay of the economy of these cultures was subsistenceagriculture and stock-raising.

i) Cultivated Crop: Carbonized remains of seeds recovered in the excavations atsomeof the sites indicate that a variety of crops were raised by these farmingcommunities. The main crops were barley, wheat, rice, bajra, jowar, lentil,horsegram, haycinth bean, grass pea, pea, black gram and green gram.Other plants utilized were Jamun, Behada, wild date, ber, Myrobalan etc.Barley was the principal cereal during this period. Evidence from Inamgaon suggeststhe practice of crop rotation, harvesting of summer and winter crops, and artificialirrigation. A massive embankment (240 m long and 2.40 m wide) was built atInamgaon during early Jorwe period (Ca. 1400 - 1000 B.C.) to divert the floodwater through a channel (200 m long, 4m wide and 3.5 m deep).That the black cotton soil was ploughed for farming operations is suggested by thefind of an ard (Protom of the ploughshare) made from the shoulder bone of cattleat Walki (not very far from Inamgaon).

ii) Animals: The excavations have revealed evidences of both domesticated as well aswild animals.

i) The domesticated animals during this period were cattle, sheep, goat,dog, pig, horse. The bones of cattle and sheep/goat predominate at most of thesites. The cut and chop marks on the bones of these animal indicate that theywere slaughtered for food. Age determination of these bones has indicated thathost of the animals were slaughtered when they were young (ranging from threemonths to three years in age).

ii) The wild species found are black buck, four horned antilope, Niligai, barasingha,sambar, chital, wild buffalo, and one horned rhinoceros.

Bones of fish, waterfowl, turtle and rodents have also been found at some of the sites. Bones of marine fish species have been found at Inamgaon and the source of thesefish could be either Kalyan or Mahad, the nearest creek ports, 200 km. west ofInamgaon.The charred bones of both the domestic and wild species indicate that they werecooked in open fire.

8.2.3 Dwellings

Let us briefly examine the housing patterns of these cultures. Rectangular andcircular houses with mud walls and thatched roofs are the most common types,though there are variations in house sizesfrom site to site.

i) Most of the houses of the Savalda culture were single roomed rectangular housesbut there are some with two or three rooms. Ahar people built houses on plinthsmade of schist. Walls were built on these plinths with mud or mud brick and thewalls were decorated with quartz cobbles and floors were made of burnt clay orclay mixed with river gravels.

ii) The sizes of the Ahar houses ranged between 7m x5m and 3m x3m, and thelongest house measured more than 10metre in length. Bigger houses had partitionwalls, and chulahs (hearths) and quartzite saddle querns in the kitchen.

iii) The Malwa settlements such as those found at Navadatoli, Parkash, Daimabadand Inamgaon were quite large. Evidence at Inamgaon suggests that some kindof planning was adopted in the laying out of the settlement. Of the 20 and oddhouses exposed at Inamgaon, the majority were aligned in a roughly east-westorientation. Though these houses were built close to each other, they had anintervening space of about 1 metre to 2 metre in between which might have served as a lane.These houses at Inamgaon were large (7m x5m) rectangular structures with apartition wall. The houses had a low mud wall and gabled roof inside the house was a large oval fire pit with raised sides for keeping the fire under control. The houses at Navadatoli were provided with one or two mouthed chullahs in the kitchen. The grain was stored in deep pit silos (1 m in diameter and 1 m deep). Circular mud platforms (1.5m in diameter) inside the houses suggest that they probably served as bases to keep bins of wicker work for grain storage.

iv) A significant feature of the Jorwe culture (of which more than 200 sites are known so far, though the majority of them can be classified as villages ranging from 1 to 4 ha.) is the presence of a large centre in each region. These centres are Prakash, Daimabad and Inamgaon, respectively in the valleys of Tapi, Godavari and Bhima. The Jorwe settlement at

Daimabad was the largest, covering an area from more than 30 hectares. Prakash and Inamgaon cover about 5 ha. each.

v) A noteworthy feature of the Jorwe (both Early and Late) settlement at Inamgaon is that the houses of the artisans such as the potter, the goldsmith, the lapidary, the ivory-carver etc. were located on the western periphery of the principal habitation area, whereas those of well-to-do farmers were in the central part. The size of the artisans' houses is smaller than those of the well-to-do. Both these aspects i.e. the position and size of houses demonstrate social differentiation in terms of a lower position for artisans in the society.

Interestingly enough, some of these early Iron Age sites have fortification walls around the settlement. For example Eran and Nagda (Madhya Pradesh) of the Malwa Culture, and Inamgaon (during Jorwe period) have a fortified mud wall with stone rubble bastions and ditch around the habitation. At Inamgaon has been noticed a change in house types from early Jorwe (1400 - 1000 B.C.) to late Jorwe period (1000 - 700 B.C.):

The Early Jorwe houses were large rectangular structures with low mud walls (about 30 cm. high) surrounded by wattle-and-daub constructions. These houses were laid out in rows with their longer axis in a roughly east-west orientation. These houses have an open space in between (approximately 1.5m wide) which might have served as a road or lane. The Late Jorwe houses on the other hand depict a picture of poverty. Large rectangular huts were no more built, and instead there were small round huts (with a low mud wall) in clusters of three or four, The pit silos were replaced by a fourlagged storage jar supported on four flat stones.

The overall evidence indicates that this shift from Early Jorwe to Late Jorwe was due to decline in agriculture as a result of drop in rainfall. Investigations in western and central India have disclosed that at the close of the second millennium B.C. there was a drastic climatic change in this region that led to increasing aridity forcing the people to resort to a semi-nomadic existence. This conclusion is based on calculations of percentages of animal bones found from different phases. It seems that increasing aridity during the Late Jorwe period led to the decline of

agriculture, and economy based on farming changed over to sheep/goat pastoralism.

8.2.4 Additional Characteristics

Allthese cultures are characterized by a stone blade/flake industry based on siliceous stones such as chalcedony, chert, jasper and agate. The tools include long parallel sided blades, blunted back blades, serrated blades, pen knives, lutes, triangles and trapezes. Some of these blade tools have a shine on the sharp edge suggesting that they were used for harvesting. Polished stone axes, which are typical of the Neolithic-Chalcolithic cultures of Karnataka-Andhra, have also been found at some of these sites, though they are not Copper objects consist of flat axes or celts with convex cutting edges, arrowheads, spearheads, chisels, fish hooks, mid-ribbed swords, blades, bangles, rings and beads.

Among the finds at Kayatha, one pot contained 28 copper bangles. Some of these objects like the axe were cut in mould, while others were hammered to shape. The most prolific item among the ornaments is beads made of carnelian, jasper, chalcedony, agate, shell, etc. A necklace made of 40,000 microbeads of steatite has been found in a pot belonging to the Kayatha culture. At Inamgaon were found beads of gold and ivory, a spiral ear ring of gold and anklets of copper.

Terracotta objects are found frequently at majority of these sites. These are in the form of human and animal figurines. The stylized terracotta bulls (which are mostly miniature sized) found in the Chalcolithic levels at Kayatha, some with a prominent hump, some with horns twisted backward, and some with the horns projecting forward horizontally, are of special interest. Considering the occurrence of numerous terracotta bull figurines at several of these Chalcolithic sites it can be suggested that bull was a sacred animal, though the possibility that some of them could have been toys cannot be ruled out.

The Daimabad Hoard: By a chance discovery, four objects on the top of the mound(below which is a deposit, 1.2m thick belonging to the Jorwe period) came to light atDaimabad. These are massive, all solid cast, and weigh over 60 kg:

i) **Elephant:** This is the heaviest (25 cm in height X 27 cm in length), and stands on a cast copper platform with four brackets beneath, pierced, to take axles.

ii) **Rhinoceros:** This is a slightly smaller, and also stands on a cast platform. The brackets contain two solid copper axles with cast wheels attached. This rhinoceros recalls the one inscribed on the Indus seals.

ii) **Two Wheeled Chariot with a Rider:** The chariot is attached by a long pole to the yoked oxen which stand on two cast copper strips, but there are no brackets for wheels. The chariot has two uprights supporting a cross-bar behind which the rider stands. This piece has no parallels.

iv) **Buffalo:** This also has wheels and axle in position. This has some parallels in the figures of buffalo in both terracotta and case copper or bronze found from Mohenjodaro. The copper of the Daimabad hoard compares with that of other copper objects found in excavations, and spectrometric analysis of this metal has revealed that it is unalloyed by tin or other metals. According to one view the Daimabad hoard is datable to the Late Harappan period (Ca. 1600- 1300 B.C.). Another suggestion is that they could probably belong to the same technological group as the Kallur hoard.

8.2.5 Traditions and Beliefs

The finds in the excavations also shed light on the religious practices and beliefs ofthe people.

i) Mother Goddesses: That these Chalcolithc communities had a belief in themother goddess, and worshipped her, is attested by the finding of female figures ofclay (both baked and unbaked). These female figures are both with heads and withoutheads. From the lower levels of occupation (dated to the middle of secondmillennium B.C.) at Nevasa, comes a large headless female figure, which is madewithout clearly showing physical features. Inamgaon has also yielded similarterracotta female figurines, which show no physical features except breasts.

Evidence for the worship of the mother goddess has been recorded in the excavationsof an Early Jorwe house (1300 B.C.) at Inamgaon. Here buried under the floor in a corner, was found an oval shaped clay receptacle with a clay lid. Inside thisreceptacle was found a headless

female figurine having large pendant breasts and alsoa bull figurine. These female figurines, including the one from Inamgaon point to theworship of the goddess of fertility. These figurines (especially the headless ones) according to one suggestion, may represent the goddess Sakambhari (of the earlyhistoric period), the goddess of vegetative fertility, who was worshipped for wardingoff draughts.

ii) Gods: Male figurines are rare in the Chalcolithic settlements. It has beensuggested that the male figurines of clay (two of them being unbaked, and onebaked) found in the Late Jorwe levels (1000 - 700 B.C.) at Inamgaon may possiblybe identified as gods.

In this context a painted jar of Malwa period (1600 B.C.) is considered to be of somereligious significance. This pot has two panels. In the upper panel is painted a scenedepicting a human figure wearing a garment of twigs covering the loin, and issurrounded by stylized animals such as stag, deer, peacocks etc. The lower panelshows springing tigers or panthers, which are also stylized. This vessel, richlydecorated with elaborate paintings, was probably meant for some ritualistic use.

Likewise, finds of solid cast copper elephant, buffalo etc. at Daimabad could havereligious functions.

iii) Burial Practices: Disposal of the dead by burial was a common custom. Adults aswell as children were usually buried in a north-south orientation; the head towardsthe north and the legs towards the south. Adults were, in a majority of cases, buriedin an extended position, whereas children were buried in urn-burials-either in singlepots or, more often, in two pots-placed horizontally mouth-to-mouth in a pit.Adults, and also children, were buried in a pit which was dug into the house floor,and rarely in the courtyard of the house. It is interesting to note that during the Jorweperiod, in the case of adults, the portion below the ankle was purposely chopped off.

These practices like burying the dead within the precincts of the house, and choppingoff the feet could possibly suggest a belief in which the dead were restrained fromturning into ghosts, who could become malevolent.The adult burials in several cases contain offerings (grave goods) which are usuallytwo pots, or sometimes more in number. One adult burial of the Late Jorwe periodcontained fifteen pots. It was also common to bury the dead with personalornaments. In an adult burial of

the Late Jorwe period, a large copper ornament wasfound near the neck of the skeleton. A child in a twin urn-burial of the same periodhad a necklace consisting of twelve beads of copper and red jasper alternately.

The Jorwe period has also disclosed some unusual burials at Inamgaon. Here has been found a four legged urn-burial made of unbaked clay, and its southern face resembles a human body. This urn (80 cm. in height and 50 cm. in width) which has a wide mouth with a featureless rim contained the skeleton of a male, of about 30 to 40 years old in a sitting posture. In this case, the portion below the ankle is not chopped off. The burial offerings were a spouted pot with the painting of a boat design having long oars. What this boat design reminds one is the present day Hindu belief that the departed soul has to cross waters in a ferry to reach the heavenly abode. This person who was given such an elaborate burial could be of high status, or the ruling chief of the settlement, or belonging to a social group that practised a different kind of burial.

8.2.6 Social Life

In the Chalcolithic/Early Iron Age culture regions, a study of the distribution pattern of the sitesseems to suggest that these sites were of two types, one type representing regionalcentres and the other type representing village settlements. This difference, or hierarchy, has been taken to suggest that some form of administrative organisation was present in the early Iron Age cultures. This also suggests that the early Iron Age social organisation was characterised by ranking. The presence of an administrative authority is further supported by existence of public structures such as fortifications, rampart and moat, granaries, the embankment and canals (well documented at Inamgaon) etc. found at different sites.

Seen in the larger context of the post-Harappan developments, these early Iron Age cultures betray discernible influences of the Harappan culture, though in a residual form. All the same, they are marked by strong regional elements, and also display trade links and cultural contacts between each other. These metal-using farming communities which flourished in the second millennium B.C. disappeared around the first millennium B.C. (excepting Late Jorwe which continued till 700

B.C.). One possible reason attributed for such decay (on the basis of analysesof soil sample overlying these Chalcolithic horizons) was increasing aridity and unfavourable climatic conditions. Many of these settlements in the Godavari, Tapi and other valleys were deserted, and were reoccupied after a gap of six or five centuries in fifth-fourth centuries B.C., heralded by urbanisation.

Check Your Progress 1

1) Mention the sites of early Iron Age.

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2)What kind of crops was grown in early Iron Age sites?

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3) Highlight the importance of Diamabad.

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4) Write a note on burial practises of early Iron Age people.

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8.3 PENINSULAR AND SOUTH INDIA

8.3.1 Early Farming Habitations

Settlements of the early farming communities in south India make a rather suddenappearance in the third millennium B.C. There is no evidence to discerna gradualevolution (as in West Asia) from a hunting-gathering economy to a food producingeconomy. The evidence for this region indicates some sort of colonization offavourable habitats in the

Godavari, Krishna, Tungabhadra, Penneru and Kaveririver systems. These settlements, in majority of the cases, are scattered in thesemi-arid, low rainfall and sandy loamy regions which are suitable for dry farmingand pastoralism (cattle, sheep and goat). The distinguishing features of thesesettlements are:

i) Sedentary village settlements with semi-permanent to permanent structures, thelatter consisting of wattle and daub.

ii) Stone axes (made of Bard rocks like dolerite and basalt) manufactured by grinding and polishing. Because of this technique the stone tool industry of theseearly farming cultures is referred to as the polished stone axe industry.

iii) Long and thin blades made of grained rocks like chert, jasper, chalcedonyand agate. These artefacts have sheen on the cutting edge, indicating that theywere used for harvesting crops.

iv) Pottery which is hand made in the early stages and wheel made inthe laterstages.

v) An economy based on millet farming, and cattle and sheep/goat pastoralism.The economy, thus, is basically ago-pastoral.

vi) The dietary needs are supplemented by wild game.

8.3.1.1 Cultural Periods

On the basis of the overall evidence, we can distinguish three broad phases in thegrowth of the early farming communities in south India.

Phase I

The earliest settlements of these farming communities represent this phase. These were made on tops of granitoid hills, or on levelled terraces on hill sides, or in the valleys between two or more hills. The material culture consists of a polishedstone axe industry, blade industry and handmade pottery. In pottery, grey or buff-brown ware is most common. A ware, which is less common,has a black or red burnished slip, often with purple painted decorations. Theseearliest settlements are associated with ash mounds some of which were excavated. These excavated ash mound sited like Utnoor, Kodakal, Pallavoy, Piklihal, Maski and Brahmagiri have all revealed the first phase of settlements of theseagro-

pastoral communities. This phase can be ascribed between 2500-1800 B.C onthe basis of radiocarbon dates.

Phase II

The settlement pattern of Phase-I continues without any change like the settlements were still made on top of granitic hills, or on levelled surfaces on thehillsides. Nonetheless, there are some important developments. The settlements hadcircular hutments of wattle and daub on wooden frames with mud floors. Some ofthe larger pits at Nagarjuna-Konda (in coastal Andhradesa) which are circular, oval,oblong and irregular, with post holes are interpreted as semi-subterranean pitdwellings. Pit dwellings were also found at Paiyampalli and Veerapuram. In thisphase new pottery types like the perforated and spouted vessels appeared. Thediscovery of such pottery types reveals contacts with regions in the north as similarpottery types have been found there. The technique of roughening the outer surfaceof pottery during this phase is reminiscent of technique employed in the earlyHarappan period.The polished stone axe and blade industries proliferated in this phase. Copper andbronze objects were also discovered for the first time and their numbers increasedtowards the end of this phase. Some of the sites where the Phase II settlements werediscovered are Piklihal, Brahmagiri, Sanganakallu, Tekkalakota, Hallur and T.Narsipur. The available radiocarbon dates for this phase suggest a timespan covering1800-1500 B.C.

Phase III

The important development in this phase is the increase in the number ofcopper and bronze tools. Such an increase is seen at Tekkalakota, Hallur, Piklihal,Sanganakallu, Brahmagiri and Paiyampalli. The stone axe and blade industriescontinue. In pottery a new grey and buff ware with a harder surface becomescommon.Another ceramic type which is wheel made, unburnished and with purple paint alsoappears. This ware has affinities to the Chalcolithic Jorwe ware of Maharashtra. Onthese grounds this phase can be ascribed to the period 1400-1050 B.C.

These three phases reveal how gradually the early farming-cum-pastoral settlementsin south India emerged and expanded. There is continuity of occupation from Phase Ito Phase III (as revealed at some sites in the excavations) and with no significantchange in the economy. The only

important difference is the absence ofcopper/bronze tools in Phase I. As the occupation of Phse II and III have yieldedthese metal tools, they are designated as Neolithic-Chalcolithic.

From the distribution of these settlements, it can be seen that the preferred landformsare low hill ranges away from major watersheds but in proximity to streams; the soilzones are tropical black clays, tropical red and black sandy loams, sandy or sandyloamy ferruginous tropical soils, and deltaic alluvium. The average annual rainfall inwhich these settlements are located, as at present, falls in the range of 600-1200 mm. These sites are commonly dispersed in the castlellated hills and the habitations areusually on the tops of hills or at the foot of hills.

8.3.1.2 Livelihood Economy

In view of the location of the sites in relation to physiography, it would appear thatareas which were suited largely for gravity flow irrigation were generally colonised.However, there are some sites like Veerapuram on the bank of Krishna, Hallur on Tungabhadra, T. Narsipur at the confluence of the Kaveri and Kapila and thosein the alluvial zones of the Krishna, where there is scope for water managementthrough canal irrigation.

The available archaeobotanical evidence indicates that millets and pulses were the main cultivated crops. These are various kinds of millet, horse gram, green gram and black gram, hyacinth bean and barley have been recently identified at Ramapuram.Coming to the fauna, almost all the excavated Neolithic-Chalcolithic sites yieldedremains which belong to both domesticated and wild species.

The domesticated species consist of cattle, buffalo, sheep, goat, pig, dog and fowl.Cattle predominate at the majority of the sites indicating its importance in theeconomy of these communities. For instance in the Neolithic levels at Veerapuram,the faunal remains of which were subjected to meticulous study, cattle represent48.68% of the domesticated animals whereas sheep/goat form only 5.4%. If suchwas the case at Veerapuram situated on the right bank of the Krishna with potentialfor irrigation agriculture, then one should expect cattle pastoralism to have played amajor role in the scores of sites located in

the uplands. As the economy of thesecommunities was a combination of agriculture and animal husbandry (cattlepredominantly and sheep/goat to some extent), it can be termed agro-pastoral.

In addition to these domesticated species these settlements have also yielded remainsof wild game.These wild species are porcupine, black naped hare, nilgai, chinkara,blackbuck, sambar and chital. This would indicate that their meat requirements weresupplemented by wild game.

8.3.1.3 Material Culture

The material remains of this period include pottery, stone artefacts, copper/bronzeobject and other objects.

i) Pottery

Pottery in Phase I (2500-1800 B.C.) was predominantly handmade, grey orbuff-brown. This grey ware is characterized by the use of bands of red ochre, appliedafter firing. What is interesting is that some of these pottery forms have applied ringfeet and hollow pedestals which recall the pre-Harrappan types known from Amri and Kalibangan. The other ceramic type of Phase I had a black or red burnished slip,with a purple painted decoration.

In Phase II, (1800-1500 B.C.)the red and black slipped wares disappear and new types occurred.These new are perforated vessels, and vessels with spouts. In ceramicmanufacture, the technique of roughening the outer surface of vessels is used, andthis recalls the one employed in the pre-Harappan levels of Baluchistan.

In Phase III(1400-1050 B.C.) new ceramic types occur:

a) a grey and buff ware with a harder surface and

b) a wheel thrown unburnished ware with purple paint. This latter type displaysaffinities with the Jorwe type of Maharashtra, thus indicating cultural contactsbetween the southern Deccan and the northern Deccan. The pottery forms arevarious kinds of bowls (bowls with lips, lugs and spouts), handled and hollowfooted bowls, jars, dishes on stand, perforated vessels, and spouted vessels.

ii) Stone Tools and Bone Artefacts

The stone blade industry consists of long and thin parallel sided blades, some of which are finished into other forms by retouch. These finished

forms are crescents,triangles, trapezes, serrated blades etc. Some of the parallel sided blades show a glosson the cutting edge which is due to their use in harvesting activities.

Many stone tools were also polished. The most common type of the polished orground stone axe industry is the triangular axe with a pointed buff and oval crosssection. The other forms are adges, scrappers, wedges, chisels and pointed tools(termed as picks).

Besides these the other stone objects comprise hammerstones, sling balls, rubbingstones, rubbing stones and querns.The latter were used in foodgrain processing.Among the Bone artefacts, worked bone, horn and occasionally antler and shellhave been found at some of the excavated sites. The most common artefacts are avariety of points and chisels. One site (Pallavoy) has yielded bone axes, made fromcattle scapulae finished by grinding at the worked edge.

iii) Metal Objects

As noted earlier, copper and bronze tools appear in Phase IIand increase inPhase III. The most important of these are flat axes and chisels which are reminiscentof those of Malwa and Maharashtra. The other interesting find is the antenna swordfound at Kallur. The other items of copper/bronze, which are known from various excavated sites are bangles, spiral ear rings and antimony rods. A fish hook has been recovered from Hallur. The site Tekkalakota has yielded a spiral ear ring of gold.

iv) **Beads and Terracotta figurines**

Beads made of semi-precious stones have occasionally been found at some of the excavated sites. For example circular disc beads of paste and steatite were discoveredat Nagarjunakonda.Terracotta figurines, predominantly of humped cattle, have been recovered fromexcavated sites like Piklihal.These, seen in the context of paintings, of cattle around the settlements at Kupgal,Maski, Piklihal etc. are suggestive of the significance attached to cattle in theirculture. These paintings show cattle, singly and in groups, and depict humped bullsand long horned cattle. Some show cattle with decorated horns.

8.3.1.4 Burial Practices

The dead were commonly buried within the houses. Adult burial practices includeextended inhumation.Infants were buried in urns. Excavations at Tekkalakota revealed (in Phase III)multiple pot burials, which recall the Jorwe burials of Maharashtra. A Neolithiccemetery is reported at Nagarjunakonda. The offerings for the dead (grave goods)usually consisted of pots, including spouted vessels, and in some cases stone axes andstone blades.

8.3.2 Neolithic Findings

Apart from being found in habitation sites, polished stone axes occur in smallisolated assemblages, in forested regions. Such occurrences are common in southIndia, and often, there is a habitation site nearby. What do such occurrencesindicate? Such findspots probably represent activity loci. This is to say consideringthe functional use of the tools (axes for tree felling) these findspots indicatevegetation clearance in the hilly forested zones for dry farming operations.Such isolated Neolithic stone axe clusters are common in the wooded hill ranges ofTamil Nadu: Shevroy, Javadi and Tirumalai hilly zones. Such a distribution ofNeolithic axe clusters from the wooded uplands of the southern extensions of the Western Ghats to the lowland Tamil plains is suggestive of shifting cultivationradices, which was prevalent till recently in the southern part of the Western Ghats.

The south Indian Neolithic is also associated with ash mounds which are distributedin the semi-arid parts of the Bhima-Krishna-Tungabhadra doab. More than 60 ashmounds are known and some of them are quite extensive. It was suggested by somearchaeologists that these mounds were produced by the burning of cow dung by theNeolithic communities, and that they were the sites of cattle pens where dung wasallowed to accumulate, Raymond Allchin in the light of evidence heobtained fromhis excavations at Utnoor (an ash mound site) concluded that they were associatedwith forest cattle stations of the Neolithic people and that the burning probably hadritualistic significance.

As mentioned earlier, there is no evidence to prove the evolution of village farmingcommunities from the preceding hunting-gathering

economy, in south India. As wehave seen a sudden spurt in the emergence the village settlements started fromaround the middle of the third millennium B.C. in these areas. How did thesefarming settlements come into existence? According to some archaeologists, the greyware exhibits broad similarities with that found at sites like Hissar, Turang Tepe andShah Tepe in north east Iran; and the red and black painted pottery has affinitieswith the pre-Harappan pottery of Baluchistan and the Indus system. On the basis ofthese similarities, and considering some other features, they have suggested that theorigin of south Indian Neolithic cultures may have had links with some centres in theIndo-Iranian borderlands.

8.3.3 South India—Iron Age

The use of iron in South India began sometime around 1100 B.C. This date has been suggested on the basis of the radiocarbon analysis of objects found at Hallur. However, at some of the other sites discussed earlier, we find that the Iron Age Neolithic-Chalcolithic cultural horizons overlap with Iron Age levels. In Northern Deccan (Maharashtra) also the occupations at several Chalcolithic settlementscontinue into the Iron Age and it is the same case at sites like Brahmagiri, Piklihal, Sanganakallu, Maski, Paiyampalli, etc. in southern Deccan.

The earliest phase of Iron Age in south India is recovered in the excavations atPiklihal and Hallur and possibly by the burial pits at Brahmagiri. These early burialsyielded the first iron objects, black-and-red ware, and a matt painted buff and redware. To some extent the latter is similar to the Jorwe ware. Similar evidence hasbeen recorded in the burials at Tekwada (Maharashtra). At some sites, in thehabitations, stone axes and blades continued to be used. The succeeding phase ischaracterised by a predominance of burnished unpainted black-and-red ware, andred or black wares.

8.3.3.1 Megalithic Society

Most of the information about the Iron Age in south India comes from theexcavations of the megalithic graves. The megaliths usually refer to burials amidststones in graveyards away from the habitation area. In

south India this kind ofelaborate burial came with Iron Age. Megalithic burials have been reported in largenumbers from Maharashtra (around Nagpur), Karnataka (sites like Maski), AndhraPradesh (Nagajunakonda), Tamil Nadu (Adichanallur) and Kerala.

The megalithic burials showed a variety of methods for the disposal of the dead. Insome cases bones of the dead were collected in large urns and buried in a pit. The pitwas marked by a stone circle or a capstone or both. The pits and the win also contained grave goods. In some other cases pottery sarcophagi has been found. In other cases pit circles have been formed with stones for burying the dead. Cist gravesmade with granite slabs have also been reported. In Kerala rock cut chambers havebeen made for burial. Yet another kind of megalithic burial is stone alignmentcomprising rows of standing dories set in diagonal or square plan.

8.3.3.2 Origin of Megalithic Society

The megaliths emerged around the end of the second and beginning of the firstmillennium B.C. and this practice continued for many centuries subsequently. Somescholars are of the opinion that megaliths cannot be associated with a single culturalgroup and that the south Indian graves appear as a developing complex with severalstreams of influences combining in them. Firstly, some ofthe megalithic burials arereminiscent of those of Central Asia, Iran or the Caucasus, and might representtraditions introduced from these areas by Indo-European speaking immigrants.

Secondly, some appear as developments of the indigenous Neolithic-Chalcolithicburial customs of the Deccan.Scholars have variously identified the megalithic complex with the remains of theAryans or Dravidians. However, these claims are not acceptable. What seems certainis that these burial complexes emerged in a situation of greater interaction amongvarious communities in south and north India. As pointed out earlier, a large numberof ago-pastoral groups existed in these areas prior to the introduction of iron. Manyof the burial customs of some of these communities continued in the Iron Age. Thepottery burial

was already practised in Chalcolithic Inamgaon. Other features of themegalithic burials might have developed as local cultural innovations. However, someof the objects found in the graves indicate contacts with the areas to the north-west ofIndia. Particular kinds of pottery like bowl on stand found in these graves are verysimilar in shape to those of some earlier graves found in north-west India and Iran.Similarly, the finding of bones of horses and implements used for horses indicatesthat horse riding people had arrived in these areas. Horses could have been broughtfrom Central Asia only because wild horses are not found in India. Horse burial hasbeen reported from Junapani near Nagpur. In place like Maski and Piklihal rockpaintings show groups of horse riders carrying metal axes. All this is indicative ofgreater contact with communities to the north-west of India. So, Iron Age burialindicates a combination of indigenous and foreign influences.

8.3.3.3 Material Culture

As earlier, the material remains of the Iron Age are represented by pottery withcertain specificities, besides iron and other metal objects.

i) Pottery

The pottery that we discover from all the excavated graves is the black-and-red ware.The characteristic types are shallow tray bowls and deep bowls, both with a roundedbase, conical lids with knobs or loops on the apex, pottery ring stands and largerwater pots with rounded bases, etc.

ii) Iron and other metal objects

Iron objects have been found universally in all the megalithic sites right fromJunapani near Nagpur in Vidharbha (central India) down to Adichanallur in thesouth--a distance of nearly 1500 km. They show use of identical tools. There are anarray of iron objects: flat iron axes often with crossed iron bands for hafting, differenttypes of flanged spade, hoe, and spud orpick axe, sickles, bill hooks, wedges,cowbars, spears, knives, chisels or adzes, iron tripods, pot rests, saucers, hooklamps,many armed lam-pendants, daggers, swords (some with ornamental bronze hilts),arrowheads and spearheads with hollow sockets, ceremonial scalloped axes, irontridents etc. In addition to these, there is a special group of objects which consists ofhorse furniture such as snaffle bits and

two simple bar-bits with looped ends (whichwere recovered from Junapani), a kind of bar-bit with looped nose-and-mouthpiece(known from Sanur), etc. Among other metal object, the most numerous are bells ofcopper or bronze, which might have served either as horse or cattle bells. Beads ofsemi-precious stones and gold objects have also been reported.

8.3.3.4 Livelihood Economy

Excavated habitation sites of the Iron Age are few. So it is difficult to form a clearpicture of the economy of the south Indian megalith builders. Some of the excavatedsites have yielded remains of sheep/goat and cattle, and also millets and pulses.An important feature of the iron objects which are grave goods recovered from theexcavated burials is the uniformity in types. Such a wide distribution of identicaltypes of iron objects right from Junapani (near Nagpur) to Adichanallur in the south,testifies to the movement of a fairly tightly knit group of iron workers. According toone scholar the megalithic people of Tamil Nadu and Karnataka were proficient intracing iron ore deposits and in the manufacture of a variety of iron objects. Theywere trading in these items, and gradually took to settled life.

Yet another scholar hasput forward the view that these groups were nomadic pastoralists with a greaterreliance on sheep/goat herding.The settlements found near the megalithic complexes have very thin debris ofoccupation. This would indicate that these people were living in one area for veryshort time. May be with the knowledge of iron they could colonize new areas. Thus, some of the population was nomadic and some settlements might indicatecolonization of new areas. Where the settlements continue from the precedingperiod, people continued to live in their old ways. Use of iron tools enabled them to use granite stones for their graves. It is these agro-pastoral groups that enter thehistorical phase in the early centuries of the Christian era. They have been mentioned in theSangam literature. Some of the graves have yielded Roman Coins which suggeststheir entry into history and their participation in trade networks spread over a largearea.

Check Your progress 2

1) Describe the phases of early farming communities in South India.

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2) State the crops grown in early farming communities in South India.

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3) Write a short note on South Indian Neolithic.

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4) What is Megalithic Burial?

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8.4 LET US SUM UP

By about 2000 B.C. agricultural communities came into existence in different parts of India. These agriculturists used tools and implements made of stone and copper. In North India these communities used various kinds of potteries like the OCP and BRW. A variety of copper tools have also been discovered. In Central India and Maharashtra Black soil zone excavations have shown the existence of the Kayastha, Malwa and Jorwe cultures. By about 750 B.C. many of these agricultural communities adopted iron technology. The Chalcolithiccommunities showed distinct variations in their pottery tradition. The Iron Age potteries called the PGW and the NBPW were used over a larger area.

During this period there was greater interaction among various communities and a transition towards urbanisation was taking place. The

finds at the sites belonging to different cultures give detailed information aboutsettlement patterns, trade links, types of tools and ornaments and religious beliefs etc.

Farming communities emerged in South India around the middle of the thirdmillennium B.C. A large number of pastoral nomadic communities also came intoexistence in this period. The agriculturists grew various kinds of millet, grain andbarley. The pastoral communities tended cattle, sheep and goats. Around thebeginning of the second millennium B.C. these communities started using copper andbronze tools. Some of these bronze tools show parallels with the tools found innorth-western India. Iron was introduced in this area towards the end of the secondmillennium B.C. This period also saw the beginning of megalithic burials. Thisintroduced a change in settlement pattern for some of the communities because theystarted burying their dead away from the habitation areas. However, the farmerscontinued to grow the same crops and pastoralist continued with their old life style.This phase merged into the early historic south India when the literate traditionbegan.

8.5 KEY WORDS

Archaeobotany: Study of the remains of plants,

Brahmi Script: The earliest known script of historical India. Ashoka's inscriptions were written in the same script.

Chalcolithic: Refers to communities which used copper and stone tools.

Mound: Remains left by people of the past which look like heaped up embankmenton the relief.

Pit Dwelling: A practice of making homes beneath the surface of the earth. Dwellingspaces used to be dug beneath the floor.

Punch Marked Coins: Coins made of copper and silver which came to be usedaround the sixth-fifth century B.C. They are the earliest known coins of India.

Mortuary Practice: The practice of the disposed of the dead.

Thermoluminiscence Dating: A scientific method of dating ceramic material.

Type Site: It is the site where a particular culture was first identified.

Burnishing: A form of pottery decoration in which the surface of the pot is polishedbefore firing.

Dry Farming: A system of tillage in dry countries, surface soil being kept constantlyloose, so as to retain scanty rains and reduce evaporation.

Jorwe Ware: A late second millennium red painted pottery first identified in Jorwe,Maharashtra.

Sedentary: Communities living in settled villages.

8.6 QUESTIONS FOR REVIEW

1) Write a note on early Iron Age cultures of Western, Central and Eastern India.

2) Write about the Iron Age in South India.

3) Discuss the implications of iron metallurgy in the development of urbanism and state structures.

4)The Units studied so far have indicated varied methods of disposal of the dead. What are the social implications for this diversity?

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8.8 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) The Kayatha culture is named after the site of Kayatha (25 km. east of Ujjain)located on the bank of the Kalisindh and affluent of the river Chambal. The Ahar or Banas culture is named after the river Banas and its type site is Ahar (Udaipur inRajasthan). The type site of Savalda culture is Savalda (Dhuliadistrict, Maharashtra). It is mostly confined to the Tapi valley but the evidence fromDaimabad suggests that it reached up to the Pravara valley. The Malwa culture wasdiscovered in the excavations at Maheshwar and Navadatoli (Nimar district, MadhyaPradesh) on the banks of Narmada.Prakash (Dhulia district), Daimabad(Ahmednagar district) and Inamgaon (Pune district) were the most extensivesettlements of the Malwa culture in Maharashtra. The Prabhas and Rangpur cultures,respectively, are known after the type sites Prabhas Patan and Rangpur in Gujarat.In northern Bihar at a place called Chirand remains of an ancient villagesettlement have been found. Similar kinds of settlements have been reported from Sahgaurain Gorakhpur

(U.P.) and Sonpur in Gaya (Bihar) where people seen to have grownwheat and barley also. In West Bengal the sites of Pandu-Rajar-Dibi in the Burdwandistrict and Mahisdal in the Birbhum district have yielded similar evidences.

2) The main crops were barley, wheat, rice, bajra, jowar, lentil,horsegram, haycinth bean, grass pea, pea, black gram and green gram.Other plants utilized were Jamun, Behada, wild date, ber, Myrobalan etc.Barley was the principal cereal during this period. Evidence from Inamgaon suggeststhe practice of crop rotation, harvesting of summer and winter crops, and artificialirrigation.

3) Four Objects from Daimabad Hoard:

i) Elephant: This is the heaviest (25 cm in height X 27 cm in length), and stands on a cast copper platform with four brackets beneath, pierced, to take axles.

ii) Rhinoceros: This is a slightly smaller, and also stands on a cast platform. This rhinoceros recalls the one inscribed on the Indus seals.

ii) Two Wheeled Chariot with a Rider: The chariot is attached by a long pole to the yoked oxen which stand on two cast copper strips, but there are no brackets for wheels.

iv) Buffalo: This also has wheels and axle in position.

4) Adults aswell as children were usually buried in a north-south orientation; the head towardsthe north and the legs towards the south. Adults were, in a majority of cases, buriedin an extended position, whereas children were buried in urn-burials-either in singlepots or, more often, in two pots-placed horizontally mouth-to-mouth in a pit.Adults, and also children, were buried in a pit which was dug into the house floor,and rarely in the courtyard of the house.

Check Your Progress 2

1) Phase I

The earliest settlements of these farming communities represent this phase. These were made on tops of granitoid hills, or on levelled terraces on hill sides, or in the valleys between two or more hills. The material culture consists of a polishedstone axe industry, blade industry and handmade pottery. In pottery, grey or buff-brown ware is most common.

Phase II

The settlements hadcircular hutments of wattle and daub on wooden frames with mud floors. Some ofthe larger pits at Nagarjuna-Konda (in coastal Andhradesa) which are circular, oval,oblong and irregular, with post holes are interpreted as semi-subterranean pitdwellings. Pit dwellings were also found at Paiyampalli and Veerapuram. In thisphase new pottery types like the perforated and spouted vessels appeared.

Phase III

The important development in this phase is the increase in the number ofcopper and bronze tools. Such an increase is seen at Tekkalakota, Hallur, Piklihal,Sanganakallu, Brahmagiri and Paiyampalli.

2)The available archaeobotanical evidence indicates that millets and pulses were the main cultivated crops. These are various kinds of millet, horse gram, green gram and black gram, hyacinth bean and barley have been recently identified at Ramapuram.

3)Apart from being found in habitation sites, polished stone axes occur in smallisolated assemblages, in forested regions. Such occurrences are common in southIndia, and often, there is a habitation site nearby.Such isolated Neolithic stone axe clusters are common in the wooded hill ranges ofTamil Nadu: Shevroy, Javadi and Tirumalai hilly zones. The south Indian Neolithic is also associated with ash mounds which are distributedin the semi-arid parts of the Bhima-Krishna-Tungabhadra doab. More than 60 ashmounds are known and some of them are quite extensive.

4)The megalithic burials showed a variety of methods for the disposal of the dead. Insome cases bones of the dead were collected in large urns and buried in a pit. The pitwas marked by a stone circle or a capstone or both. The pits and the win also contained grave goods. In some other cases pottery sarcophagi has been found. In other cases pit circles have been formed with stones for burying the dead.

UNIT 9 SOCIO-ECONOMIC FERMENT: JAINISM, BUDDHISM AND OTHER HETERODOX RELIGIONS

STRUCTURE

9.0 OBJECTIVES

After reading this Unit you should be able to understand the context in which Buddhism & Jainism arose;understand that this context had a vital role in the formation of the society at that time; understand the spirit of religious reform and doctrines of these two sects had a bearing on the social change taking place at that time and; also get a knowledge of various heterodox sects in the contemporary period.

9.1 INTRODUCTION

The rise of two prominent heretic sects, Buddhism and Jainism in the northern India in 6th century B.C marks a crucial point in the early historic context of India. It was a period of change in many aspects of

life. It was the remarkable intellectual and socio-religious ferment within the society created by changing politico-material milieu that led to the emergence of a number of schools of thought, of which two, Buddhism and Jainism assumed definite shape of independent religions. Both these nearly contemporary sects followed anti-Brahmanism, anti-Vedic, anti-ritualistic, anti-caste, ascetic tradition, which laid more emphasis on moral conduct than the lengthy and expensive Vedic sacrifices of the period. Both appeared in and were confined to the areas of Bihar and Uttar Pradesh or the Ganga valley in their early period of history. The founders of both the sects, Buddha and Mahavira, were the Kshatriyasfrom powerful clans of the times. Largely the trading community patronized both the sects. Many factors were responsible for such a rise against the established order of the contemporary society. Though these factors were operating for a considerable time, the final change appeared in the 6th century B.C.

9.2 REMERGENCE OF NEW RELIGIOUS IDEAS

The new religious ideas during this period emerged out of the prevailing social, economic and religious conditions. Let us examine some of the basic reasons which contributed to their emergence:

i) The Vedic religious practices had become cumbersome, and in the context of the new society of the period had become in many cases meaningless ceremonies. Sacrifices and rituals increased and became more elaborate and expensive. With the breakup of communities, the participation in these practices also became restricted and as such irrelevant to many sections in the society.

ii) Growing importance of sacrifices and rituals established the domination of theBrahmans in the society. They acted both as priests and teachers and through theirmonopoly of performing sacred religious rites; they claimed the highest position in thesociety which was now divided into four Varnas.

iii) Contemporary economic and political developments, on the other hand, helped theemergence of new social groups which acquired

considerable economic power. You have seen that merchants living in cities or even rich agricultural householders possessed considerable wealth. Similarly, the Kshatriyas, either in the monarchies or in the gana-sanghas came to wield much more political power than before. These social groups were opposed to the social positions defined for them by the Brahmans on the basis of their heredity. As Buddhism and Jainism did not give much importance to the notion of birth for social status, they attracted the Vaisyas to their folds.

Similarly, theKshatriyas i.e. the ruling class were also unhappy with Brahmanicaldomination. Briefly put, it was basically the discontent generated by the dominantposition of the Brahmanas in the society, which contributed to the social support behindthe new religious ideas. It is worth remembering that both Buddha and Mahavira camefrom Kshatriya class but in their search for answers to the pressing problems of societythey went beyond boundaries set by their birth. Further, when we try to find out howtheir ideas were received by their contemporaries, we notice that they had a range ofpeople responding to them: Kings, big merchants, rich householders, Brahmans andeven courtesans. They all represented the new society which was emerging in the sixthcentury B.C. and Buddha and Mahavira, and other thinkers of those times, in their ownways, responded to the problems of a new social order. The Vedic ritualistic practiceshad ceased to be of much relevance to this new social order.

Buddha and Mahavira, were by no means, the first to criticise the existing religious beliefs.Many religious preachers before them, like Kapila, Makkali Gosala, Ajita Kesakambalin and Pakuda Kachchayana had already highlighted the evils of the Vedic religions. They also developed new ideas on life and God. New philosophies were also being preached. However, it was Buddha and Mahavira, who provided an alternative religious order.This was the background which helped the emergence and establishment of new religiousorders in the sixth century B.C. Among these Buddhism and Jainism were most popular andwell organised.

9.3 POLITICAL CONDITIONS

The political context of northern India in 6th century B.C was in a state of flux. Thespate of migrations and settlement was over and the process of state formationgained a considerable momentum. The political focus had shifted from the northwestand Punjab to the Gangetic plain. The preceding period had witnessed confrontationsbetween the polities based on clan organisation. However, permanent settlement in a particular area gave a geographical identity to a clan, which assumed concreteshape by the emergence of a territorial entity with a definite political organisation ofeither chiefdom or a kingdom. Thus, the tribal clans were gradually making way fora territorial state.

India was divided into a number of janapadas (political units), which included monarchies as well as the so-called republics or tribal chiefships, popularly known as gana-sanghas. Of these, sixteen were mahajanapadas as referred to in Buddhist texts. These were Anga, Magadha, the Vrijji confederacy and the Mallas in the middle Ganges valley; Kasi, Kosala and Vatsa to its west; Kuru, Pancala, Matsya and Surasena further west; Gandhara and Kamboja in northwest, Avanti and Chedi in western and central India and Assaka (Asmaka) in the Deccan. The mahajanapadas mentioned in the Jaina texts are spread over much wider geographical area, the list probably having been compiled at a later date.

Gana-sanghas

The compound term gana-sangha has a connotation of gana - those claiming equal status and sangha-an assembly. These were the systems, where the heads of families of a clan governed the territory of the clan through an assembly. In some cases, a few clans formed a confederacy, where the chiefs of all the clans constituted an assembly to govern the territory of the confederate clans. The assembly was presided over by the head of the clan. This office was not hereditary. The actual procedure of governance involved the meeting of the assembly, located in a main city. The gana-sanghas with their egalitarian character were less opposed to individualistic and independent opinion than the kingdoms and were more ready to tolerate unorthodox views. These gana-sanghas were Kshatriya clans. Their social organization was simple, with a preponderantly Kshatriya population and a marginal non-Kshatriya

population composed of Brahmans, artisans and the dasa-karmakara or slaves and labourers forming the clan and the support unit. The land was owned in common by the clan, but was worked by the hired labourers and slaves. The dasa-karmakaras were not represented in the assembly and had virtually no rights. Of the sixteen janapadas of the period, Vrijjis, Mallas and Chedis were ganasanghas. A number of other ganas such as Sakyas, Koliyas were also prevalent.

Vrijjis

This gana-sangha was a confederacy of eight or nine clans. Of these, the Videhans, the Lichchhavis, the Jnatrikas and the Vrijjis were the most prominent clans. Vaishali (Basarh, north Bihar) was the headquarters of this powerful Vrijjian confederacy.

Malla

It was a powerful tribe of eastern India. It was the confederacy of nine clans. Kusinagara (Kasia, near Gorakhapur) and Pava (Pandaraona, near Kasia) were prominent cities of this chiefdom.

Chedi

It was one of the most ancient tribes of India.

Kingdoms

In contrast to the gana-sanghas, the kingdoms had a centralized government with the king's sovereignty as its basis. Power was concentrated in the ruling family, which became a dynasty as succession to kingship became hereditary. The crucial difference between the State and the Chiefships was that the membership of the former was not based on the kin group or the kin position. The king was advised and assisted by ministers, advisory councils and an administration manned by officers. The officers assessed and collected the revenue, which was redistributed in the form of salaries and public expenses. Clan loyalty weakened in the kingdoms giving way to loyalties to the caste and the king. The already prevalent idea of attributing divinity to kingship was reinforced from time to time by elaborate ritual sacrifices. Thus, both

Brahmans and Kshatriyas joined hands in establishing power and monopolized the highest positions in the society.

The kingdoms were concentrated in the fertile Ganges plain, while the gana-sanghas were ranged around the periphery of these kingdoms, in the Himalayan foothills, and in the northwest and western India. They tended to occupy the less fertile hilly areas, which may suggest that their establishment predated the transition to kingdoms since this area would have been easier to clear than the marshy jungles of the plains. Alternatively, it is possible that more independent minded settlers of the plains moved up towards hills and established communities more in keeping with egalitarian traditions as against newly emerging, orthodox, powerful kingdoms. The rejection of Vedic authority by the gana-sanghas and general disapproval of these chiefdoms in Brahmanical sources indicate that they may have been maintaining an alternative tradition.

This period was marked by constant struggle for power between the monarchies and also between monarchies and gana-sanghas. However, by this period, gana-sanghas were gradually on decline and the kingdoms were gaining prominence. Magadha, Kosala, Vanga and Avanti were important kingdoms. All four were in constant conflict with each other in spite of close matrimonial alliances between them. The gana-sanghas offered strong resistance to expansionist policies of kingdoms by forming confederacies. Finally it was Magadha, which appeared as most powerful state. Magadha was ruled by the powerful king, Bimbisara, who conquered Anga and gained control of part of Kasi as the dowry of his chief queen, who was the sister of Prasenjit of Kosala. His son and successor Ajatasatru waged war against Prasenjit and finally incorporated Kosala. After this conquest, he turned his attention to the Vrijji confederacy. Following a long war, lasting for almost six years, he succeeded in occupying their chief city, Vaishali after weakening them by treachery. Finally, he incorporated their territory and Magadha emerged as an imperial state, controlling all the surrounding regions. Magadha continued to hold the foremost position for centuries to come.

9.4 ECONOMIC AND SOCIAL CONDITIONS

The process of state formation was influenced and accelerated by major economicchanges. The period was marked by expansion of economy caused primarily bymarked agricultural expansion leading to a wave of urbanization, which started in theGanges valley and spread to other parts of the country. This phenomenon is generallyreferred to as second urbanization, the first being the urbanized civilization of Indusvalley, dated back to the middle of 3rd millennium B.C.

It was believed that the expansion of agriculture was caused by introduction of iron.The new iron technology was instrumental in clearing the large tracts of marshyGanges valley, which was not possible with copper tools. The theory was firstexpounded by D. D. Kosambi and was strongly supported later on by R. S. Sharma.

However, in the light of new evidences, it is now believed that iron technology didnot play such a decisive role. The archaeological excavations at a number of siteshave pushed back the antiquity of iron to 1200 B.C. There are stray references toiron in Samhita literature, dated roughly to 1000-800 B.C. Thus, it is argued that ifiron appeared as early as 1200 B.C., how it affected the economy as late as 600B.C. Again, most of the iron implements found from the archaeological excavationsare weapons and very few agricultural tools have come to light. Thus, role of ironin clearing the jungles of Ganga valley is much debated, though it definitely gave fillipto already established rural economy. Moreover, almost simultaneous appearance ofiron in South Indian Megalithic culture did not lead to expansion of agriculture in thisregion. Thus, it was the functioning of multiple processes operating in the Gangavalley, which initiated a phase of major change during this period.

It is certain that there was definite expansion of agriculture during this period, whichwas caused both by improved climatic conditions and refined iron technology leadingto surplus production. There was definite increase in population as attested bytremendous increase in the number as well as the size of settlements of this periodas evident from archaeological explorations and excavations. From staying close tothe

banks of rivers, some settlements moved into the interior where they cleared landfor cultivation. Though all the important crops were known from the Chalcolithicperiod, there was considerable improvement in agricultural techniques. The introductionof wet-rice cultivation was beneficial as it provided a higher yield. The wide floodplains of northern Bihar were well suited for rice-cultivation. Since cultivation of ricewas necessarily single-crop agriculture, it was important to produce substantialexcess at each harvest.

To achieve this aim, more and more land was brought undercultivation with improved techniques and intensified labour. These factors, along withthe rise of organized state with proper administrative machinery, were responsible foragricultural surplus. The surplus could support a large population. It accelerated theprocess of urbanization and state formation. This period also witnessed the beginningof the network of inland trade and some amount of foreign trade with AchaemenidEmpire. The commodities involved in the early trade included metals, salt, pottery andtextiles. The trade activities opened up routes to various interior parts and also to thefar off places of the sub-continent. The trade was carried out both by river and roadroutes. The increased trade activities led to the development of metal currency in theform of silver bent-bars.

The population rise, agricultural surplus and beginning of trade leading to expandingeconomy initiated the early phase of urbanization. A number of different kinds ofcities emerged in Ganges valley. Some grew out of political and administrative centressuch as Rajagriha in Magadha, Sravasti in Kosala, Kausambi in Vatsa, Champa inAnga and Ahichhatra in Panchala. All these cities were located on major routes, landand/or riverside. The rise of Magadha was not solely due to its powerful rulers. Itoccupied very strategic location, commanding all major routes. Its land was fertileand naturally irrigated. The forests of the Rajamahal hills provided supplies of timberand elephants and major iron ores were located to its south. Thus, expanding economyalso contributed in the emergence of imperial state.

Other cities grew out of markets,usually located where there was agricultural surplus that could enter into regularexchange nexus. The strategic location of some of the settlements on the trade routeshelped

their development into towns of significance. Another important aspect of thischanging economy was the beginning of craft specialization. Textual sources refer tosome villages specializing in blacksmithing, pottery, carpentry, cloth weaving, and basketweaving and so on. These were the villages close to the raw materials and linkedto routes and markets. Thus, specialized craftsmen gathered at one place because of facilitated access to resources and distribution of the craft items. Such places eventually developed into towns, which in turn expanded their production to become commercial centres. The literary sources mention grama (village), nigama (local market), nagara (town), and mahanagara (large city). Introduction of iron technology brought about technical improvements in various craft activities. The archaeological evidence indicates striking increase and qualitative improvement in the making of the items from bone, glass, ivory, beads of semi-precious stones etc. as compared to earlier chalcolithic period.

The period in question was the beginning of the process of state formation andurbanization, which culminated with the establishment of Mauryan Empire in 321 B.C.and subsequent development of trade of highest volume with the western world,accelerating the growth of large cities in all parts of the country between 3rd centuryB.C. to 3rd century A.D.

These major changes in politico-material aspects naturally brought many changes in the society. Brahmanas still held the highest position in Varna hierarchy. However, the emergence of various republics and monarchies, most of which were ruled by Kshatriyas, led to the rise of Kshatriyas to a prominent status. Moreover, the urbanization and expanding trading activities witnessed the beginning of the emergence of Vaishyas or trading community as a powerful caste. There are numerous literary references to ‘gahapati’ (grihapati), who was an affluent ‘house-holder’, as a growing powerful community. The changed economy led to the proliferation of a number of occupational groups and craft specialization. This resulted in the assimilation of many ‘tribal’ or marginal groups into mainstream Brahmanical society, which were absorbed at the lower level of the society. Thus, gradually a well-stratified society was emerging with Brahmanas-Kshatriyas-Vaishyas and various artisans, landless labourers and others.

Check Your Progress 1

1) What are gana-sanghas?

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2) Discuss the changes in material culture taking place around 6th century B.C.

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9.5 SOCIO-RELIGIOUS AND INTELLECTUAL STORM

As far as the religious context is concerned, Vedic Brahmanism was most prominent.However, old Vedic religion had been reduced to an extremely formalized ritualismin the hands of Brahmans. The emphasis was on the rigid observance of the rulesprescribed for the performances of the sacrificial rites, which had become the mostimportant aspect of the religion. These sacrifices had become very lengthy andexpensive affair, affordable only to the high and rich classes of the society. The Brahmanas, who monopolized the reading and interpretation of Vedas, were the most powerful and prominent caste.

The changing politico-economic-social scenario naturally invoked much change at intellectual level. The period was marked by proliferation of ascetic sects with a wide range of ideas spanning from annihilations (ucchedvada) to eternalism (sasvatavada) and from fatalism to the materialism. Though the ascetic tradition and the ideas propagated by various sects had a long history, their appearance in a concrete shape of definite sects in the 6th century B.C. was provoked by the changes of contemporary society.

The emergence of imperial state against the decline of republics provoked muchdiscussion. The kingdoms came to be favoured by mainstream Brahmanical society,which advocated the ideal of ‘Universal

Ruler'. However, another thought processprotested against such domination, which later on came to be manifested in thephilosophy of Buddhism and Jainism. Some scholars even go to the extent of suggestingthat the political troubles of the age provided its more sensitive souls with incentiveto withdraw from the world, which accelerated the popularity of ascetic tradition.

The newly emerging castes of Kshatriyas and Vaishyas resisted the highest statusclaimed by the Brahmanas as they also aspired to rise in the social hierarchy. Thisconflict between the established orthodoxy and the aspirations of new groups in theurban centres intensified the intellectual process, which resulted in a remarkablerichness and vigour in thought, rarely to be surpassed in the centuries to come.Moreover, so many changes produced a sense of social stress and awakened thespirit of questioning. The experience of social change and suffering is undoubtedlyconnected with the quest of new pathways in religion and philosophy. Social changeis an effect rather than a 'cause' of spiritual change.

There is no doubt that the older VedicGods and sacrifices were conceived in themidst of rural and agricultural landscape. In the new atmosphere of town-life, muchof the symbolism of the older religion derived from natural phenomena and pastoralagriculturalfunctions would become dim, the Gods less convincing and the ritualsobscure. The changing milieu witnessed the appearance of new concepts and ideas.

Brahmanism

A sharp contrast had developed within Brahmanism between formalistic,ritualistic tendencies of Vedas and the new trend towards an esoteric and ascetic direction visible in the Upanishads. In these texts, the doctrine of ritual act was oftenreplaced by that of knowledge and sometimes by that of theistic devotion as well asmoral conduct. Ritualism was receding, while ascetic renunciation and creed of lifeof virtue and devotion was gaining importance. Thus, there was growing cleavage of ideas within Brahmanism itself.

Rise of Asceticism

A religious tradition parallel to Brahmanism was the tradition ofasceticism, which was prevalent for a long time. The ultimate origins of this ascetictradition are obscure. There are traditions about ancient teachers, often in veryremote period, but their historicity has not been established as yet. Its definite historycan be traced from 6th century B.C. The growth and spread of asceticism in 6thcentury B.C. is the most characteristic feature of the new religious life that sprangup. This new movement was led by the non-Brahmans. Some Brahmans alsojoined it, but they thereby left the Brahmanical tradition. The philosophers of thesenew schools of asceticism were called '*Sramana*s' or '*Parivajraka*s'. They werethe men who had left the society and become wanderers. They lived on alms andpracticed rigorous penance of various forms. They rejected the Vedas and the authorityof the Brahmans. They ridiculed the complicated rituals and tried to show theabsurdity of the Veda as a canon of ultimate truths by pointing out contradictions init. They declared that the entire Brahmanical system was a conspiracy against thepeople by the Brahmans for the purpose of enriching themselves by charging exorbitantfees for rituals. In place of this authoritarian tradition, the Sramanas sought to findexplanations by own investigations. Even if the life of wandering in the forests wasold, most of the philosophies of the period were new, taking account of major changesat all levels of life. The establishment of organised communities of Sramanas asopposed to individual wanderers was an innovation of the period. Debate, discussionand teaching were important aspects of these schools. Audiences gathered aroundthe new philosophies in the kutuhala-salas, the place for creating curiosity.

Sramana Philosophy

Though there were a number of ascetic schools withindependent concepts, most followed a general pattern. Their conception of theUniverse was that it was a natural phenomenon, evolving itself according toascertainable natural laws. It was not subject to the control of Gods or a God andhad not been created by such supernatural powers. If there were Gods, as some ofthem admitted might be the case, they were natural beings on a level with humansand animals, inhabiting in different region, but just as subject to natural laws ashumans. The Gods

were not immortal, but lived and died as humans did. However,the most schools denied the existence of God.

Most of the Sramanas believed in transmigration in some form, either of a ‘soul’ orof a stream of consciousness from a dying body to a newly conceived one. By thisperiod, Brahmanism also had accepted this idea. Most of these schools regarded lifeas on the whole unhappy, filled with sufferings, concluding that their aim should be,not to be reborn in it in better circumstances, which any way would be temporary,but not to be reborn at all. Though the methods to achieve this aim differed, theemphasis was primarily laid on the moral conduct and personal efforts of an individual,rather than complicated rituals with the help of Brahmans.

A number of such schools are mentioned in the literature of subsequent period. InPali literature of Buddhists, there is reference to 62 doctrinal views before Buddha,while the Jaina canons refer to 363 sects. However, of these, a few groups weremost prominent and influential.

Ajivikas

This sect was founded by a group of prominent teachers in Kosala. The leader of this school was Makkhaliputra Gosala. Other important teachers were Purna and Pakuda. The Ajivikas believed in transmigration on a grand scale. Their key doctrine was that ‘niyati’ or impersonal ‘destiny’ governed all; such that humans had no ability to affect their future lives by their karma as actions were not freely done, but were predetermined. The destiny controlled even the most insignificant action of each human being and nothing could change this. Thus, they believed in rebirth, but not in karma. They practiced rigorous asceticism such as fasting and nakedness.

Lokayatas

The followers of this school were materialists. The main spokesman was Ajita Kesakambala. They denied any kind of self other than the one, which could be directly perceived. Each act was seen as a spontaneous event without karmic effects and spiritual progression was not seen as possible. Man was made of dust and returned to dust. Thus they denied soul, transmigration and also destiny. This school was also known as Do-

as-you-like school (yadrcchavada). They believed that the aim of living beings was happiness and highest happiness was of pleasures of the senses. Unlike other schools, they maintained that there was more happiness than unhappiness in life. Later on, Charvaka became the prominent leader of this theory.

Skeptics

Their spokesman was Sanjaya Belatthaputta. They avoided commitmentto any point of view. They held that no conclusive knowledge was possible and did not even commit them to saying that other people's views were wrong. One of theprimary concerns of these Sramanas was whether moral actions would have anyeffect on the person who performed them, in other words, the existence and functioningof karmic cause and effect. If moral actions did have effects, then the religiouspractitioners had to investigate how he might break his karmic bonds and free hismind or soul and achieve final release from the cycle of birth and rebirth. Such wasthe cultural milieu in which Buddhism and Jainism rose.

Buddhism

Buddha (566-486 B.C.) was the Kshatriya prince of the republican clan of Sakyas and was known as Siddhartha in his worldly life. He was born at Lumbini, on the Nepalese side of Indo-Nepal border. After living a life of an aristocrat, he encountered sickness, suffering and death as well as asceticism for the first time in his life through famous four visions of a sick, an old and a dead person and an ascetic. Highly dissatisfied with the transitory nature of life, he finally left his house, wife and the child at the age of 29 and became an ascetic. He joined various ascetic groups and followed different types of asceticism prevalent at the time. He wandered around for six years. When nothing worked, he decided to discover his path through meditation. He achieved enlightenment at the age of 35, while meditating under a tree at Bodhagaya. He gave his first discourse at Sarnath, near Varanasi, where he gathered his first five disciples. For 45 years, he wandered around, mainly in Bihar region, preaching his creed in the local language, Pali. The religion was soon adopted many important dignitaries of the period as well as a number of common

people. He died at the age of 80 years at Kapilavatsu after establishing his sect on firm footing.

Buddha promulgated a doctrine, which had all the main characteristics of the Sramana movement. He rejected all authority except experience. One should experiment for himself and see whether the teaching is true. The Universe is uncreated and functions on natural laws. It is in continuous flux. He denied the existence of soul, though accepted the process of transmigration and karma. According to him, in transmigration, the new life arises as part of the chain of events, which included the old. The only stable entity was Nirvana, the state of infinite bliss. The aim of human life was to achieve this nirvana and end transmigration. The path to achieve this aim constituted most important part of teaching. The basic principles of Buddhism are Four Noble Truths: 1) world is full of suffering, 2) suffering is caused by human desires, 3) renunciation of desire is the path to salvation, 4) salvation is possible through Eightfold path, which comprised of eight principles, emphasizing on moral and ethical conduct of an individual. Buddha preached the 'Middle Path', a compromise between self-indulgence and self-defeating austerities.

The religion was essentially a congregational one. Monastic orders were introduced, where people from all walks of life were accepted. Though Buddha was initially against the entry of women into asceticism, an order of nuns was established eventually. Monks wandered from place to place, preaching and seeking alms, which gave the religion a missionary flavour. The organisation of Sangha was based on the principles of a gana-sangha.

Jainism

Jainism has longer history than Buddhism. Jaina ideas are said to have beenprevalent since time immemorial as twenty-three tirthankaras or makers of fords arerecorded to have lived before Mahavira in remote past. Though the historicity ofthese tirthankaras is not proved, the 23rd tirthankara, Parsvanatha could have beena historical personage of 8th century B.C. However, it was Mahavira who reorganizedthe sect and provided it with historical basis. The sect was initially known as'Nirgrantha' ('knotless' or free from bonds), but later on came to be known as'Jaina', after Jina-the Conqueror, which refers to Mahavira.

The life of Mahavira (540-468 B.C.) has striking similarities with that of Buddha. Hewas also a Kshatriya prince of Jnantrika clan, which was a part of famous Vrijjiconfederacy. He was born at Kundugram, a suburb of Vaishali and was known asVardhamana. In Buddhist texts, he is also called Nathaputra and Videhan, son ofJnatras and resident of Videha. He too, after living a life of an aristocrat, renouncedthe world at a young age of 30. He practiced rigorous asceticism for twelve yearsin search of truth. He wandered in Bihar and parts of Bengal. He finally achievedenlightenment outside the town of Jambhikagrama after which he preached his doctrinefor 30 years. He mainly travelled in Bihar, spending maximum time at Vaishali andRajagriha. He met with great success in Bihar and parts of western Bengal alsocame under his influence. Many important personalities of his time and rich merchantsare said to have accepted his creed. Many ordinary people were also brought intothe fold. He found the orders of monks and nuns. He too preached in the locallanguage, Ardhamagadhi. He died at the ripe old age of 72 at Pawa.

The Jainas also rejected the existence of God. According to the Jaina philosophy, the Universe is uncreated and moves in a cyclic motion of decline and progress. During each epoch, twenty-four tirthankaras are born who revive the Jaina religion. The universe functions through the interaction of living souls (jivas) and five categories of non-living entities (ajiva), which are akasa, dharma, adharma, kala and pudgala.

Not only the human, animal, and vegetable organisms, but also things like earth; fire and water have souls. By nature, the soul is bright, pure and conscious, but it gets covered by the matter of karma, which accumulates by any and every activity. Only by removing this karma, one can achieve moksha or liberation from the cycle of transmigration, which is a state of inactive bliss. The annihilation of karma comes through prevention of the influx and fixation of karma in soul by careful, disciplined conduct of right knowledge, right vision and right conduct. Unlike Buddhism, Jainism laid great emphasis on self-mortification and rigorous austerities, mainly fasting. It differed from Buddhism and also Brahmanism in believing that full salvation was not possible for the laymen as total abandonment was necessary for attaining nirvana.

The path to nirvana was observance of five vows, non-killing (*ahimsa*), non-stealing(*achorya*), non-lying (*astyeya*), non-possession (*aparigrahara*) and celibacy(*brahmacharya*). While Parsvanatha preached the first four vows, Mahavira addedthe last one. The Jainas laid great emphasis on ahimsa and formulated a number ofrules for observing ahimsa in daily life.

Thus, the emergence of these two similar ascetic sects, which emphasized the transitoryand painful nature of human life and preached the salvation as the final solution, tobe achieved by observing moral conduct, entirely through an individualistic effort asagainst by complex rituals through a priest, was a reaction to a changing society andan attempt to fulfil the needs of new society.

Check Your Progress 2

1) What was the descent in 6^{th} century A.D that led to the rise of heterodox sects?

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2) What are the main points of difference between Jainism and Buddhism?

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9.6 SIGNIFICANCE OF NEW RELIGIOUS MOVEMENTS

The rise and development of the new religious ideas had brought some significant changes in the contemporary social life. Following are some of the important changes.

i) The idea of social equality was popularised in this period. The Buddhists and Jains did not give any importance to the caste system. They accepted members of different castes in their religious order. This

was a great threat to the age long domination of the Brahmans in the society. Acceptance of women in the Buddhist order also had an important impact in the society because this gave women equal status with men in the society.

ii) Brahmanical texts had assigned an inferior position to traders. Sea voyages were also condemned. But, Buddhists and Jains did not give any importance to caste and did not look down upon sea voyages so the trading community was very much encouraged by these new religious ideas. Moreover the emphasis on 'karma' by these new religious ideas for future life also indirectly favoured the activities of the trading community.

iii) The new religions gave importance to languages like Prakrit, Pali and Ardha Magadhi. Buddhist and Jaina philosophies were discussed in these languages and later, canons were written in the local language. This paved the way for the development of vernacular literature. Thus the Jains, for the first time, gave a literary shape to the mixed dialect, Ardha Magadhi, by writing their canons in this dialect.

9.7 CHAITYAS AND VIHARAS

The use of the term Chaitya suggests a pre Buddhist sacred enclosure that was a regular part of the worship in the gana-sanghas. The Chaityacomplex also at times contained a stupa, originally a funeral monument and a memorial relic later on, which was the main object of worship in Buddhism before the introduction of image worship. The Chaityacave consisted of either an apsidal, vaulted-roofed or a square, flatroofed hall with the rock-cut stupa at one end having circumambulatory formed by a row of pillars around and a veranda. A Viharwas basically a hall with a number of cells along all sides and with or without a veranda. These caves were simple with sparse decoration in the form of ornamental pillars, elaborate façade and a few auspicious symbols occurring above the cell doors. This visible form of architecture was possible due to the nature of the patronage received by the sect from its patrons. These patrons were linked to the process by which the religion spread across the parts of India in post Mauryan phase.

The spread of Buddhism to distant lands of peninsular India, central India and also to other countries is often associated with the mechanism of expanding trade networks and empire building activities. There is no doubt that it was primarily the proselytizing efforts of dynamic and enterprising monks, who ventured through unknown lands to preach the creed that led to the spread and popularity of Buddhism in far off lands. But the process of second urbanization, which spread from the Gangetic valley to the rest of the country, with its growing trading networks, definitely accelerated the spread of Buddhism.

The phenomenon of urbanization and trade, which started in 6th century B.C., gained momentum in the subsequent centuries. The volume of trade increased immensely as the trade with the Mediterranean world, which probably existed for a long time, was intensified. By 3rd-2nd century B.C., almost all parts of the country experienced a phase of urbanism, accompanied by the emergence of a powerful imperial state, agricultural expansion and growing economy characterized by increased volume of trade, appearance of metal currency as well as craft specialization. The marginal areas or 'prohibited areas' outside the pale of mainstream Brahmanical culture of Gangetic valley became accessible through various trade routes. The knowledge of the earliest routes comes from the religious texts, which mention the travels of stray persons from place to place. With the intensification of trade, especially with the Mediterranean world, the western texts mention a number of cities and urban centres. Much information is also gathered from the archaeological evidences testifying to long-distance exchange of goods. Thus, a broad, but indistinct picture of a network of trade routes emerges. The most important among these was the 'Dakshinapatha', a route to south, which opened up the areas south of Vindhyas. So important was this route that the whole country to the south being designated as 'Dakshinapatha'.

A large number of articles, primarily raw material of different type, were exported to the Mediterranean world, while a few were also imported. The southern region comprising of Maharashtra, Andhra Pradesh, Tamil Nadu and Kerala, with its long coastline actively participated in this trade mechanism. A number of large cities emerged on strategic locations of trade routes and also as ports. Thus, the expanding trade definitely opened up distant lands for the monks to venture out and preach.

This process was accelerated and strengthened by emergence of powerful imperial states. During this period emerged the Mauryan Empire, the first major empire of the sub continent controlling large geographic areas with differing polities and societies at various levels of social stratification in its fold. The extent of Mauryan Empire is known from the locations of Asokan edicts, which are found as far south as Chitradurga district in Karnataka and Kurnool district in Andhra Pradesh. It is postulated that subsequent emergence of the powerful state of Satavahanas and Ikshvakus in Deccan, helped the spread of Buddhism in this region, which is marked by proliferation in Buddhist monastic sites during this period.

Buddhism came to be favoured by traders. Buddhism, with its opposition to the Brahmanical taboos on purity and contamination, encouraged travel and in turn accelerated long distance trade. The literary and archaeological records link Buddhism with king and the merchant. These sources portray the social milieu of Buddhism as a complex urban environment with kings, wealthy merchants, craftsmen and professionals. There is large number of references to urban centres in Buddhist literary sources as opposed to stray references to rural settlements. The largest number of monks and nuns of early sangha came from large towns and from powerful, wealthy families. There is a marked preference to trade over other professions in the Buddhist literature. The donative inscriptions from almost all Buddhist sites in central and southern India record donations primarily by traders, and various craftsmen, occasionally from far off places.

Buddhism also provided much-needed support system to the changing cultural milieu. At the ideological level, it influenced and encouraged the accumulation and reinvestment of wealth in trading ventures by lay devotees, at the social level, donations to Buddhist monasteries provided status to traders and other occupational groups, while at the economic level, the Buddhist monasteries were repositories of information and essential skills such as writing. Moreover, the organised institution of Buddhist sangha brought monasteries into closer contact with lay community and provided identity and cohesiveness to trading groups.

The association of trade, urbanism and powerful states with Buddhism is indicated by occurrence of most of Buddhist sites of the period on

strategic locations, either on trade route or near large urban centre. Barhut in central India occupied the northern end of the valley, in an area rich in mineral resources. The sites in the Deccan were located on major trade routes. Junnar, with largest cluster of caves was located at the head of Nanaghat, an important pass. Similarly, Kanheri, another important site, was located in the vicinity of port of Kalyan, similarly at Karla and at Kondane. Amaravati and Nagarjunakonda in Andhra Pradesh were located near the flourishing capital cities of Satavahanas and Ikshvakus. The other sites were located within rich, fertile, rice-growing Krishna delta and along arterial routes.

Thus, Buddhism spread against the background of expanding trade network and the empire building process of early historic period, both of which opened up routes to distant lands of southern India. The well-organised institution of Buddhist sangha, the proselytizing efforts of dynamic monks and the nature of Buddhism, which favoured trade and urban life-style, were some of the factors that led to immense popularity of the sect during this period in central and southern India. A large number of monasteries emerged on major trade routes and/or near large urban centres and thrived on the large scale donations, primarily by the trading community. When the trade dried up and trade routes became inactive, the sect declined, though continued to survive in stray pockets till very late. As the religion took a more organized form, especially once it obtained patronage from the kings as well as the mercantile community, the religion also visually expressed itself through the architecture.

9.8 TRIBES AND BUDDHISM

In this context where do we place the tribes in relation to the Chaityas and the Viharas? We need to have clarity about the term ‘tribe itself before we can articulate any possible relationship between the visible expressions of Buddhist structures and the ‘tribes’. The label “tribe” has been an unstable category that has been deployed within multiple networks of power relations, such as state-society, local-national and national-global spheres. We need to question the contending meaning of

tribes, variously defined as indigenous, aboriginal, primitive, underdeveloped, disempowered and marginalized.

The term Adivasi was coined as a translation to the colonial category of aboriginal. The tribal and the aboriginal are not synonymous categories. They are in fact two different categories altogether. The term tribe refers to the political organization of the community while the term aboriginal means one present from the beginning (origin) or of the sunrise (literal meaning). Any identification of a particular people with the area implies a genetic sub text and a continuity of between them and the first human populations of those regions. This hypothesis may have some limited validity in the *New World* but none in the *Old World*. The equivalence of the aboriginal to the tribal in the 19th century led to the theory of race (in Africa especially), where it was argued that the Africans were quite incapable of progressing beyond tribal organizations, unless forcibly integrated into societies dominated by superior races. This led to the aboriginal –tribal and vice versa.

In fact the opening of the first millennium BC saw the prevalence of hunting and gathering, pastoralism and agriculture as the three varying strategy as per the demands of the eco-niche in the subcontinent. We cannot place the 'tribal' in the hunter gatherer context always. These were responses determined by the eco-niche and the limitations of manpower and technology. The state too had an uneasy relationship with the people who lived in the forests. The forest produce was crucial to the state, and the control over the same was desirable.

The Mauryan State for instance, in one telling stroke warned the forest dwellers thus, "and the forest folk who live in the dominions of the Beloved of Gods, eventhem he entreats and exhorts in regard to their duty. It is hereby explained tothem that, inspite of his repentance, the Beloved of the Gods possess powerenough to punish them for their crimes so that they would turn from their evilways and would not be killed for their crimes". The 13th rock edict is remarkable for its clarity and ruthlessness. An empire had to be run and the resources had to be marshalled. It was in that context that the people were being warned. Needless to state that similar attitudes still prevail that lead to the utter dehumanization of our tribal populations.

Let us now consider the so-called tribal, in the context of the above. According to Shereen Ratnagar though we cannot argue from the perspective of the indigenous, certainly we can form the perspective of the marginalized. The first question to be asked pertains to the defining elements of the term 'tribal'. It is not ethnicity that marks out any group as a tribal society, but its social organization. One way of looking at the topic is to focus on the fact that tribes are societies without caste hierarchies. Not all tribesmen or tribeswomen are ever equal in talent, industriousness, or wealth. By definition, all members of a tribe hold their natural resources jointly; these are agricultural land, forests, pasture grounds, fisheries, or water resources. A tribal family tills a plot of land because it has the right to do so by virtue of birth in that tribe. No family is deprived of access to these resources; all members have rights to land, or to graze their animals on open ground in the tribe's terrain.

On the other side of the coin, no member of a tribe has the right to dispose of his plot to an outsider or to sell it off. The social stratification in the tribal society results due to a complex process of appropriation of respect, of authority and of a capacity to participate in the cycles of reciprocities. Thus tribal tenure is joint tenure, and qualitatively different from private property in land. Tribal cultures do not make commodities of their natural resources! In other words the term tribe can said to be applied to that specific context where individual rights were embedded in the community rights, where production was for consumption and where there existed authority but not power. Where did this society prevail in the context of the early history of the subcontinent? Can we speculate on the nature of any relationship between the tribal world and Buddhism? These are interesting issues that need a greater commitment to research. These cannot be left as speculative matters.

9.9 LET US SUM UP

In this Unit you have seen the emergence and establishment of new religious ideas in thesixth century B.C. in North India. The contemporary socio-economic needs largelycontributed to the emergence of these new religious ideas. Among these, Buddhism and Jainism became very

popular among the people. In spite of some differences, both the religions put emphasis on humanity, moral life, 'Karma' and 'Ahimsa'. Both of them were highly critical of caste system, domination of the Brahmanas, animal sacrifices and the ideas of God. This was a direct challenge to the existing Vedic religion. Besides this, you haw also learnt about other heterodox sects like Ajivikas and their ideas. All these brought about a significant change in the attitude of the people and they, as a result, began to question the age long supremacy of the Brahmanical religion.

You also sawhow the changes in politics material aspects was bringing in the change insociety during this period; how the socio-religious ferment was itself was giving rise to new ideas andschools of thought; how Buddhism & Jainism as crystallization of this ferment themselves gave athrust to social changes of this period.

Buddhism, initially a response to the regressive Brahmanical ideology and closed Vedic practices of ritual gradually turned into a religion patronised by the newly emerging classes, the merchants and the artisans, the traders and the new rulers. The seeds of the decline of the religion too were embedded into the nature of the patronage extended to the religion. In this process it would be interesting to study the nature of its relationship with the tribes, if any. We must leave that to the courageous breed of researchers.

9.10 KEYWORDS

Heretic: rebelling against established norms and values especiallyof religion.

Assimilation: here refers to integration of tribal groups into mainstreamsociety.

Ascetic Renunciation: refers to the giving up of worldly life, by that ishouseholder’s life and adopt a path of piety, spiritualsalvation and wandering.

Heterodox: Non-orthodox

Karma: Action of an individual

Pitakas: Buddhist religious texts

Purvas: Jain religious texts

Schism: Division of an organisation into two or more groups.

Tirthankara: Refers to the Jain preachers who acquired supreme knowledge.

Purity and Contamination: In Brahmanical ideology the distinction made between what was considered to be pure and impure. Some scholars like Louis Dumont in fact regard the hierarchy of purity and pollution as central to formation of caste system in India.

9.11 QUESTIONS FOR REVIEW

1) What were the different trends of the thinking which emerged in the wake ofthe socio-religious ferment?

2) What were the changes taking place in the society in the 6th B.C.

3) Comment on the location of the Chaityas and the Viharas.

4) Can we speculate on any relationship between the Chaityas and the tribal world?

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9.13 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) The compound term gana-sangha has a connotation of gana - those claiming equal status and sangha-an assembly. These were the systems, where the heads of families of a clan governed the territory of the clan through an assembly. In some cases, a few clans formed a confederacy, where the chiefs of all the clans constituted an assembly to govern the territory of the confederate clans.

2)More and more land was brought undercultivation with improved techniques and intensified labour. These factors, along withthe rise of organized state with proper administrative machinery, were responsible foragricultural surplus. The surplus could support a large population. It accelerated theprocess of urbanization and state formation. This period also witnessed the beginningof the network of inland trade and some amount of foreign trade with AchaemenidEmpire. The population rise, agricultural surplus and beginning of trade leading to expandingeconomy initiated the early phase of urbanization. Thus, expanding economyalso contributed in the emergence of imperial state.

Check Your Progress 2

1) The newly emerging castes of Kshatriyas and Vaishyas resisted the highest statusclaimed by the Brahmanas as they also aspired to rise in the social hierarchy. Thisconflict between the established orthodoxy and the aspirations of new groups in theurban centres intensified the intellectual process, which resulted in a remarkablerichness and vigour in thought, rarely to be surpassed in the centuries to come.Moreover, so many changes produced a sense of social stress and awakened thespirit of questioning. The experience of social change and suffering is undoubtedlyconnected with the quest of new pathways in religion and philosophy. Social changeis an effect rather than a ‘cause’ of spiritual change.

2) Unlike Buddhism, Jainism laid great emphasis on self-mortification and rigorous austerities, mainly fasting. It differed from Buddhism and also Brahmanism in believing that full salvation was not possible for the laymen as total abandonment was necessary for attaining nirvana.

UNIT 10 RISE OF URBAN CENTRES, NEW CLASSES AND CHANGING SOCIAL RELATIONS

STRUCTURE

10.0 OBJECTIVES

After reading this unit you will discover the real meaning of an urban settlement and distinguish it from rural centres,learn the main factors which led to urbanisation during the sixth century B.C.,know what kind of cities existed at that time, andbe able to list various features of city life in sixth century B.C. You will also know about the new classes that grew

as a result due this urbanization and the how these classes redefined the social relationships of the contemporary period?

10.1 INTRODUCTION

The period starting with the sixth century B.C. saw the emergence of cities in ancient India for the second time. This urbanisation was more significant in the sense that it endured for a longer time and it saw the beginnings of a literate tradition. This tradition embodied inBuddhism, Jainism and many important strands of Hinduism look back on this period as itsformative epoch. The contemporary literature is full of references to cities like Rajagriha,Sravasti, Kashi, etc. The Buddha and Mahavira were preaching to urban audiences most ofthe time.

After the end of the Indus cities, settled agricultural villagers and wandering peopleinhabited the plains of India. Small village settlements with humble dwellings dotted thelandscape of the country. All this was undisturbed by the din and bustle of market placesand the domination of kings and merchants. You must have heard the story of KingHarishchandra famous for his truthfulness and keeping his vows. Here is the earliest versionof his story from a text called the Aitareya Brahmana. This text can roughly be dated to the 8th-7th century B.C.

Thus goes the story-King Harishchandra did not have a son. He went up to God Varuna and prayed, "Let a son be born to me, with him let me sacrifice to thee." To him a son was born Rohita by name. Varuna demanded his sacrifice. The king made various kinds of excuses and kept postponing the sacrifice. However, when Rohita grew up Harishchandra told him, "O my dear one, this one (Varuna) gave thee to me. Come let me sacrifice to him with thee." "No", he said and taking his bow went to the wild and for a year he wandered in the wild.

Varuna was angry and as such Harishchandra was inflicted with dropsy. Rohita heard ofthis and decided to go back from the wild to his village. Six times he started for the villageand six times he was persuaded by Indra to go back to the wild.In the seventh year he bought a Brahman boy called Sunahsepa from his father for ahundred coins. As such he came back to the village of Harishchandra where Sunahsepa wasto be

sacrificed to Varuna. When Sunahsepa was about to be sacrificed he chanted someincantation which pleased Varuna and he was saved. The king's dropsy also disappeared.

What is significant for a historian of urbanism is that King Harishchandra was not living in acity, not even in a small town but in a village adjacent to the wilds. All this changed in thesixth century B.C. You have already read earlier that the kings of the monarchicalMahajanapadas and the Kshatriya chiefs of the gana-sanghas used to live in cities likeKausambi, Champa, Sravasti, Rajagriha and Vaisali. It is not only big cities which emergedat this time. Along with agriculture-based villages, there existed market centres, smalltowns, big towns and other types of settlements.

Hence the period from sixth century B.C. to fourth century A.D. represents a crucial phasein Indian history. It is in this period that the impact of 'second urbanisation' was feltin India. This period witnessed the rise of Buddhism and Jainism, formation of earlystates, emergence of an imperial system, development of caste and class distinctions,intensification of inland and overseas trade, emergence of numerous urban centresand expansion of agriculture with the effective use of iron technology and the adoptionof Brahmi script. The initial focus of the second urbanization process was on the Gangetic Valley and, it spread to other parts of India around the early centuries of theChristian era, e.g., the Deccan and the extreme south.

10.2 URBAN CENTRE DEFINED

Many scholars have tried to define an urban centre. On the face of it, it seems fairly easy todefine an urban centre. But when we get down to details the problem becomes complicated. For example, some writers believe that the urban centre is characterised by a largepopulation. However, it has been pointed out that some modern Indian villages havepopulations larger than those of some Australian towns. Similarly, some scholars argue thaturban centres are larger in size than villages. However, it is difficult to determine a standardsize for the towns. We know that some of the villages today are larger in size than say

aHarappan town like Kalibangan. Thus, the number of people or the size of the settlementcannot be the reliable criteria for defining an urban or rural centre. Hence it is important toidentify the kinds of activities people are performing. In a village most of the people areengaged in food production. So, the social landscape of the villages is dominated by fieldsand farmers. In the towns, on the other hand, the dominant people are either rulers or merchants or priests. It is possible that many people in the town might engage in agriculturalactivities but it is essentially the non-agricultural activities that define a town.

Let us take the example of Benaras which is among the oldest surviving cities of India. Itsfame rests not on the very good quality rice produced there but on its being a very importantpilgrimage centre. Benaras attracts pilgrims from all over India. These pilgrims offer variouskinds of gifts to the deities in the temples. In this way the keepers of the temples are able todraw upon the resources of the people coming from all over the country. Thus, the othercharacteristic of an urban centre is that it functions in relationship to a large hinterland. Theresidents of the city might provide administrative, economic or religious services to apopulation residing in an area much larger than the physical space of the city. Thisrelationship with the population of the hinterland is advantageous to the urban centre. This means that the residents of the city are able to harness the resources of the people living in the hinterland. This might be done in the form of taxation in kind or tribute. The merchant living in the city is also able to appropriate a share of the resources of rural areas by controlling the supply of metals, minerals or some luxury items. This means that the class of 20 kings, priests and merchants living in the cities have more wealth than a common man.

These classes use their wealth for acquiring more wealth, prestige and power. Now, the richand powerful in every society have their own way of showing off. The rich in some societies build large palaces others build beautiful temples. Still others perform grand sacrifices.Some others are content with the possession of precious metals and stones. Apart from the kings, priests, merchants and farmers, various groups of craft specialistsalso stay in the city that produce luxury items for the city and other objects needed by the people outside the city. The craft specialists need not enjoy the same privileges as the rich. For example, the

administrator or merchant might be very rich but blacksmiths or masons orcarpenters might be quite poor. Thus, the city is characterised by the presence of rich andpoor people.

We can say that an urban centre refers to a place where the most powerful and visiblesections of population are engaged in activities other than food production.Such diverse socio-economic activities create the problem of proper coordination amongthose engaged in them. For example, the blacksmith would need food from the cultivator orthe merchant will need protection from robbers while transporting his goods to and fromdistant areas. In a situation where each of the groups cannot survive without the other, thereis a need for a centralized agency coordinating their activities. The need to keep in check the hostilities between the rich and poor and the need for mobilising agricultural produce forurban consumption also create the possibilities for the emergence of a centralized power.The emergence of centralized decision making groups coincides with the emergence ofgroups exercising monopoly over the use of force. This kind of social structure also impliesthe coming into being of a state society.

Thus, the urban society is characterised by the presence of craft specialists, rich and poorpeople and a state administration.

10.3 TOWNS OF SIXTH CENTURY B.C.

Our information about the cities of the sixth century B.C. comes from many sources. This is because it was the period which saw the beginning of the written tradition in ancient Indian History. Brahmanical, Buddhist and Jain texts refer to the conditions of this period. The excavation reports of many urban and rural centres of this period also enrich our understanding.

10.3.1 Literary Evidences

The terms that are frequently used to denote cities in ancient Indian literature are Pura, Durga, Nigama, Nagar, etc. Let us see how the ancient Indians defined them.

Pura: The term pura is mentioned even in the early Vedic literature, where it referred tofortified settlements or temporary places of refuge or cattle pens. Later on it is often used forthe residence of the king and his retinue or for the families of the ruling group in the Gana Sanghas. Gradually the connotation of fortification became less important and it came to mean a city.

Durga: This is the other term used for denoting the fortified capital of a king. Fortificationsprotected the urban centres and separated them from the surrounding rural areas. Also fortifications made it easier for the ruling classes to control the activities of the populationresiding in the city. .

Nigama: It is frequently used in the Pali literature to denote a town. It probably meant amerchant town where the sale and purchase of goods used to take place. In fact somescholars believe that some of the Nigamas evolved out of villages specializing in pottery, carpentry or salt making. That the Nigamas were market towns are also proved by the fact that certain coins of a later period carrying the legend 'Nigama' have been found. Thesecoins indicate that they were minted by the Nigama. Sometimes literary texts would refer toa particular section of a city as Nigama where craft specialists would live and work.

Nagara: It is the most commonly used word for a town or city in literature. This word isused for the first time in the Taittiriya Aranyaka. This text has been roughly dated to the 7^{th}-6^{th} century B.C. Another word Mahanagara also referred to cities. These centrescombined the political functions of the Pura and the commercial functions of the Nigama.Kings, merchants and preachers resided in these cities.

The Buddhist literature refers to six Mahanagaras. All of them were located in the middle Gangetic Valley. They were Champa, Rajagriha, Kashi, Sravasti, Saketa and Kausambi. Other terms like Pattana, Sthaniya etc. are also used to refer to towns and cities. It appears that the terms Pura and Durga are amongst the earliest terms used in Indian literature for denoting a town. Other terms came in use in subsequent phases. What is significant for us is that both these terms referred to fortified settlements. This might indicate that kings and their followers lived in fortified settlements. They extracted taxes from the surrounding population. Their ability to store wealth and collect luxury items might

have stimulated trade. Thus, these fortified settlements led to the development of a network of relationships. This led to the emergence of urban centres. This idea is supported by the fact that the Brahmanical tradition ascribes the foundation of almost all the cities to certain kings. For example, a king called Kusamba is said to have founded Kausambi. Similarly, Hastin founded Hastinapura and Sravasta founded Sravasti. In Buddhist literature cities are associated with sages, plants and animals. For example, Kapilavastu is said to have been named after the sage. Kapila and Kausambi was named after the Kusamba trees growing in that region. However the tradition of cities being founded by kings is quite strong. The Pandavas are said to have founded Indraprastha. In Ramayana also princes of the ruling family are supposed to have founded various cities.

Some of the political centres also became great commercial centres in the subsequent period. Soon centres which were important for both the political and commercial reasons overshadowed those which were only political centres. For example, capital cities like Hastinapura never experienced the kind of prosperity that we associate with Kasi or Kausambi. Once long distance trade prospered, political leaders tried to enrich their treasuries by taxing traders. Atleast in two cases political capitals were relocated in areas connected with important trade-routes. The capital of Kosala was shifted from Ayodhya to Sravasti and the capital of Magadha was shifted from Rajagriha to Pataliputra. This indicates the importance of emerging trading networks with an important section of the ancientuttarapatha stretching along the Himalayan foothills and finally connecting Taxila withRajagriha. Similarly, Pataliputra was located at a point where it could exploit the trade routepassing through the river Ganges. It was the patronage of kings and merchants that led to thedevelopment of cities in ancient India. The literature of this period is full of descriptions ofcaravans of merchants going to distant areas to conduct trade. Rich merchants along with Princes are described as the main supporters of the Buddha.

10.3.2 Portrayal of City

The following reconstruction is based on references in the Buddhist and Brahmanical literature of slightly later period. Books like the Divyavadana and Apastamber Dharmasutra provide us with an idea of the city in those times. Ancient Indian literature gives an idealized view of cities. Ayodhya described in Ramayana or Vaishali described in the Buddhist texts would be almost identical if one goes by their description.

The cities were surrounded by defensive walls and moats. Wide streets, high mansions with colourful banners, busy markets, flowering gardens, ponds filled with lotus and geese are part of this description. Well dressed men, beautiful women dancing and singing complete the picture of the city. This timeless description of an idealised city gives us an unsatisfactory idea of what ancient Indian cities actually looked like. Other incidental references may help us get a better view of the cities.

10.3.3 City Revisited

Towns seem to have grown around the intersection of two highways or along river banks. When you entered the city streets, what would you see? Well, the contemporary literary sources give a vivid description in this regard. The haze of dust raised by horses hoofs and caravans of merchants which the pious Brahmans disliked so much. The crowds of people clamouring around shops selling various kinds of eatables such as fruits like mangoes, jackfruits and bananas or sugar candy, cooked rice, etc. The din and bustle created by women selling trinkets and bangles of conch shell and by flower sellers filled the air. If one had taste for liquor, shops selling various kinds of them would be found.

The houses were generally made of earth or timber with tiled roofing-the kind of houses still visible in the countryside of the Gangetic plains. In some cases the houses might be made of stone or burnt brick. One could see women looking down from their balconies. Sometimes one might come across a prostitute. If you were fond of gambling, there were arrangements for that too. On the roads you could also come across the processions of the King and his retinue seated on their elephants and chariots. In some parts of the city you could see the king's armymen practising archery, training elephants and improving their skills of

warfare. The other kind of procession you were likely to encounter was that of the wandering mendicants clad in brown or white robes, sometimes not wearing anything at all. These wandering ascetics belonging to the various sects that emerged in this period could be seen lecturing on various religious problems, in the groves and gardens given to them. The audiences could be varied. Sometimes it was the exclusive assembly of the rich merchants or powerful princes, at other times it could be groups of people who came from the poorest sections of society. The rich lavished their wealth upon these monks. Gardens and monasteries meant for the exclusive use of monks were also a part of the urban landscape.

10.3.4 Commodities of Exchange

Markets involved the buying and selling of commodities. People could be seen buyingutensils and tools made of metals like iron, copper, tin and silver. Groups of merchantsspecialising in the procurement and selling of salt could be seen in the streets earmarked forthem. The cotton cloth of Kasi attracted quite a large numbers of buyers. Woollen blanketsbrought from the distant north-western province of Gandhara could attract only the rich.Horses brought from Sind and Kamboja would also be on sale. Here the buyers were onlythe super rich of those days. Bangles of conch shell, beautiful ornaments of gold and combsand ornaments made of ivory and various kinds of precious stones were also in high demandamong the aristocracy.

Literary sources also point out that each item was sold in a separate street. Those whomanufactured or brought them also sold them. There were no shops selling a variety ofitems. There were various kinds of traders: the shopkeepers (apanika), retailers (Kraya-Vikrayika) and the money investors (Setthi-Gahapati). Atleast the richer people wereusing coins. The coin of highest value was the silver satamana. This was followed by theKarsapana. The copper masas and kakani were coins of smaller denomination. Amidst thisglitter of the cities was hidden a whole category of poor people who went unnoticed. In aBuddhist story it is said that the daughter of a merchant on seeing a chandala (i.e. of theoutcaste categories) washed here eyes for fear of pollution. With the emergence of

cities a class of washer men, scavengers, beggars and sweepers also came into existence..The services of sweepers and the people involved in cremating corpses were essential for cities.

However, these people were the most impoverished and deprived sections of society. Theseoutcastes had to stay on the fringes of the city with no hopes of economic or socialimprovement in their condition. The group of beggars also emerged as a result of thebreakdown of kin-based society and increasing demands on the produce by the rulers. Thereis a story which says that the king's men looted the village in day time and the robbers atnight.

10.4 ARCHAEOLOGICAL EVIDENCES

The literary sources available to us have undergone several alterations and additions in the subsequent periods. The written manuscripts of these texts which are available to us are less than a thousand years old. Thus, it is difficult to sift out the material of the later phases of history from the early phases of history. As such the information derived from excavation reports gives us a more dependable idea regarding the cities of the period. This is because the archaeological data can be dated with greater certainty. Also, the literary sources exaggerate the opulence and splendour of the cities. The excavated material does not have such a bias. Let us see what kind of information is provided by excavation reports.

By about 700 B.C. in places like Ayodhya, Kausambi and Sravasti small settlements came into existence. The people living in these settlements used various kinds of potteries. Among them a particular kind of pottery called the Painted Grey Ware is important because many people living in the upper Gangetic Valley were also using this pottery. People in other settlements of the middle Gangetic Valley were using a pottery called the Black and Red Ware. By about the sixth century B.C. people of this entire zone started using along with other varieties of pottery, a particular kind of pottery having glossy surface. This pottery is called the Northern Black Polished ware. This deluxe pottery is one of the indicators of the broad cultural uniformity in the Gangetic Valley towns of the sixth

century B.C. Probably this pottery was made in a few places and exported over large areas by merchants.

Another item which starts appearing at the archaeological sites at this phase is coins. Coins came into use in this period for the first time in ancient India. The coins are made of silver and copper and are commonly those which are called Punchmarked coins. They bear various kinds of symbols on one side and were probably initially issued by merchants. The introduction of coinage promoted organised commerce. In addition, copper cast irons which like Punch marked coins did not have any writings on them, appear in this phase at some sites.

The barter system requires two persons willing to exchange their produce. Suppose a person has a cow which he wants to exchange for hay. There is a person who has hay but he wants to exchange it for rice. In that case barter cannot take place. Coins on the other hand carry standard values for buying and selling. Besides it is easier to carry coins than to carry cows for buying something. The introduction of money also led to the emergence of the class of moneylenders.

The larger settlements in this period show the use of baked bricks for housing. Soak Pits made from superimposed jars or rings of terracotta used for the disposal of dirty water have also been reported. They indicate some kind of planning. In the preceding phase people lived in mud brick hutments. There is also evidence of a larger number of settlements of larger size. This would indicate a higher density of population. In some sites drains and refuse bins have been reported. However, the excavated materials indicate that many details regarding cities given in literature are either highly exaggerated or that they belong to a later period. None of the cities of the sixth century B.C. show evidence of a planned layout, whereas literary works always talk about planned layouts of cities. Large scale excavations in the ancient site of Taxila show that this town might have come into existence by 8th-7thcentury B.C. However, planned township came into existence only around the 2nd century B.C. Similarly, literature repeatedly mentions that cities like Ayodhya and Vaisali covered anywhere between 30 to 50 square kilometres. The excavations indicate that none of these cities would exceed 4 to 5 square kilometre. Likewise the descriptions of large palaces and wide streets seem to be exaggerated. So far except in

Kausambi no palatial structure has been reported in the 6th century B.C. The houses were more like humble hutments. No monumental buildings are in evidence. Many early cities like Ujjain, Kausambi, Rajagriha, etc show evidences of fortification. Fortifications are indicative of increased apprehension of warfare. Also fortifications are a way in which the urban community is demarcated from the rest of the population. This population could be easily controlled by the king. This also supports the literary evidence that Pura meaning fortified settlement were the earliest forms of urban settlement in ancient India. It is now believed that prosperous cities with large palaces came into existence during the Mauryan period. The literature available to us seems to have used Mauryan cities as the standard description for the cities of the preceding period too.

Check Your Progress 1

1) Write on the kinds of cities which are referred to in the contemporary literatures.

_____

_____

_____

2) What does the archaeological source tell about the cities?

_____

_____

_____

10.5 SECOND URBANIZATION

Urbanization is a complex socio-economic process by which 'cities' emerge amidst from rural settlements. Traditionally the urban-rural dichotomy dominated the urbanstudies though now scholars question the binary conceptual distinction between urbanand rural in the context of the studies in the area of urbanisation. Hence the focushas shifted to the study urbanization process.

How can we decide whether traces of urbanization are present in a particularhistorical context? A number of parameters are used to ascertain the presence ofurbanisation in a particular situation. Gordon Childe lists the following ten criteria fordetermining the presence of urbanization:

1) Permanent settlement in dense aggregations;
2) Non-agricultural specialists;
3) Taxation and wealth accumulation;
4) Monumental public buildings;
5) Ruling class;
6) Writing techniques;
7) Predictive science;
8) Artistic expression;
9) Trade for vital materials; and
10) Decline in importance of kinship.

These have been supplemented by other indicators as well and the list grows. Herewe are more concerned with the processes of urbanisation and the new classes itthrew up in the early historic phase of Indian history. The Indus Valley/HarappanCivilization which flourished in third millennium B.C to middle of second millenniumB.C. witnessed the first phase of urbanization in India. The genesis of the secondphase of urbanization can be located in the state formation in Magadha in the sixthcentury B.C. This phase lasts till the fourth century A.D. During this phase, severalurban centres, which functioned as political headquarters besides functioning as thenuclei of traders and artisans, make their appearance across the sub continent. The epicentre of the early phase can said to have been in the region of Magadha which occupied the rich Gangetic belt and straddled the river route.

Most of the criteria proposed by Childe to detect the existence of urbanizationprocess are evident in the period from 600 B.C. to 400 A.D. Many urban centreswith dense population appeared, with a few having fortification wall around. Use ofBrahmi script also began in this period.Buddhism and Jainism grew and spread and these sects criticized the rituals andsacrifices and questioned the dominance of Brahmanas. Thus they became popularamong the groups placed at the bottom of the social hierarchy. Buddhism madeattempts, though unsuccessfully, to do

away with the caste system. Buddhists alsoadmitted women in their monasteries. Long distance trade began to flourish from thebeginning to the Christian era. The trade with the Roman Empire and the SoutheastAsian countries was active. We hear from Greek writers that the balance of theIndo-Roman trade was in favour of India.

The Caturvarna system further transformed and strengthened in this period. Merchants,artisans and peasants were incorporated into system under broad caste categories.As a result of urbanization merchants and artisans were treated as distinct socialgroups. The wealth brought by trade activities enabled the merchants to move up inthe social hierarchy, which consisted of Brahmanas, Kshatriyas, Vaishyas and Sudras.The merchants received support from the Buddhist monasteries and in turn they gavematerial support to these establishments. The alliance between the merchants andmonasteries saw their successful spread in parts of Deccan and south and Sri Lankafrom the Ganga-Yamuna Valley. The peasants also gained some importance, asfarming began to play an important role. Most of the artisans and craftsmen wereplaced in the Sudra group. The social hierarchy became stringent in due course andwith caste began to play a major role the way of life of the people. Individuals couldnot change the castes, but the castes could move up in the social hierarchy.

10.6 RISE OF NEW GROUPS AND CHANGING SOCIAL RELATIONS

The society of the sixth to fourth century B.C. is a society undergoing tremendous change.Preachers, princess and merchants vie for our attention. This was the time when cities cameinto existence for the first time in historical India.Thiswas also the time when a literate tradition began. Towards the end of this period the societyhad acquired the knowledge of writing and the earliest script of ancient India is called theBrahmi script. The invention of writing expanded the horizon of knowledge. Sociallyacquired knowledge had been transmitted through memorisation from one generation toanother. There was a possibility of lots of things being forgotten or changed over a period oftime. The

invention of writing meant that knowledge could be stored without tampering with it. This fact heightened the consciousness of change. This was because social structure andbeliefs kept changing in time. Once things were written down those changes becameobservable to the people of the subsequent period when ideas and beliefs had changed.Letus discuss about the various sections of society who are caught in the flux of change.

10.6.1 Kshatriyas

The Kshatriyas appear to be the most visible and powerful section of society in thecontemporary literature. Buddha and Mahavira belonged to this group. In the Brahmanical texts the Kshatriyas have been equated with the warrior caste. This is the second highestcaste in the Varna order. They were supposed to be the rulers of the society. However, theBuddhist literature gives a different picture of the Kshatriyas. They did not have thecompactness and strict rules of marriage which characterise a caste. They are mentioned asthe ruling lineages of the Ganasanghas like those of Vaisali and Kapilavastu, referred to as the Shakyas, Licchavis, Mallas etc. They were groups who owned land collectively. Their land was cultivated by slaves and labourers called the Dasa, Karmakaras. They do not seem to have performed the Brahmanical rituals. As such we find that the Buddhist literature generally talks of only two groups in the Ganasanghas.They are the high caste and the lowcaste.

In these areas instead of the four-fold Brahmanical caste structure there is a two-folddivision. The Brahmans and Shudras are missing. These Kshatriya clans practiced variouskinds of marriage customs which included the cross-cousin marriage. In fact they were soparticular about whom to marry and not to marry that the Shakyas are supposed to have beendestroyed because of this. According to a story their overlord, the King of Kosala called Prasenajit, wanted to marry a Shakya girl. The Shakyas could not refuse the offer. So, theysent a Shakya slave girl who was married to the King. The progeny of this marriage succeeded to the throne. Upon discovering this ruse played by the Shakyas, he destroyedthem in anger. Although both, the Kosalan monarch and the

Shakyas were Kshatriyas, theydid not inter-marry. This indicates that the Kshatriyas were not a caste in the sense weunderstand it. The Kshatriyas were very proud of their lineage and status. The Shakyas,Licchavis, Mallas and other such clans jealously guarded their rights of entry in theirassemblies and other people were not allowed into these places. These assemblies decidedmost of the socio-political issues of their society. They did not pay land taxes and they didnot have a standing army. In times of war the entire lineage would take to arms.

In the Kingdoms of Kosala, Kashi etc. the rulers are referred to as Kshatriyas. However unlike the Brahmanical sources the Buddhist sources place them at the top of the four caste structure. In one of the discourses Buddha says 'even when a Kshatriya has fallen into the lowest depths, he is still the best and the Brahmans are low in comparison to him.' Some of the Kshatriyas are shown as learned teachers and thinkers. Some others are described as taking to trade. As such one can say that the Brahmanical notion of Kshatriya as the warrior caste was applicable to only some princely families in the upper and middle Gangetic plains. They performed a variety of activities like preaching, trading and supervising agriculture. Especially in eastern India Kshatriyas did not exist as a caste. Rather there were many separate groups who called themselves Kshatriyas.

10.6.2 Brahmans

The Brahmans mentioned in the contemporary texts seem more like a caste group. Brahman is one who is born a Brahman. He may change his profession, still he remains a Brahman. The Brahmanical texts give them the privilege of mediation between man and god. They had the exclusive rights of performing sacrifices. This group was imbued with a consciousness of being the highest caste. They also seem to have followed certain rules of avoiding impure food and habitations. The Shatapatha Brahman a contemporary Brahmanical text mentions four important marks of a Brahman. They are Brahmanical parentage, suitable behaviour, attainment of fame and teaching of men. For doing this they were supposed to enjoy certain privileges. They were to be respected,

given presents and were given immunity from death sentence. Many Brahmans did follow the life of renouncement and teaching.

The Buddhist literature is generally critical of the Brahmans. However, it is critical of the Brahmans who had deviated from pious ethical life. They criticised the excessive ritualism and greediness of the Brahmans. Many Brahmans embraced Buddhism. It had been found that among the early followers of the Buddha, Brahmans were present in largest number. However, the Pali literature also indicates that the Brahmans had taken to various kinds of professions. In the Dasabrahmana Jataka we are told a story which will give us an idea of the Buddhist attitude towards the Brahmans. "In ancient times there reigned in the city of Indpatta in the Kingdom of Kuru, King Koravya of the family of Yuddhitthila. He was advised by his minister Vidhura in worldly and spiritual things ... He (the King) gave him a seat and asked his advice. "Seek Brahmans Vidhura, that are virtuous and learned, who eschewing sensual pleasures would enjoy my gifts, gifts, O friend, we will make where what is given will bear rich fruit."

"Very difficult to find are Brahmans, O King, that are virtuous and learned, who, eschewing sensual pleasures, would enjoy your gifts. "Verily, there are ten classes of Brahmans, O King. Here when I distinguish and classify them clearly: Provided with roots, they gather herbs, bathe and mutter aphorisma. Physicians they resemble, OKing, even if they call themselves Brahmans, they are now known to you, Ogreat King, to such we will go." "Strayed-have they" replies King Koravya" ....."Little bells they carry before you and ring, messages also they carry and they know how to drive wagons, servants they resemble" ..... "Carrying a waterpot and a bent stick they run behind the Kings into the villages and the Country towns, saying 'If nothing is given, we will not leave the village or the forests'. Tax Collectors they resemble" ..... "With long nails and hair on the body, filthy teeth, filthy hair covered with dust and din, they go out as beggars. Wood-cutters they resemble" ..... "Myrobalans, mango and jack fruits, baskets made of sugar, scents, honey and ointment, the most diverse wares they sell, O Lord. Tradesmen they resemble." ....."Agriculture and trade they carry on, they breed goats and sheep, their daughters they give away (for money), marriages they arrange for their daughters and sons. The Ambattha and

versa they resemble" ..... "Some purohitas eat food brought from outside, many people ask them (regarding omens), animals they castrate and lucky signs they prepare. Sheep are also slaughtered there (in the houses of the purohitas), as also buffaloes, swine land goats; slaughterer, they resemble." ..... "Armed with the sword and the shield axe in hand they stand in the roads of the varsas (i.e. in thebusiness streets) lead the caravans. (Through roads exposed to robbers). Cowherds they resemble and nishadas" ..... "Building huts in the forest, they make nooses; hares, cats, lizards, fish and tortoises they kill. Hunters are they ....."Others lie for love of money under the bed of kings; the latter bathe over them after a Soma offering is ready. Bathers they resemble" .....

(Thenames of persons and places as given in the original text have been retained)

This story gives us an idea of the variety of activities-performed by the Brahmanas. It also gives us a glimpse of the range of professions present in the contemporary society. Even with the changes in profession they are considered unworthy Brahmans. They do not lose their caste. References to learned Brahmans are also legion. So are the references to Brahman agriculturists who cultivated their own land or got their land cultivated by slaves and servants. However, their primary identity as a caste concerned with the divine had already been formed.

10.6.3 Vaishyas and the Gahapati

In the Brahmanical Varna system Vaishya was the third caste in the ritual order. They were entrusted with cattle herding, agriculture and trade. The Buddhist literature on the other hand uses the term Gahapati more frequently. Gahapati literally means the master of the household. This community of landholders cultivated its land with the family labour or the labour of slaves and servants. They seem to have emerged out of the rajanya and groups mentioned in the Vedic literature. Their emergence represents the emergence of family and individual ownership of wealth. Earlier wealth was collectively owned by the entire lineage.

Apart from the Gahapatis the Buddhist literature mentions a whole range of professionals and merchants who would fall under the category of the Vaishyas of the Brahmanical texts. Each of them was closed kinship

groups who would not inter-marry. Their identity was defined by the kind of professions they followed and by their geographical location. As such there never was a Vaishya caste in the Brahmanical sense of the term. Rather there were many groups having caste like formations. Let us look at some of these groups.

As already mentioned the Gahapatis form a prominent category of landowners. Interestingly enough they are rarely found in the gana-sanghas where land was owned by Kshatriya lineages. They are frequently mentioned in the monarchies of the middle Gangetic Valley. They were the primary exploiters of agriculture and the source of revenue for the Kings. Gahapatis included men of wealth who were also associated with carpentry, medicine etc. The Pali texts use another term Kutumbika in a synonymous sense which would mean the head of the household (Kutumba). They are shown as rich landowners, dealing in corn or money transactions. It was from the class of rich landowners that a section of rich traders evolved. The Gahapatis are mentioned in trading towns too. Individual ownership of wealth and weak Brahmanical influence helped the Gahapatis use their wealth for trade.In western Gangetic valley this wealth would have been used for sacrifice. Thus, out of this branching off, emerges the class of Setthi. The word Setthi literally means 'a person having the best!'

The Setthi-Gahapati referred to very rich merchants and bankers having close contacts with the king. Anathapindika who donated the Jetavahana in Sravasti to Buddha was one such rich Setthi. A Setthi in Banaras engages in trade and drives a caravan of five hundred wagons. Their profession as bankers flourished with the invention of coined money. Coins called Shatamana, Karshapana, etc. are mentioned in the contemporary literature.

Excavations have also shown that coins had come in use by this period. Long distance trade is frequently mentioned. Apart from the big merchants and landlords many small scale traders are also mentioned. Among them shopkeeper, retailer, trader, pedlars, selling pots and pans, carpenters, ivory-carvers, garland makers and smiths can be mentioned. These groups formed professional unions. No one else but a family member could take up that profession.

This local division of different kinds of works and the hereditary character of various professions gave them the character of guilds. They used to have a head that would look after their interests. The King was supposed to respect the internal rules of the guild and protect it. The presence of the guild indicates increased trading and manufacturing activity. It meant that groups identified specifically on the basis of their economic activity came into existence. These groups did have the character of caste. Each of these groups would marry inside the group only and their rules were considered inviolable.

10.6.4 Shudras

The Shudras were the lowest caste in the Brahmanical order. Their only duty was service to the other three castes. The non-brahmanical texts give us a picture of many oppressed and poor people who are bracketed as Shudras. The Pali literature frequently mentions dasas (slaves) and karmakaras (wage labourers). The term dalidda is used for denoting extremely poor people who did not have anything to eat and no covering for their back. So, for the first time we have references to the rich living in luxury and the poor destitute. The process of such impoverishment and the formation of the Shudra caste may be attributed to the appropriation of land and other resources by the powerful groups. The Shudras without any resources were reduced to servility and forced to work on the land of the rich. The more general reference to the Shudras included artisans and craftsmen also. The Dharmasutras ascribe the origins of various groups of the Shudras by the notion of the Sankirna jati, which means that if there is an inter-caste marriage, their progeny would be of a very low caste. This was the counterpart in ritual status to the economic and social deprivation of the peasants, slaves and craftsmen. They had the most to lose from the erosion of kinship ties, characterising the Vedic society.

Dasasudda is frequently mentioned in the contemporary literature. They were slaves who did not have any legal status. War-prisoners and people who could not pay back their debts seemed to be the chief sources of supply of the Shudra labour. They were forced to work on the land of the rich. The dasas, karmakaras and kassakas were the sources of labour

supply in rural areas. With the emergence of cities the inequality between the rich and poor further increased.

All the groups mentioned above by no means exhaust the list of social categories present in - the time of the Buddha. Wandering dancers and musicians moved from village to village and impressed their audiences with their skills. Tricksters, tramps, elephant tamers, stage managers, soldiers, writers, archers, hunters and barbers were some of the groups which come in our view. It is difficult to place them in the caste order. Probably, they would be considered out-castes. Most of them were outside the pale of the newly emerged agrarian society. As such they were generally despised. Sometimes these groups rose in revolt. The Jataka stories are full of descriptions of war. The poor Shudras are mentioned as living outside the city. The logical outcome of this process was the emergence of untouchability.

The Chandalas are described asliving in separate villages. Their presence was believed to be so polluting that the daughter of a Setthi washes her eyes on seeing a Chandala. Similarly, a Brahman is disturbed about the fact that a breeze blowing past a Chandala would touch him. The Chandalas were supposed to wear the garments of the dead and eat their food out of broken pots. Other such despised groups were the Pukkusas, Nishadas and Venas. One of the justifications of the King's rule was that they protected the villages from the plundering, pillaging tribes. These were the primitive communities who were gradually evicted from their homes in the forest. They either became slaves or robbers.

10.6.5 Asceticism

One very visible group in this period was of the Paribrajakas and Sramanas. These werepeople who had renounced their homes. They travelled from place to place and held discussions on the meaning of life, society and spirituality. Among them were people like the Buddha and Mahavira.

10.6.6 Position of Women

The changes in the economy and society of the sixth century B.C. also affected the condition of women. Since, property was inherited from

father to son; there was obsession with the need to prevent adultery. The books repeatedly say that the two most important functions .of the King are punishing the violation of property and of the family. The meek slave like wife was considered the ideal wife. However, this was true of the wives of the rich. For them the main function of a wife was producing legitimate heirs. However, there were a larger number of women who spent their lives labouring for their masters and mistresses. Women were looked down in comparison to men. They were described as incapable of sitting in a public assembly. They were permanently in the charge of men--father, brother or son. Even if they join the Sangha they were treated as inferior to men.

Check Your Progress 2

1)What were the criteria put forth by Gordon Child for determining the presence of Urbanization?

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_____

_____

2) Who were Chandalas?

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_____

_____

10.7 LET US SUM UP

In this unit you learnt about the emergence of urban centres in the sixth century B.C.Emergence of the city was a result of two crucial processes. One was in relationship withnature i.e. by the use of iron and mastering the technique of paddy transplantation the peopleof the Gangetic Valley achieved greater mastery over the process of agricultural production.The other process was the changes in the internal structure of the sixth century B.C. society.This meant that the ruling aastes like the Kshatriyas and Brahmanas along with the class ofthe Gahapatis could extract surplus food and other social products. The place where therich and powerful lived was called the city. Of course the presence of these

people meant thepresence of a large number of poor people. That is why some scholars have said that theemergence of Buddhism was a response to urban misery. The ancient Indian literaturedescribes cities of various kinds like Pura, Pattana and Nagara. However, literature seemsto exaggerate the size and opulence of the cities. This was found out by the archaeologists -who excavated the ancient sites of these cities.

Thus the early historic phase of Indian history witnessed a robust phase of a processof urbanisation and the increase in trade and expanding agrarian structure. The newclass of merchants and artisans organised in the guilds, exerted pressure over polityas well on the religious structures in the society. This phase of urbanisation was thusqualitatively different than the previous one witnessed in the Indus valley.

10.8 KEY WORDS

Hinterland: region lying inside the area of influence of a town.

Literate tradition: refers to traditions in which writing was known.

Paddy transplantation: the practice of removing the seedling where it has grown andplanting it in another place.

State Society: society characterised by the presence of rulers and ruled, rich and poor.**Surplus:** refers to the produce which is siphoned off by the rulers from the producers.**Taxation:** contribution exacted by the rulers from individuals or groups on a regular basis.**Tribute:** an irregular payment in acknowledgment of subjection.

Wet Rice Cultivation: The practice of cultivation in which paddy seedlings aretransplanted into fields which are water-logged. This is distinct from the dry rice cultivationin which seeds are simply broadcast in the fields. Wet rice cultivation is immensely more productive.

Guilds: A distinct occupational or professional organisationwhich looks after the interests of the professional oroccupational activities and the individuals connectedwith it.

Chaturvarna System: Here it is the same as the Varna system which had afourfold division of Brahmins, Kshatriyas, Vaishyasand Shudras

10.9 QUESTIONS FOR REVIEWS

1) Discuss the nature of the second urbanisation as it was taking place in India.

2) Write a note on changing social relations in 6th century B.C..

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10.11 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1)**Pura:** It was referred tofortified settlements or temporary places of refuge or cattle pens. Later on it is often used forthe residence of the king

and his retinue or for the families of the ruling group in the Gana Sanghas. Gradually the connotation of fortification became less important and it came to mean a city.

Durga: This is the other term used for denoting the fortified capital of a king.

Nigama: It probably meant amerchant town where the sale and purchase of goods used to take place.

Nagara: It is the most commonly used word for a town or city in literature. This word isused for the first time in the Taittiriya Aranyaka. These centrescombined the political functions of the Pura and the commercial functions of the Nigama.

2) The people living in these settlements used various kinds of potteries. Among them a particular kind of pottery called the Painted Grey Ware and Northern Black Polished ware are prominent. Another item which starts appearing at the archaeological sites at this phase is coins. The larger settlements in this period show the use of baked bricks for housing. Soak Pits made from superimposed jars or rings of terracotta used for the disposal of dirty water have also been reported. They indicate some kind of planning. There is also evidence of a larger number of settlements of larger size. This would indicate a higher density of population. In some sites drains and refuse bins have been reported.

Check Your Progress 2

1) Permanent settlement in dense aggregations; Non-agricultural specialists; Taxation and wealth accumulation;Monumental public buildings;Ruling class;Writing techniques;Predictive science;Artistic expression;Trade for vital materials; and decline in importance of kinship.

2) The Chandalas were outcastes and were described asliving in separate villages. Their presence was believed to be so polluting that the daughter of a Setthi washes her eyes on seeing a Chandala. Similarly, a Brahman is disturbed about the fact that a breeze blowing past a Chandala would touch him.

UNIT 11 EDUCATIONAL IDEAS AND INSTITUTIONS

STRUCTURE

11.0 OBJECTIVES

In this Unit we will study the ancient Indian education system prevailing the Vedic age, sutras and epic times and Buddhist era. We will also throw light on Brahmanic education system as well as the various educational institutions in ancient period.

11.1 INTRODUCTION

India has a rich tradition of learning and education right from theantiquity. These were handed over generations to generations eitherthrough oral or written medium. A single feature of ancient Indian orHindu civilization is that it has been shaped in the course of itshistory more by religious than by political or economic influences. Thefundamental principles of social, political, and economic life were weldedinto a comprehensive theory, which is called Religion in Hindu thought.

Ancient Indian education is also to be understood as beingultimately the outcome of the Indian theory of knowledge as part of thecorresponding scheme of life and values. The scheme takes full account ofthe fact that life includes death and the two forms the whole truth. Thisgives a particular angle of vision, a sense of perspective and proportion inwhich the material and the moral, the physical and spiritual, the perishableand permanent interests and values of life are clearly defined and strictlydifferentiated. Of all the people of the world the Hindu is the mostimpressed and affected by the fact of death as the central fact of life. Theindividual's supreme duty is thus to achieve his expansion into theAbsolute, his self-fulfilment, for he is a potential God, a spark of thedivine. Education must aid in this self-fulfilment, and not in theacquisition of mere objective knowledge.

11.2 VEDIC PHASE

11.2.1 Four Vedas

The Vedas regarded as the oldest among the literatures of theworld, are the original sources of the philosophy of life in ancient India. Astudy of these Vedas will enable one to get a thorough knowledge not onlyof the philosophy of life but also of the whole fabric of ancient Indianculture. Consequently, the entire literature and philosophy of India, TheUpanishads, the Smritis and the Puranas, all acknowledge the superiority ofVedas. The Vedas occupy a very important place in the Indian life. Thebasis of Indian culture lies in the Vedas, which are four in number-Rigveda, Samaveda, Yajurveda and Atharvaveda. Vedas have their owncharacteristic features. Through them we are able to know about theculture, civilization, life and philosophy of people in ancient India. Vedassymbolize the chief objective of human life, which has been deliberancefrom this world of births and deaths. The Indian philosophy of life hasnever accepted life as purposeless.Before giving a detailed account of the Vedic Education, it isnecessary to make a short appraisal of the four Vedas as the education ofthat period was based on them.

The Rig Veda

The Rig Veda is established as the earliest work not merely of theHindus, but of all Indo-European languages and humanity. It lays thefoundation upon which Hindu Civilization has been building up throughthe ages. Broadly speaking, it is on a foundation of plain living and highthinking. Some of the prayers of the Rig Veda, like the widely knownGayatri mantra also found in Samaveda and Yajur Veda touch the highestpoint of knowledge and sustain human souls to this day. The Rig Vedaitself exhibits an evolution and the history of the Rigveda is a history of theculture of the age.

Other Vedas

Following Rigveda, came into existence the three Samhitas ofSama, Yajur and Atharva in close succession. These Vedas ushered in anew kind of literature. The order of hymns included in the RigVeda is not inaccord with that of the sacrifices; so much so there are some such hymns ashave no relation to the Yajna or sacrifice at all. On the contrary,

in theSama, Yajur and Atharva the hymns follow closely in order of thesacrifices. Priesthood was gaining ground. Higher education later onrelated itself to priesthood and the ritualistic aspect of religion. Thecurriculum of education was the same for all the students calledBrahmacharinis; each of them was required to attain proficiency in themelodies of verses and ritualistic aspects of yajna. In course of timehowever, essentiality of division of labour was strongly felt owing to thegrowing complex nature of formal aspect of sacrifice, because no singleindividual priest could be expected to specialize in the triple aspect of theyajna.

The Sama Veda

The compilation of all the hymns recited on the occasion of theSoma yajna came to be known as the Sama Veda.

The Yajur Veda

It is the collection of prose Mantras. Though the duty of chantingthe hymns on the occasion of sacrifice was mainly undertaken by the Hotri,the first order of priesthood, yet certain hymns related to prayer orinvocation were sung by the Adhvaryus who were closely associated withsacrificial operations. Consequently, a separate training school wasestablished for the education of these priests. The elementary proseliterature of India, which culminated in the Upanishads, lies in therudimentary form in the Yajurveda. We get in the Yajurveda glimpses ofthe religious and secular aspects of life in India.

The Atharvaveda

In the beginning only three Vedas were popular. In the course oftime the fourth Veda called the Atharvaveda was also recognized. It is moreoriginal in contents. Unlike the preceding Vedas, the majority of Mantrasin this Veda have not been adapted from the Rigveda. The Atharvaveda isthoroughly secular in character containing a vivid description of variousarts and sciences.

11.2.2 Growth of Education in Rig Veda

The Rig-Veda, in the form in which we have it now, is acompilation out of old material, a collection and selection of 1,017 hymnsout of the vast literature of hymns, which have been accumulating for along period. When the Rigvedic texts was thus fixed and appropriated forpurposes of the Samhita, its editors had to think out the principles on whichthe hymns could be best arranged. These show considerable literary skill,originality of design, and insight into religious needs. Rishis were chosen--who were seers of truth. Their works were utilized to constitute sixdifferent Mandalas. These Rishis are Gritsamada, Visvamitra, Vamadeva,Atril, Bharadvaja, and Vasistha.

When the highest knowledge was thus built up by these Seers andrevealed and stored up in the hymns, there the methods were thennecessarily evolved by which such knowledge could be acquired,conserved, and transmitted to posterity. Thus, every Rishi was a teacherwho would start by imparting to his son the texts of the knowledge he hadpersonally acquired and such texts would be the special property of hisfamily. Each such family of Rishis was thus functioning like a Vedicschool admitting pupils for instruction in the literature or texts in itspossession. The relations between teacher and taught was well establishedin the Rig Veda. The methods of education naturally varied with thecapacity of pupils. Self-realization by means of tapas would be for the few.It is believed that these sages, by virtue of their Tapas or asceticism andYoga, were gifted with the vision of a clairvoyant, capable of knowingabout the past, present and the future.The system of education, which evolved in the Rigveda concernsitself with the acquisition of the Supreme knowledge, religion and Brahma.The aim of the Veda was the knowledge of the Ultimate Truth and therealization of the Supreme.

11.2.3 Module

The students started the recitation of the Vedic hymns in earlyhours of morning. The chanting of Mantras had been evolved into the formof a fine art. Special attention was paid to the correct pronunciation ofwords, *Pada* or even letters. The Vedic knowledge was imparted by theGuru or

the teacher to the pupil through regulated and prescribedpronunciation, which the pupil would commit to memory, having listenedto it alternatively. Only that knowledge, which was received from the lipsof the teacher, was regarded as purely Vedic. Thus, the teaching was oral.Various subjects were incorporated in the curriculum of Vedic education.Grammar, rhetoric, astrology, logic, Nirukti (etymological interpretation ofwords) was the main subjects. Vedang was the synonym of all thesesubjects taken together- the performance of sacrifice, correctpronunciation, knowledge of prosody, etymology, grammar, and jyotishi orthe science of calendar. The study of logic occupied a special place,because knowledge of any other subject was tested on its basis. Debatesand discussions were organized for training in logic.

Though the Rigvedic education, being essentially religious andphilosophical in character, was imparted only to those who were fit tomake quest of Eternal Truth and acquire Supreme knowledge, yet therewas arrangement for secular education and vocational training for themasses. The people would receive training in diverse arts and crafts formaterial gain. Agriculture, horticulture and animal husbandry attained to ahigh norm of progress. Thus, we can safely conclude that secular, socialand practical form of education was in existence during the Rigvedic era.

11.2.4 Modus Operandi--Teaching

Two methods of teaching were being practiced during the Vedicperiod. The first method was Oral and the second was based on Chintani.e. thinking. In the oral method the students were to memorize the Mantras(Vedic hymns) and Richayas (verses of Rigveda) in order that they mightnot be changed wrongly and they might remain preserved in their originalforms.Thinking method was another part of the teaching method. Throughthis an attempt was made to reserve the Veda Mantras and Richayas. Thethinking principle, Manana Shakti was reckoned higher than the subject ofthinking. So the primary subject of education was the mind itself.According to the ancient Indian theory of education, the training of themind and the process of thinking, are essential for the acquisition ofknowledge. So the pupil had mainly to educate himself and

achieve hisown mental growth. Education was reduced to the three simple processesof Sravana, Manana and Niddhyaasana.

Sravana was listening to the truthsas they fell from the lips of the teacher. Knowledge was technically calledSruti or what the ear heard and not what was seen in writing. The secondprocess of knowledge called Manana implies that the pupil has to think outfor himself the meaning of the lessons imparted to him orally by his teacherso that they may assimilate fully. The third step known as Niddhyasanameans complete comprehension by the pupil of the truth that is taught sothat he may live the truth and not merely explain it by word. Knowledgemust result in realization. Just as in modern days teachers encourageintelligent students by guiding them to make research, similarly in ancientdays Manan (reflection) was a method especially for highly intelligentstudents.

11.2.5 Features of Vedic Education

Some special features of the educational system of the Rigveda eramay be summed up as follows-

 The admission was made by the formal ceremony *Upanayana* orinitiation by which the pupil left the home of his natural parents for that ofthe preceptor. In this new home he had a second birth and was called*Dvijya* or twice born.

 The pupil was eligible to admission to the preceptor's house only onthe basis of his moral fitness and unimpeachable conduct.

 The discipline of brahmacharya or celibacy was compulsory. Though amarried youth was entitled to get education, yet he was denied the right ofbeing the residential pupil.

 It was one of the sacred duties of the pupil to serve his preceptor. Hepledged devotion to him in thought, speech and deed and worshipped himas his own father or God. Pupils who neglected their duties were debarredfrom education and expelled from the institution.

 Brahman-Sangh was an organization where meritorious students weregiven chances to fulfill their quest of higher knowledge. These Sanghas maybe compared to the seminars of the modern times.

 There was equality between the sexes in the filed of knowledge. TheRig Veda mentions women Rais called Brahmanavadinis.

 Princes and other leading Kshatriyas were trained in all the manifoldsciences to make them fit for government. Most boys of the lower orderslearnt their trades from their fathers. Some cities became renowned becauseof their teachers. Chief among them were - Varanasi, Taxila from the dayof Buddha and Kanchi in the beginning of the Christian era. Varanasi wasfamous for its religious teachers. Taxila was known for its secular studies.

Among the famous men connected with Taxila was Panini, the grammarianof the fifth or fourth century B.C. Kautilya, the Brahmin minister ofChandragupta Maurya and Charaka one of the two leading authorities ofIndian medical sciences. The institutions imparted Vedic knowledge thatexists even today. There were also universities like Taxila and Ujjain formedicine and learning including mathematics and astronomy respectively.

In the south Kanchi became an important centre of learning.In the Rigvedic period occupations were not dependent on Varnasystem. At that time the nature of education was religious; but this sort ofeducation was meant only for those persons who, rising above the mundaneinterests, were capable of attaining spiritual heights. Ordinary people werestill engaged to advance the material well-being of the society This age isexemplary for its economic, political and religious progress and famous forvarious arts and crafts, agriculture, commerce and trade. It thus, leads tothe inevitable inference that the period must have evolved an elaboratesystem of vocational, scientific and commercial education.

11.3 LATER VEDIC PHASE

In Vedic period, the educational sphere was inordinately dominatedby priesthood hence knowledge pertaining to sacrificial rituals hadconsiderably advanced. There were scholars and thinkers who haddeveloped an attitude characterized by mysticism towards life andmeditated on speculative subjects such as God, Soul and Universe, Life andDeath etc. In later- Vedic age, this trend of speculative thought grewintense and vehement. The philosophers now meditated upon selfrealization.Their mystical experiences manifested themselves through

thescriptures known as *Brahmanas* and *Aranyakas*. The Upanishads were nextto emerge. The Upanishads advocate that whatever good is done withfull knowledge and awareness becomes forceful and fruitful in life. Theyare the archives preserving ancient culture and civilization. The Vedanta,an important trend in philosophical thought, which can rightly be regardedas the culminating point of the Vedic knowledge, was revealed through thepages of the Upanishads. The spread and propagation of the post-Vediceducation was influenced through diverse institutions known as *Sakhas,Charanas, Parishads, Kulas* and *Gotras*- an improvement on the oraltradition of the Vedic literature.

11.3.1 Focus of Education

The basic aim of education during the Later-Vedic period has beenthe same as during the Vedic Age- the salvation of the soul, but the methodof attaining this goal has been different between the two periods. Duringthe Vedic period the student used to attain the objective of educationthrough penance while living with *Acharya* as member of his family.

During the post Vedic period, Yajna replaced the penance and a number ofprocedures were prescribed for the same. Only that education was regardedtrue, which helped one to realize this supreme truth. The *UpanayanaSanskar* ceremony was so important during the Post-Vedic period that itwas usually regarded a second birth of the individual.

11.3.2 Module

Veda mantras (hymns and verses) were principally taught in theVedic period. During the post- Vedic period various types of literatureswere produced pertaining to different Vedas. In addition to religioussubject, many worldly subjects were also included in the curriculum. Thecurriculum consisted of Vedas, History, Puranas, Grammar, mathematics,Brahma Vidya, Nirukti, astronomy, dance, music etc. Education was notregarded as an end in itself; it was fundamentally related to life. Its aim wasthe attainment of Brahmavarchasa i.e. knowledge of the Absolute. Theperformance of sacrifice and other ritualistic operations were directed tothe same end, but special emphasis

was laid on the study of the Scriptures,technically known as Svadhyaya or Self- study. It was a sort of sacrifice toBrahma whereby the attainment of an imperishable world was possible.

11.3.3 Modus Operandi--Teaching

Hearing, thinking and meditation were the three principalpsychological methods of instruction during the post- Vedic period. Alsoquestion-answer system was followed in the Upanishad literature; throughthis difficult and abstract ideas were made simple.

11.3.4 Position of Teacher

Teacher (Guru) enjoyed a predominant place not only in hisGurukul but also in the entire society. He was regarded as a great guide forall. The pupils were free to discuss points freely with the Guru. The teacherwas expected to be in possession of the essential qualities viz. profundity ofeducation, clairvoyant vision and intellectual regeneration. Rules ofconduct were enforced keeping in view the physical, mental and moraldevelopment of students. Strict adherence to rules of conduct and disciplinewas an inseparable aspect of education in those days. The duration ofeducation was twelve years.

11.3.5 Responsibilities of Students and Teachers

Students had to beg alms for the support of the Guru and himself.This tradition was carried out by all--poor or rich. This would begetin the students the virtue of humility and thereby he learnt the concretelesson of charitable good done to him by the society and in return his senseof obligation to it. Along with the external duties study was the main dutyof the pupil. The study of Vedas would initiate their education. The pupilprior to receiving education was called upon to prove that he was peaceful,patient and tenacious of purpose. Simple living and high thinking was themotto of his life.

At the completion of their educational period, the teachers wouldddeliver convocational address to the students, which sought to remind themof the duties in practical life they stood at the threshold of. This was the*Samavartana* ceremony. These final addresses of the teachers of

ancientIndia can be compared to the Convocation Address of modern Universities.The teacher was expected to possess all moral and spiritualqualifications. His profession made it indispensable to master the Vedicknowledge thoroughly and dwell entirely in the Brahma. He illumined theinner being of his pupils with his own spiritual enlightenment. It wastraditional knowledge to pupils through a succession of teachers, whichcame to be known as *Guru Parampara*. The teachers felt the natural desirethat their truths and principles, learning and experience should survivethem and promote good of the society. The life of the teacher served as amodel for the pupils to follow and imitate.

11.3.6 Patterns of Educational Institutions

Broadly there existed three types of institutions namely *Gurukulas,Parishads(Academies)* and *Sammelans* (Conferences) in that age.According to sacred texts, the training of the Brahmin pupil took place atthe home of a Brahmin teacher. In some texts the guru is depicted as thepoor ascetic and it is the duty of the student to beg for his teacher. The firstlesson that was taught to the student was the performance of *sandhya* andalso reciting of *gayatri*. The family functioned as a domestic school, anashram or a hermitage where the mental faculties of the pupils weredeveloped by the teacher's constant attention and personal instruction.

Education treated as a matter of individual concern, did not admit of themethod of mass production applicable in industry. The making of man wasregarded as an artistic and not a mechanical process. Indeed, the aim ofeducation was the developing of the pupil's personality, his innate andlatent capacities. This view of education as a process of one's inner growthand self-fulfilment evolved its own technique, its rules, methods andpractices.

Besides these regular schools of instructions, there were specialinstitutions for the promotion of advance study and research. These arecalled in the Rig Veda as Brahmana- Sangha. These Academics werecalled Parishads; there is a reference to the Panchala Parishad in theUpanishads, in whose proceedings even kings participated.

TheseAcademies were the main forums where students belonging to higher orderof learning gathered and quenched their insatiable thirst for knowledgethrough discussions and discourses. Learning was also prompted bydiscussions at public meetings, which were a regular of rural life, and wereaddressed by wandering scholars. These scholars toured the country todeliver public discourses and invite discussion. The Brahmanas, theAranyakas and the Upanishads abound in such instances.

Besides the local councils or academies of disputants, there wereinvited occasionally by some great king, several scholars, Rishis,philosophers and psychologists to a national gathering for the sake ofdiscussions and debates. The ablest and best scholars, speakers,philosophers and thinkers were awarded special prizes for their merits. Inaddition to the above mentioned forms of educational institutions, courts ofkings too, served as important centres of learning where several scholarsand philosophers, hailing from different countries, would flock together,talk, discuss and throw light on metaphysical, theological and otherproblems.

During the Vedic period one could choose a particular profession ashe liked and accordingly his Varna was determined. But during the laterVedic period Varna came to be determined by birth. Consequently thewhole society was divided into four Varna- Brahman, Kshatriya, Vaishyaand Shudra. Secular education was prescribed for all these Varnas or castesaccording to the requirements of their respective duties they had to performin life towards the society.

The main duties of the Brahmans were studying and teaching of theVedas, performance of the Yajna for themselves as well as for others,receiving and giving gifts. The Brahmans had to undertake theresponsibility of the education of the Kshatriyas and Vaishyas in view oftheir specialization in the profession of teaching. They came to be regardedas the guides and teachers of the entire community. Their presence wasconsidered to be indispensable on the occasion of religious ceremonies andrituals.

With the passage of time the Vedic study came to be regarded as ofsecondary importance by the Kshatriyas and Vaishyas. They thought itsufficient for them to have acquired merely superficial knowledge of theVedas, Vedangas and the Upanishads. The sphere of duties appropriate tothe Kshatriyas was limited only to defence, protection of

people andadministration. Military training was thus important for the princes. TheRamayana and The Mahabharata also contain reference to the militarytraining of the kings and princes.

As regards the Vaishyas, agriculture and animal husbandry andtrade were their chief occupation, and as such they were given technicaleducation of agriculture, animal husbandry and trade. Education of theVaishyas, too, was under the direct control and supervision of theBrahmans. Study of Vedas was regarded as of secondary magnitude tothem. Knowledge of various languages, rates of wages, rules applicable topurchase and sale of commodities, was regarded, as indispensable for theVaishyas. To acquire this cumulative information, the study of arithmetic,general geography as well as economic and commercial geography, scienceof agriculture and business method was extremely essential.There was no provision of higher education for the Shudras. Toserve was their occupation. Nonetheless their education resembled more orless that of Vaishyas. They learnt *devajana Vidya*, which according toShankara, included dancing, vocal music, orchestral music and dyeing ofclothes. No established technical institutions were in existence for the sakeof imparting technical education, but their knowledge was transferred fromgeneration to generation as heritage.Thus, the Aryans had established and recognized the superiority ofVarna system. In addition to these, there were prevalent certain arts andsciences which could be regarded as non-parallel in the history of thatperiod.

11.4 EDUCATION--SUTRAS AND EPICS

11.4.1 Sutras

The period of the Vedic literature was followed by that of Sutraliterature. It falls between 600 B.C and 200 B.C. The growth of Vedicliterature had become so vast and diffused that the need was strongly felt toevolve some practicable method as may epitomize conveniently the hugemass of Vedic literature. This need brought a new type of literature, the*Sutras* into being. These Sutras revealed great principles and truths in avery compressed and succinct form. In this age, the rules and regulations

ofeducation were manifested mainly in the form of Dharma-Sutras. TheseDharma- Sutras embodied the principles of social conduct and a code ofduties for the teachers and students.

The entire Sutra literature consists of mainly six divisions known as*Vedangas*. A pre-knowledge of various subjects such as Siksha, Chhadas,Vyakaran, Kalpa and Jyotisha was indispensable for the sake ofcomprehending the Vedas. One special feature of education of this periodis specialization of students in different branches of learning. This period isthe most important one from the viewpoint of its constructive and creativeaspect in ancient Indian education in as much as such important branchesof learning as Geometry, Algebra, Astronomy, Astrology, Physiology andGrammar reached culminating point in this period.

The commentary of Patanjali is an immortal creation of ancientIndia. The Nyaya and Mimamsa Shastras too were the production of thisage. Besides these works the Smritis were written for the proper guidanceof life. The account of education in the Sutra period will not be completewithout the consideration of the evidence of the grammatical literature asrepresented in the works of Panini and his two famous commentators,Katyayana and Patanjali. Panini throws light on the literature of his times.

The educational system during the Sutra period was identical withthat of Upanishad period. All the current unwritten regulations, social andreligious traditions and long standing conventions, had been compiled inthe sutras in a well-arranged and systematic order. This newly createdliterature became the proper course of study for the students. The necessityof regular institutions was felt for higher education. Various sciences andarts such as handicrafts, medicine, sculpture and architecture had attainedthe peak of development. Thus, the sole objective of the entire system ofeducation during this period was character formation, development ofpersonality and protection of ancient culture.

One special feature of the literature of the Sutra period is theunprecedented progress of philosophy. Theories of philosophy had enjoyedan uninterrupted continuity since the Vedic age. The period of Upanishadscan well be regarded as the meridian of philosophy. But the

period of theSutras witnessed the consummation of its progress. In this period, thecurrent of philosophical thought flowed out chiefly in six differentchannels. In this way developed six systems of philosophy, viz, TheSamkha of Kapila, The Yoga of Patanjali, The Nyaya of Gautama, TheVaisheshika of Kanada, Karma or Purva-Mimansa of Jaimini and UttaraMimamsa or Vedanta of Badarayana.In this way the study of philosophy was complete in itself. Itpresented a correct solution to the problems of discipline, humanity andSupreme knowledge. Indian philosophy is a unique contribution of ourcountry to humanity at large. It was a system of thought that kept the flameof Indian culture ablaze through a succession of stormy ages.

11.4.2 Epics

The Ramayana and the Mahabharata are the main Epics of ancientIndia. These epics give us glimpses into the creed of militarism of that age;nevertheless, there are in them scattered facts, which throw light upon theeducation of that period.

The Mahabharata tells of numerous hermitages where pupils fromdistant parts gathered for instruction round some far-famed teachers. Afull-fledged Ashram is described as consisting of several Departmentswhich are enumerated as following:

1. Agnisthana, the place for fire-worship and prayers
2. Brahmasthana, the Department of Veda
3. Vishnusthana, the Department for teaching Raja-Niti, Arthaniti, andVartta
4. Mahendrasthana, Military Section
5. Vivasvatasthana, Department of Astronomy
6. Somasthana, Department of Botany
7. Garudasthana, Section dealing with Transport and Conveyances
8. Kartikeyasthana, Section teaching military organization, how toform patrols, battalions, and army.

The most important of such hermitage was that of the *Naimisha*, aforest, which was like a university. The presiding personality of the placewas *Saunaka*, to whom was applied the designation of Kulapati, sometimesdefined as the preceptor of 10,000 disciples.

The hermitage of *Kanva* was another famous centre of learning, ofwhich a full description is given. It is situated on the banks of the Malini, atributary of the Sarayu River. It was not a solitary hermitage, but anassemblage of numerous hermitages round the central hermitage of RishiKanva, the presiding spirit of the settlement. There were specialists inevery branch of learning cultivated in that age; specialists in each of thefour Vedas; in sacrificial literature and art, Kalpa-Sutras in the Chhanda(Metrics), Sabda (Vyakarana), and Nirukta. There were also logicians,knowing the principles of Nyaya, and of dialectics (the art of establishingpropositions, solving doubts, and ascertaining conclusions). There werealso specialists in the physical sciences and art. There were, for example,experts in the art of constructing sacrificial altars of various dimensionsand shapes (on the basis of a knowledge of Solid Geometry); those whohad knowledge of the properties of matter (dravyaguna); of physicalprocesses and their results of causes and their effect; and zoologists havinga special knowledge of monkeys and birds. It was thus a forest Universitywhere the study of every available branch of learning was cultivated.

The hermitage of Vyasa was another seat of learning. There Vyasataught the Vedas to his disciples. Among the other hermitages noticed bythe Mahabharata may be mentioned those of Vasishtha and Visvamitra andthat in the forest of Kamyaka on the banks of the Saraswati. But ahermitage near Kurukshetra deserves special notice for the interesting factrecorded that it produced two noted women hermits.Military science was generally called Dhanurveda. TheMahabharata marks the culmination of military art and science. In ancienttimes, military education was not only organized by the State, but on theother hand private individual instructors too would undertake this duty. Inevery village, there were military training camps where villagers weregiven military education for self-defence. Mainly speaking, dancing, music,painting, sculpture, architecture, carpentry and smithery were some sucharts and crafts, which helped a major portion of the population of thecountry to earn their livelihood. In the early Vedic age handicrafts andagriculture were held in high esteem.

Students approached the learned souls for the acquisition ofknowledge. Parents too encouraged it and sent their boys to the institutions.When

their number began to increase the institutions formed with thesestudents began to grow gradually. With the lapse of time these institutionsturned into Universities and were maintained with the gift of the public andthe state. In this way many institutions were formed of which Taxila,Ujjain, Nalanda, Benares, Ballavi, Ajanta, Madura and Vikramsila werevery famous. Taxila was famous for medicine and Ujjain for Astronomy.Both were pre-Buddhist. Jivaka the well-known medical expert and thestate physician of the King of Magadha of the 6th century B.C. and Paninithe famous grammarian of the 7th century B.C. and Kautilya, the authorityon Arthasastra, of the 4th century B.C. were students of Taxila.

The academic year has several terms. Each term is inaugurated by aceremony called Upakarnmana and ends by the Utsarga ceremony.Holidays (Anadhyayas) are regularly observed on two Astamis (eight dayof the moon) two Chaturdasis (fourteenth day of the moon), Amavasya,Purnima and on the last day of each of the four seasons, called Chaturmasi.Besides these Nitya (regular) holidays there are Naimittika (occasional)holidays due to accidental circumstances, e.g. storms, thunder, rain, fog,fire, eclipses etc.

11.5 BRAHMANICAL EDUCATION

Most of the aspects of human existence found fullest scope fordevelopment and evolution during the period of the Vedic education. TheBrahmanical education has its own peculiar importance as regards theharmonious development of physical, mental and spiritual aspects ofhuman life. It helped a lot in the development of character and individualityof human beings.

Thus, the aim of Brahmanic education was similar to the aim ofVedic education when the education was considered to be a means ofgaining knowledge. In Vedic education too much emphasis had been laidon the religious aspect of education, but the Brahmanic education includedworldly aspect as well. Self-reliance, self control, formation of character,individual development, knowledge of social and civil life and preservationof national culture was accompanied with the physical

development as theaim of education.Some Important characteristics of Brahmanic Education were asfollows:

1. The disciple lived in direct contact with the Acharya.
2. The daily routine of the students was regulated.
3. Brahmanic education paid a good deal of attention to the formation ofcharacter and nature of the students.
4. The students were supposed to maintain strict celibacy.
5. It prepared the students for the entire life in its fullness. Yet thetendency towards specialization had grown up.
6. In Brahmanic education instead of collective teaching, individualteaching prevailed. Thus, there were more opportunities to develop theinner talents of the students.
7. Brahmanic education was not only theoretical; it also gave the practicalknowledge to face the struggles of life.
8. In Brahmanic education the course of study was much vaster thanthat of Vedic period. Besides all the four Vedas, the study of Itihaspuranas,Vyakarans, Arithmetic, Astrology, Ethics, Yajurveda etc werealso undertaken.
9. The education was based on psychological principles. Corporalpunishment was considered a sin.
10. Students were free to study according to their choice and ability.
11. In Brahmanic education, Karma siddhant and stratification of castesystem also had an effect on the courses of study.

Check Your Progress 1

1)Throw light on curriculum of Vedic education.

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2) Comment on Sutra literature.

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3) Compare Brahmanic education with Vedic education

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11.6 EDUCATION IN BUDDHIST ERA

Buddhist education can be rightly regarded as a phase of the ancientHindu system of education. Buddhism, itself, especially in its original andancient form, is, as has been admitted on all hands, rooted deeply in thepre-existing Hindu systems of thought and life.

The monasteries were the centres of education during the Buddhistperiod. Besides monasteries, there were no other organizations forimparting education. Only the Bhikshus could receive religious and othertypes of education. Other persons were deprived of this facility. There wasno place for Yajna in the Buddhist system. For admission the student hadto present himself before the teacher and request him for giving education.The teacher was fully responsible for education of his pupil. In turn, thepupil had also to be responsive to the instructions received from theteacher. Thus, a relationship was established between the teacher and thetaught as during the Vedic period.

Pabbajja (First Ordination)

Itmeans 'going out'. According to this ceremony, the student afterbeing admitted to a monastery had to renounce all his worldly and familyrelationship. After admission into 'Sangh', they could remain as a monk.The age limit fixed for Pabbajja was 8 years. At the time of entering intothe Sangh, the disciple must have attained the age of 8 years. There theyhad to receive education for 12 years and during this period the new monkmade his preparation for the Sangh life. After that he had to undergo the*Upasampada* ceremony, which entitled a student for a full-fledgedmembership of the monastery.

Upasampada (Final Ordination)

After completing the education of 12 years, the monk at the age of20 years had to undergo the Upasampada ritual and then he becomes

thepermanent member of the Sangh. This ceremony was democratic in nature.The Shramana had to present himself before all other monks (Bhikshus) ofthe monastery. One could be admitted for the Upasampada ceremony onlywhen the majority of the monks voted in favour of the same.

In the Vedic age the student was given education upto 25 years ofage and after that he was permitted to go home and lead the life, in theBuddhist system after having received education the student never cameback to his parents place for leading the life of a householder. He remaineda monk for good and cut off his worldly relationships forever.There always existed cordial relationship between the teacher andthe taught. The teacher too had to observe all these rules of conduct, whichwere prescribed for the students. It was the highest and most sacred duty ofthe teacher to impart intellectual and spiritual education of a higher order tohis disciples. If any pupil ignored to respect his preceptor, he was deemedunfit and consequently was expelled from the order. The teacher too putforth the ideal of high learning, excellent moral character, self-possessionand spiritualism before his pupils to compel inherent high respect fromthem.

11.6.1 Module

It was chiefly spiritual in nature. It was so because the chief aim ofeducation was to attain salvation. Study of religious books was mostimportant. *Suttanta, Vinaya* and *Dhamma* were the main subjectsprescribed for the study. Besides these, spinning, weaving, printing of thecloth, sketching, medicine, surgery and coinage were the other subjects ofBuddhist education.

Education during this period may be classified into two parts-primaryand higher. In the primary education the emphasis was given onthe teaching of reading, writing and arithmetic. Knowledge of grammarwas essential. The child was primarily educated in the knowledge of thealphabet, vowels, Sandhis or rules of combination.In the higher education, religion, philosophy, military science,medicine and other difficult subjects were taught. The Vedas were alsostudied for acquiring comparative knowledge; nevertheless theAtharvaveda was not included

in the curriculum upto the Jataka period. Asregards higher education, Hiuen-Tsang has quoted the example of Nalandawhere Buddhist philosophy, the Literature, the Yoga and other spiritualsciences were taught. The institution at Vikramshila was reputed forimparting education in Logic and Jurisprudence.

11.6.2 Modus Operandi--Teaching

The main aim of education in Buddhist period was the purity ofcharacter. Therefore, like Vedic educational system, they also emphasizedmuch on the practice and training for pure character instead ofpsychological development of the students. Later on to attain the stage ofBodhisattva personal development was considered essential and mental andmoral development began to be emphasized. Originally there waspredominance of religions.

At first the teacher gave a lecture on a certain topic and the studentswere required to listen to him with attention. Afterwards students wereexpected to memorize the same. Thus, method of teaching was mostly oral.The importance of discussion encouraged the logic in the Buddhist period.It was useful to argue controversial matters and on the development of themental power and knowledge of the students. Followers of differentreligions held occasional discussions; hence students were trained in the artof debating from the very beginning of their academic career. Since themain aim was to propagate Buddhism, some Acharya gave importance totours for educating the students. After the completion of education, thestudents were encouraged to gain the practical and real form of thetheoretical knowledge gained by them undertaking long trips. Thus, theirknowledge became solid and evident.

The teaching method in regard to technical education in SecularScience, Arts and Crafts was identical with that of Brahmanical educationi.e. students were given education through both theoretical and practicalmethods. On the beginning (Pratipada) and close (Purnima) of each monthlearned people used to assemble together. This type of assembling togetherwas a very important part of Buddhist education. Purpose of this assemblywas to maintain the moral standards of all the

monks (Bhikshus) becausethe total education system was based on morality.

11.6.3 Vocational Education

Indeed Buddhist education was basically religious. Yet,occupational education was not neglected altogether and Mahabaggamentions about spinning and weaving, tailoring etc. Among the otheruseful arts-Architecture, Arithmetic, Painting, Agriculture and AnimalHusbandry etc were also taught. In Buddhist period emphasis was laid onthe development of the medical science. There were many medical expertsduring that period. The Indian Chikitsaks (medical men) were not onlyexperts in the examination and treatment of most serious diseases, but theywere also efficient in serious surgical operations like that of brain, stomachetc. Takshila was the main centre of medical education and the completecourse of the science was completed in 7 years.In short the following conclusions may be drawn in regard toBuddhist education.

1. Centres of Education-In Buddhist period, there were many suchcentres where foreign students used to come for higher education. Amongsuch centres, Takshila was notable. It might be called the spiritual capitalof India of the time.

2. Minimum age of education- The minimum age for admission inTakshila University was 16 years because here the students were takenonly for higher studies.

3. Education fee- It was about 1000 coins at that time, which wasprobably charged in the beginning. Those who were unable to pay the feesin any form either cash or manual labour, were educated as a charity.

4. Scholarships- The meritorious students who did not have means tosupport themselves were given scholarship by the government of the time.

5. Residence of Students- Generally the students lived in the centres withtheir teacher but some married people and students residing in privatelodges, were also not prohibited from gaining education.

6. Teaching arrangements- One head teacher, with the help of his assistants arranged for the education of about 500 students. More

studentscould not be put under him. Efficient and experienced students wereappointed as assistant teachers and meritorious students used to teach thestudents of lower classes. According to convenience, the teaching workwas done during daytime as well as night hours, but the students who paidfees, were taught during the day.

7. Higher Education- In higher education, students were taught Literary,scientific and Vocational education. In literary education, religiousteachings were also included. Beside Atharvaveda, all the Vedas formedthe foundation stone of this education. The following subjects have beenmentioned in the Jatakas.

- Medicine
- Vashikaran Kam-Tantra
- Tantra-Mantra
- Archery
- Elephant taming
- Hunting
- Giving life to the dead
- The knowledge of the voices of various animals

8. Search of truth and nirvana- Some students who could not getmentally satisfied even through higher studies used to go to the isolatedplace of some monk and spent their lives in search of truth and Nirvana.Gradually gaining spiritual knowledge they became ascetics in their futurelife.

11.7 EDUCATIONAL CENTRES AND UNIVERSITIES

Taxila

From times immemorial Taxila has been an important centre ofBrahmanical education. During the Buddhist period, its fame continued inNorthern India. It attracted hundreds of students from various countries ofthe world. They came there to quench the thirst of their knowledge. Beingsituated at the distance of 20 miles in the West of Rawalpindi, Taxila wasthe capital of Gandhar Kingdom. According to Valmiki

Ramayana, PrinceBharat founded this city and appointed his son Taksha as the ruler of theterritory.

There was no organized institution or university, but education wasimparted on family system. Takshshila was also not an organizeduniversity. It may be called an educational centre of different subjects,where special and higher studies were carried on. Students were admittedaccording to the decision of the teacher. The students were taught thesubjects of their own choice. There was no examination system prevalent.No degree or diploma was awarded to the students who completed theireducation.

Only higher studies were conducted in Takshshila and so thestudents of more that sixteen years of age were admitted in the University.Perhaps the fees were also realized in the beginning. Here the chiefbranches and subjects of study were Vedatrayi (Three Vedas), Vedanta,Vyakaran, Ayurveda, eighteen Sippas (crafts), Military education,Astronomy, Agriculture, Commerce, Snake Bite cure etc. Panini, the fatherof Vyakaran and Jivaka, an expert in Surgery and Medicine were theproduct of Taxila. Kautilya, the famous author of Arthashastra hadreceived his higher education here. No caste distinction was observed asregards the training in these sciences. Taxila had been influenced by Greekculture also. Some preceptors taught Greek there. Taxila was very famousas a centre of training in Indian Military science.

Thus, for several centuries, Taxila served as the beacon light to thecountry in educational sphere. This light of earning continued to burninspite of vicissitudes of fortune and stormy changes. At length, it wasoverwhelmed by the Huns who extinguished this flame forevernever to shine anew.

Nalanda

In the province of Bihar, situated at a distance of 40 milessouthwest of modern Patna and seven miles north of Rajgriha, Nalanda wasa famous cultural and educational centre of Northern India. In thebeginning it was a small village but by and by its importance grew inmagnitude. It enjoyed a considerable degree of fame and importance forBuddhist monks owing to its being the birth place of Sariputta, a favouritedisciple of Lord Buddha. This place began to grow in importance since therise of

Mahayana branch of Buddhism in the first century A.D. By thebeginning of fourth century A.D. it became educationally important andfamous.

Upto 5th century, Nalanda had not achieved paramount educationalimportance in India. Its real importance begins with the year 450 A.D. Forthe next three centuries, it remained at the zenith of its fame andimportance, which is evident by the writings of Hiuen Tsang who camehere in 7th century A.D. and gave a vivid description of the glory andmagnitude of this ancient seat of culture and learning.

Nalanda reached its zenith of progress at the hands of the kings ofGupta dynasty. Kumaragupta I (414-445 A.D.) built a monastery there. Abig and strong enclosing wall having only one gateway marked off theentire university area. At this gate, there lived a teacher designated as *DwarPandit* who was incharge of the test for admission to the university. Thegate opened into eight big halls, where students were delivered addressesen masse. These halls stood in the middle of *Sangharama* that comprisedthe main building of the Vihara. Besides, these, there were three hundredstudy chambers where students were taught by the preceptors.

In Nalanda higher studies were carried on. Meritorious studentsfrom far and wide came to this university to quench their thirst ofknowledge. It was considered to be a great centre of learning throughoutthe whole of Asia. The admittance examination in Nalanada was not easyand according to Hieun-Tsang only about 20 percent of the studentssucceeded in this examination. The minimum age limit was twenty yearsfor admission into the university. Education, board and lodging wereprovided to the students free of cost by the university.The *Kulpati* or Chancellor of the University was Shilbadra. He hadstudied all Sutras and Shastras books and may explain them fully well.The scope of study in Nalanda was very vast. Besides the study ofBuddhism and Buddhist literature all other subjects of the time were alsoincluded in the course of study. Though the Vihar belonged to theMahayana school of Buddhism, yet Hinyanana scriptures were also taughtthere. Vedas, Vedant, Sankhya, Philosophy, Dharamshastra, Puran, Jyotish,Ayurveda etc. were the subject of study along with physical education.

Students were also given practical training in many subjects. Students ofthis university were held in high esteem everywhere in the

country.There were three methods of teaching, namely verbal andexplanatory, lectures and debates and discussions. There was thearrangement for one hundred lectures daily and it was obligatory on thepart of the students to attend these talks. The university had a very biglibrary corresponding to its reputation. It had nine storeys. The library hadthree departments known as 'Ratna Sagar'. It had a collection of rare worksabout all religions, subject arts, sciences and crafts.

Valabhi

Another important education centre of Buddhist period wasValabhi, capital of the Maitraka Kings between 475 and 775 A.D. Itcan aptly be regarded as the rival of Nalanda in fame and educationalimportance. There were several Vihars and monasteries at Valabhi. LikeHiuen-Tsang, I-Tsing too had found Valabhi in the western side of India asglorious as Nalanda and students from every part of India would flockthere for education. These students, after completing their higher education,were appointed in the courts on high and responsible posts. This clearlyindicates that Valabhi was the centre not much of religious education as ofother secular subjects such as Arthashastra (Economics), Law, Politics andMedical Science. Whereas Nalanda was centre for Mahayana branch ofBuddhist religion, Valabhi was the centre for Hinayana.

The centre was famous not only as a centre of Buddhist culture andlearning but also for the religious tolerance and mental freedom. Educationwas imparted in book-keeping, literature and vyakaran etc. and also inmany other practical subjects of worldly importance. The graduates ofValabhi were appointed in high Government services of that time. ThisUniversity had also very big library.

The city of Valabhi was very prosperous and there were manymillionaires who gave financial help to Valabhi. It was running in goodfinancial position till 755 A.D. Due to the invasion of the Arabs someportions of Valabhi was destroyed but even then the university was runningas an important educational and cultural centre of western India till 12^{th}century.

Vikramshila

The Vihara of Vikramshila was established by the famous EmperorDharampala of Pal dynasty in the 8th century in Northern Magadh at abeautiful hill on the bank of the river Ganges. In Vikramshila 108 scholarswere appointed as the incharge and Acharyas of the various temples. Sixadditional Pandits were also appointed for general management. In all therewere 144 permanent scholars in the University. As there were manylearned personalities in the University so its fame spread out in variouscountries. It attracted a large number of scholars from Tibet, who camethere for higher studies.

The university was later organized into six colleges. In the centre there was the central big building having six gates connected with eachother. The college was situated in front of it. This central building wascalled the *Vigyan Bhawan*. A Dwar pandit was appointed at the main gate.He used to examine the candidates, who came to seek admission in theUniversity.

Mahasthavir was the highest authority of the University and thegeneral management was carried on under his guidance. He was called theKulpati of the Gurukula and was elected with great care. The main subjectsof study were vyakaran, Logic, Philosophy, Tantra Shastra andKaramkanda. Later on Tantra Shastra gained prominence. This influencedthe education system of the university. Degrees were conferred on thegraduates and post-graduates at the time of Samavartana (Convocation) bythe rulers of Bengal.

Odantapuri

This University had been established long before the Kings of Paladynasty came into power in Magadha. Odantpuri could not attain that levelof fame and repute which either Nalanda or Vikramshila had accomplished.Still nearly 1000 monks and students resided and received education there.Odantapuri contributed its share in spreading the tenets of Buddhism. Itattracted students from Tibet too.

Jagaddala

Pal King, Raja Ram Pal of Bengal had set a city on the banks ofGanga. It was the beginning of the 11th century and it was named asRanavati. He also constructed a monastery and named it as Jagaddala. Soonafter this

University became the centre of learning it remained the centre ofBuddhist culture for about 100 years.In Jagaddala there were many scholars notable for their knowledge.Their reputation reached Tibet and their books were translated in Tibetanlanguage.

Check Your Progress 2

1) Throw light on commercial and occupational education as advocated in Buddhist literature.

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2) Write a short note on Nalanda University.

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3) What were the subjects taught in Vikramshila University?

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11.8 LET US SUM UP

Thus, the ideal of the Vedic education was lofty. Ampleopportunities were provided to the pupil for the development of hispersonality. The preceptors took personal care of the pupils, which resultedinevitably in a multi-dimensional development. The educational system ofVedic period achieved a pronounced success in connection with characterformation,development of personality, and contribution to knowledge inall branches of learning as well as social well being and materialprosperity. The Vedic education was essentially spiritual and religious incharacter, yet it did not ignore the material aspect, the evidence whereof isavailable in the Yajurveda and the Atharvaveda. Thus it pointsunmistakably to the future evolution of Aryan culture.

To sum up, in ancient India secular vocational training wasessentially a practical and useful education. There was complete absence offormal paraphernalia of education required in modern times; education wasimparted by the father to his son according to practical and direct method.Industrial occupations were at the peak. Indian artists have bequeathed tothe world many fine artistic creations, which will be regarded as thevaluable treasure of the past, present as well as the future.

In short it can be said that Buddhist education laid the foundationstone of a high culture. Though Indian attitude towards life had alwaystended to be characterized by piety and sanctity, yet the Buddhist educationintensified and elevated it still more. The foreign students made a veryprofound study of Indian religion, literature and system of education anddisseminated the seeds of Indian culture in their own lands. The sacredportals of the Buddhist institutions were open to all where all the studentswithout differences were provided with equal opportunities for thedevelopment of their character according to their capacity and aptitudes.Along with religious and philosophical aspects of the Buddhisteducation, secular education formed an essential part of it. This systemgave birth to such international institutions as Nalanda, Taxila andVikramshila, which were the centres of both religious and secular learning.

11.9 KEYWORDS

Pada: Words

Smritis: Hindu religious texts containing traditional teachings on religion, such as Manusmriti

Puranas:A class of sacred Sanskrit writings on Hindu mythology and folklore of varying date and origin.

Upanayana Sanskara: An initiation by which the pupil left the home of his natural parents for that ofthe preceptor. In this new home he had a second birth and was called*Dvijya* or twice born.

Samvartana Ceremony: At the completion of their educational period, the teachers wouldddeliver convocational address to the students, which sought to remind themof the duties in practical life.

Vedangas: Limbs of the Vedas.

Devajana Vidya: It included dancing, vocal music, orchestral music and dyeing ofclothes.

11.10 QUESTIONS FOR REVIEW

1)Describe the growth of education in Vedic period.

2) Throw light on education in Buddhist Era.

3)Write a note on educational institutions in ancient India.

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11.12 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress

1) Various subjects were incorporated in the curriculum of Vedic education. Grammar, rhetoric, astrology, logic, Nirukti (etymological

interpretation of words) was the main subjects. Vedang was the synonym of all these subjects taken together- the performance of sacrifice, correct pronunciation, knowledge of prosody, etymology, grammar, and jyotishi or the science of calendar.

2)The entire Sutra literature consists of mainly six divisions known as*Vedangas*. A pre-knowledge of various subjects such as Siksha, Chhadas,Vyakaran, Kalpa and Jyotisha was indispensable for the sake ofcomprehending the Vedas. One special feature of education of this periodis specialization of students in different branches of learning. This period isthe most important one from the viewpoint of its constructive and creativeaspect in ancient Indian education in as much as such important branchesof learning as Geometry, Algebra, Astronomy, Astrology, Physiology andGrammar reached culminating point in this period.

3) The aim of Brahmanic education was similar to the aim of Vedic education when the education was considered to be a means of gaining knowledge. In Vedic education too much emphasis had been laid on the religious aspect of education, but the Brahmanic education included worldly aspect as well.

Check Your Progress 2

1) Occupational education was not neglected altogether in Buddhist texts and Mahabaggamentions about spinning and weaving, tailoring etc. Among the otheruseful arts- Architecture, Arithmetic, Painting, Agriculture and AnimalHusbandry etc were also taught. In Buddhist period emphasis was laid onthe development of the medical science.

2) In Nalanda higher studies were carried on. Meritorious studentsfrom far and wide came to this university to quench their thirst ofknowledge. It was considered to be a great centre of learning throughoutthe whole of Asia. The admittance examination in Nalanada was not easyand according to Hieun-Tsang only about 20 percent of the studentssucceeded in this examination. Though the Vihar belonged to theMahayana school of Buddhism, yet Hinyanana scriptures were also taughtthere. Vedas, Vedant, Sankhya, Philosophy, Dharamshastra, Puran, Jyotish,Ayurveda etc. were the subject of study along with physical education.

3)The main subjectsof study were vyakaran, Logic, Philosophy, Tantra Shastra andKaramkanda. Later on Tantra Shastra gained prominence. This influencedthe education system of the university. Degrees were conferred on thegraduates and post-graduates at the time of Samavartana (Convocation) bythe rulers of Bengal.

UNIT - 12: ANCIENT INDIA: SCIENCE AND TECHNOLOGY

STRUCTURE

12.0 OBJECTIVES

This chapter will discuss the development of different sciences in ancient India. After studying this lesson the students will be able to: know the origin and development of astronomy in ancient India; understand the origin and growth of mathematics in ancient India; identify the evolution and growth of medicine in Ancient India and; investigate the historical development of metallurgy in ancient India.

12.1 INTRODUCTION

The impression that science started only in Europe was deeply embedded in the minds of educated people all over the world. The alchemists of Arab countries were occasionally mentioned, but there was very little reference to India and China. Thanks to the work of the Indian National Science Academy and other learned bodies, the development of sciences in India during the ancient period has draw attentions of scholars in 20th century. It is becoming clearer from these studies that India has consistently been a scientific country, right from Vedic to modern times with the usual fluctuations that can be expected of any country. In fact, we do not find an example of a civilization, except perhaps that of ancient Greece, which accorded the same exalted place to knowledge and science as did that of India. This chapter will throw lights on the sphere of sciences in which ancient Indian excelled.

Technology is today defined as applied science, but early humans developed technologies such as stone-working, agriculture, animal husbandry, pottery, metallurgy, textile manufacture, bead-making, wood-carving, cart-making, boat-making and sailing-with hardly any science to back them up. If we define technology as a human way of altering the surrounding world for making life easier, we find that the first stone tools in the Indian subcontinent go back more than two million years! Jumping across ages, the Neolithic revolution of some 10,000 years ago saw the development in agriculture in parts of the Indus and the Ganges valleys, which in turn triggered the need for pots, water management, metal tools, transport, etc. Metallurgy brought about important changes in human society, as it gave rise to a whole new range of weapons, tools and implements. Some of these had been made in stone earlier, it is true, but the result was coarser as well as heavier. Metal, precious or not, is also a

prime material for ornaments, and thus enriches cultural life. Metallurgy may be defined as the extraction, purification, alloying and application of metals. Today, some eighty-six metals are known, but most of them were discovered in the last two centuries. The seven metals of antiquity', as they are sometimes called, were, more or less in order of discovery: gold, copper, silver, lead, tin, iron and mercury. For over 7,000 years, India has had a high tradition of metallurgical skills; let us see some of its landmarks.

12.2 MATHEMATICS

Vedic Hindus evinced special interest in two particular branches of mathematics, viz. geometry and astronomy. Sacrifice was their prime religious avocation. Each sacrifice had to be performed on an altar of prescribed size and shape. They were very strict regarding this and thought that even a slight irregularity in the form and size of the altar would nullify the object of the whole ritual and might even lead to an adverse effect. So the greatest care was taken to have the right shape and size of the sacrificial altar. Thus, originated the problems of geometry and consequently the science of geometry. The study of astronomy began and developed chiefly out of the necessity for fixing the proper time for the sacrifice. This origin of the sciences as an aid to religion is not at all unnatural, for it is generally found that the interest of a people in a particular branch of knowledge, in all dimes and times, has been aroused and guided by specific reasons. In the case of the Vedic Hindu that specific reason was religious. In the course of time, however, those sciences outgrew their original purposes and came to be cultivated for their own sake. The following paragraphs will discuss the history of mathematics in ancient India.

12.2.1 Vedic Phase

The *Chandogya Upanishad* mentions among other sciences the science of numbers. In the *MundakaUpanisad*knowledge is classified as superior and inferior. The term *ganita*, meaning the science of calculation, also occurs copiously in Vedic literature. The *VedangaJyotisa*gives it the highest place of honour amongst all the sciences which form the

Vedanga. At that remote period *ganita* included astronomy, arithmetic, and algebra, but not geometry. Geometry then belonged to a different group of sciences known as *kalpa.* Available sources of Vedic mathematics are very poor. Almost all the works on the subject have perished. There are six small treatises on Vedic geometry belonging to the six schools of the Veda. Thus, for an insight into Vedic mathematics we have now to depend more on secondary sources such as the literary works.

12.2.2 Post Vedic Phase

The development of a certain level of mathematical knowledge dictated by the material needs of a society is a common phenomenon of all civilizations. What is noteworthy is that Vedic Hindus went much farther than what was warranted by such needs and developed a natural love for the subject fully in keeping with their propensity for abstract reasoning. Those problems of irrational quantities and elementary surds, indeterminate problems and equations, arithmetical and geometrical series, and the like, engaged in the practical design and construction of sacrificial altars. Although problems of architecture, the intricacies of the science of language such as metre and rhyme, and commercial accounting did stimulate the development of mathematics, its greatest inspiration doubtless came from the consideration of problems of reckoning time by the motions of celestial bodies.

In India, a substantial part of mathematics developed as a sequel to astronomical advancement; and it is no accident that the bulk of post-Vedic mathematics has been found only in association with the *Siddhantas*, a class of astronomical works. The formative period of Siddhantic astronomy may be limited to the first few centuries of the Christian era. These centuries and possibly the few closing ones of the pre-Christian era witnessed the development of mathematics required for adequately expressing, describing, and accounting for astronomical elements and phenomena, as well as for meeting the various needs of an organized society.

Jaina priests showed remarkable interest in the study and development of mathematics. They devoted one of the four branches of

Anuyoga(religious literature) to the elucidation of *ganitanuyoga*(mathematical principles) and prescribed proficiency in *samkhyana*(science of calculation) and *jyotisa*(astronomy) as an important prerequisite of the Jain priest.

12.2.3 Arithmetic

Decimal Place-value Numeration: It is well known that the development of arithmetic largely centered round the mode of expressing numbers. The early advantage, skill, and excellence attained by Indians in this branch of mathematics were primarily due to their discovering the decimal place-value concept and notation, that is, the system of expressing any number with the help of either groups of words or ten digits including zero having place-value in multiples of ten. An extensive literature exists on the Indian method of expressing numbers, particularly on the decimal place-value notation with zero, and on the question of its transmission to South and West Asia and to Europe leading to its international adoption. Mathematicians and orientalists are generally agreed that the system with zero originated in India and thence travelled to other parts of the world. In examining the question of India‘s contribution to the origin and development of the place-value system with zero, the basic facts established from literary and epigraphic sources may be summarized as follows: At first, from the Vedic times the basis of numeration in India has consistently been ten. Long lists of names for several decimal places are found in the sacred literatures of the Hindus, Jains, and Buddhists. The *Vajasaneyi*, *Taittiriya*, *Maitrdyani*, and *KathakaSamhitas*give denominations up to 13 places, e.g. *eka*(1), *daja*(10), *sata*(100), *sahasra*(1000). Buddhist literature continued the same tradition and introduced a centesimal scale (*Jatottara-ganana*), obtaining the name *talaksana*for the 54th place. The Jains in the *Anuyogadvara-sutra* (*c*. 100 B.C.) called the decimal places *ganana-sthana*, gave a numerical vocabulary analogous to that of the Brahmanic literature, and mentioned fantastically large numbers up to 29 places and beyond. Thus the decimal place-value mode of reckoning was recognized without any ambiguity in the sacred literatures of the pre-Christian period going back to the time of the composition of the Samhitas. This mode of reckoning we find more clearly stated in the mathematical-

astronomical texts from Aryabhata onwards in such expressions as *sthanatsthanamdasagunamsyat*(from one place to the next it should be ten times) and *daiagunottarahsamjnah*(the next one is ten times the previous).

Secondly, the word-numerals and their use in a decimal place-value arrangement represent another unique development in India, designed particularly to compress a large mass of numerical data into versified mathematical texts. The word-names were selected by considering their association with numbers. Thus 0 (zero) was denoted by *kha*, *akahtambara, Sunya*, and their various synonyms, signifying emptiness, void, nothingness', etc.; by earth synonyms, e.g. *ksiti, dhara*, *prthivi*, or moon synonyms, e.g. *indu, candra*, *abja;*; by *veda*, *samudra*, *arnava*, etc.; and so on. Fabrication of word-numerals may be traced to the *Rig-Veda*, and their use without place-value has been found in the *Satapatha*and *TaittiriyaBrahmanas*, the *Vedanga-jyotisa*, and some Sutra texts. Their use in a decimal system appears in the *Agni Purana*and *Panca-siddhantika*(*c*. 6th Cen. A.D).

Thirdly, Aryabhata I (A.D 476) invented a system of expressing numbers with the help of consonants and vowels, based again on the decimal place value principle. The need for extreme compactness and brevity in using a large number of astronomical constants in verses with due regard to metrical considerations led to this interesting method, explained in the *paribhasa*stanza of his *Daiagitika-sutra*

Fourthly, there are several references to zero in literary works before its appearance in inscriptions and texts in association with numerals. In Pingala's*(c.* 200 B.C.)*Chandah-sutra* zero is mentioned in the rules for calculating the number of long and short syllables in a metre of *n* syllables. The Bakhshali Manuscript (A.D 200) uses zero in calculation and represents it by a dot as does the Kashmir recession of the *Atharva-Veda*. The Sanskrit name for this zero-dot is *Sunya-bindu*as is clearly stated in Subandhu's*Vasavadatta (*A.D 600). In the Srivijaya inscriptions of Palembang in Sumatra, a dot is used in writing the zero of the number 605

Fifthly, the Kharosthi numerals are found to occur in the Asokan, Saka, Parthian, and Kusana inscriptions dating from the fourth century B.C to the second century A.D. Strokes and crosses were used for the first eight

digits. The multiplicative principle was used in developing symbols for multiples of 100 up to 900. No sign for 1000 is known. Where additive principle was applied, numeral symbols were used on the left-hand side, and in the case of the multiplicative principle, on the right hand side. For writing conjugate numbers the left to right method, similar to the word-numeral arrangement, was followed. The Brahmi numerals are more sophisticated in their forms. They have separate signs for numbers 1, 4 to 9, 10 and its multiples up to 90, and for 100, 1,000, etc. Multiples of 100 and 1,000 up to 9,000 are derived on the multiplicative principle, as in the case of the Kharosthi for multiples of 100. A few examples are given. More than thirty inscriptions giving decimal place-value numeral notations are known. A circular symbol for zero appears in the Gwalior inscription of the reign of Bhojadeva in which the verses are numbered from 1 to 26 in decimal figures. In another Gwalior inscription the date VikramaSamvat 933 and the numbers 270, 187, and 50 are given in the decimal place-value system. Those who are reluctant to rely on any evidence other than the palaeographic in such matters have emphasized the importance of the Gwalior inscriptions and cited these as unmistakable proof of the existence in India of a decimal place-value notation with zero.

Extraction of Square and Cubic Roots: the above discussion shows that, the development of the decimal place-value notation also meant the evolution of a new kind of arithmetic. Let us take the case of the extraction of square and cube roots of large numbers. In India the method first appeared in the *Aryabhatiya*(A.D. 499). This was followed by Brahmagupta (A.D. 598) who, however, did not give any rule for square root extraction.

12.2.4. Algebra

The beginnings of algebra, or more correctly, the geometrical methods of solving algebraic problems, have been traced to the various *Sulvasutras*of Apastamba, Baudhayana, Katyayana, Manava, and a few others. These problems involving solutions of linear, simultaneous, and even indeterminate equations arose in connection with the construction of different types of sacrificial altars and arrangements for laying bricks

for them. The differentiation of algebra as a distinct branch of mathematics took place from about the time of Brahmagupta, following the development of the techniques of indeterminate analysis *(kuttaka).* In fact, Brahmagupta used the terms *kuttaka*and *kuttakaganita*to signify algebra. The term *bijaganita*, meaning the science of calculation with elements or unknown quantities*(bija)*, was suggested by Prthudakasvamin (A.D 860) and used with definition by Bhaskara II. Brahmagupta gave the following classifications: (1) *eka-varna-samikarana*-equations in one unknown, comprising linear and quadratic equations; (2) *aneka-varna-samikarana*-equations in many unknowns; and (3) bhavita-equations containing products of unknowns.

Quadratic Equations: The Sulvasutras contain problems involving quadratic equations. The Bakhshali Manuscript gives the solution of a problem in a form which reduces to none of them gives any rule for solving such equations. Both Aryabhata I and Brahmagupta clearly indicate their knowledge of quadratic equations and the solutions thereof.

Indeterminate Equations: The branch of algebra dealing with indeterminate equations of the first degree has interested Indian mathematicians and astronomers presumably from the time of the Sulvasutras. These manuals contain rules and directions which point to the solution of simultaneous indeterminate equations of the first degree. Thus the *BaudhayanaSulvasutra*prescribes rules for the construction of a *garhapatyavedi*(sacrificial fire altar) which lead to indeterminate equations. Detailed rules of solution are given in the works of Aryabhata I, Brahmagupta, Bhaskara I, Mahavlra, Aryabhata II, Bhaskara II, and later authors and commentators. Indeterminate analysis had an immediate application in astronomy in the determination of the cycle *(yuga)* of planets from the elapsed cycles of several other given planets.

Permutations and Combinations, **Pascal Triangle**, **and Anticipation of Binomial Theorem**: In the early Jaina canonical literature, permutation was termed vikalpa-ganitaand combination, bhanga**.** Later on the term chandaicitiwas adopted to signify permutations and combinations. The rules had wide applications which Bhaskara II enumerated as follows: It serves in prosody, for those versed therein, to find the variations of metre; in the arts (as in architecture) to compute the changes upon apertures (of a building); and (in music) the scheme of

musical permutations; in medicine, the combinations of different savours. For fear of prolixity, this is not (fully) set forth. The *Susruta-samhita*correctly gives the sum of combinations of six tastes taken one at a time, two at a time, etc. up to all at a time. The Jaina*Bhagavati-sutra* calculates the number of combinations of *n* fundamental categories taken one at a time, two at a time, and so on. Varahamihira has stated that an immense number of perfumes can be made from sixteen substances taken in one, two, three, or four proportions and has correctly given the number of perfumes resulting from sixteen ingredients mixed in all proportions.
Varahamihira in his astrological work, the *Brhatjataka*, applied the same principle in connection with planetary conjunctions. An interesting rule for finding the number of combinations of *n* syllables taking 1, 2, 3, etc. up to a time has been given in Pingala's*Chandah-sutra* and is known as *meru-prastara.*

12.2.5. Geometry

Like other branches of mathematics, geometry in India in the post-Vedic period was developed in the course of dealing with practical problems. Although there are quite a few examples of important results having been obtained, the subject never grew into an abstract and generalized science in the manner it did at the hands of the contemporary Greeks. Problems receiving geometrical treatment were discussed under such topics as *ksetra*(plane figures), *khata*(excavations or cubic figures), *citi*(piles of bricks), *krakaca*(saw problems or cubic figures), and *chaya*(shadows dealing with problems of similarities and proportions). This mode of treatment continued up to the time of Bhaskara II or even later.

12.2.6. Trigonometry

Trigonometry was developed as an integral part of astronomy. Without its evolution many of the astronomical calculations would not have been possible. Three functions, namely, *jyatkojya*(also *kotijya*), and *utkramajya*, were used and defined in ancient times. Fairly accurate sine tables were worked out and given in most astronomical texts to facilitate ready calculations of astronomical elements. The usual practice was to give the values at intervals of 3°45', although other intervals also were

sometimes chosen. Intermediate values were calculated by extrapolation. Brahmagupta, BhaskaraI, and others gave formulas for the direct calculation of the sine of any angle without consulting any table. Thus in trigonometry there is evidence of an unbroken tradition of excellence and originality in India extending over several centuries.

12.2.7. Calculus

Rudimentary ideas of integration and differentiation are found in the works of Brahmagupta and Bhaskara II. Bhaskara II, in particular, determined the area and volume of a sphere by a method of summation analogous to integration. In the first method, the surface is divided into elementary annuli by drawing a series of parallel circles about any point on the surface. The number of such circles, according to Bhaskara II, can be as many as desired. The area of the sphere is given by the sum of areas of the annuli. To find the volume of the sphere, it is divided into a large number of pyramids with their bases lying on the surface of the sphere and their apices coinciding with the centre. The sum of the volumes of these pyramids gives the volume of the sphere.

In the definition of *tatkalikigati*(instantaneous motion) by Bhaskara II and in his method of calculating its value, an elementary conception of differentiation is clearly indicated. The problem is presented in connection with the question of finding the instantaneous velocity of a planet. Earlier, he had given methods of determining the mean and true longitudes of any planet for any instant of time.

Check your Progress-2

Note: i) Use the space given below for your answer

1)Give an account of Mathematics in Vedic Period.

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2) Highlight the growth of Arithmetic in Ancient India

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12.3 ASTRONOMY

There is considerable material on astronomy in the Vedic Samhitas. But everything is shrouded in such mystic expressions and allegorical legends that it has now become extremely difficult to discern their proper significance. Much progress seems, however, to have been made in the Brahmana period when astronomy came to be regarded as a separate science called *naksatra-vidya*(the science of stars). An astronomer was called a *naksatra-daria*(star-observer) or *ganaka*(calculator).

12.3.1. Vedic Phase

Idea on Universe: According to the Rig-Veda, the universe comprises prithivi(earth), antariksa(sky, literally meaning ‗the region below the stars'), and div or dyaus(heaven). The distance of the heaven from the earth has been stated differently in various works. The *Rig-Veda* gives it as ten times the extent of the earth, the *Atharva-Veda* as a thousand day's journey for the sun-bird, the *AitareyaBrahmana*as a thousand day's journey for a horse, and the *PancavimsaBrahmana*as the distance equivalent to a thousand cows, one standing on the other, and again as a thousand leagues, besides the two preceding estimates. All these are evidently figurative expressions indicating that the extent of the universe is infinite. There is speculation in the *Rig-Veda* about the extent of the earth. It appears from passages therein that the earth was considered to be spherical in shape and suspended freely in the air.

The *SatapathaBrahmana*describes it expressly as *parimandala*(globe or sphere). There is evidence in the *Rg-Veda* of the knowledge of the axial rotation and annual revolution of the earth. It was known that these motions are caused by the sun. According to the *Rig-Veda*, there is only one sun, which is the maker of the day and night, twilight, month, and year. It is the cause of the seasons. It has seven rays, which are clearly the seven colours of the sun's rays. The sun is the cause of winds; says the *AitareyaBrahmana*. It states further: The sun never sets or rises.

When people think the sun is setting, it is not so; for it only changes about after reaching the end of the day, making night below and day to what is on the other side. Then when people think he rises in the morning, lie only shifts himself about after reaching the end of the night, and makes day below and night to what is on the other side. In fact he never does set at all.

This theory occurs probably in the *Rig-Veda* also. The sun holds the earth and other heavenly bodies in their respective places by its mysterious power. In the Ri*g-Veda*, Varuna is stated to have constructed a broad path for the sun called the path of the *rta*. This evidently refers to the zodiacal belt. The *Rig-Veda* mentions the inclinations of the ecliptic with the equator and the axis of the earth. The apparent annual course of the sun is divided into two halves, the *uttarayana*when the sun goes northwards and the *daksinayana*when it goes southwards. According to the *SatapathaBrahmana*the *uttarayana*begins from the vernal equinox. But it is clear from the *KausitakiBrahmana*that those periods begin respectively from the winter and summer solstices. The ecliptic is divided into twelve parts or signs of the zodiac corresponding to the twelve months of the year, the sun moving through the consecutive signs during the successive months. The sun is called by different names at the various parts of the zodiac, and thus has originated the doctrine of twelve *adityas*or suns.

The *Rig-Veda* says that the moon shines by the borrowed light of the sun. The phases of the moon and their relation to the sun were fully understood. Five planets seem to have been known. The planets Sukra or Vena (Venus) and (Mangala) Mars are mentioned by name. The *TaittiriyaSamhita*and other works expressly mention twenty-seven *naksatras*. The Vedic Hindus observed mostly those stars which lie near about the ecliptic and consequently identified very few stars lying outside that belt. The relation between the moon and *naksatras*was conceived as being a marriage union. The *TaittiriyaSamhita*and *KathakaSamhita*state that the moon is wedded to the *naksatras*. The ecliptic was divided into twenty-seven or twenty-eight parts corresponding to the *naksatras*, each of which the moon traverses daily during its monthly course.

Methods of observation: It appears from a passage in the Taittiriya Brahmana that Vedic astronomers ascertained the motion of the sun by observing with the naked eye the nearest visible stars rising and setting with the sun from day to day. This passage is considered very important as it describes the method of making celestial observations in old times. Observations of several solar eclipses are mentioned in the *Rig-Veda*, a passage of which states that Atri observed a total eclipse of the sun caused by its being covered by Svarbhanu, the darkening demon. Atri could calculate the occurrence, duration, beginning, and end of the eclipse. His descendants also were particularly conversant with the calculation of eclipses. In the *Atharva-Veda* the eclipse of the sun is stated to be caused by Rahu the demon. At the time of the *Rig- Veda* the cause of the solar eclipse was understood as the occultation of the sun by the moon. There is also mention of lunar eclipses.

Calculation of Season: In the Vedic Samhitas the seasons in a year are generally stated to be five in number, namely, Vasanta (spring), Grisma (summer), Varsa (rains), Sarat (autumn), and Hemanta-Sisira (winter). Sometimes Hemanta and Sisira are counted separately, so that the number of seasons in a year becomes six. Occasional mention of a seventh season occurs, most probably the intercalary month. It is called single born, while the others, each comprising two months, are termed twins. Vedic Hindus counted the beginning of a season on the sun's entering a particular asterism. After a long interval of time it was observed that the same season began with the sun entering a different asterism. Thus they discovered the falling back of the seasons with the position of the sun among the asterisms. Vasanta used to be considered the first of the seasons as well as the beginning of the year. The *TaittiriyaSamhita*and *AitareyaBrahmana*speak of Aditi, the presiding deity of the Punarvasu*naksatra*, receiving the boon that all sacrifices would begin and end with her. This clearly refers to the position of the vernal equinox in the asterism Punarvasu. There is also evidence to show that the vernal equinox was once in the asterism Mrgasira from whence, in course of time, it receded to Karttika. Thus there is clear evidence in the Samhitas and Brahmanas of the knowledge of the precession of the equinox.

Equation of time: Some scholars maintain that Vedic Hindus also knew of the equation of time. The Vedas prescribed various *yajnas* or sacrifices to be performed in different seasons of the year. The duration of these sacrifices used to vary; some were seasonal, some four-monthly, some year-long, and others even longer. It was necessary to calculate the time to begin and end a sacrifice. This presumably led the Vedic Indian to turn to astronomy. The winter and summer solstices formed the basis of their seasonal calculations. The ascertained solstice days almost always coincided with the full moon, new moon, or last quarter of the lunar month. The seasons were calculated beginning from the *uttarayana*-the winter solstice or the first day of the sun‘s northerly course. There were six seasons, each of two months: winter, spring, summer, rains, autumn, and dews.

Early researchers came across a Vedanga tradition about the position of the solstices of the Vedic period. It states that the sun turns north at the beginning of the Dhanistha division and south at the middle of the Aslesa division-a phenomenon which is known to have prevailed during the period between 1400 and 1200 B.C. This led them to consider this period as the earliest phase of the Vedic age.

The manner in which positions were ascertained in the Vedic period may be determined from a passage in the *Aitareya Brahmana* which indicates that the sun remained stationary at the rising point or maintained the same meridian zenith distance for twenty-one days at the solstices. The true solstice day was the middle of these twenty-one days. The twenty-one days in which the sun remained stationary at the solstice were divided into ten, one, and ten days. The two periods of ten days at the beginning and at the end were styled *viraja.* Since at the end of the sun‘s northerly course the sun‘s rising point remained stationary for twenty-one days, it was thought that the middle or the eleventh day was the true summer solstice day. Similarly, the eleventh day of the solstice at the end of the sun‘s southerly course was the winter solstice day. When the solstice day fell on a new moon day, the new moon *naksatra*gave the position of the solstitial point. Likewise, when the solstice day fell on a full moon day, the moon‘s *naksatra*gave the position of the opposite solstitial point. The observation of the retardation in the moonrise after

the full moon could exactly settle the full moon day and also perhaps the instant of the full moon. Similarly, the observation of the entire period of invisibility of the moon after the new moon led to the correct estimate of the exact day and perhaps of the hour of the instant of the new moon.

The observation of the phase of the moon on the solstice day settled the nature of the Vedic calendar, whether the lunar months were to be reckoned as ending with the full moon, the new moon, or even with the last quarter of the lunation. Sometimes after four years the months ending with the full moon and starting from the winter solstice day were changed into months ending with the new moon. Hence in the observational methods forming the Vedic calendar, this procedure of changing the system of reckoning lunar months from months ending with the full moon to those ending with the new moon and *vice versa* was quite possible.

A winter solstice on a full moon day in the month of Magha (January-February) will in six years fall on the seventh day of the dark half of the month, and the first day of the sun‘s northerly course will fall on the next day, i.e. the day of the last quarter. This idea is supported by the statement the first day of the next year will fall on the day of the last quarter in the *Taittiriya Brahman.* In those days the lunar phase of the solstice day gave the mode of reckoning the coming lunar months. In ordinary calendars it was generally preferred to follow the lunar months ending with either the new moon or the full moon. Sometimes there arose a special necessity for finding the winter solstice day of a particular year, which led to the determination of the new phase of the moon for finding the first day of the New Year. This settled the dates for beginning the Vedic sacrifices lasting two or four lunations. Among the sacrifices th*e jyotistoma*and *vajapeya*-the spring and the summer sacrifice respectively-were of two months duration each. The four-monthly *(caturmasya)* sacrifices lasted the four months of spring and summer. For these, both the solstice days were very frequently determined in the process mentioned above. The *Aitareya Brahmana* however, speaks of only the summer solstice day. The year-long sacrifices like the *asvamedha*and *rajasiiya*began from the spring and lasted twelve lunations. The beginning of spring was taken at 60 or 61 days after the winter solstice day, which was a fair approximation.

The long-period sacrifices performed by the Vedic people sometimes extended to three, five, or twelve years. In three yeah there was evidently one additive lunar month, while in five years there were two. Thus in eight years three additive months had to be reckoned with. Consequently in four years there were one and a half additive months and in twelve years four and a half additive months. The Srautasutras also speak of sacrifices which lasted for thirty-six years or even longer periods.

The Vedic people were keen observers of the motions of the moon amongst the fixed stars. The ecliptic stars were regarded as so many milestones for the moon‘s motion in a sidereal month. The stars and star clusters about the ecliptic were probably named and reckoned as twenty-seven or twenty-eight, the period of revolution of the moon being between twenty-seven and twenty-eight days. In the *Mahabharata* the *naksatras*are stated to be twenty-seven in number when Rohini is the first star, a phenomenon which may be dated at about 3000 B.C. Many are the *naksatras*mentioned in the *Rig-Veda* but we cannot be definite whether all the twenty-seven or twenty-eight *naksatras*were recognized before the time of the *TaittiriyaSamhita (c.* 2446 B.C.).

Of the twelve signs of the zodiac, the *Rig-Veda* refers to Mesa (Aries) and Vrasabha (Taurus). But it may be doubted if such references really point to anything similar to the signs of the zodiac as conceived by the ancient Babylonians and Greeks. The twelve signs of the zodiac do not figure in the whole of the Sanskrit literature prior to A.D 400. In the *Mahabharata* there is no mention of the signs of the zodiac. Neither is the days of the week mentioned in the *Mahabharata* or the Vedas. Each day of the lunar month was named after the star or constellation with which the moon was conjoined on that particular day.

12.3.2. Post Vedic Phase

This section will discuss the development of Indian astronomy from A.D 100 to 500. According to tradition, VrddhaGarga was the earliest Indian astronomer. His name is found in the *Mahabharata*. When the *Mahabharata* in its present form was compiled (4th Cent. A.D), Vrddha Garga had already come to be regarded as a great Indian astronomer who had lived many centuries earlier. Another astronomer was Lagadha,

author of the *Yajusa-jyotisa* who discovered that the summer solstice passed through the middle of the *naksatra*Aslesa and the winter solstice through the first point of the *naksatra*Dhanistha. He was followed by Garga and Parasara who carried on his tradition as regards the solstices. We learn from Bhattotpala‘s commentary on the *Brhat-samhita* that in Garga‘s time the sun turned north before reaching the *naksatra* Dhanistha and in Parasara‘s time before reaching the *naksatra*Sravana. It is thus clear that Garga lived after Lagadha, and Parasara after Garga. Parasara lived very probably in the third century A.D. Among other astronomers mentioned in Bhattotpala‘s commentary are Rsiputra, Kapilacarya, Kasyapa, and Devala. But there are no indications as to when they lived or what they achieved in the field of astronomy.

Varahamihira‘s (A.D 550) *Panca-siddhantika*is the only available work to throw light on the development of astronomy during this period. In this work Varahamihira summarizes the teachings of the *Paulisa, Romaka, Vasistha*and *Paitamaha-siddhantas,* and improves upon the *Surya-siddhanta*by incorporating the astronomical constants from the *ardharatrika*system of Aryabhata I. Varahamihira states his opinion of the five *Siddhantas.* The *Paitamaha-siddhanta,* considered to be the most inaccurate of the five *Siddhantas*is described in the *Panca-siddhantika*in five stanzas. The first one contains all the astronomical constants. According to the *Paitamahay*five years constitute a *yuga*of the sun and the moon. The *adhimasas*are brought about by thirty months, and an omitted lunar day by sixty-two days. In five years there are sixty solar months; and hence, according to this rule, in five years there are two *adhimasas*or additive lunar months. The number of lunar months is sixty-two; thus the number of *tithis*is 1860, which, when divided by sixty two, gives the number of omitted lunar days as thirty. These are the same as in the *Vedanga-jyotisa.* The remaining four stanzas give rules for the use of these elements in calculating (a) the number of civil days elapsed from the light half of Magha of 2 Saka era, (b) the sun‘s *naksatra*(c) the moon‘s *naksatra*and (d) the number of *vyatipatas* elapsed f the current *yuga. It* also notes that the shortest day was of twelve *muhurtas* and he longest day of eighteen *muhurta* and hows a rough method of finding the length of any given day in *muhurtas*.

The *Paitamaha-siddhanta*does not treat of any other planets. The *Vasistha-siddhanta*(A.D 300), the oldest of the five, is discussed in Chapters II and XVIII of the *Panca-siddhantika.* From this discussion we deduce that the solar year was perhaps taken to consist of 365-366 days nearly. It is thus clear that considerable progress was made at the time in more correctly determining the luni-solar astronomical constants. The courses of the planets are treated in the following order: Venus, Jupiter, Saturn, Mars, and Mercury. These planetary courses relate to the direct motion, stationary stage (*anuvakra*), retrograde motion (*vakra*), and again the direct motion, and are given in the *Panca-siddhantika*. From the determination of these courses, the celestial longitudes of the planets could be calculated.

The *Vasistha-siddhanta*gives rough rules for finding the lunar ecliptic point on the eastern horizon and furnish the synodic periods in days of the five planets as follows: Venus, 584, Jupiter-399, Saturn-378, Mars-780, and Mercury, 115 day 52 *nadikas*45 *vinadikas.* In using the signs of the zodiac in place of *naksatras,* the *Vasistha-siddhanta*represents the oldest system of Babylonian astronomy as transmitted to India. Chapter II of the *Panca-siddhantika*states the rules for calculating the length of the day as follows: The shortest day is 26 *nadikas*31 *palas*in length; from the shortest to the longest, the days are thought to increase by 3 *palas*every day. This rough rule is on a par with those given in the *Vedanga-jyotisa*and *Paitamaha-siddhanta.* The other rules for finding the longitudes of the moon and sun and the shadow of the gnomon at midday are also inexact. No definite method for the calculation of eclipses occurs up to the time of the *Vasistha-siddhanta*. The *Paulisa-siddhanta,* according to Varahamihira, maintained that there are 43,831 days in 120 years. Thus the length of the year was taken to be 365-2583 days. The longitude of the sun‘s apogee was taken to be 80°. The mean measure of this periphery of the sun‘s epicycle was considered to be about 15°8, which is near to that accepted by Ptolemy, viz. 15°.

12.3.3. Innovativeness

Concepts of scientific astronomy in India were not borrowed wholesale from cither Babylonian or Greek science rather the ancient *sutrakaras*or

writers of aphorisms who stated only their results but not the methods by which they obtained them. These methods were at first transmitted through generations of teachers, and in the course of ages they were lost.

Aryabhata I furnished only one stanza (*Golapada*) regarding his astronomical methods, which says: The day-maker has been determined from the conjunction of the earth (or the horizon) and the sun; and the moon from her conjunctions with the sun. In the same way, the star planets have been determined from their conjunctions with the moon. No other Indian astronomer has left us anything of the Indian astronomical methods. There is no doubt that Greek astronomy came to India before the time of Aryabhata I. Varahamihira has given us a summary in his *Panca-siddhantika*of what was known by the name of the *Romaka-siddhanta*, but nothing of the epicyclic theory is found in it. A verbal transmission of that theory together with that of a few astronomical terms from a foreign country was quite possible. It must be said to the credit of Indian astronomers that they determined all the constants anew.

The Indian form of evection equation is much better than that of Ptolemy and stands on a par with that of Copernicus. It is from some imperfections also that this originality may be established. For instance, the early Indian astronomers' recognized only one part of the equation of time, viz. that due to the unequal motion of the sun along the ecliptic. In regard to the methods of spherical astronomy, the Indian astronomers were in no way indebted to the Greeks. The Indian methods were of the most elementary character, while those of Ptolemy were much advanced and more elegant. Yet the Indian astronomers could solve some problems where Ptolemy failed. For instance, they could find the time of day by altitude and the altitude from the sun's azimuth. Thus, although scientific Indian astronomy is dated much later than the time of Ptolemy, barring the mere idea of an epicyclic theory coming from outside India, its constants and methods were all original.

Check your Progress-2

Note: i) Use the space given below for your answer

ii) Check your answer with that given at the end of the unit

3. Discuss the three main types of representation.

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4. Discuss the other models

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12.4 AYURVEDA: MEDICINE

Ayurveda, the traditional system of Indian medicine, is a special branch of knowledge on life dealing with both body and mind. This is implicit in the two components of the term *ayurveda*: *dyus*and *veda*. The former means life, and the latter, knowledge or more precisely science. According to the *Caraka-samhita*, *dyus*comprises *sukha*(happiness), *duhkha*(sorrow), *hita*(good), and *ahita*(bad). *Sukhamayuh*or a life of happiness is free from physical and mental disease; endowed with vigour, strength, energy, and vitality; and full of all sorts of enjoyment and success. *Asukhamayuh*or a life *of duhkha*is just the opposite. Ayurveda deals with these four conditions of life. It is also concerned with the prolongation of life.

12.4.1. Scope

The scope of Ayurveda is not limited to physical health alone. It also seeks to promote a totality of physical, mental, and spiritual health in the context of man‘s interaction with his environment. Ayurveda is concerned with the origin of life and intelligence which are eternal. The wide scope of Ayurveda, in general, covers (i) cosmological and ontological speculations about the intrinsic relationship between matter and life; (ii) biological theories concerning (a) embryonic conception, (b) body, life, and soul, and (c) rules of genetics; (iii) physiological and pathological theories; (iv) food; (v) rules of health and longevity; (vi)

diseases, their diagnosis and treatment; (vii) poisons and antidotes; and (viii) ethics.

12.4.2. Innovativeness

The origin and antiquity of Ayurveda have been examined from two considerations; one is myth and tradition; and second is historical analysis. Tradition has it that Ayurveda is of divine origin from Brahma who later on communicated this knowledge to the Asvins, and from the twin divinities it come to Indra. Its human tradition began with the transmission of this divine knowledge to two mythical personages, Bharadvaja and Dhanvantari, who in their turn were responsible for the two streams of Ayurveda, i.e. medicine and surgery. Traditionally, Bharadvaja specialized in both medicine and surgery. It therefore appears that the two streams originated not from two persons but from one under two appellations.

This is corroborated by the association of Dhanvantari with his incarnated name Divodasa and subsequently with Bharadvaja in the *Rig-Veda* and later Vedic texts. It is also believed that their two successors, Aitreya and Susruta, were not two different persons, Susruta, alias Bahusruta, meaning an extremely learned person. The divine origin of Ayurveda has been mentioned by Caraka and Susruta as well as by later authorities. Possibly some common sources were relied upon by these two medical authorities in this regard. Caraka holds this divine knowledge of Ayurveda as eternal, but considers it to have a beginning from its first systematized comprehension or instruction.

While tradition would have us believe in the eternity of Ayurveda, historical considerations lead us to trace its origin to pre-Aryan times. In fact, different streams of thought and ideas are found to have been incorporated through ages in the various branches of Ayurveda. Its medical corpus is an extension and systematization of earlier medical knowledge of the pre-Aryan and Indo-Aryan peoples. Its philosophical speculations and logical deliberations in the understanding of the creation of the world in the context of material components of the body and in finding out the aetiology of diseases are borrowed from different philosophical systems, particularly the Samkhya and the Nyaya-

Vaisesika. These contributed to the development of Ayurveda as we have it today.

Pre-Aryan Medical Elements

Archaeological remains concerning pre-Aryan medical elements unearthed from different sites of Indus and pre-Indus cultures testify to rudimentary ideas about some medical and surgical practices. Surgical activities are inferred from trephine human skulls and curved knives from two pre-Indus sites, viz. Burzahom in Kashmir and Kalibangan in Rajasthan. Medical practices inclusive of some health and hygienic measures are indicated in excavations at Mohenjodaro and Harappa. These comprise elaborate sanitary measures, arrangements for bath in specially-built chambers, and medicinal substances consisting of stag-horn, cuttle-fish bone, and bitumen. The craniotomic operation described in the *Susruta-samhita,* hygienic rules and regulations as part of medical practice, application of vapour bath in medical treatment, and utilization of animal and mineral substances in medical prescriptions are some of the instances of borrowing by the Ayurvedic system from earlier cultures.

Indo-Aryan Medical Elements

While pre-Aryan elements led to the development of some medical practices in Ayurveda, Indo-Aryan medical elements facilitated the growth of some concepts and theories. These are mainly noticed in (a) cosmo-physiological speculations about the three basic constituents of living organisms, viz. *vayu*, *pitta*, and *kapha*; (b) ideas about the aetiology of diseases; and (c) belief in the association of medical treatment with god physicians.

(a) Cosmo-physiological speculations relate to the humeral theory of Ayurveda which propounds that wind *(vayu),* bile *(pitta),* and phlegm *(kapha)* are the three basic elements activating, sustaining, nourishing, and maintaining the life-principle. The origin of this theory may be traced to Indo-Aryan speculations regarding the three world-components, viz. air, fire, and water, which similarly sustain, maintain, and motivate the world. The cosmic element of *vayu*or *vata*(air) is considered the motor *par excellence* which activates the entire universe. Its

physiological manifestation is the vital breath or *prana*which, according to Ayurveda, regulates all functions of life. *Pitta,* which maintains the thermal balance of the body, is a manifestation in living organisms of the cosmic principle of *agni*(fire). The term *kapha,* meaning that which results from water, corresponds to the cosmic primordial water *(ap).* This primordial element was viewed by both the Indo-Aryans and Indo-Iranians as mother, as a vivifying liquid (nectar). Some other epithets show it as the _fluid matrix' from which the birth of living organisms was possible. Its physiological element *kapha*in the human body is also credited with the same properties. Both *ap*and *kapha*signify the fluid-matrix in which all the operations of life are possible.

(b) Ayurvedic theories and ideas about the aetiology of diseases are of two kinds, rational and irrational. The first kind is formulated on the basis of pathological conditions, while the second is rooted in the notion of superhuman and malefic agencies being the cause of diseases. Maladies classed under the second group are known as *adhidaivika.* Ayurveda owes much to the Indo-Aryan or Vedic medicine for this idea of the irrational cause of diseases. Moreover, the elaborate theory of *dosas*, i.e. abnormal conditions of the three basic elements as the main cause of disease, which developed in Ayurveda, is also suggested in a passage of the *Atharva-Veda*.

(c) The other Indo-Aryan element present in Ayurveda is the association of godheads with medical treatment. The important god-physicians of the Vedic medicine finding prominence in Ayurveda were Brahma, Indra, Rudra (as Siva), Surya or Agni, and the two Asvins. Their active role as physicians in the Vedas is replaced by the Ayurvedic medical formulae which allude to different godheads for the cure of specific diseases. This association of divinities with healing was a common aspect of ancient medicine throughout the world. The authors of Ayurveda in order to glorify the medical prescriptions appear to have associated them with the renowned Indo-Aryan god-physicians.

Ayurveda and Vedas

In its conceptual aspects Ayurveda has greater affinity to *Rig-Vedic* notions, while in practice it draws much from Atharva-Vedic medicine. Its relation to the *Atharva- Veda* is seen in its (i) two fold objective of the

curing of disease and the attainment of a long life; and (ii) anatomical and physiological ideas. Under the second category may be cited (a) three types of bodily channels-*hirdydhamani*, and *nadi*-used in the sense of duct in the *Atharva-Veda* and corresponding to *Hrady, dhamani*, and *nadi*of Ayurveda which mentions an additional channel (*srotas);*(b) ideas of five vital breaths common in the two systems;(c) osteological ideas in connection with the number and nomen- clature of bones; and (d) *ojas*(albumen), the vital element in the body recognized in Atharvan medicine and in Ayurveda.

The main points of difference between Ayurveda and the *Atharva-Veda* are in the concept and mode of treatment of diseases. The *Atharva-Veda* stresses the wrath of gods and influence of malefic agents as the causes of diseases more than imbalances in bodily elements which are given primary importance in the diagnosis of diseases in Ayurveda. Hence drug treatment predominates in Ayurveda whereas treatment by charms is emphasized in the *Atharva-Veda*. Ayurveda, which incorporates different traditions, has a distinct place alongside of the Vedas. It forms a*upanga*of the *Atharva-Veda* and *upaveda*associated particularly with the *Rig-Veda.* It is sometimes called a *panchama-veda*or fifth Veda. The epithet *upanga*is presumed to have come into use on account of the resemblance between Ayurveda and the medical portion of the *Atharva-Veda.* This relationship has been noted by Susruta himself and later on by others. Its appellation as a*upaveda*or minor Veda of the *Rg-Veda* occurs in the *Caranavyuha*. Ayurveda is mentioned as a fifth or distinct Veda in the *BrahmavaivartaPurana*. Modern writers consider it as a Vedanga or an appendage of Vedic literature. All the aforementioned epithets of Ayurveda point to its existence in some form during the composition of Vedic literature. Although glorified as an appendage of Vedic literature, Ayurveda as such is not mentioned there. A later Vedic text designates a medical treatise as *subhesaja*. The *Mahabharata* first refers to Ayurveda with its eight branches of knowledge. It specifically mentions Ayurveda composed by Krsnatreya.

Check your Progress-2

Note: i) Use the space given below for your answer

ii) Check your answer with that given at the end of the unit

1 Write a note on the scope of Ayurveda.

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2 How Indo-Aryans contributed to the growth of Ayurveda?

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12.5 METALLURGY

12.5.1 Copper

Harappan Civilization

The first evidence of metal in the Indian subcontinent comes from Mehrgarh in Baluchistan, where a small copper bead was dated to about 6000 BCE; it is however thought to have been native copper, not the smelted metal extracted from ore. The growth of copper metallurgy had to wait for another 1,500 years; that was the time when village communities were developing trade networks and technologies which would allow them, centuries later, to create the Harappan cities. Archaeological excavations have shown that Harappan metal smiths obtained copper ore from the Aravalli hills, Baluchistan or beyond. They soon discovered that adding tin to copper produced bronze, a metal harder than copper yet easier to cast, and also more resistant to corrosion. Whether deliberately added or already present in the ore, various impurities such as nickel, arsenic or lead enabled the Harappans to harden bronze further, to the point where bronze chisels could be used to dress stones. Shaping copper or bronze involved techniques of fabrication such as forging, sinking, raising and cold work, annealing, riveting, lapping and joining.

Among the metal artefacts produced by the Harappans, objects discovered are spearheads, arrowheads, axes, chisels, sickles, blades (for knives as well as razors), needles, hooks, and vessels such as jars, pots

and pans, besides objects of toiletry such as bronze mirrors; those were slightly oval, with their face raised, and one side was highly polished. The Harappan craftsmen also invented the true saw, with teeth and the adjoining part of the blade set alternatively from side to side, a type of saw unknown elsewhere until Roman times.

Besides, many bronze figurines or humans such as the well-known Dancing Girl, for instance and animals like rams, deer, bulls etc. have been unearthed from Harappan sites. Those figurines were cast by the lost-wax process: the initial model was made of wax, then thickly coated with clay; once fired which caused the wax to melt away or be lost, the clay hardened into a mould, into which molten bronze was later poured. Harappans also used gold and silver to produce a wide variety of ornaments such as pendants, bangles, beads, rings or necklace parts, which were usually found hidden away in hoards such as ceramic or bronze pots. While gold was probably panned from the Indus waters, silver was perhaps extracted from galena, or native lead sulphide.

Beyond the Harappans

In the later phase of Harappan culture, a Copper Hoard culture of still unclear authorship produced massive quantities of copper tools are underway central and northern India. Later, in the classical age, copper-bronze smiths supplied countless pieces of art. Let us mention the huge bronze statue of the Buddha made between 500 and 700 CE in Sultanganj in Bihar, measuring 2.3 m high, 1 m wide, and weighing over 500 kg, it was made by the same lost-wax technique that Harappans used three millenniums earlier. So were thousands of statues made later in Tamil Nadu, such as the beautiful Nataraja statues of the Chola period, among other famous bronzes. Of course, all kinds of bronze objects of daily use have continued to be produced; for instance, highly polished bronze mirrors are still made in Kerala today, just as they were in Harappan times.

12.5.2 Gold

The noble metals, gold and silver, are found in the native state, and as is well known, gold and silver were used to make jewellery and sheet metal

due to the great ductility and lustre of the pure metals. Some of the early rich finds of gold artefacts were from the cemeteries in Bulgaria in Europe (5th millennium BC) with accouterments of hammered and sheet gold. Some of the most elegant gold vessels made by the repousse technique come from the Mesopotamia (ca 2500 BC). Spectacular gold castings are known from ancient Pharaohnic Egypt, such as the enigmatic face of the young Pharaoh Tutenkhamen (ca 1300 BC). Early gold and silver ornaments from the Indian subcontinent are found from Indus Valley sites such as Mohenjodaro (ca 3000 BC). These are on display in the National Museum, New Delhi.

In antiquity gold would usually have been collected by panning alluvial sands from placer deposits. However India has the distinction that the deepest ancient mines in the world for gold come from the Maski region of Karnataka with carbon dates from the mid 1st millennium BC. A rather delightful piece of conjecture is that tales of Herodotus, the Greek, about gold-digging ants' from India refers to marmot, a type of rodent found in Afghanistan, who dig up the river sand which could then have been panned for gold by the inhabitants.

Surface tension was used to turn melted gold filings into spheres. The granulation technique was also used to make gold jewellery in India in the late 1st millennium BC to early Christian era. Interestingly, as far as silver production goes, the Aravalli region in north-west India along with Laurion in Greece and the Roman mines of Rio Tinto in Spain ranks amongst the few major ancient silver producing sites from about the mid 1st millennium BC onwards.

12.5.3Iron

While the Indus civilization belonged to the Bronze Age, its successor, the Ganges civilization, which emerged in the first millennium BCE, belonged to the Iron Age. But recent excavations in central parts of the Ganges valley and in the eastern Vindhya hills have shown that iron was produced there possibly as early as in 1800 BCE. Its use appears to have become widespread from about 1000 BCE, and we find in late Vedic texts mentions of a dark metal (krsnayas), while earliest texts (such as the Rig-Veda) only spoke of *ayas*, which, it is now accepted, referred to

copper or bronze. Whether other parts of India learned iron technology from the Gangetic region or came up with it independently is not easy to figure out. What seems clear, however, is that the beginnings of copper-bronze and iron technologies in India correspond broadly with those in Asia Minor (modern Turkey) and the Caucasus, but were an independent development, not an import.

12.5.4 Wootz Steel

Instead, India was a major innovator in the field, producing two highly advanced types of iron. The first, wootz steel, produced in south India from about 300 BCE, was iron carburized under controlled conditions. Exported from the Deccan all the way to Syria, it was shaped there into Damascus swords renowned for their sharpness and toughness. But it is likely that the term Damascus derived not from Syria‘s capital city, but from the damask or wavy pattern characteristic of the surface of those swords. In any case, this Indian steel was called the wonder material of the Orient‘. A Roman historian, QuintiusCurtius, recorded that among the gifts which Alexander the Great received from Porus of Taxila (in 326 BCE), there was some two-and-a-half tons of wootz steel-it was evidently more highly prized than gold or jewels.

The second advanced iron is the one used in the famous 1,600-year-old Delhi Iron Pillar, which, at a height of 7.67 m, consists of about six tons of wrought iron. It was initially erected by Chandra as a standard of Vishnu at Vishnupadagiri, according to a six-line Sanskrit inscription on its surface. Vishnupadagiri has been identified with modern Udayagiri nearSanchi in Madhya Pradesh, and Chandra with the Gupta emperor, Chandragupta II Vikramaditya (375-414 CE). In 1233, the pillar was brought to its current location in the New Delhi‘s Qutub complex, where millions continue to come and see this rust less wonder.

But why is it rustless, or, more precisely, rust-resistant is still a major question. Here again, numerous experts, both Indian and Western, tried to grasp the secret of the pillar‘s manufacture. Only recently have its rust-resistant properties have been fully explained. They are chiefly due to the presence of phosphorus in the iron: this element, together with iron and oxygen from the air, contributes to the formation of a thin protective

passive coating on the surface, which gets reconstituted if damaged by scratching. It goes to the credit of Indian blacksmiths that through patient trial and error they were able to select the right type of iron ore and process it in the right way for such monumental pillars.

12.5.5 Zinc

The earliest firm evidence for the production of metallic zinc is from India. Of the metals used in antiquity zinc is one of the most difficult to smelt since zinc volatilizes at about the same temperature of around 1000 degree centigrade that is needed to smelt zinc ore. Indian metallurgists were familiarity with zinc deserves a special mention because, having a low boiling point (907°C), it tends to vaporize while its ore is smelted. Zinc, a silvery-white metal, is precious in combination with copper, resulting in brass of superior quality. Sometimes part of copper ore, pure zinc could be produced only after a sophisticated downward distillation technique in which the vapour was captured and condensed in a lower container. This technique, which was also applied to mercury, is described in Sanskrit texts such as the 14th-century Rasaratnasamuccaya. There is archaeological evidence of zinc production at Rajasthan‘s mines at Zawar from the 6th or 5th century BCE. The technique must have been refined further over the centuries. India was, in any case, the first country to master zinc distillation, and it is estimated that between 50,000 and 100,000 tons of zinc was smelted at Zawar from the 13th to the 18th century CE

Check your Progress-3

Note: i) Use the space given below for your answer

ii) Check your answer with that given at the end of the unit

1.Can the Harappans have developed their urban civilization without copper / bronze metallurgy? Justify your answer.

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2. Discuss the growth of Iron Metallurgy in Ancient India.

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12.6 LET US SUM UP

The work of the Indian National Science Academy and other learned bodies, the development of sciences in India during the ancient period has draw that India has consistently been a scientific country, right from Vedic to modern times. Vedic Hindus evinced special interest in two particular branches of mathematics, viz. geometry and astronomy. Sacrifice was their prime religious avocation so the greatest care was taken to have the right shape and size of the sacrificial altar. Thus originated problems of geometry and consequently the science of geometry. The study of astronomy began and developed chiefly out of the necessity for fixing the proper time for the sacrifice. The term ganita, meaning the science of calculation, also occurs copiously in Vedic literature. The VedangaJyotisa gives it the highest place of honour amongst all the sciences which form the Vedanga.

The development of a certain level of mathematical knowledge dictated by the material needs of a society is a common phenomenon of all civilizations. In India, a substantial part of mathematics developed as a sequel to astronomical advancement. Mathematicians and orientalists are generally agreed that the system with zero originated in India and thence travelled to other parts of the world and the word-numerals and their use in a decimal place-value arrangement represent another unique development in India. Much progress seems, however, to have been made in the Brahmana period when astronomy came to be regarded as a separate science called naksatra-vidya (the science of stars). An astronomer was called a naksatra-daria (star-observer) or ganaka (calculator). Scientific Indian astronomy dates from the year A.D 499 when Aryabhata I of Kusumapura (Pataliputra or Patna) began to teach astronomy to his pupils. Brahmagupta, Varahmihira, Bhaskaraetc also

contributed to the growth of astronomy in ancient India. Concepts of scientific astronomy in India were not borrowed wholesale from cither Babylonian or Greek science rather the ancient sutrakaras or writers of aphorisms who stated only their results but not the methods by which they obtained them.

Ayurveda, the traditional system of Indian medicine, is a special branch of knowledge on life dealing with both body and mind. This is implicit in the two components of the term ayurveda: dyus and veda. The former means 'life' and the latter 'knowledge' or more precisely 'science'. The scope of Ayurveda is not limited to physical health alone. It also seeks to promote a totality of physical, mental, and spiritual health in the context of man's interaction with his environment.

The inclusion of metal technology introduced some complexities into thepatterns of living, for instance determining who was to control the newtechnology, since those who were producing the artefacts were notnecessarily the same as those in authority. In most of the cultures bronzetechnology was accompanied by the script, beginning a new chapter inthe process of historical evolution. If bronze marks the beginning of thenew chapter in the social relations/stratification, then introduction of ironprovided tools to colonise the newer terrain, not inhabitable until then.The process of expansion of agriculture received a new and potent tool.It provided tools to not only clear the forest tract but also to exploit thehidden potential of land other than the river denuded ones.

12.7 KEYWORDS

Algebra : branch of mathematics, dealing with properties of, and relationship betweenquantities by means of general symbols

Alloy : mixture of metals

Aanatomy: science of structure of living organisms

Artefacts: products of human art and craftsmanship

Axle : the slender bar or rod, on or with which the wheel revolves

Brewing : making of beer, wine by boiling and fermentation

Carding of cotton: removing seeds from cotton

Centrifugal force: Forward force acting on a body rotating in a circle round a central point**Classification:** arranging in different categories

Constellation: a definite region of the sky mapped by a group of stars

Geocentric: model of the universe in which the earth is at the centre and other heavenlybodies move around it

Heliocentric: model of the solar system in which the sun is at the centre and the planetsmove around it

Horticulture: cultivation of plants, especially in gardens

Hypothesis: assumption or supposition made as a basis for investigation

Innovations: bringing in new changes

Mechanics: science of motion of rigid bodies, causes of motion, properties of materials etc.

Morphology: study of form and structure of animals and plants

Natural History: study of animal or vegetable life, collection of facts about natural objects

Prognosis: forecast of the probable course of disease

Reagents: substance used to cause reaction

Reducing Ores: conversion of ores, especially metal-oxide ores by heating with coal

Smelting: extracting metal from ore by melting.

12.8 QUESTIONS FOR REVIEW

1) Give an account of the ancient Indian astronomy.

2) Discuss the mathematical knowledge of Indian in the ancient period.

3) Write an essay on Ancient Indian Medical Science.

4) Write a note on the tradition of copper metallurgy in Ancient India.

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12.10 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) The Chandogya Upanishad mentions among other sciences the science of numbers. In the Mundaka Upanishad knowledge is classified as superior and inferior. The term ganita, meaning the science of calculation, also occurs copiously in Vedic literature. The VedangaJyotisagives it the highest place of honour amongst all the sciences which form the Vedanga. At that remote period ganitaincluded astronomy, arithmetic, and algebra, but not geometry.

2) See section 1.1.2.3

Check Your Progress 2

1) The scope of Ayurveda is not limited to physical health alone. It also seeks to promote a totality of physical, mental, and spiritual health in the context of man‘s interaction with his environment. Ayurveda is concerned with the origin of life and intelligence which are eternal.

2) Indo-Aryan medical elements facilitated the growth of some concepts and theories. These are mainly noticed in (a) cosmo-physiological speculations about the three basic constituents of living organisms, viz. vayu, pitta, and kapha; (b) ideas about the aetiology of diseases; and (c) belief in the association of medical treatment with god physicians.

Check Your Progress 3

1) Among the metal artefacts produced by the Harappans, objects discovered are spearheads, arrowheads, axes, chisels, sickles, blades (for knives as well as razors), needles, hooks, and vessels such as jars, pots and pans, besides objects of toiletry such as bronze mirrors; those were slightly oval, with their face raised, and one side was highly polished. The Harappan craftsmen also invented the true saw, with teeth and the adjoining part of the blade set alternatively from side to side, a type of saw unknown elsewhere until Roman times.

2) Its use appears to have become widespread from about 1000 BCE, and we find in late Vedic texts mentions of a dark metal (krsnayas), while earliest texts (such as the Rig-Veda) only spoke of ayas, which, it is now accepted, referred to copper or bronze. Whether other parts of India learned iron technology from the Gangetic region or came up with it independently is not easy to figure out.

UNIT 13 DEBATE ON FEUDALISM

STRUCTURE

13.0 OBJECTIVES

The debates on feudalism cover a wide spectrum of themes ranging from theprecise meaning of the term to the origins, nature and consequences of thesystem under survey. Although one may find the Latin word *feodalis*, fromwhich the word 'feudal' has been derived, in medieval Europe, the term wasemployed in a strictly legal sense. It was used to connote the fief (one particularform of real property right), and not to denote a complex type of socialorganisation. The word 'feudalism' was popularised through the works of theeighteenth-century French *philosophers*, notably by Boulainvilliers andMontesquieu, who used it to indicate the parcelling out of sovereignty amonga host of pretty princes and lords during the Middle Ages. However, with theprogress of the French Revolution, the term practically came to be used as ageneral description covering the many abuses of the *Ancien Régime*. Sincethen, different meanings have been attached to the word 'feudalism' and thehistorians have applied the term with varying emphases and

connotations, withthe broad agreement that feudalism, either as a political structure or as a socialformation, was the dominant system in western and central Europe at leastbetween the tenth and the twelfth centuries.

In this Unit we will study the views of various scholars on feudalism in Europe and India.Beginning with the early formulations about the origin of the feudal systemwe will review the recent debate on it. Main views discussed in this Unit willinclude Henri Pirenne, The Feudal Revolution thesis, R.S Sharma, D.D Kosambi etc.

13.1 INTRODUCTION

The notion of feudalism has European origins. Indeed, in Europe too its history is rather recent, going back at the most to the seventeenth century, long after the phenomenon characterised as feudalism had been dead and gone. From here it, along with many other concepts, spread out to the rest of the world in the wake of European expansion. Understandably then, as the concept evolved and changed in European historiography, its shape in the world's other regions too changed accordingly.

Initially, European feudalism was perceived entirely in the customary law binding the lord and the vassal. It was also seen as a backward, rigid, and slow moving system. The view was somewhat expanded to equate feudalism with a system of government where power was highly decentralised, resting in the hands of feudal lords even as a nominal ruler was publicly acknowledged as a sovereign. It was not for too long that the concept of feudalism remained confined to the lord vassal relationship. Gradually, other aspects of study began to evolve. Marxism in particular brought to attention the question of production, i.e. the relationship between land and labour. From lord-vassal relationship, the perspective shifted to the lord-peasant relationship. Economy also brought into focus questions of technology, trade, money etc. Historiography of the Annales School opened up areas of the history of the family, gender relations, ideas and mentalities.

13.2 DIFFERENT APPROACHES ON INDIAN FEUDALISM

The first assimilation of 'feudalism' in the Indian context occurred at the hands of Col. James Tod, the celebrated compiler of the annals of Rajasthan's history in the early part of the nineteenth century, For Tod, as for most European historians of his time in Europe, lord-vassal relationship constituted the core of feudalism. The lord in the medieval Europe looked after the security and subsistence of his vassals and they in turn rendered military and other services to the lord. A sense of loyalty also tied the vassal to the lord in perpetuity. Tod found the institution and the pattern replicated in the Rajasthan of his day in good measure.

The term feudalism continued to figureoff and on in works of history in India, often with rather vague meanings attached to it. It was with the growing Marxist influence on Indian history writing between the mid-1950s and the mid-60s that the term came to be disassociated from its moorings in lord-vassal relationship and acquired an economic meaning or rather a meaning in the context of the evolution of Indianclass structure. One of the major imperatives of the formulation of an Indian feudalism was paradoxically the dissatisfaction of Marxist historians with Marx's ownplacement of pre-colonial Indian history in the category of the Asiatic Mode ofProduction. Even though Marx had created this category himself, much of thesubstance that had gone into its making was commonplace among Western thinkersof the 18^{th} and the 19^{th}centuries.

Marx had perceived the Asiatic Modeof Production as an 'exception' to the general dynamic of history through the mediumof class struggle. In Asia, he, along with numerous other thinkers, assumed therewere no classes because all property belonged either to the king or to the community;hence there was no class struggle and no change over time. He shared this notion ofthe changeless Orient with such eminent thinkers as Baron de Montesquieu, JamesMill, Friedrich Hegel and others. Real dynamism, according to them, came onlywith the establishment of colonial regimes which brought concepts and ideas ofchange from Europe to the Orient. Indian Marxist historians of the 1950s and 60swere unwilling to accept that such a large chunk of humanity as India, or

indeed thewhole ofAsia, should remain changeless over such large segments of time. Theyexpressed their dissatisfaction with the notion of the Asiatic Mode of Productionearly on. In its place some of them adopted the concept of feudalism and applied itto India. Irfan Habib, the leading Marxist historian of the period, however, put onrecord his distance from 'Indian feudalism' even as he vehemently criticised theAsiatic Mode of Production.

D. D. Kosambi gave feudalism a significant place in the context of socio-economic history. He conceptualised the growth of feudalism in Indian history as a two-wayprocess: from above and from below in his landmark book, *An Introduction to the Study of Indian History,* first published in 1956. From above the feudal structurewas created by the state granting land and rights to officials and Brahmins; frombelow many individuals and small groups rose from the village levels of power tobecome landlords and vassals of the kings. Kosambi, in his characteristic mode, formulated the notion of feudalism in the shapeof a formula rather than in a detailed empirical study. This major task was taken up by Professor R. S. Sharma in his *Indian Feudalism*, 1965. However, R. S. Sharma did not follow the Kosambian formula of feudalism from below and from above;instead, he envisioned the rise of feudalism in Indian history entirely as theconsequence of state action, i.e. from above. It is only lately that he has turned hisattention to the other phenomenon.

R. S. Sharma essentially emulated the model of the rise and decline of feudalism inEurope formulated in great detail by the Belgian historian of the 1920s and 30s,Henri Pirenne. Pirenne had displaced the dominant stereotype of European feudalismas lord-vassal relationship and substituted in its place one that had much wider and deeper range of consequences for society. He postulated that 'grand trade', i.e.long distance trade in Europe across the Mediterranean had allowed Europeaneconomy, society and civilisation to flourish in Antiquity until its disruption by theArab invasions of Europe in the seventh century. Disruption of trade led to theeconomy's 'ruralisation', which made it inward, rather than outward looking. It also resulted in what Pirenne called 'the closed estate economy'. The closed estate signified the unit of land held as estate by the lord [10,000 acres on an average] and

cultivated by the peasant, where trade was minimal and almost everything the inhabitants of the estate required was produced within. These estates, in other words, were economically 'self-sufficient' units. The picture changed again from the eleventh century when the Crusade threw the Arabs back to the Near East which led to therevival of trade and cities and the decline of feudalism. Pirenne thus posited anirreconcilable opposition between trade and urbanisation on one hand and feudalism on the other.

R S Sharma copied this model in almost every detail, often including its terminology,on to the Indian historical landscape. He visualised the decline of India's long distancetrade with various parts of the world after the fall of the Guptas; urbanisation alsosuffered in consequence, resulting in the economy's ruralisation. A scenario thusarose in which economic resources were not scarce but currency was. Since coinswere not available, the state started handing out land in payment to its employeesand grantees like the Brahmins. Along with land, the state also gave away more and more rights over the cultivating peasants to this new class of 'intermediaries'. The increasing subjection of the peasants to the intermediaries reduced them to the level of serfs, their counterparts in medieval Europe. The rise of the class of intermediariesthrough the state action of giving grants to them is the crucial element in R S Sharma'sconstruction of Indian feudalism.

Later on in his writings, he built other edifices tooupon this structure, like the growth of the class of scribes, to be consolidated into the caste of Kayasthas because state grants needed to be recorded. The crucialprocess of land grants to intermediaries lasted until about the eleventh century whenthe revival of trade reopened the process of urbanisation. The decline of feudalismis suggested in this revival, although R S Sharma does not go into this aspect in asmuch detail. The one element that was missing in this picture was the Indiancounterpart of the Arab invasion of Europe; however, Professor B N S Yadava,another eminent proponent of the Indian feudalism thesis, drew attention to the Huninvasions of India which almost coincided with the beginning of the rise of feudalismhere. The oppressive feudal system in Europe had resulted in massive rebellions ofthe peasantry in Europe; in India R S Sharma looked for evidence of similar uprisingbut found only one example of Kaivartas -

who were essentially boatmen in easternBengal but also engaged part time in cultivation--having revolted in the 11th century.

The thesis propounded in its fully-fledged form in 1965 has had a great deal ofinfluence on subsequent history writing on the period in India. Other scholarssupported the thesis with some more details on one point or another, althoughpractically no one explored any other aspect of the theme of feudalism, such associal or cultural aspect for long afterwards. B N S Yadava and D. N Jha stoodfirmly by the feudalism thesis. The theme found echoes in south Indian historiography too with highly acclaimed historians like M.G.S Narayanan and Noburu Karashimaabiding by it. There was criticism too in some extremely learned quarters; the mosteminent among critics was D C Sircar. There was too a fairly clear ideological divide which characterised history writing in India in the 1960s and 70s: D D Kosarnbi, R S Sharma, B N S Yadava and D N Jha were firmly committed Marxists; D C Sircat stood on the other side of the Marxist fence. However, neither support nor opposition to the notion of feudalism opened up the notion's basic structure to further exploration until the end of the 1970s. The opening up came within the Marxist historiographical school. We shall return to it in a little while.

In 1946 one of the most renowned Marxist economists of Cambridge university, UK, Maurice Dobb, published his book, *Studies* in the *Development of Capitalism* in which he first seriously questioned the Pirennean opposition between trade and feudalism and following Engels' insights drew attention to the fact that the revival of trade in Eastern Europe had brought about the 'second serfdom', i.e., feudalism. He thus posited the view that feudalism did not decline even in Western Europe due to the revival of trade but due to the flight of the peasants to cities from excessive and increasing exploitation by the lords in the countryside. This thesis led to an international debate in the early 1950s among Marxist economists and historians. The debate was still chiefly confined to the question whether feudalism and trade were mutually incompatible. Simultaneously, in other regions of the intellectual landscape, especially in France, where an alternative paradigm of history writing, known as the Annalesparadigm, was evolving, and newer

questions were being asked and newer dimensions of the problem being explored. Some of these questions had travelled to India as well.

13.3 WAS FEUDALISM PRESENT IN INDIA?

It was thus that in 1979 a Presidential Address to the Medieval India Section of the Indian History Congress's 40th session entitled 'Was There Feudalism in Indian History? Harbans Mukhia, its author, a committed practitioner of Marxist history writing, questioned the Indian feudalism thesis at the theoretical plane and then at the empirical level by comparing the medieval Indian scenario with medieval Europe.

The theoretical problem was concerned with the issue whether feudalism could at all be conceived of as a universal system. If the driving force of profit maximisation had led capitalism on to ever rising scale of production and ever expanding market until it encompassed the whole world under its dominance, something we are witnessing right before our eyes, and if this was a characteristic of capitalism to thus establish a world system under the hegemony of a single system of production, logically it would be beyond the reach of any pre-capitalist system to expand itself to a world scale, i.e. to turn into a world system. For, the force of consumption rather than profit maximization drove pre-capitalist economic systems, and this limited their capacity for expansion beyond the local or the regional level. Feudalism thus could only be a regional system rather than a world system. The problem is hard to resolve by positing different variations of feudalism: the European, the Chinese, the Japanese and the Indian, etc., although this has often been attempted by historians.

For then either the definition of feudalism turns so loose as to become synonymous with every pre-capitalist system and therefore fails to demarcate feudalism from the others and is thus rendered useless; or, if the definition is precise, as it should be to remain functional, the 'variations' become so wide as to render it useless.

Indeed, even within the same region, the variations are so numerous that some of the most respected historians from Medieval Europe in recent years, such as Georges Duby and Jacques Le Goff, tend to avoid the use

of the term feudalism altogether; so sceptical they havebecome of almost any definition of feudalism.

The empirical basis of the questioning of Indian feudalism in the 1979 Presidential Address lay in a comparison between the histories of medieval WesternEurope andMedieval India, pursued at three levels: the ecological conditions, technology available and the social organisation of forms of labour use in agriculture in the two regions. With this intervention, the debate was no longer confined to feudalism/ trade dichotomy which in any case had been demonstrated to be questionable in its own homeland.

The empirical argument followed the perspective that the ecology of Western Europe gave it four months of sunshine in a year; all agricultural operations from tilling thefield to sowing, tending the crop, harvesting and storing therefore must be completedwithin this period. Besides, the technology that was used was extremely labour intensive and productivity of both land and labour was peggedatthe dismal seed:yieldratio of 1:2.5 at the most. Consequently the demand for labour during the four months was intense. Even a day's labour lost would cut into production. The solutionwas found in tying of labour to the land, or serfdom. This generated enormous tension between the lord and the serf in the very process of production; the lord would seekto control the peasant labour more intensively; the peasant would, even while appearing to be very docile, try to steal the lord's time to cultivate his own land.

The struggle, which was quiet but intense, led to technological improvement, rise in productivity to 1 :4 by the twelfth century, substantial rise in population and therefore untying of labour from land, expansion of agriculture and a spurt to trade and urbanisation. The process was, however, upset by the Black Death in 1348-51 which wiped out a quarter of the population leading to labour scarcity again. The lords sought to return to the old structures of tied labour; the peasants, however,who had tasted better days in the 11^{th} and 12^{th}centuries, flew into rebellions allover Europe especially during the 14" century. These rebellions were the work ofthe prosperous, rather than the poor peasants. By the end of the century, feudalismhad been reduced to debris.

Indian ecology, on the other hand, was marked by almost ten months of sunshinewhere agricultural processes could be spread out. Because of the intense heat, followed by rainfall, the upper crust of the soil was the bed of fertility; it thereforedid not require deep, labour intensive digging. The hump on the Indian bull allowedthe Indian peasant to use the bull's drought power to the maximum, for it allowedthe plough to be placed on the bull's shoulder; the plain back on his Europeancounterpart would let the plough slip as he pulled it. It took centuries of technological improvement to facilitate full use of the bull's drawing power on Medieval Europeanfields. The productivity of land was also much higher in medieval India, pegged at 1:16. Besides, most Indian lands yielded two crops a year, something unheard of inEurope until the nineteenth century. The fundamental difference in conditions in India compared to Europealso made it imperative that the forms of labour use in agricultureshould follow a different pattern. Begar, or tied labour, paid or unpaid, was seldompart of the process of production here; it was more used for non-productive purposes such as carrying the zamindar's loads by the peasants on their heads or supplying milk or oil, etc. to the zamindars and jagirdars on specified occasions. In otherwords tension between the peasant and the zamindar or the jagirdar was playedout outside the process of production on the question of the quantum of revenue.

We do not therefore witness the same levels of technological breakthroughs andtransformation of the production processes in medieval India as we see in medievalEurope, although it must be emphasised that neither technology nor the process of agricultural production was static or unchanging inIndia.

The 1979 Address had characterised the medieval Indian system as one markedits Continuities by free peasant economy. Free peasant was understood as distinct from the MedievalEuropean serf. Whereas the serf's labour for the purposes of agricultural productionwas set under the control of the lord, the labour of his Indian counterpart was underhis own control; what was subject to the state's control was the amount of produceof the land in the form of revenue. A crucial difference here was that the resolutionof tension over the control of labour resulted in transformation of the productionsystem from feudal to capitalist in

European agriculture from the twelfth centuryonwards; in India tension over revenue did not affect the production system as suchand its transformation began to seep in only in the twentieth century under a differentset of circumstances.

'Was There Feudalism in Indian History?' was reprinted in the pages of a Britishpublication, *The Journal of Peasant Studies* in 1981. Within the next few years it had created so much interest in international circles that in 1985 a special doubleissue of the journal, centredon this paper, comprising eight articles from around the world and the original author's response to the eight, was published under the title*Feudalism and Non-European Societies,* jointly edited by T. J. Byres of the Schoolof Oriental and African Studies, London University, editor of the journal, and thearticle's author. It was also simultaneously published as a book. The title was adoptedkeeping in view that the debate had spilled over the boundaries of Europe and Indiaand had spread into China, Turkey, Arabia and Persia. The publication of the specialissue, however, did not terminate the discussion; three other papers were subsequentlypublished in the journal, the last in 1993. The discussion often came to be referredto as the 'Feudalism Debate'. Acollection of concerned essays was published inNew Delhi in 1999 under the title *The Feudalism Debate.*

13.4 FEUDALISM RECONSIDERED

While the debate critically examined the theoretical proposition of the universality of the concept of feudalism or otherwise - with each historian taking his own independent position - on the question of Indian historical evidence, R S Sharma, who was chiefly under attack, reconsidered some of his earlier positions and greatly refined his thesis of Indian feudalism, even as he defended it vigorously and elegantly in a paper, *"How Feudal was IndianFeudalism?"* He had been criticised for looking at the rise of feudalism in India entirely as a consequence of state action in transferring land to the intermediaries; he modified it and expanded its scope to look at feudalism as an economic formation which evolved out of economic and social crises in society, signifying in the minds of the people the beginning of the *Kaliyuga,* rather than entirely as

the consequence of state action. B N S Yadava also joined in with a detailed study of the notion of *Kaliyuga* in early medieval Indian literature and suggested that this notion had the characteristics of a crisis -the context for the transition of a society from one stage to another. All this considerably enriched the argument on behalf of Indian feudalism.

R.S. Sharma was also able to trace several other instances of peasant resistance than the one he had unearthed in his 1965 book. This too has lent strength to the thesis. R S Sharma has lately turned his attention to the ideological and cultural aspects of the feudal society; in his latest collection of essays, published under the title *Early Medieval Indian Society: AStudy in Feudalisation* in 2001 in New Delhi, he has revised several of his old arguments and included some new themes such as 'The Feudal Mind', where he explores such problems as the reflection of feudal hierarchies in art and architecture, the ideas of gratitude and loyalty as ideological props of feudal society, etc.

This venture of extension into the cultural sphere has been undertaken by several other historians as well who abide by the notions of feudalism. In a collection of sixteen essays, *The Feudal Order: State, Society and Ideology in Early MedievalIndia,* 1987 and 2000, its editor D.N Jha has taken care to include papers exploring the cultural and ideological dimensions of what he calls the feudal order, itself a comprehensive term. One of the major dimensions so explored is that of religion, especially popular religion or Bhakti, both in north and south India and the growth of India's regional cultures and languages. Even as most scholars have seen the rise of the Bhakti cults as a popular protest against the domination of Brahmanical orthodoxy, the proponents of feudalism see these as buttresses of Brahmanical domination by virtue of the ideology of total surrender, subjection and loyalty to a deity. This surrender and loyalty could easily be transferred on to the feudal lord and master.

There have been certain differences of opinion among the historians of the Indian feudalism school too; D N Jha for example had found inconsistency between the locale of the evidence of the notion of *Kaliyuga* and site of the 'crisis' which the *kaliyuga* indicated: the evidence came from peninsular India, but the crisis was expected in Brahmanical north. B P Sahu too had cast doubt on the validity of the

evidence of a *kaliyuga* as indicator of a crisis; instead, he had perceived it more as a redefinition of kingship and therefore a reassertion of Brahmanical ideology rather than a crisis within it.

13.5 FEUDALISM, TRADE AND URBANISATION

However, the basic structure of the Indian feudalism thesis, i.e. antagonism betweentrade and urbanisation on one hand and feudalism on the other remains untouched.And that has not been without problems vis-a-vis recent trends in history writing. InEuropean historiography itself there has been a sea change among historians on thisproblematic. If Henri Pirenne had posited an irresolvable dichotomy between urban, rural, trade/feudalism and natural of self-sufficientmoney economy dichotomy inthe 1930s, later historians tore it to pieces by demonstrating the perfect compatibilitybetween the one and the other. The great French historian, Marc Bloch, even titledone of his papers as 'Natural Economy vs. Money Economy: A Pseudo-Dilemma',and another French historian, Guy Bois has in a recent work traced the developmentof feudal economic relationships in Western Europe around the year 1000 A.D in those very areas where trade had greatly developed. In other words, he has established adirect causal relationship between trade and feudalism. The trade/feudalism dichotomyhas thus been abandoned in the very place of its origin. The very notion of the,existence of natural or self-sufficient economy has been fundamentally questioned, both at the level of theory as well as empirical data almost everywhere. Clearly,even for one's daily needs at the lowest level of subsistence, some trade must takeplace whether for buying salt or clothes or utensils; the volume of buying things add the use of money for it rises as we go up the social ladder. Trade in some form oranother also embedded in an agricultural economy, for the nature of the soil indifferent regions necessitates cultivation of different crops; hencetheir produce in order to obtain necessities of subsistence.

Empirically, several historians have had problems with the notion of decline oftrade and scarcity of currency in the region and period of Indian feudalism.D. N. Jha had criticised R S Sharma for relying too

heavily on the absence of longdistance external trade as the cause of the rise of feudalism in India. But, moresubstantively, trade has been demonstrated to have flourished in several regions ofIndia long before the deadline set by feudalists for its revival around the year 1000,parallel to Europe. B D Chattopadhyay has shown that to have happened at least acentury earlier. More recently Ranbir Chakravarti in two books, *Trade in Early India (*2001) and *Trade and Traders in Early Indian Society*(2002), has broughtforward ample evidence of flourishing trade in the concerned period. The monetary anaemia thesis, fundamental to the formulationof Indian feudalism, has also been put under severe strain by recent researches of BD Chattopadhyay and B N Mukherjee. John S Deyell too in his book, *Living without Silver*(1990), seriously undermined the assumption of the scarcity of money.

Onemust also keep in mind that metals like gold, silver or copper are not the only formsof money in medieval societies. Marc Bloch had shown that in medieval Europe,almost anything could perform the functions of a medium of exchange, i.e., money:a certain measure of a certain kind of spice, a piece of cloth of a certain quality, ameasure of a particular grain, whatever. In India too, the tradition of cowries as amedium of exchange has recently attractedthe attention of historians and the factthat procuring cowries actually involved long distance trade, for the cowry shellswere obtained from the far off Maldives, highlights its significance.

13.6 PROBLEMS

There are some other methodological problems too. If the period between c. 300 and c. 1100 is the life span of Indian feudalism, how is one to characterise thesucceeding era, 'medieval India' as it is normally called, prior to the establishmentof the colonial regime? Besides, can one leave the long stretch of time under onesingle head with the implicit assumption that the whole stretch was a single unit which did not witness any major mutations? Marc Bloch had, for example, classifiedthe period of feudalism in Europe into the First Feudal Age and the Second FeudalAge, with the dividing roughly drawn across the year 1000. So sharp was the changes in his view that a person from one age would have found himself analien in the other.The profound mutations within the

structure of feudalism are by now conventionalwisdom in European historiography, even if the terms used by different historianssometimes differ. Some historians prefer 'Low and High Middle Ages' to the 'Firstand the Second Feudal Age.' Also, there is consensus that feudalism in Europe was succeeded by the rise and consolidation of capitalism. Colonialism was one facet ofthe rise of capitalism.

What kind of changes can one visualise in Indian feudalism over the eight centuriesof its existence? And, what was it that succeeded it after A.D. 1100 or so? Surely not capitalism. Adherents of feudalism have not seriously encountered these questions.D D Kosambi had extended feudalism to the 17thcentury almost as a intellectualdiktat; this would only compound the problem further by extending its life by anothersix centuries and treating the entire stretch of nearly 1400 years as the same fromone end to the other - an impossible plea for historians of today to entertain, fortracing change, even minute one over small periods, is their primary preoccupation.

The problems notwithstanding, 'The Feudalism Debate' has nevertheless traverseda long distance. The academic level of the debate has been nothing short ofexhilarating; it never descended even one step below to personal animosity, something noted in a review by Susan Reynolds herself, an eminent medievalist of England,particularly lamenting such descent in academic circles in and near her own home.The debate has been most fertile because it led almost everyone to rethink one'sown position and to refine it and modify aspects of it, even while defending it. In the end no conclusive answers were found; but that's in the nature of the discipline, for,it constantly seeks to renew itself through self-questioning.

13.7 FEUDAL REVOLUTION THESIS

Taking the cue from Bloch, Georges Duby, one of the most original andinfluential post-war historians of medieval society, attempted to look beyondthe economic to the ideological dimensions of feudal institutions. His detailedstudy of the political, economic, and social life in the Maconnais settlement inFrance from the tenth through the twelfth centuries was published in 1953 andfocused a generation of historical

research on what he called the "feudalrevolution" of the early eleventh century. Arguing that fief never played "morethan a peripheral part in what is generally known as feudalism", Dubydocumented how with the collapse of royal authority in the late tenth and earlyeleventh century, the castellans forced the lesser landlords into vassalage andimposed on all peasants a new kind of lordship – *seigneurie banale* – based ontaxation rather than tenure. Previously, Duby argued, the obligation to work inorder to feed a master fell upon slaves, but since this period, with the increasedweight of the seigniorial power, this burden came to be borne by all villagers.

This involved a realignment of the social functions. On the one hand, thedifference between the freemen and the serfs came to be blurred as all thevillagers were subjected to identical and heavier levies. On the other hand, thedifferences between the laymen and the clergy came to be more sharplypronounced, with the clergy strongly defending their exemption from seigniorialexactions. The bearing of arms also became a crucial marker of social distinctionin this period, with the horsemen or the knights forming a lower stratum of thearistocracy.

The term 'feudal revolution' signifies this entire social process,slow but unmistakable, which not only transformed the previous economy ofwar and plunder, but also restructured the aristocratic family into the patrilineageand effected related changes in the domains of mental attitudes. Duby developeda fresh perspective on the question of the decline of feudalism. Unlike thePirennean and the dominant Marxist models, which visualised the collapse offeudalism resulting from a blow from outside – either in terms of the Crusadesor in relation to the increased peasant flight into the cities – Duby chose to seethe decline as a slow and dynamic process which reflected the internaldevelopments within the rural economy and society.

In his subsequent works, Duby turned to explore the ways in which thesubstantial growth of the rural economy after the feudal revolution accentuatedthe contrast between leisure and labour. His researches on the practices offamily, the marriage customs, the chivalric code and the governing medievalimagination of ideal society as a sum of three distinct unequal orders (thosewho pray, those who fight and those who toil) attempted to elucidate theperceptions, concepts, and attitudes behind

medieval institutions and practices.He called this the “imaginary” or the “mental attitudes” of the period. Focusingon the construction and function of as well as the changes in the reigningideological models of the feudal society, Duby simultaneously mapped thesocial changes they were reproducing.

While much of the historiography of feudalism has now moved into Duby’sperspective’s shadows, his work has also generated an intense and vigorousdebate among the historians. Dominique Barthelemy, in his detailed study ofthe feudal Vendomois society, has questioned Duby’s vital methodologicalassumptions and argued that Duby has mistaken the change in style ofdocumentation as the change in society itself. Theodore Evergates has pointedout that Duby’s insistence on the absolute dichotomy between independentcastellanies and the monarchical state has retained an old Blochian model thatdoes not take the diverse forms of local power configurations into account.Constance Bouchard and other feminist historians have criticised Duby forunderplaying the diverse ways in which the women related to the feudalrevolution. His refusal to engage the secular documents, especially the royaland princely administrative registers, has also invited disapproval from manyhistorians.

13.8 DECLINE

Somewhere along the line during the 1960s and 70s, a neo-Malthusianexplanation of the decline of feudalism too was advanced. Malthus hadpropounded the notion in the nineteenth century that natural resources likeland, forests, water etc. etc. could sustain a certain quantum of population.Whenever in history the total human population had exceeded this sustainablelevel, famines, pestilences, wars etc. have occurred that would bring thepopulation figures down again to levels that corresponded to the resources.Some historians, like Emanuel Le Roy Ladurie, argued that the growingpopulation in medieval Europe had similarly exceeded the sustainability levelof agriculture. Therefore, the famines of 1314-15 and the devastating pestilenceof 1348-51 that caused the Black Death which wiped out something like aquarter of the European population was such a manifestation of the Malthusianlaw.

This upset the entire equilibrium in medieval Europe and brought aboutthe transition to capitalism.

The Malthusian theory has always been subject to great controversy;understandably therefore the explanation of the collapse of feudalism on thisscore found sharp critics. The basic flaw in the Malthusian theory is theassumption that resources are relatively inflexible and can sustain only a givenlevel of population. Its critics assert that resources can always be enhancedthrough better technology and better management and the same amount ofland, for example, can yield much higher output with a better method ofcultivation. It is therefore fallacious to assume that population levels in medievalEurope had exceeded what agriculture could sustain. Such an explanation drawsone's attention away from social factors arising from the social structure.

A yet another opening up of the debate on transition to Capitalism appearedfirst in the pages of the British journal, *Past and Present* in the 1970s and early80s. The new debate was initiated by an American historian, Robert Brennerwith an essay titled 'Agrarian Class Structure and Economic Development inPre-Industrial Europe' in 1976. Brenner essentially reiterated the superiorityof the classical Marxist methodology of analysing history in terms of classstruggle. Although he was not directly engaged in discussing the decline offeudalism, but the debate nevertheless overlapped with this theme in as muchas it was seeking explanation of the different paths followed by Britain andFrance into the world of capitalism. The formulation of the problem itself hasclassic Marxist frame of reference. The debate that followed the publication ofthe article did not remain confined to Marxist historians alone, nor didagreements and disagreements remain bound by one's ideological loyalties.In 1985, the whole set of papers was published under the title, *The BrennerDebate.*

Check Your Progress

1) Describe the views of Marx.

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2) Analyze the two way process of Indian feudalism as highlighted by D.D Kosambi.

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3) What are the similarities in the model of R.S Sharma and Henri Pirenne.

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13.9 LET US SUM UP

The growth of Indian feudalism is characterised by D.D. Kosambi as two way process--feudalism from above and feudalism from below. However, for R.S. Sharmafeudalism was the result of state action - i.e. from above. Sharma's arguments werefurther strengthened and developed by B.N.S. Yadava and D.N. Jha. In 1979,however, Harbans Mukhia questioned, 'Was there feudalism in Indian History?'Countering Mukhia, R.S. Shanna in his essay 'How feudal was Indian Feudalism?'once again tried to emphasise the feudal character of Indian economy in a moresubtle way. More recently, a new dimension- bhakti - is added to further explorethe feudal character. Here Bhakti is seen embodying the lord-vassal relationship.However, of late the chief feature of Indian feudalism - declining trade andurbanisation - is seriously questioned by B.D. Chattopadhyaya, Ranabir Chakravarti, and John S. Deyell.

We have also analyzed The Feudal Revolution Thesis of Georges Duby who tried to look beyond the economic angle. Under the views on decline we have discussed the Malthusian theory to a great extent. Revival and expansion of trade and consequent growth of towns has beenconceived by some scholars as the dominant cause for the decline of feudalism.Level of technology, agricultural productivity, demographic changes andtransformation of rural scenario are some other issues which

were consideredimportant factors which contributed to the decline of feudalism in varyingdegrees. In this Unit we have analysed all these views to understand the processof decline. Our aim here is not to identify any one view as the primary causebut put before you the whole range of debate pertaining to the question ofdecline of feudalism. It is not possible to include the views of all the scholarswho have worked on this theme therefore we have selected the main viewsonly.

13.10 KEYWORDS

Annales: It was initially associated with a French journalco- founded by Marc Bloch and Lucien Febvre.Annales School of historians emphasise upon astudy of long-term structures rather than events.Ferdinand Braudel and Marc Bloch was themost famous exponent of this school. Theyopened new areas like comparative history,history of attitudes/mentalities, quantitativehistory, etc. They challenged conventional historyof narratives and periodization. They broke thebarriers of disciplines and introducedinterdisciplinary approaches in social sciences.

Asiatic Mode of Production: Essentially a concept developed by Karl Marxand Frederic Engels, it neverthelessincorporates several elements drawn from thewidely prevalent European image ofAsia as the anti-thesis of Europe. In this image, Europe was perceived to have been on a triumphant march of 'progress' owing to rationality, science and technology; Asia on the other hand was perceived as still, unchanging, lacking in 'history'. Marx ascribed this changelessness in Asia to the absence of private property; consequently there were no class struggles here, the motor, in his view, of progress. The Asiatic Mode ofProduction has come in for some sharp criticismespecially at the hands of Marxist historians ofChina and India.

Crusades: Byzantine ruler Alexius Comnenus, ruling from Constantinople was troubled constantly by the Turks. They often attacked Christian pilgrims ontheir way to and in Jerusalem, causing them greatdistress. Pope Urban II on that pretext declared a Holy crusade to reclaim the Holy Lands from the barbarian Turks. Thus the first Crusade began in AD 1096. The centre of the conflict was Levant

(modern Israel, parts of Syria, Lebanon, and south eastern Turkey). Crusades lasted for 250 years. Altogether there were six major crusades in a period of 176 years (1095- 1271).

Jagirdar: Land revenue assignments given in lieu of cash were termed as jagir and its holder was called jagirdar. This should be borne in mind that it was not land but revenue from the land which was given to the jagirdars.

Serfs:A class of tenant cultivators in Medieval Europe. They were tied to the land they tilled. In return they rendered labour on the lord's land or paid a share of their produce, besides several other obligations' owed to the lord.

Zamindar: Literally means controller or holder of land. During the Mughal period it did not signify propertyright. Instead the term denotes hereditary right over the peasant's produce. It was generally $1/10^{th}$of the land revenue demand.

13.11 QUESTIONS FOR REVIEW

1) To what extent is European model of feudalism relevant in the Indian context?

2) Analyse recent developments in feudalism debate.

3) Describe the theory of Georges Duby.

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13.13 ANSWERS TO CHECK YOUR PROGRESS

1) Marx had perceived the Asiatic Mode of Production as an 'exception' to the general dynamic of history through the medium of class struggle. In Asia, he, along with numerous other thinkers, assumed there were no classes because all property belonged either to the king or to the community; hence there was no class struggle and no change over time.

2)He conceptualised the growth of feudalism in Indian history as a two-wayprocess: from above and from below in his landmark book, An Introduction to the Study of Indian History, first published in 1956. From above the feudal structurewas created by the state granting land and rights to officials and Brahmins; frombelow many individuals and small groups rose from the village levels of power tobecome landlords and vassals of the kings.

3)R S Sharma copied the model of Pirenne in almost every detail, often including its terminology,on to the Indian historical landscape. R.S Sharma visualised the decline of India's long distancetrade with various parts of the world after the fall of the Guptas; urbanisation alsosuffered in consequence, resulting in the economy's ruralisation. A scenario thusarose in which economic resources were not scarce but currency was. Along with land, the state also gave away more and more rights over the cultivating peasants to this new class of 'intermediaries'. The increasing subjection of the peasants to the intermediaries reduced them to the level of serfs, their counterparts in medieval Europe.

UNIT 14 SLAVERY, WOMEN IN MARRIAGE AND FAMILY LIFE, CHANGING PATTERNS IN VARNA, JATI AND UNTOUCHABLES

STRUCTURE

14.0 OBJECTIVES

In this Unit we will deal with slavery, position of women in family and the changing pattern in Varna, Jati and Untouchability.

14.1 INTRODUCTION

The earliest Vedic literature comes from a background of pastoralism giving waygradually to agricultural settlements. The social philosophy enshrined in Rig Veda hadevolved into a new entity through a sustained philosophical discourse over a coupleof millennium and accumulated historic experience of the then society. The endproduct of the social evolution was found to be a plummet of rituals that promulgatedthe supremacy of ‘twice-born’ and protected the hierarchical social structure.

Thiscreated a lot of dissent in the lower end of the social hierarchy. Buddhism andJainism appeared in the mean time as alternatives to the hierarchical and nonegalitarianideology and practice of Hinduism. The questions about caste and supremacyof Brahmins appear quite frequently in the Buddhist and Jain texts. This suggests thatthis was a major social problem and philosophical pre-occupation of the time. Theearly Buddhist literature suggests a more settled agrarian economy and an emergingcommercial urban economy.

The Mauryan period (4th and 3rd century BC) saw thedevelopment of an imperial system based on an agrarian economy. Subsequent fivecenturies saw a series of small kingdoms ruling in various parts of the subcontinentand at the same time a tremendous expansion in both internal and external trade.These changes brought several changes in the social and cultural spheres. In this unitwe will study some of the major changes in the social sphere. We will start thisdiscussion from the slavery and marriage--the most elementary form of social institutions, and then we will discuss gender relationship in a conjugal life, which is the foundationof family and proceeds to discuss the cultural dynamism of socialreproduction. In the end we will cover wider social categories such as Jati, Varna and untouchables.

14.2 SLAVERY IN INDIAN CONTEXT

In ancient India slaves were a matter of significant considerationand that is why they were provided enough food and clothes by theirmasters. Their condition was far superior to that of their counterpart inEurope and other countries. The sources, be it literary or legal innature sufficiently focus on a contradictory picture so far as theirstatus or rights are concerned. On one side if legally a slave had noright even on his own body, quite apart from other rights, he wastreated like a chattel, as a property of the house equivalent to master'soxen, buffalo, gold and silver, garments, sandalwood houses, treasuresetc. while on the other hand Apastamba laid down that the householder must have to provide food to the slaves even he along with hiswife or his children might remain hungry in want of food. Kautilyaalso confirms the similar ruling

that the treatment of slaves needed tobe good and if a master ill-treated his slaves the state should punishhim.

Similarly, Ashoka in his Rock Edict IX ordained that allpeople should treat their slaves with sympathy and consideration.While Manu mentions that a slave, his wife and his son had no right toproperty of any kind. Surprisingly, they did not come across anymajor change so far as their status in the society during early medievalperiod was concerned as the literature of this period speaks in thesame tone. In this regard, Medhatithi while making a commentary on*Manusmrti* holds that a slave was merely fed and clothed. Their actual status gets exposed in the documents of *Lekhapaddhati* and referencesof *Trisastisalakapurusacharita* which clarify that the slaves werebeaten like mules, bear very heavy loads, endure thirst etc.

However,Yajnavalkya and Narada while allowing them property rights seemsto indicate that the status of the slaves depended upon the nature oftheir work, capability, age and most probably on the nature of theirmasters during their respective period. Hence in the present chapter ahumble attempt has been made to throw light on the social and economic status of the slaves during the period understudy.

14.2.1 Social Position

In Indian society the slaves used to enjoy a satisfactory attitudeas is indicated by the statement of Manu where he asks the master totake food after taking by slaves. It seems that in principle thisconsideration was expected from the masters, however, in practice itdepended upon the behavioural conduct of their masters. From the*Jatakas* it looks that slaves in India were treated as members of a family. Some facilities were also provided to them for learning,reading and writing and training in some art and craft. But on the otherhand in case the slaves stole the articles of their master their limbswere chopped off. Similarly, Manu also holds that the master couldbeat his slave with a rope or stick. It shows that they wereconsidered as the property of their master like animals, houses, fieldsand gold. Thus, in principle, they were deprived of their legal right tooppose the inhuman behaviour and torturing by their

masters/mistresses. A slave's witness was also not considered trustworthy.

What is significant to comment is that there were no checks andbalances against the ill-treatment of their masters. However, theMauryan period do witness some changing trend in this context.Kautilya being a rational thinker makes provision of punishment to bemade by king if a master shirks to provide some short of socialsecurity to the slaves.

In later Gupta period, their status in master's family inparticular and society in general depended upon the nature of theirmasters. The sage Kanva in *Abhijnanashakuntalam* advises Shakuntalawhen she was going to her husband's home that 'You should behaveaffectionately with *dasa-dasis* in royal palace'. Thus it reveals thatslaves generally did not face bitter treatment by their masters.However, the social ethics of the period lay stress on the due apathyfor slaves. The *Sukaraniti,* while making a statement regarding fortunes of someone includes slave among nine things, a faithful wife,virtuous progeny, useful science, honestly earned money, a goodfriend, sincere male and female slaves, a handsome body and abeautiful home. It adds that a noble king was regarded as great sourceof delight to the lay community and consequently deserved properattention. The occurrence of the names of five female slaves with theimage of their master Prapapadhavala on Tilotha inscription indicatesthat slaves received kind treatment at the hands of their masters.

Manasollasa also advises that slaves should be properly protected, fedand nourished and also be honoured through the bestowal of gift ifmasters wish to accumulate merit in this and for the next life. Thelaw of the period also expected to place slaves at an important place inthe house. It referred that punishment be given to errant slaves as fora wife, son, sister, pupil, daughter in law and younger brother andthus, they could be beaten with a thin cord or a stick always on theback and never on the head. A transgressed man was liable to bepunished like a thief by the king.*Agnipurana* also confirms theabove view by referring that a man should chastise his wives, sons,slaves, pupils and brother (by blood) with a thin cord or a stick ofbamboo on the back and not on the head, a transgressing owner shouldbe punished like a thief.

Bilhana testifies the performance offriendly relations between masters and slaves by showing beautifuldamsels playing with their slaves.

Nalachampu, talking in thesame context tells about the rewards given by the masters to the *dasis* (female slaves) showing a high social status of women slaves.Medhatithi commenting on *Manusmrti* asked that the master shouldnot actually beat the slave with a rope or a staff. What was supposedto be ensured by the master that required keeping the slave in strictdiscipline? Such views of Medhatithi, in fact, intends to clear that themaster generally remained sympathetic towards slaves. The feudal warfares and foreign invasions while playing adecisive role in deteriorating the economic condition of the commonman during early medieval period adversely affected the moralstandards of the society. As a consequence the social status of theslaves in the family as well as in the society got affected.

From the*Lekhapaddhati* an amazing scene emerges wherein a Rajput girlfalling at the feet of a merchant and begging to be kept as a slavetestifies the similar type of deterioration in the social values. It isstated that at the *chatusapatha* of the city and with the knowledge ofthe people of all the four Varnashe agreed upon to accept her as aslave girl. The same case though recorded the fact that violentlyopposed as the earlier *Smrti* rule did not allow a man reducing toslavery people belonging to castes higher than his own. Thus it isworth noting that *Lekhapaddhati* supports the deteriorated socialstandards of the society in regard to emerging values to slavery duringthe period under review. The legal injunctions and social ethics wereadhered to only by a few masters and therefore, the instances of conviviality between masters and slaves quoted above were found lessin comparison to the instances of cruelty and oppression of slaves.

The position of slaves in general life was not in any way betterthan that of domestic animals. Sometimes they were intentionallymarked with some signs in order to ensure their identity as is testifiedin *Kathasaritasagara* which refers that the foreheads of some of theslaves were branded by iron with a shape like dog's foot. Evenderogatory expression for son or daughter of a slave girl was usedwhen someone wanted to abuse the other in a contemptuous sense.

People in general did not have any sympathetic attitude on themiseries of a slave as the *Dhurtavitasamvada* gleans on the fakeweeping of a slave girl, which was born out of nothingness and isdifficult to cure. The usual

picture of a slave girl was of droopinglimbs fatigued with doing all the work. The slaves remained incomplete observation of their masters. They could be sold, gifted andeven deputed by them. The *Mrichchhakatikam* seems to testify theirsimilar position when it quotes a statement of a slave who addressingto his master says, "Undoubtedly my body is completely under you butmy character and conduct is out of your jurisdiction".

In spite of hard work done by slaves, they could not ask forwages or salary. The law works of the period make it clear that aslave was entitled to nothing but bare maintenance.*Medhatithi* alsoimplies that a slave is merely to be fed and clothed. In this regard the documents of *Lekhapaddhati* refers that a slave girl is to be paidby her owner according to his capacity only with food, clothing andfoot-wear and adds that she will demand nothing more. From anotherdocuments we learn that the highest, which a slave faithful to hisduties could expect, was to receive, without having to ask for it, food,clothing, and the like according to the custom, country and times andalso as per the capacity of the owner.

Thus what is significant to say that though slaves as a class wereaccursed, ill-treated and abhorred by the society during later Gupta Period, the better among them were not found wanting in the virtuespracticed by the people of upper castes. It was most regrettable thatalthough the more fortunate masters admired the virtues of slaves theywere blessed with, they could do little to improve slave status, andtheir living conditions in the society of their times.

14.2.2 Economic Position

The economic status of the slaves in later Gupta and early medieval India in somecases appears to be improved to some extent. Earlier, a slave legallyhad no right even on his own body along with other aspects. He waslikely to be chattel as his master's oxen, buffalo, gold and silvergarments, sandalwood, houses, treasures, etc. In the Buddhist period,slaves were hardly allowed to own property. But in Kautilayan period,certain concessions were granted to them in the same context. Kautilyawhile referring to similar view point allowed that a slave, apart

fromserving his master was eligible to earn money in his spare time andthat he was also legally allowed to be the sole heir to his father'sproperty. However, if a slave left no heir, his property went to hismaster.

B.N.S Yadav a noted historian dealing with early medievalperiod, has rightly made it more clear that in spite of different degreeof servitude and the qualified property rights granted to a few type ofslave, excessive dependence and devoid of property had normally beendeemed as the outstanding marks of the status of slavery in the*Mahabharata* and *Dharamashastra* tradition from about the 2nd century B.C. to the 6 century A.D. It appears, thus, that only a fewslaves were allowed property rights while others were deprived of such rights. It is significant to mention here that the right to propertyconceded to them by Kautilaya was withdrawn by Manu as hecategorically ruled out that a wife, a son and a slave had no right toproperty of any kind. While going ahead, this *smrti* even clearlyordained that whatever money they earned belonged to whom theybelonged. The same *smrti* further refers that slaves being entirelydependent on their master, should not be allowed to indulge theirfancy and squander their wealth according to their will without themaster's sanctions. The above examination in this way concludes thatin general the economic status of slaves was more or less same as itused to be except in some cases.

The law givers of the period under study generally opposed theproperty rights of the slaves as testified by the references of Vishnu,Katayayan, Brihashpati,Narada and *Matsayapuran* who whileopposing the property rights of the slaves gleaned that slave beinghimself a property of master, therefore, his property also belonged tohis master. *Matsayapuran* while justifying the authority of the kingover the state refers that it was due to his last deeds (*karmas*) andpenance of previous birth that a king got prosperous state andalso enjoyed slaves. However, Katyayan while making some liberalstatement allowed a slave to take debts for the welfare of his master'sfamily without the master's consent, but the master had to repay the loan and not the slave.

It is further clarified that though the slavecould not own assets during his stay at his master's house, yet themoney which he had obtained by selling himself belonged to him.*Medhatithi* while blocking all the

possibilities for the slave to ownproperty, intends to make it clear at least that a slave was merely fedand clothed. But it appears that the rules promulgated by theclassical thinkers like Manu and Yajnavalkya were in practice.

Commenting for instance on *Manusmrti* that a wife, a son and a slavehad no right of property of any kind, *Medhatithi* argued elsewherethat slave too, had proprietary rights over his own property.Yajnavalkya circumscribed the right of the son of a female slave keptby a *sudra*to own property. But *Mitakshara* seeking to minimize therigour of earlier law observed that a son begotten by a female slaveshould be entitled to a portion of property of the *sudra*father if thelatter would like it to be so. At the death of the father, the brothersshould make the slave a partner to the extent of half of the share; ifthere were no brother, he might take the whole property provided therewere no daughters and grandsons of the master surviving. Exactlythe same view was expressed in the same context in the *Agnipurana.*Narada also agreed upon over the right of property to a slave like thesons of his master, who saved the life of his master. The *Avasyakacurni* referred that after the death of master, his slave becamethe owner of his property.

To sum up it may be said that the socio-economic status of slaves during the period of present study was generally pitiable. Although the slaves had some legal rights and assurance of social security along with some property rights yet they did not enjoy the rights and privileges of free citizenship. A slave's property belonged to his master, he could not take loans in his personal name, yet some thinkers allowed him to do so, his evidence was considered valid in suits but his offspring were addressed with contempt and he was subjected to various types of corporal punishments and insults. Since the slave was taken as equivalent to household objects, it is easy to imagine that his constant association in family could not but have created in a sense of more humane consideration among owners.

Check Your Progress 1

1)State the views of Yajnavalkya and Narada on slavery.

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2) State the views of different thinkers on property rights of slaves in Ancient India.

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14.3 THE RELATIONSHIPS: FAMILY LIFE OF WOMEN

A close look at the Buddhist and Jain literature gives some glimpses of inter-personal relationships and gender relationship in conjugal life. There existed conjugal love and affection between husband and wife. Sometimes, however, the wife's devotion to her husband arises out of duty rather than love. Still, a woman is valued by her husband more than by her other relatives. In Sigalovada Sutta, it is said that husband should treat his wife with respect, courtesy and faithfulness. In turn, she should be hospitable and chaste, skilled and diligent at work and should safeguard the property of her husband. In another place Buddha addressing young women about to go to their husband's house says: (1) A wife rises earlier than her husband and is the last one to retire, she willingly helps her husband, carries out his wishes and speaks with him affably. (2) She honours, reveres and respects all whom her husband reveres, such as his parents, samanas, and Brahmanas. (3) She manages the household and those who live in it. (4) She is deft and nimble in the crafts of her husband's household and she knows how to get the work done and how to do it herself. (5) She safeguards her husband's property. Only such a wife, the Buddha adds, can be born a Deva after death.

In another instance, Buddha advises Sujata, the unruly daughter in law of Anathpindika who comes from a rich family. He says there are seven types of wives, some approved and others not so. The first is 'the slayer' (vadhaka) who is pitiless, corrupt and neglect the husband at night, and

passes her time with others. The second type is 'the robber' (Chorisama), who takes his money and longs to impoverish him. The third is 'mistress-like wife' (ayyasama) who is lazy, indolent, expensive to maintain, who loves gossip and talks with strident voice. She lessens her husband's zeal and industry. These three are harsh and distrustful, and live in the hell after their deaths. But, the fourth type is 'the mother-like wife' (matusama), who has sympathy for her husband, cares for him as she would for an only son, and safeguards her husband's property. The fifth type is 'the sister-like' (bhaginisama), who respects her husband as she would an elder. The sixth type is 'the companion-like' who is full of joy on seeing her husband, just as one meeting a friend after a long time. The last type is 'the slave-like wife' (dasisama), who does not fear to take beating from her husband and is calm, patient, and obedient. These wives are virtuous and will go to heaven after death. Interestingly, Sujata after listening to Buddha's deliberation chooses to be a 'slave-like wife'.

Now let us turn to the Hindu texts to see what they have to say about personal relationship between married couples. In Abhijnanasakuntalam, the admonition addressed to the king by the sage Kanva's disciple, we have echoes of rules in Smritis deprecating long residence of the wife with her paternal relatives and admitting the husband's complete authority over her. Kanva's own summary of the duties of a wife, addressed to Sakuntala on the eve of her departure for her husband's place, is based on the rules laid in earlier Smritis and Kamasutra. In the character Dhuta, wife of the hero in the Mrichchakatika we have a typical instance of the good wife described in Smritis. The belief in the extraordinary powers of the devoted wife (pativrata), which is expressed in the Mahabharata and other works, is reflected in a story of the Dasa-Kumar-Charita.

The attitude of high-born ladies is illustrated in another story of the same work, where a woman, repudiated by her husband, declares it to be a living death for women of high birth to he hated by their husbands, for the husband alone is the deity of such women. Still another story shows how the qualities of economic housekeeping and absolute devotion to the husband were highly prized among wives. Following is a description of an ideal wife based on various Smritis and Kamasutra. Vatsyayana draws a picture of the good wife and may be taken as to be a faithful reflection

of real life. The picture exhibits those qualities of service and self-restraint as well as sound household management, which have remained the hallmark of Hindu, wives down to the present day. The wife is supposed to devote herself to her husband as though to a deity. She should personally look after the comforts of her husband. She shares her husband's fasts and vows, not brooking into refusal. She attends festivities, social gatherings, sacrifices, and religious processions, only with his permission. She engages sports approved by him. She avoids company of disreputable women, shows him no signs of displeasure, and does not loiter about at the doorstep or in solitary places for a long time. She is not puffed up with prosperity, and she does not give charity to anyone without informing her husband. She honours her husband's friends, as is their due, with gifts of garlands, unguents, and toilet. She serves her father-in-law and mother-in-law and abides by their commands. When in their presence, she makes no replies, speaks few but sweet words, and does not laugh aloud. She engages servants in their proper work and honours them on festive occasions. Above all, when her husband is gone abroad she lives a life of ascetic restraint: she gives up wearing all ornaments excepting the marks of her married state: she engages in religious rites and fasts: she acts as bidden by her superiors: she does not go out to visit her relations except on occasions of calamities or festivities: when she visits them, she does so only for a short while and in the company of her husband's people. When her husband returns home, she goes forth immediately to meet him in her sober dress, and then she worships the gods and makes gifts.

Apart from attending to her husband and his parents, relations, as well as his friends, the wife has complete and comprehensive charge of the household. She keeps the household absolutely clean, adorns it with festoons of flowers, and polishes the floor completely smooth. She looks after the worship of the gods at the household shrine and the offering of balioblations three times a day. In the garden attached to the house she plants beds of various vegetables, herbs, plants, and trees. She keeps a store of various provisions in the house. She knows how to spin and weave, how to look after agriculture, cattle-breeding, and draught animals, how to take care of her husband's domestic pets and so forth. She frames an annual budget and makes her expenses accordingly. She

keeps daily accounts and makes up the total at the end of the day. During her husband's absence she exerts herself in order that his affairs may not suffer. She increases the income and diminishes the expenditure to the best of her power. In case the woman has a co-wife she looks upon the later as a younger sister when she is older in age, and as a mother when she herself is younger.

The rule of life for the virtuous wife sketched above from the smritis and the Kamasutra appears to have been generally followed in the Gupta Age. Again, according to Katyayana and Veda-Vyasa, the wife is to be associated with the husband in the performance of his religious acts, but all acts done by her to secure her spiritual benefit without his consent are useless. On the other hand, husband must maintain his wife. Some of the texts even prescribe penance for a husband for deserting a faultless wife.

Interestingly, we mark a striking similarity in Buddhist and Hindu sources on the interpersonal relationship in a conjugal life. The woman was mostly responsible for the household management and subservient to her husband. Unlike the Vedic period, women no longer enjoy equality with their husbands. They are also marginalised in other spheres of public life. The basic framework of the social structure thus can be inferred to be patriarchal, though there are rare instances of royal women acting as sovereigns. In Orissa, several queens of Bhaumaka dynasty occupied the throne in the absence of male heirs. Hence, it is hard to generalise for the whole subcontinent.

The impression that one gets about women's position in society during 7^{th} century A.D is that ofprogressive decline. The law-books provide for the marriage of women at an early age, prepubertymarriage being preferred. Formal education was denied to them. Women and propertycame to be bracketed together with adverse consequences for women's status. They weregenerally denied property rights. However, in the case of widows there was some improvement in proprietary rights. It may be pointed out that the provision for stridhana (which literally means wealth of women) actually did not amount to much, for it did notextend beyond rights to personal jewels, ornaments and gifts. The joint references to womenand sudras in contemporary literature such as the Brihatsamhita amply demonstrate theplight of women. They were debarred from various sacrifices and ceremonies. The practice ofSati (or self-immolation by

wife on the funeral pyre of her dead husband) gained socialacceptance during this period. The earliest references to sati date to the later-Gupta periodand the times of Harsavardhana. The change of women's Gotra upon marriage can be datedto the period after the fifth century A.D. This constituted an important development becauseit marked the curtailment of their rights in their parental home and symbolised the finaltriumph of the patriarchal system of male dominated society.

14.4 INSTITUTION OF MARRIAGE

In the Rig Vedic times, the most ancient of the Vedic traditions, the woman enjoyed an exalted position and she was on perfect equality with her husband. The wedding hymn in Rig Veda narrates the marriage of Surya, the Sun-maiden with Soma. The hymn metaphorically describes the bride and the groom, with all rituals, formulas and sayings. The marriage becomes a visible reality when the parents give the bribe the farewell blessings. At least eight different forms of marriages were recognized. There was a distinct sanction for the remarriage of widow. Men of one caste married widows of another caste (Atharvaveda V: 17-18) and marriage of near-blood was objected for third and fourth generation. But as we move into later Smriti period, we find more and more restrictions to be included and the system becomes more rigid and static.

The ascendancy of rival faiths such as Buddhism and Jainism resulted in strong brahmanical reaction. As Buddhism and Jainism looked more reformists, the Brahmanic movement of counter-reform also gained strength. This Brahmanic reaction to the reformist alternative religious philosophy was successful by integrating the foreigners who entered the Indian society from north and northwest. The orthodox brahmanical society strategically conceded to these powerful ruling classes the status of Kshatriyas.

In the meanwhile, the resurgence of trade and industry especially during Gupta rule raised the standard of living of many social groups and urbanization took place in all parts of the country. More and more groups were allowed to hold better social positions in the structural matrix of Brahmanic social order. The social groups who gained new social

positions now enviously guarded them by following the social customs rigidly. The rules of marriage and social interaction became more restrictive and stringent. Thus, on the whole, during this period albeit the philosophical challenge from Buddhism and Jainism, the social rules did not depart much from their earlier practice.

Like Smritis, Vatsyayana contemplates marriage as being normally arranged by the parents or other guardians of both the parties. There are only four forms of marriages recognized in this period out of original eight. The four types of marriages recognized were: Brahma, Prajapataya, Arsha, and Daiva. The parents and relatives, in usual circumstance, would search for a match. Occasionally there was a ceremony for selection of the bride. The parents or guardians of the bride usually took the advantage of occasions of festivities and social gatherings to show the bride to the groom's selection party. Thus, both bride and groom were not involved in the selection process; it is parents or elders in the family who took the decision.

However, Vatsyayana mentions in special circumstances, a young man can on his own win the girl of his choice by courtship or even by trickery and violence. He though discusses Gandharva, Paisacha and Rakshasa forms of marriage in these special circumstances, yet they are not favoured. The literature in Gupta period contain repeated references to Gandharva marriages between the leading characters, but, these are concerned in general with ancient kings, or heroes, or with fictitious character of princes and nobles. The popular attitude on this point is well expressed by Kamandaki to the heroin of Malatimadhava. She says that generally father as well as destiny has authority over the disposal of maidens, the contrary examples of Sakuntala marrying Dushyanta, Urvashi marrying Pururavas and Vasavadatta marrying Udayana involve rashness and therefore do not deserve to be followed. In historical example, princess Rajyasri of Thaneswar, her father, king Prabhakaravardhan, arranged her marriage. The mother meekly acquiesced the choice with the observation that 'the father is the judge in the bestowal of the daughter'. Hence, the patriarch or elder male members of the family mostly took the decision of the marriage. The opinion of the mother in such matter played a marginal role. Any role of the bride and groom in such a context seems farfetched.

As every social group consciously guarded their social positions, the instances of marriage between different groups reduced considerably. The Sastras now made rules where marriages in the same caste were preferred. Vastyayana in his Kamasutra declares that a man uniting himself in love according to canonical rites with a virgin of the same Varna obtains the blessings of progeny, fame, and public approval. The contrary practice of making love to girls belonging to higher Varnas as well as to married women is forbidden. The intermarriages between different Varnas were hedged around with even greater restriction in the society of Vatsyayana's time than those contemplated by Smritis. According to Vatsyayana, not only is marriage in the pratiloma order absolutely forbidden, but also marriage in the anuloma is put on the same low level as union with harlots.

The effect of stringent marriage rules and the prescribed punishment and social ostracism was shed upon the age of the marriage. To exercise the absolute control over the marriage, the growing patriarchy in the society adopted rules that favoured early marriages. To keep the purity of the social groups and thereby preserving the social status of the group, now women became the symbol of social prestige. Several texts of this period thus put forth rules to maintain the social purity by stringently regulating marriage options. Though, there was some space provided for the boy for any aberrant behaviour, the control over girls was absolute. Some texts made it compulsory to marry the girl before puberty. According to Vishnu Purana the age of the bridegroom should be three times that of the bride, but according to Angiras the difference in age should be considerably less. Hence, though there is no agreement by different authors on the age of marriage of girls, but it can safely be said that the marriageable age of the girl had considerable gone down in this period in comparison to the earlier Smriti period.

The ceremony of marriage was as ever. The stepping round the fire, offering of grains as sacrifice, utterance of some promises by the bride and bridegroom by way of canonical hymns were essential rites. The parents usually took various precautions for the happiness of the daughters. Before selecting a suitable bridegroom, they matched the gana, i.e., classes of both agree or not. All men belonged to three ganas viz., deva-gana (divine class), nara gana (human class) and rakshasa gana

(demonical class). A married pair of like ganas has the best constancy. Deva and nara ganas make middle combinations; deva and rakshasa inferior; nara and rakshasa are opposed or inimical. A boy or girl's gana is determined by the rasi (sign of the zodiac) and nakshatra (constellation) under which she or he is born.

The Smriti law of pre-Gupta period requires the widow as a rule to live a life of strict celibacy and self-restraint, though Brihaspati recommends, as an alternative, that she should burn herself on the funeral pyre of her husband. Literary references show that the custom of sati was extolled by some authors, but strongly condemned by others in the Gupta period. But a wide spread prevalence of this practice in the Gupta Age is disproved by the complete silence of the observant Chinese travellers on this point and frequent references to widows in the Smritis and other literature. On the whole, we may infer, on general grounds that widows in the Gupta Age, as in the earlier times, usually live the chaste and austere life prescribed by the Smritis. But the remarriage of widows, and of other women, though gradually coming into disfavour, was not absolutely forbidden.

Thus, on the whole, the social and domestic life in this period continued from the earlier period with the following restrictions:

1) No intermarriage, inter-dining and exogamy.

2) Ancient eight forms of marriage were falling into disuse. Only the first four were recommended and supported viz., Brahma, Daiva, Arsha, and the Prajapatya.

3) Early marriage of girls was now insisted upon.

4) Remarriage of widows was still in use, though regarded with disfavour since Manu.

5) Of the 12 kinds of sons, only two were recognized, viz., aurasa (legitimate) and dattaka (adopted).

Now, looking at the Buddhist sources one does not notice any remarkable difference from the Hindu sources on these matters. One finds various forms of marriages and unions mentioned in the Buddhist texts. There are ten forms of unions mentioned in one place. These are:

1) When woman is bought with money (dhanakkhita).

2) When woman stays of her own accord with a man (Chandavasini).

3) When a man gives her money of union (bhogavasini).

4) When a man gives her clothes (patavasini).

5) When an ablution of water is performed (odapattakani).

6) When she removes her head wear (obhatacambata).

7) When she is also a female slave (dasi nama).

8) When she is also a servant (kammakari).

9) When she is temporarily with a man (muhuttika).

10) When she is captured in a raid (dhajahata).

This list of unions throws adequate light on prevailing social situation within which these relationships took place. But, the most acceptable form of social union of both sexes was in the form of marriage, which is referred in many texts as avahavivaha. Avaha literally means the leading of the bride and vivaha leading her away by bridegroom's family. In this form of marriage, the families of both parties were mostly unknown to each other. The marriage was arranged through an intermediary.

It is the status and position in the society of the families on both sides, which are of the importance. Presumably, the families must be equal. However, when the marriage is being arranged, the rites and practice held the bride's family to be superior. The individual opinion of the girl and the youth like the Hindu practice is absent though compatibility is suggested by imputation of identical qualities of both parties.

One also finds reference to marriage practices in non-Buddhists in Buddhist literature. Vinaya Pitaka mentions five types of Brahmans in relation to marriage. The first type of Brahman is Brahman brahma-sama, celibate like God. Second type isBrahman devasama and the third Brahman mariyada, those who follow traditions. The second and third types must marry only Brahman women and with a ritual in which water is poured on woman. The fourth type, those who break traditionsBrahmansabbhinnamariyada; and the fifth is the Brahman outcaste or Brahmanchandala. The fourth and fifth types of Brahman marry both Brahman and other woman. The ceremony in the last two types is through pouring of water as well as through buying and selling. All types of Brahmans irrespective of their behaviour are described as pure in lineage and also versed in the Vedas. It is obvious that only the first three types of Brahmans carry some approval. The last two are disapproved of but do not lose their caste affiliation.

A comparison of both Hindu and Buddhist practice thus suggest close resemblance. Both the societies held patriarchal attitude to arrange marriage, where the opinion of the parties to the marriage held no or marginal importance. The compatibility in Hindu system was ensured by astrological and caste background. To the contrary, however, in Buddhist practice, the economic background and status of the family ensured compatibility between husband and wife. Hence, in both the societies marriage led the foundation for a patriarchal family. The interpersonal relationships within the marital bond favoured patriarchal ideals.

Check Your Progress 2

1) What are the duties of a woman towards her family in Ancient India.

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2) How the position of women changes from early ancient period to late Gupta period.

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14.5 FLUX IN SOCIAL PREFERENCES: VARNA, JATI, UNTOUCHABLES

Our information on the Varna concept comes largely from the Dharmasastras, and description of it in those sources is not always corroborated, and occasionally even contradicted by other sources. The concept of Varna is seen to be closely associated with the concept of dharma, understood in sense of universal law. Dharmasastras state that the society was made up of four orders, and later a fifth order was added. The first four were the Brahman, Kshatriya, Vaisya and Sudra. The fifth order was later identified with untouchables. This schema of social structure is traced from the purushasukta, the tenth mandala of Rig Veda. This tenth mandala is believed to be a later addition. The reference to

Kshatriya, Vaisya and Sudra as a social category is only found in this last mandala and is conspicuously absent in other parts of Rig-Veda.

In the later period, Manu provides a list of Varnas and occupations associated with them. Though other Hindu sources recognise a hierarchical social composition of the contemporary society, yet there is no sufficient evidence to suggest they resembled the Varna system described by Manu. Had the Varna system functioned as a superimposed hierarchical layer of social groups, the distinction between the four main groups and other permutation and combinations would have remained very clear and distinct. What is curious however that while the identity of the Brahman and the untouchable is generally clear, references to the intermediate groups often appear to be of a rather confused, if not of a contradictory kind.

In large number of instances provided in the non-Dharmasastra sources one finds a contrary situation. Buddhism is viewed as a system, which was more sympathetic to oppressed groups and it provided an economic, political, and social solution to the caste oppression. In Buddhist literature no one is ever described as belonging to Brahman Varna,Kshatriya Varna, Vaisya or Sudra Varna. It seems to have remained a theoretical concept without any parallel in actual practice. On the other hand, the terms jati and kula appear in concrete situations quite frequently. What really seems to matter the Buddhists were the kula and jati divisions.

The vinaya pitaka states that there are two jatis: the low jati (hina jati) and the excellent jati (ukkatta jati). Buddha also accepts this bipartite division, but at several instances refuted the relation of jati in the matter of spiritual attainment. In doing so, Buddha though recognises the importance of jati and gotra in social interaction, but rules out their extrapolation to the spiritual field. In purana kassapa, a distinct Buddhist text, six social divisions are conceptualised based on occupation, trade, caste and sect affiliation. They are:

1) Kanhabi jati- Black jatis mostly comprising of those who follow a bloody trade, i.e., mutton butchers, pork butchers, fowlers, hunters, fishermen, robbers etc.

2) Nilabhi jati- Blue jatis comprising of Bhikshus.

3) Lohitabhi jati- Red jatis which includes Jainas.

4) Halladdabhi jati- Yellow jati, which includes white robbed householders or gahapatis.

5) Sukkabhi jati- White jati comprising of Ajivikas and their followers.

The scheme not only provides this broad structure of the society in terms of different colour groups, it further resolute low jati group into a hierarchical scheme of occupational groups. This textual resolution of the low jatis into occupational groups starting with pukusuka should be taken to indicate an order of lowness. This in overall character seems as a forerunner to Manu's scheme. The Buddhists believed that good behaviour and wisdom being rewarded with rebirth in the high kulas of Kshatriya and Brahmanas and Gahapatis. The opposite characteristics on the other hand would result in rebirth in the low kulas of Chandala, nesadas, vennas and pukkusas.

Rhys Davids drawing conclusion from the recruitment practice and principle of Buddhism proves that the jati was not a determining criterion in Buddhist Sangha. But, in practice the egalitarian principle of Buddhism could not influence beyond life in Sangha. Other section of the society and the social interaction however still followed the discriminatory practice of the caste system. Rhys Davids believed that "had Buddha's view own the day, the evolution of social grades and distinctions would have developed differently and the caste system would never have been built up". Oldenberg, on the other hand, has pointed out that despite the fact that Buddhist theory acknowledged the equal rights of all persons to be received into the Sangha, the actual composition of the Sangha suggests that it was by no means in the keeping with the theory of equality and that a marked leaning to aristocracy seems to have lingered in ancient Buddhism. Similarly, Fick states that the development of caste was in no way broken or even retarded by Buddhism. Charles Eliot in his book Hinduism and Budhism also suggest that while Buddha attacked both the ritual and philosophy of the Brahmans, so that after his time the sacrificial system never regained its earlier prestige, he was less effective as a social reformer. Buddhism did oppose the Brahministic ritualism, but did not preach against the caste system as whole. E. Senart in his book 'Caste in India' also writes that the conflict between the Buddhists and Brahmans was primarily a

struggle for influence, and that there was nothing in the Buddhists stand which aimed at changing the entire caste system.

Some of the historical evidence in the Gupta Age points to departures from the earlier Smriti law on Varna and Jati. An inscription of 5th century AD refers to two Kshatriya merchants living in a city in the upper-Ganga basin, while another inscription of the same century mentions of a body of weavers from Gujarat as having gradually adopted various other occupations in their new home in Malwa. This social dynamism is proved by a number of authentic instances of Brahmans and Kshatriyas adopting the occupations of the classes below them, and of Vaisyas and Sudras following those of the classes above them. This social dynamism needs to be understood in the economic and political dynamism of this period. The economic expansion was integrally related to the social integration process. The village economy grew from subsistence production stage to produce social surplus to support trade and commerce. The imperial polity integrated vast regions into a single political unit allowing different people, skills and resources to interact. The land grant to kshatriyas expanded the agricultural practice to nook and corner of the country. The spread of Brahman groups stretched brahmanical nuclei to foster systematic acculturation in such regions to the Sanskritic mould. The social groups enjoying different grades of social status were integrated into the economy and regional polity. The emergence of small kingdoms at the end of Gupta period thus created many groups to claim Kshatriya status. The economic opportunities lured some Brahmans to take up trade. New technology and craft activities provided new opportunities to Vaisyas and sudras. These opportunities of economic interaction created new rules of social regulations. As we have discussed in the earlier section, the rules of inter-marriage became more rigid. Though, some examples of intermarriages between Varnas (both anuloma and pratiloma--Varnasankara) can be inferred from the literary sources, yet they seem to be confined to the social and economic elites. On the whole, the hierarchical model of Varna system could not be rigidly enforced in practice, since it would require a static society for proper functioning.

However, Varna order was an ideal order and there were many groups in society whoseVarna identity could never be determined. Secondly, it was

assumed that the Varnas wouldperform their duties; in reality, they may not have done so. These suggest that real societywas different from the ideal society and this was also recognized by the Brahman writersof the Dharmasastras. They therefore tried to determine the status of various castes or jatis by giving fictitiousexplanations of their origins. They suggested that various jatisor groups originated through varna-sankara or inter-marraiges between various Varnas. The various foreign ruling families of the pre-Gupta period, of Greek of Siythian origin, were given the semi-kshatriya status (vratya Kshatriaya) because they could not beconsidered to be of pure Kshatriaya origin. Similarly, fictitious origins were thought of fortribal groups who came to he absorbed into the Brahmanical society.

The Dharmasastras also speak of apadharma or conduct to be followed during periods ofdistress. This means that the Varnas take to professions and duties not assigned to themwhen they found it necessary to do so. In matters of profession also the Dharmasastras thusrecognized that the real society was different from their ideal society. These changes ofcourse originated much before the Gupta period, but with the spread of the Brahmans todifferent parts of India, the social structure came to be very complex. As the new society had toabsorb many social groups thus the actual social structure came to vary from region toregion, although certain ideas were common to them:

The Brahmanas came to he recognized as the purest and therefore the highestVarna.Since they were associated with Sanskritic learning and performed priestly functions, they came to be closely connected with royal power. Even when the rulers weresupporters of Buddhism, Jainism or a particular religious sect, they continued topatronize Brahmans, particularly those of high learning. This remained one of themajor reasons for the economic prosperity and prestige of the Brahmans.

Ideally, although there were four Varnas, there were various groups who were kept outof this scheme. They were the antyajas or untouchables. They were considered impure;even their touch was considered impure and their physical presence in areas wherehigher Varnas lived and moved was not allowed. The Chandalas, the Charmakarasand similar groups were considered impure and outcastes. Thus, in the Brahmnical order of

society, the condition of a number of social groups remained miserablethroughout.

The position of woman or higher Varnawas low. Although we hear of' personalitieslike the Vakataka queen Prabhavatigupta who wielded considerable power, not allwomen were so privileged. The Brahman texts set down norms which women wereexpected to follow and women were expected, in the family, to function mainly as anideal wife and ideal mother. In many Brahmana texts, women were even considered,for various reasons, to be of the same category as the Sudras. It is significant thatalthough Brahmans were given land grants regularly, we do not come across evidenceof land being given to Brahman women.

The Untouchables

The impure' castes or the untouchables had assumed a definite shape by the early Christian centuries. Nevertheless, they were numerically small. From around the 3rd century A.D onwards the practice of untouchability appears to have intensified and the number ofuntouchables registered a rise. Katyayana, a Dharmasastra writer of the Gupta period, wasthe first to use the expression asprsya in the sense of untouchables. Several new casteswere included in the category of the untouchables in the Gupta and post-Gupta times. Notonly hunters and some groups of artisans became untouchables but backward agriculturistswere also condemned to that status. By the turn of the first millennium A.D hunters, fishermen, butchers, executioners and scavengers appear as untouchables. Kalidasa,Varahamihira, Fahsien, Bana and others have given a vivid account of the social disabilitiesimposed on them. The Chandalas were only one section of the untouchables, although the lowest in the social ladder. Interestingly, a caste hierarchy emerged among the untouchablesas well. Contemporary literature describes them in very disparaging terms. Greed, impurity,untruth, theft, passion etc. are said to be their characteristic features.

It is difficult to explain the phenomenal growth in the number of untouchables during thisperiod and later. However, brahmanical and Buddhist sources suggest that most untouchablecastes were originally backward tribes. It has been argued that their backwardness andresistance to the process of acculturation and brahmanization may

have prevented them frombeing absorbed within the society and pushed them to the position of untouchables. Theymay have been dispossessed of their lands and made to settle outside the villages. Thecontempt for the backward people, at times in inhospitable tracts, on the part of theBrahmans and ruling elite and on occasions the former's opposition to the brahmanicalorder, thus, appear to explain the numerical growth of the untouchables and the practice ofuntouchability. In this context of the growing demand for labour the presence of theuntouchables as a depressed, dispossessed group of people was an enormous advantage to allother sections of rural society. The untouchables did not normally hold land, settled outsidethe villages and could not become peasants. They were condemned to menial jobs duringslack periods of the year and were available for work during peak periods of agriculturalactivity. The untouchables thus provided labour which the society required but were sociallycondemned and segregated.

Check Your Progress 3

1) What is Apadhdharma?

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2) Write a short note on untouchability.

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14.6 LET US SUM UP

In this unit, we saw the different patterns of marriages available to the society (made the gender relations quite complex), along with various aspects of slavery. In the section on Varna, Jati and Untouchability we sawthe changing patterns emerging.

14.7 KEYWORDS

Household Management: In the ancient texts refers to the task and the artof running day to day affairs of the householdaccording to certain canonical requirements. By theVedic times the householder or the Grahpati was acrucial pillar of the society, so, the task of runningthe household were now to be congruent with hisnewly emerging status.

Varnasankara: Intermarriages between Varnas (both anuloma and pratiloma).

Vratya-Kshatriya: Outcaste kshatriya.

Avahavivaha: Avaha literally means the leading of the bride and vivaha leading her away by bridegroom's family.

14.8 QUESTIONS FOR REVIEW

1) What was the condition of Slaves in Ancient India?

2) Discuss the changing nature of Marriage in the context of Varna and jati.

3) Explain the various forms of marriage in the specificity of Jati contexts.

4) Discuss the institution of Marriage as understood through various sources.

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14.10 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) Yajnavalkya and Narada while allowing them property rights seemsto indicate that the status of the slaves depended upon the nature oftheir work, capability, age and most probably on the nature of theirmasters during their respective period.

2)It is significant to mention here that the right to propertyconceded to them by Kautilaya was withdrawn by Manu as hecategorically ruled out that a wife, a son and a slave had no right toproperty of any kind.The law givers of the period under study generally opposed theproperty rights of the slaves as testified by the references of Vishnu,Katayayan, Brihashpati,Narada and *Matsayapuran* who whileopposing the property rights of the slaves gleaned that slave beinghimself a property of master, therefore, his property also belonged tohis master

Check Your Progress 2

1)Apart from attending to her husband and his parents, relations, as well as his friends, the wife has complete and comprehensive charge of the household. She keeps the household absolutely clean, adorns it with festoons of flowers, and polishes the floor completely smooth. She looks after the worship of the gods at the household shrine and the offering of

balioblations three times a day. In the garden attached to the house she plants beds of various vegetables, herbs, plants, and trees.

2) No intermarriage, inter-dining and exogamy; ancient eight forms of marriage were falling into disuse. Only the first four were recommended and supported viz., Brahma, Daiva, Arsha, and the Prajapatya; early marriage of girls was now insisted upon; remarriage of widows was still in use, though regarded with disfavour since Manu and; of the 12 kinds of sons, only two were recognized, viz., aurasa (legitimate) and dattaka (adopted).

Check Your Progress 3

1) The Dharmasastras also speak of apadharma or conduct to be followed during periods ofdistress. This means that the Varnas take to professions and duties not assigned to themwhen they found it necessary to do so.

2)From around the 3rd century A.D onwards the practice of untouchability appears to have intensified and the number ofuntouchables registered a rise. Katyayana, a Dharmasastra writer of the Gupta period, wasthe first to use the expression asprsya in the sense of untouchables. Several new casteswere included in the category of the untouchables in the Gupta and post-Gupta times. Notonly hunters and some groups of artisans became untouchables but backward agriculturistswere also condemned to that status