



Government of Karnataka

SOCIAL SCIENCE

(Revised Textbook)

8

EIGHTH STANDARD

KARNATAKA TEXT BOOK SOCIETY (R)

100 Feet Ring Road, Banashankari, 3rd stage
Bengaluru-85.

Preface

The Textbook Society, Karnataka has been engaged in producing new textbooks according to the new syllabi prepared which in turn are designed based on NCF – 2005 since June 2010. Textbooks are prepared in 11 languages; seven of them serve as the media of instruction. From standard 1 to 4 there is the EVS and 5th to 10th there are three core subjects namely mathematics, science and social science.

NCF – 2005 has a number of special features and they are:

- Connecting knowledge to life activities
- Learning to shift from rote methods
- Enriching the curriculum beyond textbooks
- Learning experiences for the construction of knowledge
- Making examinations flexible and integrating them with classroom experiences
- Caring concerns within the democratic policy of the country
- Make education relevant to the present and future needs.
- Softening the subject boundaries-integrated knowledge and the joy of learning.
- The child is the constructor of knowledge

The new books are produced based on three fundamental approaches namely.

Constructive approach, Spiral Approach and Integrated approach

The learner is encouraged to think, engage in activities, master skills and competencies. The materials presented in these books are integrated with values. The new books are not examination oriented in their nature. On the other hand they help the learner in the total development of his/her personality, thus help him/her become a healthy member of a healthy society and a productive citizen of this great country, India.

In Social science especially in standard V the first chapter deals with the historical, geographical, cultural and local study of the division in which learners live. Chapters on sociology, business studies and commerce are introduced in standard VIII as per the guidelines of NCF-2005. A lot of additional information is given through box items. Learners are encouraged to work towards construction of knowledge through assignments and projects. Learning load of memorizing dates has been reduced to the minimum. Life values have been integrated with content of each chapter.

The Textbook Society expresses grateful thanks to the chairpersons, writers, scrutinisers, artists, staff of DIETs and CTEs and the members of the Editorial Board and printers in helping the Text Book Society in producing these textbooks.

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Foreword

The text book which is being prepared for the high school students has come out differently and distinctively. This book has come out with unique features while compared with the previous texts that have appeared in the Text book. It should be noted that the 8th standard text book has incorporated Political Science, Sociology, Economics and Business Studies along with the traditional subjects like History and Geography as per the guidelines of NCF-2005.

We have made all the attempts to make this text easily understood and read comfortably, since this is a project of the Government oriented towards the common man. The present text has included the creative curriculum in order to discourage rote-learning in the system. We have designed the texts as it should correlate with the experiences of the students. We have deleted unnecessary dates and data that are burdensome to the students. Instead, the text gives attention to the historical understanding and the process. Besides, the text has provided ample information in order to understand contemporary affairs in the boxes throughout the text. We have endeavoured to project these issues as part of the experience of both the students and teachers. Members of the text book preparation committee dedicated themselves to prepare this text on international academic standards.

I acknowledge the members of the text book preparation committee for bringing this text successfully. I extend my gratitude to the Editorial Board, Translation Committee, Scrutinizers and Chief Advisors for their valuable suggestions in bringing out this text book.

I am grateful to Prof. G.S. Mudambadithaya, Officers and technical assistant of the Karnataka Text Book Society for their dedication in involving in the text book preparation project. I thank Dr. Shashikantha Koudur of NITK, Surathkal for his effort in editing the language in the text book.

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About the Revision of Textbooks

Honourable Chief Minister Sri Siddaramaiah who is also the Finance Minister of Karnataka, in his response to the public opinion about the new textbooks from standard I to X, announced, in his 2014-15 budget speech of constituting an expert-committee, to look into the matter. He also spoke of the basic expectations there in, which the textbook experts should follow: “ The textbooks should aim at inculcating social equality, moral values, development of personality, scientific temper, critical acumen, secularism and the sense of national commitment”, he said.

Later, for the revision of the textbooks from class I to X, the Department of Education constituted twenty seven committees and passed an order on 24-11-2014. The committees so constituted were subject and class-wise and were in accordance with the standards prescribed. Teachers who are experts in matters of subjects and syllabi were in the committees.

There were already many complaints, and analysis about the textbooks. So, a freehand was given in the order dated 24-11-2014 to the responsible committees to examine and review text and even to prepare new text and revise if necessary. Eventually, a new order was passed on 19-9-2015 which also gave freedom even to re-write the textbooks if necessary. In the same order, it was said that the completely revised textbooks could be put to force from 2017-18 instead of 2016-17.

Many self inspired individuals and institutions, listing out the wrong information and mistakes there in the text, had sent them to the Education Minister and to the Textbook Society. They were rectified. Before rectification we had exchanged ideas by arranging debates. Discussions had taken place with Primary and Secondary Education Teachers’ Associations. Questionnaires were administered among teachers to pool up opinions. Separate meeting were held with teachers, subject inspectors and DIET Principals. Analytical opinions had been collected. To the subject experts of science, social science, mathematics and languages, textbooks were sent in advance and later meeting were held for discussions. Women associations and science related organisation were also invited for discussions. Thus, on the basis of all inputs received from various sources, the textbooks have been revised where ever necessary.

Another very important aspect has to be shared here. We constituted three expert committees. They were constituted to make suggestions after making a comparative study of the texts of science, mathematics and social science subjects of central schools (NCERT), along with state textbooks. Thus, the state textbooks have been enriched basing on the comparative analysis and suggestions made by the experts. The state textbooks have been guarded not to go lower in standards than the textbooks of central schools. Besides, these textbooks have been examined along side with the textbooks of Andhra Pradesh, Kerala, Tamil Nadu and Maharashtra states.

Another clarification has to be given here. Whatever we have done in the committees is only revision, it is not the total preparation of the textbooks. Therefore, the structure of the already prepared textbooks have in no way been affected or distorted. They have only been revised in the background of gender equality, regional representation, national integrity, equality and social harmony. While doing so, the curriculum frames of both central and state have not been transgressed. Besides, the aspirations of the constitution are incorporated carefully. Further, the reviews of the committees were once given to higher expert committees for examination and their opinions have been inculcated into the textbooks.

Finally, we express our grateful thanks to those who strived in all those 27 committees with complete dedication and also to those who served in higher committees and experts of revised text also. At the same time, we thank all the supervising officers of the Textbook Society who sincerely worked hard in forming the committees and managed to see the task reach it's logical completion. We thank all the members of the staff who co-operated in this venture. Our thanks are also due to the subject experts and to the associations who gave valuable suggestions.

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CONTENTS

Chapters No.		Page No
HISTORY		
1.	SOURCES	1
2.	GEOGRAPHICAL FEATURES AND PRE HISTORIC INDIA	6
3.	ANCIENT CIVILIZATIONS OF INDIA	13
4.	ANCIENT CIVILIZATIONS OF THE WORLD	25
5.	GREEK, ROMAN AND AMERICAN CIVILIZATIONS	32
6.	RISE OF JAINISM AND BUDDHISM	47
7.	MAURYAS AND KUSHANS	55
8.	THE GUPTAS AND VARDHANAS	62
9.	SOUTH INDIA-SHATAVAHANAS, KADAMBAS AND GANGAS	69
10.	THE CHALUKYAS OF BADAMI AND THE PALLAVAS OF KANCHI	76
11.	THE RASHTRAKUTAS OF MANYAKHETA AND THE CHALUKYAS OF KALYANA	82
12.	THE CHOLAS AND HOYSALAS OF DWARASAMUDRA	89
POLITICAL SCIENCE		
1.	MEANING AND IMPORTANCE OF POLITICAL SCIENCE	95
2.	PUBLIC ADMINISTRATION	99
3.	HUMAN RIGHTS	113
4.	LOCAL GOVERNMENT	119

	SOCIOLOGY	
1.	INTRODUCTION TO SOCIOLOGY	131
2.	CULTURE	142
3.	SOCIAL INSTITUTIONS	149
4.	TYPES OF SOCIETY	154
	GEOGRAPHY	
1.	THE EARTH-OUR LIVING PLANET	163
2.	LITHOSPHERE	170
3.	ATMOSPHERE	186
4.	HYDROSPHERE	198
5.	BIOSPHERE	206
	ECONOMICS	
1.	INTRODUCTION TO ECONOMICS	212
2.	MEANING AND TYPES OF ECONOMY	219
3.	NATIONAL INCOME AND SECTORAL ASPECTS OF THE INDIAN ECONOMY	228
4.	GOVERNMENT AND THE ECONOMY	239
	BUSINESS STUDIES	
1.	COMPONENTS OF BUSINESS STUDIES	249
2.	BUSINESS AND INDUSTRY	256
3.	FORMS OF BUSINESS ORGANISATIONS	265

HISTORY

CHAPTER - I

SOURCES

In this chapter you learn :

- *Sources required to the study of history.*
- *Types of sources of history.*
- *Importance of the archaeological sources.*
- *Importance of the inscription.*
- *Importance of Oral sources in history*

History is a systematic study of the past. History is written on the basis of sources. Hence, 'There is no source, no history' is the stance of history. Historian is like an advocate. The advocates present their arguments on the basis of followed evidences and sources related to their case. Similarly, historians collect the sources, subject them to critical examination, analysis and then write the history. Whenever direct sources are not available, they need to make assumptions based on the available sources. Hence, often an event is analysed from different perspectives by different historians.

What is a source? Human beings had created many facilitates to lead their life since ancient times. If the things used by human beings in the past have remained, then they are called as the sources by historians. Hence, the agricultural tools left by the earlier people, forts, coins, inscriptions, arms, temples and other religious buildings are considered as sources to write history. Similarly, the written documents and literary works are the main source of history. The materials needed for the writing of history are the primary sources. These sources can be divided into two:

a) Literary sources

b) Archaeological sources

a) Literary Sources : There are two types in literary sources :

1) Written Literature

2) Oral Literature

1. Written Literature

Written literature is the main source of literary sources. Literature

can bring the contemporary social life of the times of the writer alive to us. A literary work portrays the then existing aspects of life either directly or indirectly. There are two types in written literary forms.

Native Literature: The literature created by Indians in native languages is called as the Native Literature. Literary works in Sanskrit, Prakruth, Kannada, Telugu, Tamil, Hindi, Marathi, Kashmiri, Gujarathi, Oriya and in many others native languages are the sources. Kautilya's 'Arthashastra', King Hala's "Gathaspathasathi", Vishaka Dutta's 'Mudrarakshas', Kalhana's 'Rajatarangini', Banabhatta's 'Harsha Charitha', Chand Bhardayi's 'Prithviraja Raso', Pampa's 'Vikramarjunavijaya', sangam literature, and many other such literary works can be named as native literature. These works portray then contemporary social, religious, economic, cultural and political life of people.

Foreign Literature : Many foreigners who visited India as travellers, ambassadors, businessmen, officials and missionaries have recorded their observations and experiences in their works. These works are considered as foreign literature. Megasthenese's 'Indica', Fa-hien's '-Gho-ko-ki', Hiuen Tsang's 'Si-yu-ki', Tolemy's 'Geography', Ferishta's 'Tarikh-i-Ferishtha', Babar's 'Tuzk-e-Babri', and others are the important sources. Apart from these, there are many other writings that serve as the sources. In these works also one can get the depiction of then contemporary social, political, economic, cultural and administrative aspects.

Exaggeration, hyperbole and loyalty to one's master are apparent in native literature. Similarly in foreign literature, due to lack of local knowledge, many misgivings are recorded. These are the drawbacks of written literary sources. Historians have the challenge of writing history keeping in mind all these limitations.

2. Oral Literature

Oral literature means the folk story, folk songs, folk legends, ballads, and others that pass on from one person to another by word of mouth. Since the beginning of human life, human beings are passing on their experiences in the form story, songs, and ballads orally from

generation to generation. The folk people have created ballads about their local heroes. There are ballads on Kumararama, the Nayakas of Chitradurga, Kempegowda, Tippu Sultan, Sangolli Rayanna, Kittur Chennamma, Sindhoora Laxamana, Meadows Taylor and others. Legends mean the local mythological stories. Every place will have their own legends. There are legends behind the names and places like Shravanbelagola, Bengaluru, Koppala, Patadakallu, Gokarna and Mysuru. Similarly, every village and town have their own legends.

Archaeological Sources

Archaeological sources are divided into four types :

1. Inscriptions.
2. Coins.
3. Monuments.
4. Other ruins.

Archaeological sources are available not only on the surface of the earth but also hidden deep in the depths of the Earth. The hidden things in the earth are dug out by using scientific methods. This process is called as excavation. Harappan civilisation came to light only due to the process of excavation. During excavation, ruins of buildings, inscriptions, coins, terracotta pieces, bangles, seals, beads, bone pieces, metal and others have been found. These are analysed by applying various scientific methods to understand the life of people of those times.

Inscriptions : Inscriptions mean engraved writing. Inscriptions are written on stone, rock, metal, ivory, terracotta and other materials that last longer. Inscriptions are more reliable as these have a direct relationship with then events. Ashoka's inscriptions are the earliest inscriptions found in India. Most of his inscriptions are in Bhrmhi script. Their language is Prakrit. Thousands of inscriptions are found in Kannada, Telugu, Tamil, Sanskrit, Prakrit languages. Samudra Gupta's Allahabad pillar inscription, Immadi Pulukeshi's Aihole inscription, Kharavela's Hathigumpa inscription and other inscriptions portray the military achievements of then rulers. The Uttarameruru inscription narrate the rural administration of Chola kings. Apart from this, many political, social, cultural, economic, educational, religious aspects are reflected in these inscriptions.



Inscription

Coins : Though the coins are small in shape, they contain many important aspects. They are helpful in understanding the geographical extent of the ruler's kingdom who minted the coins. They also aid us in knowing the language of administration, titles that the kings possessed their religion, economic conditions of the times and metal technology in vogue of the particular kingdoms. Samudra Gupta had minted seven different types of gold coins. Based on the pictures on those coins, it is said that Samudra Gupta was a lover of music and he had conducted Ashwamedha Yaga too. Gouthamiputra Shathakarani got the name of Nahapana erased on his coins, and engraved his name on them. This supports the view that Gouthamiputra had defeated Nahapana. The availability of Roman coins in Bengaluru proves the fact that this region had trade link with Romans two thousand years back.



Coins

Monuments : Monuments are the major sources to write history. Palaces, temples, forts and pillars etc., are the monuments only. Meharuli's iron pillar and Vijayapura's whispering Golgumbuz are the evidences of the maturity of then Science and Technical knowledge. Shahajahan's Tajmahal tells the story of love. Chitor's Vijayastamba (victory pillar) tells the victory of Ranakumbh. The cave pictures and engravings of Elephanta, Ellora and Ajanta narrate the mastery over painting and sculpture during their time. The temples of Aihole and Patadakallu explain the evolution of Indian temple architecture. The monuments of Nalanda and the architecture of Madrasas built by Gawan in Bidar narrate the importance given to education during those times. The fort of Srirangapatana explains the accomplishments in the area of defence technology. Thus, the monuments throw light on then contemporary religious aspects, technology, economic growth, scientific knowledge and creativity achieved.

Other Ruins : Based on the various pieces of terracotta, bangles, beads and seal procured during the examination, one can understand the socio-cultural, economic, political and religious life of then people. Not only this, one can also understand the food habits and pattern of business of those times. By applying carbon-14 dating procedure on

the biological ruins (dead animals, birds and trees) found in these sites, one can arrive at the accurate period of the ruins. Buddha stupas came to light during excavations at Sannathi in Yadagiri District and Rajagatta of Doddaballapura Taluk. In the excavations conducted at Arikamedu and Pattanam in Tamilnadu a large number of evidences were found that speak of commercial contact between South India and Romans. Like this, the remains found at excavations tell many things that were lost over a period of time.

You should know

C-14 - Radio active carbon. This should be done only to the biological fossils (tree, birds, plants, and animals). In every being, the C-14 and C-12 will be present in equal amounts. After the death of the living being, C-12 remains constant, but C-14 starts losing its volume. It loses half of C-14 by 5700 years. If one can estimate the levels of C-12 and C-14, one can estimate the accurate age of the fossil. Fossils which are ten thousand years old can also be identified using this carbon dating method.

EXERCISES

I. Answer the following questions in brief.

1. How do historians write history?
2. What is the meaning of source? How many types are there?
3. Name any two native literary works.
4. Name any two foreign writers.
5. Which source has more reliability for writing history?
6. Explain the importance of coins in the writing of history.
7. What are the aspects on which monuments throw more light?
8. By what method, the age of biological fossils can be decided?

II. Activities :

1. With the help of your teachers collect the legends of your village/ town. Make a hand written book and place it in the school library.
2. Organise a study and prepare the list of monuments and their uniqueness.



CHAPTER-2

GEOGRAPHICAL FEATURES AND PRE - HISTORIC INDIA

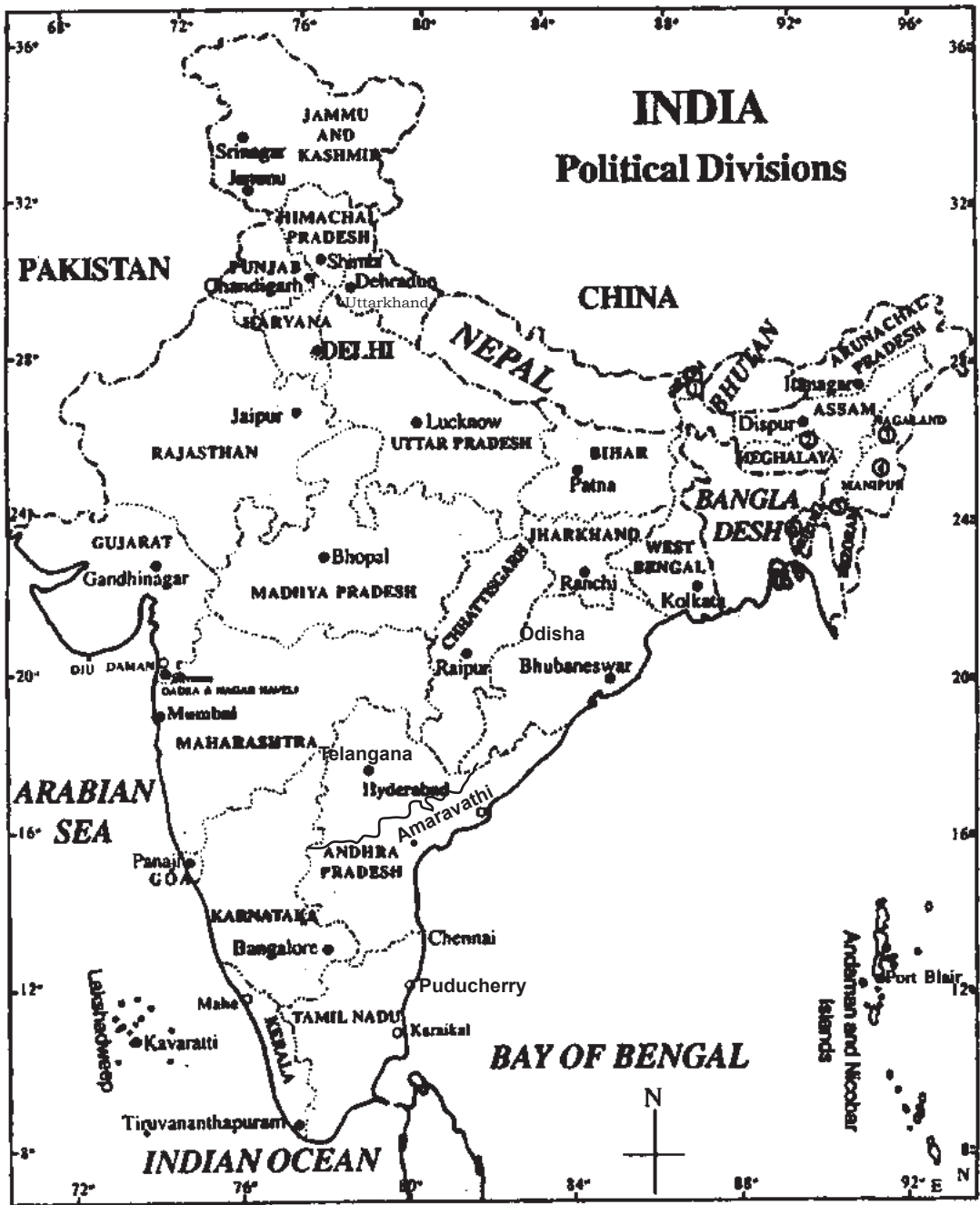
In this chapter you learn :

- *The physical features of India.*
- *India is both a sub-continent and peninsula.*
- *Recognise the neighbouring countries of India.*
- *The living style of man in pre-historic period.*
- *The stone Age.*

The geographical environment has influenced every country and people in the world. There is an intimate relationship between human life and the environment. Hence it is necessary to learn about the geographical environment in order to know about human history. India is a sub-continent occupying a huge area in the southern part of the Asian Continent. As it is surrounded by water on three sides and land on one side it is a peninsula. India shares its boundaries with Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar. It consists of 29 states and 6 union territories and one national capital region (Delhi).

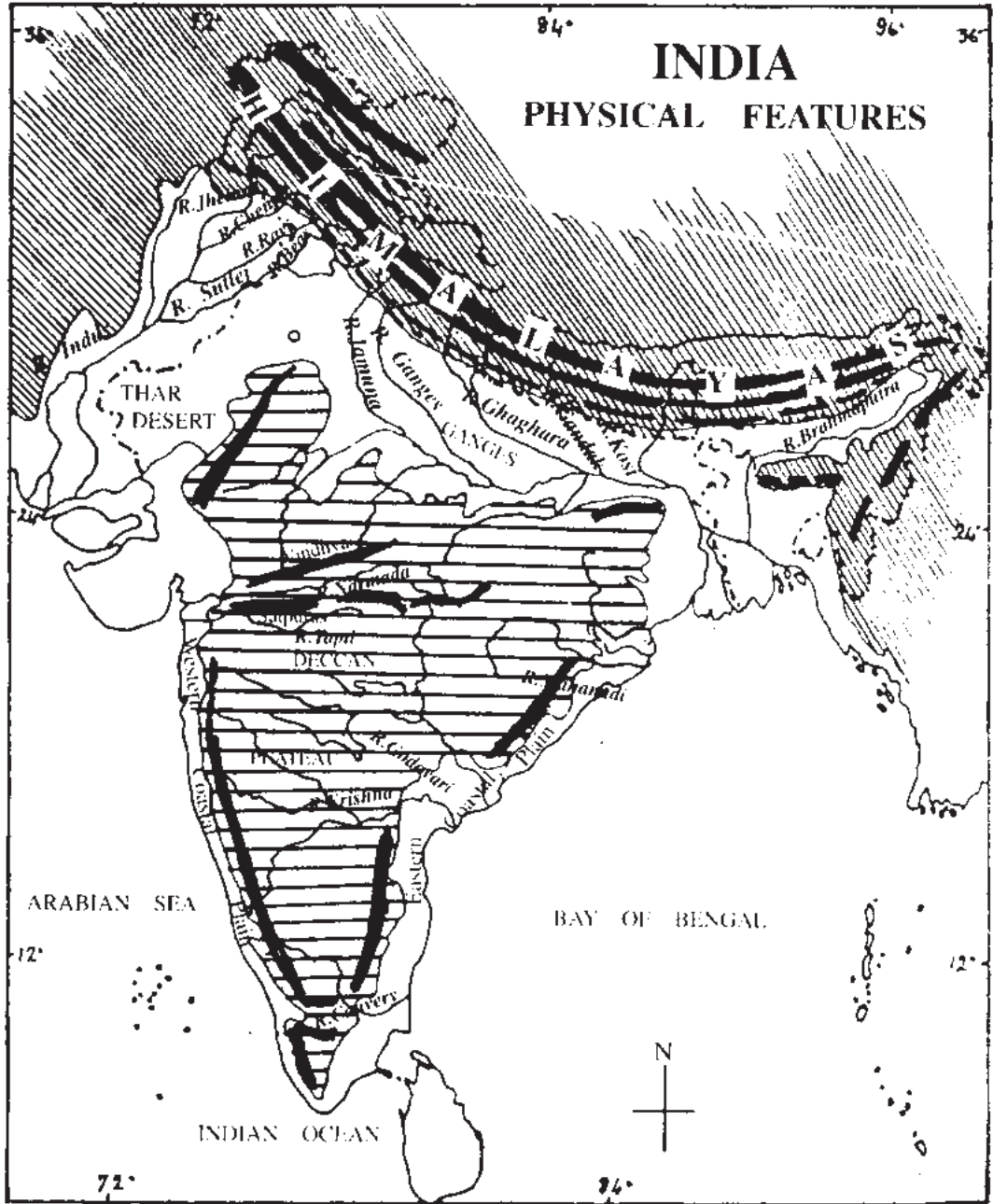
India's geographical features comprise the Himalayan mountains, the Indo-Gangetic plain in the North, the Deccan Plateau and the Coastal region in the South. The snow-capped mountains in the North include some of the tallest mountain peaks in the world. They help to preserve the safety and security of India. There have been very few intrusions on ancient India from the northern Himalayan region. The attacks have been mainly from the north- western side through the valleys of Bolan and Khyber passes. The flat Indo-Gangetic plains are extremely fertile. The ancient civilizations of Indus Valley and Vedic period flourished here. Many battles have been fought from time to time to establish control over this area. Usually, the dynasties that established control over this fertile gangetic plain also established empires.

The Narmada river separates India into two - Malwa plateau or Central Highlands and the Deccan Plateau, in the south. The Mauryas and the Guptas ruled these two areas of ancient India. The Indian coastline



is vast and stretches over 6,100 kms. The eastern coastline is called the Coromandel Coast, whereas the western coastline is referred as Konkan and Malabar coast. The numerous ports on this coastline had attracted the Romans from time immemorial. Foreign trade was carried on in those

days only through sea-routes. As a result, port towns flourished resulting in the rise of powerful kingdoms in South like the Pandyas, the Cheras and the Cholas.



The diversity in the Indian geographical environment has also influenced the lives of communities living here. Despite the communal diversity,

there exists a cultural unity which binds all these diversities. Unity in diversity is the essence of this culture.

The Pre-historic Period

The period before the discovery of the art of writing is called the Prehistoric age. This is so because we do not find evidence of the linguistic development or the use of script. We do not get any written records for the study of history of this period. Then how do we get to know about the people and their life in the pre-historic age? The scholars who study this period are called Archaeologists. In this age, man was a nomad and indulged in hunting and food-gathering. Archaeologists have discovered few tools created and used by these people. Probably they used tools made of stone, wood and bones. Among these, only tools made of stone have survived today, providing us the sources for study. Human beings in the pre-historic age used stone tools to peel the skin and separate the flesh and bones of animals, to scrape the bark of trees, and to cut fruits and roots. The people used to create handles out of bones and wood, and using them like spears and arrows, hunted animals. They used stones as axes to chop down trees and cut them up into logs. They might have used wood to build huts for themselves, or to make handles for their weapons. The word pre-historic period provides this sort of vision to us.

Where did the Pre-historic man live?

The relics of the hunting and food-gathering humans are available in Bimbetka, Hunasagi and Kurnool in India. There are many other sites in which such relics have been found. Most of these sites have been discovered along the banks of rivers and lakes. Furthermore, since stone tools were essential for the survival of people of that age, they chose areas abundant with stone which could fulfil their needs. Areas where people used stones to create various tools have been thought to be the first industrial sites of human beings.

How do we get to know about such industrial sites? Usually we get to see stone tools around rocky areas. People might have rejected some rocks as unsuitable for their tools. Heaps of broken rock or stone-chips obtained during the creation of implements abound in such areas. It is possible that people lived for a long time in these places. These sites are called residential and industrial sites.

Knowledge of fire

Signs of ashes have been obtained in the caves of Kurnool. They reveal the knowledge and the use of fire by the people of the Stone Age. Probably fire was used for various purposes to cook food, for light and to frighten animals.

Drawings found in caves

We get to see some drawings in many caves in which people lived in the Stone Age. Even today we can see these drawings done on the walls of caves and on rocks. Such cave-drawings can be seen in Madhya Pradesh, Uttar Pradesh and Karnataka. There are beautiful drawings of wild animals and hunting.

The Changing Environment

It is believed that 12,000 years ago a major change took place in the Earth's environment. The Earth's temperature began to gradually increase. This led to the development of grasslands in many places. Birds and animals began to multiply in unprecedented numbers. Animals like deer, elks, goats, sheep and others prospered in these grasslands. Humans who had been hunting animals, began to observe their nature, food habits and the way these animals multiplied. Over a period of time, they captured some these animals and brought them up. Like this animal husbandry and dairying started. Humans had by now, learnt to catch fish in streams and lakes. Human beings noticed in the meantime that some grass bearing grains had grown naturally. They learnt to use them as food, the grains and cereals like rice, Wheat and Barley obtained from such plants. Gradually they learnt to grow them too.

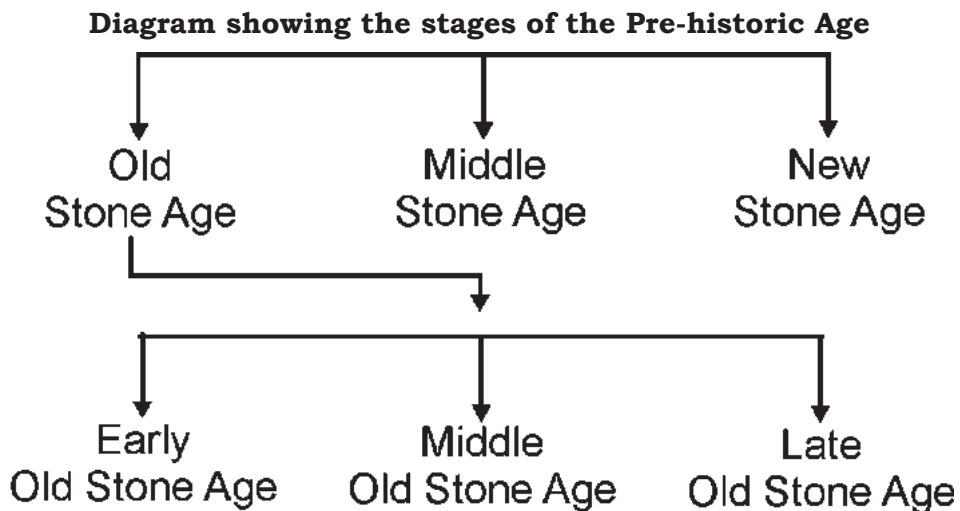
Archaeologists refer to the period we discussed now, by different names. The age that prevailed 2 million years ago is the oldest age and is called the Old Stone Age, and it stretched over a period of 12,000 years. This long duration has been classified into three stages are - the Early, Middle and Late Old Stone Ages.

The period from 12,000 years to around 10,000 years is called the Middle Stone Age. The tools of this period are generally very small and hence they are called delicate stone tools. They used to fix these stone tools with handles made out of wood and bones. They used those tools as

axes and saws. Along with these tools, tools of the old kind too continued to be used.



Weapons



The New Stone Age began after 10,000 years. The stone tools of this period are different from those of the earlier periods. These tools were bright and had sharp edges. People of this age used grinding stones for grinding leaves and herbs and grains and cereals. Some pots and pans

of this period have been found, a few of which have been decorated. Pots were used for storing grains. They were also used for cooking rice, wheat and other grains and cereals. People of this age had learnt to weave cloth.

EXERCISES

I. Complete the following sentences.

1. Geographically, India is a _____.
2. Signs of ashes have been found in the caves of _____.
3. The tools of the Middle Stone Age are called _____.

II. Answer the following questions in brief.

1. Describe the geographical features of India briefly.
2. What are the valleys through which the attacks on India have taken place?
3. What is meant by 'Pre-historic Age'?
4. How did animal husbandry and dairying start?
5. The different periods of pre-history have been given various names by archaeologists. What are they?

III. Activity :

1. Visit a cave and learn more about it from your teacher.



CHAPTER-3

ANCIENT CIVILIZATIONS OF INDIA

In this chapter you learn :

- *Ancient civilizations of India.*
- *First urbanization special features of the cities, town planing, life style and the decline of towns.*
- *The development of vedas, types of vedas and vedic period.*

When nomadic life became stable

Archaeologists have come across signs of huts and houses in some places. They have excavated a cellar in Burzahom in Kashmir. People of those times used to dig shallow pits in the soil and live in them. There were steps leading to the pits. These were built in this manner in order to provide protection from the cold weather and wild animals. Earthen pots have been found inside and outside such pits. In accordance to the weather condition, people cooked food either inside or outside.

There is a site named Mehrgarh near the fertile plain of Bolan pass which leads to Iran. The people of Mehrgarh were the first ones to have learnt the cultivation of Barley and Wheat crops and the rearing of goat and sheep. This is the first village that has come to our notice. The people of Mehrgarh lived in houses. Some houses had four or more rooms. Many sites have been discovered here which not only have the fossils of animals but also graves. People and animals used to be buried together here.

The first urbanization

The ancient sites of Harappa were discovered by the engineers when the railway lines were being laid 150 years ago in the Sindhu valley region of Punjab. They thought that it was a mound made of excellent bricks. They utilized the bricks for the construction of railway lines.

In this way, many houses which had been buried under the soil, were destroyed. Subsequently, Archaeologists took up research in this area. They were convinced that it was an ancient city. Since the sites around this city resembled the sites discovered earlier, they were called the Harappan Civilization. These cities are said to be 4600 years old.

The significance of the cities

We can see two or more parts in the cities of Harappa. The western part is narrow and at an elevated place. Archaeologists are of the view that this was a citadel. The eastern part is wide and at a lower level. This area has been called the lower town. Every part had a wall made of burnt bricks. Since the bricks around them, were placed in an interlocking manner, the walls were very strong.

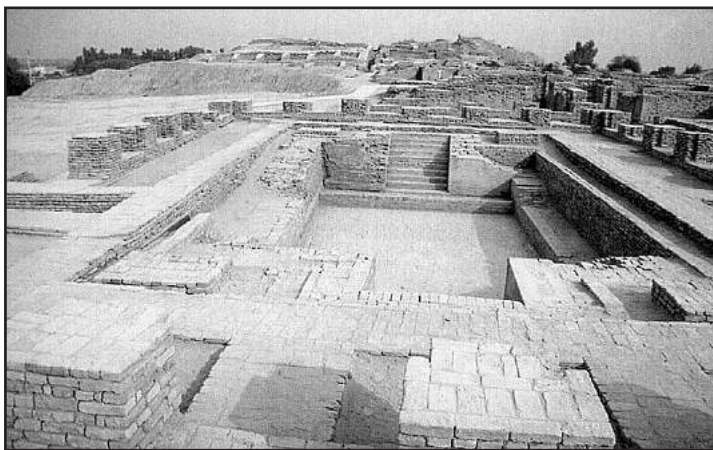
There were note worthy buildings inside the citadel. Mohenjo-Daro, one of the cities, had a water tank. Scholars have called this as the bath tank. It is built of brick so as to prevent the seepage of water from the tank. The Bath tank has steps on either sides to go down, and has rooms all around. The water was probably supplied to the tank by a well, and the used water was let out. Probably very important people used to take bath in this pool on special occasions. Fire alters have been discovered in other cities like Kalibangan and Lothal. Mohenjo-Daro, Harappa and Lothal had constructed systematic granaries.



Bronze dancing girl



Torso of a man



Mahenjo-Daro town bath tank

Town Planning

The lower town in the low lying area of the city was the place of habitation of the people. It was constructed in a very methodical manner. Systematically laid-out houses, roads and drains can be seen here. Almost every person lived in either one or two-storied house. The houses were built of bricks and had strong walls. There were rooms all around the courtyard inside. The main door faced the street. None of the windows opened onto the streets. There were bathrooms in the houses. Some houses had wells which supplied water.

The cities had a neatly laid-out underground sewage system. The drains were built of brick and covered with stone slabs. The gutter of each house was linked to the main drain outside, and enabled the flow of dirty water from the house to the main drain. Holes were created in the drains to enable timely cleaning of them.

Town Life

Apart from houses, precious stones and metals were also found. Most of the objects found were beads and seals. The layout of the town reveals the existence of administrative class. The people of this place may have used expensive metals, gems and jewellery. The beads were probably used by the common people. There is an unknown script on the seals. This reveals that there was no dearth of literate people. This enabled the engraving of scripts on thousands of seals.

The people of Harappan culture had depended on agriculture and trade. Wheat, Barley, pulses and mustard were their main crops. They had learnt to grow cotton and weave cloth from it. We can say that they knew irrigation since many towns were situated on the banks of rivers. They had domesticated the humped bull, cow, buffalo, sheep, goat, dog and hen, and were engaged in cattle-rearing, sheep-rearing and poultry. Oxen were used to carry heavy loads. Trade and commerce had assumed primary importance along with agriculture. The towns carried on business with rural areas. Baluchistan, Saurashtra and the Deccan were some of these areas. The seals obtained at Mesopotamia establish the fact that the Indus Valley Civilization had trade relations with it.

The decline of the Towns

The situation in these places began to change some 4000 years ago. There were reasons, apart from natural reasons. The walls of the

Harappan fort were further strengthened. Towards the final days of this town, its west gate was closed completely. The spacious rooms of Mohenjo-Daro became smaller. Huge buildings turned into huts. Neither the town planning nor the road planning was systematic at this time.

Historians have given various explanations for the decline of these towns. Some feel the dried rivers as the reason, and others feel that changed course of rivers was the reason. Other historians have cited the destruction of forests as the cause. Probably inundation by floods could be the reason. People living in Indus valley and some sites of West Punjab might have deserted the area and migrated to new areas in the east and south. This civilization survived in Lothal town of Gujarat for some more years. The Indus Valley civilization has remained an evidence of Maturity of the Indian Civilization.

The Vedic Age

Aryans compiled the Vedas. Aryans belonged to the early Indo-European tribe of southern Russia Ural mountain slopes. many of the groups of this tribe through Central Asia came to Iran plateau and from there migrated to Punjab area via Afghanistan, according to well known historian B.K. Ghosh in History and Culture of the Indian people published by Bharatiya Vidya Bhavan. The culture built by these people is understood based on the Vedas and is called as Vedic culture. The vedic period is identified as the period between 1500BCE and 700BCE. This is divided into two periods. First part is the Rig-Veda period or the beginning Vedic period. This period is between 1500BCE to 1000BCE. The second part is the post Rig-Veda period or post Vedic period. This period is between 1000BCE and 700BCE. But, the Vedas were not compiled in written form during this period. Vedas were in the oral form at the beginning and later emerged into written form with a lot of changes.

Four Vedas : Rig-Veda, Sama-Veda, Yajur-Veda and Atharva-Veda are the four Vedas. Vedas are mainly a compilation of nature worship, Yaga and process of yagas; and balck magic. These are also called as 'Samhithe'. Every 'Samhithe' has a text called 'Brahmana' that explains the various ways of performing rituals. Every Brahmana has an 'Aranyaka' and an 'Upanishad'. Aranyakas have necessary suprasensory instructions to hermits who were living in the forest. Upanishads are the reflective

discourses on philosophy. Upanishads are the evidence of intellectual maturity of Indians during Veda period.

Rig-Veda Period

Rig –Veda is the first among all the Vedas. The language used, the geographical and social situations depicted in it justifies this. Rig–Veda has 1028 sukthas or prayer songs. They are grouped under 10 Mandalas. All these sukthas were not compiled in a single time. Historians opine that there was a gap of five hundred years between the initial text and the last text of Rig-Veda.

The language used in Rig-Veda belongs to Indo-European family of languages. The geography discussed in Rig-Veda extends from Afghanistan’s Hindukush mountain to doab of Ganga and Yamuna rivers (Doab is the area between two rivers – the western part of present Uttar Pradesh state) and from Kashmir to Sindh in the northern boundaries.

Social System: At the time of their entry into India there were three communities among Aryans viz Aristocracy, Priestly class and common people. Caste consciousness had not yet emerged. We get the picture of an emerging social system in the ‘Purushasukta’ that appears in the 10th Mandala of Rig-veda (Probably during 1000 BCE). According to this the gods created Adipurusha whose mouth became Brahmanas; Shoulders became Kshatriyas; thighs became Vyshyas and Shudras were born from his Feet. Thus, an effort was made to provide divine and mythical background to the birth of caste. There is no mention of the word ‘Varna’ here. In the later Vedas the word ‘Varna’ appears. The first three ‘Varnas’ performed the roles in rituals, administration and business and had the right for property.

The fourth Varna ‘Shudhra’ comes during the last stage of Rig-Veda. The local tribal groups; Dasyu, Paani, and Dasa form this shudra varna. Aryans after defeating the local tribes Dasa and Dasyu, made them work as their slaves. The wealth that was accumulated after winning in battles and their unequal sharing resulted in the growth of social discriminations. The first three varnas had the right over expanding agriculture and lands. The Shudhras were forced to work for the first three Varnas. It was told as their duty. The patriarchal family was the main social unit.

Economic System : Rig-Vedic people were basically into animal husbandry. According to the Rig-Vedic compilers, wealth meant cows, horses, camels and sheep. Still, cultivated land was considered as part of wealth. There are details of the emergence of agriculture as a profession. Anyone could have obtained land and could have owned it. Importance of cattle increased as they were used for tilling, to lift water, and to move carts and expansion of agriculture. They were also useful for their milk and meat. On the whole, the need to own cattle herds grew more. With this, village common meadow (grass lands for grazing) came into existence.

They were not aware of the usage of iron. But, they were using 'mature and processed plants' as charcoal to melt metals. The brass, an alloy was called as 'Ayas'. Though there are references of pots, there is no reference to pottery as a profession. Situational references appear in Rig-veda on crafts like weaving, carpentry and other professional skills. The word 'Pani' is referred to in Rig-Veda many times. This was used to refer to a local rich tribe. They knew agriculture.

In Rig-Veda the cultivable land is called as 'Kshetra' and cultivation is called as 'Krushi'. An irrigated land belonging to Aligram of Swat valley has been found and it belongs to 11th century BCE. There is reference to stone pulley with wood cups to lift water from a well. Oxen were used to pull carts and ploughs. They were used to pull water by using rope and pulley, the lifted water was flown into broader canals. With the help of this technology, the agriculture that was limited to areas closer to rivers, expanded to areas which had higher level of underground water table. There are references to preservation of seeds in the underground and also of harvested grains. 'Yava' is identified as Barely.

Political System : A reference to Grama (village) appears in Rig-Veda. Tribes were living in gramas (Villages). Rajan or Raja was the head of the tribes. The names of Rajas were related to their specific tribes. Some tribes may have had more than one Raja. The position of Raja was hereditary. 'Trukshi' of Puru clan and 'Sudhas' of Bharatha clan are the examples for this.

In the political activities the invasion and suppression of on non-Aryan tribes like Dasyu and Paani by the Aryans one of the major

parts Rig-Veda considers Dasyu and Paani as inhuman, aliens and killable. There are references to this conflict between Aryans and non-Aryans in Rig-Veda.

The words 'Sabha' and 'samithi' were used to denote the assembly of common people around the King. The people who ruled over common people are called as 'Kashatra'. The one who fights or a soldier was called as 'Yodha'. The word Kshaytriya was not in use. Kings and the rich had power concentrated in them. They were gifting cows, horses, gold and cultivation tools to priestly class. Invasions and conflicts used to take place for cattle. Those who were successful in these invasions increased their wealth and could also get prisoners.

Religious system : Yagna was the epicentre of religious practices. During the Yagna animal sacrifices were done to appease Gods. Yagnas were organised primarily for two reasons: to get good rains and harvest and to seek the help of Gods to defeat their enemies like dasyus.

The priest who conducted the Yagna was called as 'Hothur'. During Yagna, the reciting of slokas and consumption of Soma (a drink) was done. There was no idol worship in Aryans religion. They were also not using any animal, human or other symbols.

More prominence was given to Fire (Agni) in Rig-Veda period. There are around 200 shlokas on Fire. Around 250 shlokas dedicated to lord Indra expose that Indra brings rains, defeats the enemies of Aryans – the Dasyus and Dasas, eats buffaloes and gets drunk with Soma rasa. Vishnu had not gained prominence then. At a later stage, Rudra appears as Shiva in Rig-Veda. There are no references to beliefs to incarnations. Mahayagas were performed by the rulers and heads of various tribes, and were led by priests.

When the hold of priestly class was insignificant during the early Rig-Veda period references to minor God of cultivation – 'Kshetrasya Pathi', God of plough 'Devi Sita', and minor house deity 'Vasutosh-pathi' are found. There are many such references to the religion of common people. In the last part of Rig-Veda, there are Shlokas on marriage and death. The people of Rig-Vedic time did not know the art of writing. The language was based on phonetics. only spoken. There are similarities in the characters and names that are found in Rig-Veda and Indo-Iranian religious text 'Avesta'.

Post Rig-Veda Period

After Rig-Veda, 'Sama-Veda', 'Yajur-Veda' and 'Atharva-Veda' appeared as the continuation and contributory to it. These are named after three priests who conduct three different types of 'Yagnas': Samaan (Udgaathi = Singer), Adhvaryu (the one who recites Yajus sutras), and Atharvan (Angira=Priest of Agni).

Sama-Veda has taken much from the Rig-Veda and with few alterations of the borrowed content, it mainly consisted of the slokas (mantras) that are recited at the time of Yagna. Yajur-Veda has two different types of text called 'Black' (Krishna) and White (Shukla). In the black Yajur-Veda, there are explanations about the way of reciting mantras, and also has commentary and discussions on the same. The White Yajur-Veda has only 'mantras' but no explanations. There is a reference to Iron in these. Hence, we can conclude that this Veda is not before 1000BCE.

Atharva-Veda is similar to Rig-Veda in its size and content. It has taken much from the tenth Mandala of Rig-Veda. It is in prose form. It has used the language of 'Brahmanas' rather than the ancient language. The geographical details in this Veda are different than those found in the Rig-Veda. This shows that Aryans had moved to the East by that time.

Social System : The four divisions of Brahmana, Kshatriya, Vyshya and Shudra that are found in the last part of Rig-Veda as part of 'Purushasukta', incorporating certain changes became more strong. Brahmins used to accept gifts for conducting Yagnas and rituals. In owning lands, receiving cows, offering pooja and in matters related to God Brahmins had gained a more prominent position.

Rajanya indicates the Kshatriya Varna. Those who had the political power were called Kshatriya irrespective of their origin. Rajanyas who were soldiers trained in archery and could wage war in chariots, gained a lot of importance. The word 'Vyshya' is found here and there. They were supposed to offer gifts to others. They could have been subjected to exploitation to one's whims and fancies. They neither had the right to perform Yagnas nor a right to enter the place of Yagna. They were placed lower than the first two Varnas and still remained as Aryans.

Shudras were part of the varna system, but were kept at the lower end of it. But, Dasyus and Dasas were kept outside the Varna system. Slowly, they were integrated to Shudra Varna. Though the Shudras were accepted as part of the varna system, they were not given any rights They could have been thrown out or killed at any time. Shudras were not allowed to perform Yagna. It was held that the sacred Guru not only should disown a shudra, he even should not see a shudra. Some times the Shudras could have come from tribes like Dassyu, Dasa and others. Some of the early food collecting tribes like 'Nishaada' and 'Chaandala' were grouped as untouchables.

Women were placed at the lowest position in the social hierarchy. Women are considered as the embodiment of 'Lies'. There is a reference to 'Dowry' in Atharva-Veda. There was no proper benefit for the women's work. There was no practice of child marriage. Polygamy was prevalent among the rich and powerful. The widow could remarry.

Economic System : By the time of post Rig-Vedic period, Aryans moved from Sindhu river area to Ganga river area. For this they had to destroy the forests. With the help of fire, they brunt the forest and cleared the land for agriculture and in the process these tribes reached the plains of Uttarpradesh. The scarcity of water in the doab region of Sutlej and Yamuna made them move towards the river Ganga plains. Iron axes were used to chop off trees. There is a reference to six and eight oxen driven plough in Athrava-Veda. Twelve oxen driven plough is referred to in Yajur-Veda. This proves that the usage of oxen in agriculture increased.

The following crops find reference in the text of Vedas :

1. Paddy. 2. Barely. 3. Black gram. 4. Green Gram 5. Sesame. 6. Horse gram. 7. Foxtail millet. 8. Common Finger millet. 9. Poor's Finger millet. 10. Kaadu Nellu. 11. Wheat. 12. Masoor. Excluding Kaddu Nellu, nine out of twelve crops discussed above were cultivated before 1500BCE as per the archaeological evidences. In another Suktha, sugar cane (Ikshu) is mentioned as the thirteenth crop.

At this stage of Aryans life agriculture became more important than the hunting and animal husbandry. Whoever that was not involved in agriculture and business were called as 'Vyathras' which meant 'Outsider'. Oxen became more important for agriculture and transport

of goods. It was in this background, the idea that one should not eat cows and oxen took its root and became an important issue. But this prohibition was not acceptable to all. The wealth of a person was calculated on the number of cattle that he possessed.

There is a reference to metals like gold, copper, iron, lead, brass and tin in vedas. Silver is also referred to in the vedic texts as per the archaeological evidences, there is no indication of iron mining and preparation before 1000BCE in the river Ganga and river Sindhu areas. It is believed that the technology of converting iron to steel was first found in west Asia and then later moved towards eastern countries after 10BCE. The knowledge of this technology in northern India before 8BCE is very bleak. The iron artefacts that were found in Athranjikhhera (West Uttar Pradesh) support this observation.

Know this :

The preparation of chariots as a reason had accorded respectable position to carpentry. wooden mortar and wooden pestle were in use. With the increase in metal tools, probably the stone usage would have decreased. Pottery making was in practice. Women were engaged in spinning. They were also involved in dyeing the cloths, washing cloths and embroidery works.

One can note the increase in specialised professions during this period. There were professionals like: makers of arrows and bow, rope makers, bamboo makers, ointment making women, firewood makers, fire makers, horse tenders, cowherds, hunters, fishermen, smiths, businessmen, doctors, astrologers and others.

The growth of cities was not much during this period. The word 'Pur' that comes in 'Shathapatha Brahmana' probably indicates a one door dwelling surrounded by fencing and wall with good protection. There is no reference to cities that had roads, stores, fairs or housing rows in post Vedic texts. Probably the economy was not strong enough to support cities.

Political System : The South East geographical edge during the final stages of Rig-Veda now became the central location of Aryans. This place was inhabited by Kuru, Panchala, Vasha, Usheena tribes. The present Kurukshetra was the habitat of Kuru tribe. Kosala and Videha tribes were present at the east end of Aryan's settlement. That means they were living in the north east of present Uttar Pradesh and the north Bihar areas. Tribes were the major controlling of the political system.

During Atharva Veda period Angas were living in the east Bihar and the Magadh tribe in central Bihar, south of the river Ganga. These tribes were considered as enemies by the sages. The Pundras who were to the far east and Andhras of the south were called as untouchables. These tribes were still not influenced by Aryan ways of life and language. This means that the political system of tribes continued even during the time of Atharva Veda.

The arrival of Indo-Aryans to the banks of river Ganga and tranians at the Indian border and west Punjab due to their invasion. The Vedic tribes with superior archery and chariots won over the local tribes living on the banks of river Ganga. The usage of iron after 800BCE has supported this victory.

The improved military power of Vedic tribes helped them to extend their geographical limits. As a result, powerful kingships emerged. A king is described in Atharva vedas as 'The one who rules all is like a God in human form.' As the accumulation of wealth and power increased attempts were made in levels the King as equal to the God or the representative of the God. More references to sacrifices, taxes and gifts occur at this stage. Many complex and wealth indicating rituals grew around the King. A coronation ceremony to mark the ascendance to the throne by the King called 'Rajasooya' came into existence. As a symbol of king's power 'Ashwamedha Yaga' gained importants.

Religious System : The religious beliefs and rituals of Rig-Veda continued along with changes and additions during post Rig-Vedic period. 'Rudra' and 'Vishnu' had gained a significant position during post Rig-Vedic period. They became important Gods along the vedic Gods during the time when Brahmans developed as an appendage to the vedas. There are no direct references to Vishnu's incarnations. It is said that by imbibing the local gods, Rudra also took over the legends and mythology of them unto himself. It was believed all things that happen in this world are the result of Yagnas and such notions were incorporated into puranas (Mythological stories).

In 'Upnishads', new concepts like 'Karma' and 'rebirth of the soul' were created. This aided the place of a person in the caste system which is based on birth. This became the most important philosophical base for the continuation of the caste system in its institutionalised form.

Know this :

On the occasion of the Ashwamedha yaga a special horse belonging to a particular king would be let loose. A contingent of specially-trained soldiers would follow it. Whichever places the horse wandered into, the king of that land would accept the sovereignty of the horse's owner and pay tributes to him. If anyone stopped and tied the horse, that act would be seen as a challenge and a battle between the two kings would follow. In this manner the horse would return after one year having victoriously conquered all the territories. It was then that the Ashwamedha yaga was performed. It was the desire of most of the kings.

EXERCISES**I. Complete the following sentences :**

1. The Fertile land that is near Bolan Pass _____ .
2. Harappa was found in the _____ Valley of Punjab.
3. Harappan people depended on agriculture and _____ .
4. The Oldest Veda is _____ .
5. The priest who conducted yagnas was called as _____ in Rig-Veda.

II. Answer briefly:

1. Write on the special features of Harappa cities.
2. Write a note on the great bath of Mohenjo-Daro.
3. How was the nature of town plan during Harappa civilization?
4. Name the Vedas.
5. What Yagna and Yagas were important during the Vedic period?
6. Name the professions of the post Vedic period.

III. Activities

1. Prepare a plan of Mahenjo-Daro or Harappa civilisation.
2. Read few stories from Upanishads.



CHAPTER – 4

ANCIENT CIVILIZATIONS OF THE WORLD

In this chapter you learn :

- *The great civilizations of the world - Egypt, Mesopotamia and China.*
- *Art, architecture and life style of different civilizations.*

Many other civilizations flourished in various parts of the world at the time of Indus Valley Civilization. We can see the Egyptian civilization, Mesopotamian civilization and Chinese civilization in Asia and Africa.

The Egyptian Civilization

Generally all civilizations have originated in the river plains. The Egyptian civilization could take birth due to the presence of the river Nile. The relics obtained here proclaim the grandeur of Egypt. Huge pyramids, sculptures, temples and the inscriptions in these temples tell us a lot about Egyptian culture and history.

The Contribution of Egyptians

The Egyptians were expert farmers. They knew a lot about irrigation. They had built temples. They invented the calendar which has helped us to measure time. More than anything else, they had mastered the art of writing. It was a symbolic language. It consists of small drawings and has been called hieroglyphics (sacred writings).

The Nile Valley

Every rainy season, the Nile river would transform the Nile valley into a huge lake. After the valley dried up in summer, a fertile layer of clay soil would form the grazing field and neighbouring agricultural lands. The work that would need the labour of hundreds of people, was being done by the kind river all alone. This fertile land provided food for the population of the first town in the area. Not all agricultural regions were in the valley. Hence through small canals and wells, they were responsible for the development of a complex system of irrigation throughout the land.

The prosperous, wealthy Egyptian peasants and citizens during their leisure engaged themselves in the creation of artistic works. The role of priest was created to interpret nature and explain it. The priests were scholars and shouldered the responsibility of protecting written documents. They believed in life after death. They believed that man had to give an account of his deeds on Earth to Osiris, the most powerful God of Life and Death. The priests considered that life on Earth was temporary and was needed only to prepare for the next life. Thus the whole of the Nile valley was reserved for the dead. The dead body would be smeared with various chemicals and wrapped with a thin cloth. The entire body was in this way preserved. The body protected thus was called a 'mummy'. It would be kept in a specially designed coffin. The grave was considered the true 'place' for an Egyptian. Hence all around the dead body, items needed for daily use and small dolls of a cook and barber would be kept to fulfil all future needs.



Pyramid

In the beginning, graves were created by carving into the rocks in the hills. As the Egyptians moved north, they had to construct graves in the desert itself. Tall towers were built on these graves using huge blocks of stone in order to protect the eternal sleep of the dead. Kings and wealthy people vied with each other to build taller and taller towers.

The Greeks called these structures 'Pyramids'. The kings of Egypt were called 'Pharaohs'. 'Pharaoh' means 'a person who lives in a palatial house'. The peasants who had accepted the rule of powerful Osiris, now accepted the rule of Pharaohs too.

After an independent, prosperous life for twenty centuries, Egypt was ruled over by an Arabian shepherd tribe called Hyksos which attacked it and after defeating it, ruled for 500 years. They looted the wealth of the natives, and hence did not become popular. The Jews who came wandering through the deserts in search of shelter were also hated by the people of Egypt. By co-operating with the foreign rule the Jews even assisted them in collecting taxes and in administration.

In 1700 B.C.E. the people of Thebes rose in revolt against the foreigners. After a prolonged conflict, they succeeded in driving Hyksos out of their country. Egypt became free once again. After a thousand years, it came under the rule of Sardanapalus of Assyria.

The Persian Emperor Cambyses occupied Egypt in the 6th Century B.C.E. Alexander occupied Persia in the 4th Century B.C.E. Egypt became a province of Macedonia. One of Alexander's military generals declared himself the King of Egypt and established the dynasty of the ptolemy. He founded the city of Alexandria. At last came the Romans in 39 B.C.E. The last Egyptian queen, Cleopatra, tried her best to save her country. It was said that the Romans feared her beauty more than her troops. Twice she was successful in her attack upon the hearts of the her Roman conquerors. However, in 30 B.C.E., Caesar's successor, his son-in-law, Augustus, did not succumb to her beauty like his father-in-law, but defeated her army, though he spared her life. When he planned to carry her away along with the other spoils of the battle, Cleopatra consumed poison and ended her life. From then onwards, Egypt became a province of Rome.

The Mesopotamian Civilization

Mesopotamia is an area that lies in a valley between two rivers. Many of the places described in the Old Testament can be seen here. The land which inspires awe and fascination is called the 'Land between the rivers' or 'Mesopotamia' by the Greeks. The two rivers, Euphrates and Tigris, had made this West Asian barren land very fertile. It was the fertility of this area that attracted the people to it. Since food crops could be grown with little effort, the northern hilly tribes and the southern nomadic tribes of the desert tried to establish control over this area. The rivalry between these tribes led to number of endless conflicts. However, in the midst of these conflicts, there emerged a civilization of strong and brave race. The Sumerians were the first ones to evolve a system of writing in Mesopotamia. For 30 centuries all those who entered the fertile valley – Sumerians, Babylonians, Assyrians and Persians–used this system of writing, which was called Cuneiform.

The central area of this civilization was the southern part of the valley between the Euphrates and Tigris rivers. From olden times, this area had been referred to as Babylonia. The northern part of Babylonia was called Akhad and the southern part Sumer. The northern part of Mesopotamia was known as Assyria.

The Hanging Gardens of Babylonia

The legendary Hanging Gardens were created on the banks of the river Euphrates around 7th Century B.C.E. This was one of the seven wonders of the Old World. But it is surprising to note that the Babylonian cuneiform records which make a mention of the city, its palaces and its walls, are totally silent about the Hanging Gardens. Most of the scholars are of the view that King Nebuchadnezzar II was the one who created the gardens.

Nebuchadnezzar's wife Amitis was from Mead. It is said that Nebuchadnezzar got the gardens built in order to console his wife who was missing the beautiful environment of hills, trees and flowers of her motherland. Some scholars Opine that the gardens were created by Assyrian queen Sammu-Ramat. In reality, the gardens did not hang in the air. The trees and bushes were grown at different levels (or terraced land) of the ziggurats. When the branches hung at different levels and swayed, they gave the onlooker an impression of being a hanging garden. The Euphrates provided the water for these gardens.



Ziggurat

The history of Mesopotamia is a story of end less hatred and conflict. The Sumerians, the hilly tribe from the north, were the first to arrive here. They who used to worship their gods on top of the hills, after coming to the plains,

built artificial hills and established their places of worship there. These were called Ziggurat. They did not know how to build stairs and therefore surrounded them with sloping galleries. The Jews called these the Towers of Babel.

The Law Codes of Hammurabi

The main source of the law codes of Hammurabi are the rock edicts found in 1901 C.E. Today this has been kept in 'The Louvre' museum of Paris. Hammurabi's law enforced the logic of 'An eye for an eye and a tooth for a tooth'. Hammurabi's Law Codes are one among the most ancient of the codes available to us. They were probably written to protect the rights of all sections of Babylonian society, especially women and slaves.

The Sumerians had entered Mesopotamia in 4000 B.C.E. Later they were overpowered by the Akkadians, one of the tribes of the

Arabian desert. These are known as Semites. After a thousand years, these Akkadians came to be ruled over by the Amorites, another Semitic tribe. The most famous king of the Amorites was Hammurabi. He got built a fabulous palace for himself in Babylonia. He framed the codes of justice and made Babylonia to be considered the best-administered kingdom in the whole of the Old World. The Hittites who came later, occupied the valley and destroyed all that they could not carry away. These Hittites were defeated by the Assyrians who were the followers of 'Asura', the desert God. The Assyrians occupied the whole of West Asia and Egypt till about 7th Century B.C.E., and collected taxes from all the people there. Another Semitic tribe, the Chaldeans, re-established Babylonia in the 7th Century B.C.E. and developed it into a prominent capital of that time. Nebuchadnezzar was the greatest king among them. He encouraged the study of science. But the Chaldeans came under the attack of the Persians in the 6th Century B.C.E. Two hundred years later, Alexander transformed this place of the Semitic peoples into a Greek province. After the rulers of the Romans and Turks who followed Alexander, this civilization declined and turned into a wilderness.

The Chinese Civilization

It is a special feature of all ancient civilizations that they were established on river plains. The Chinese civilization was no exception to this. But the river which led to the establishment of the Chinese civilization was known as 'China's Sorrow'. This was the Hwang Ho river. After the floods this river changed its course in an unpredictable manner and inundated houses and agricultural lands. It would render all the canals useless. This was the reason the people of that area referred to it as the 'Symbol of Sorrow'.

According to Archaeological evidences, the first ruling family of the Chinese civilization was the Shang dynasty. It ruled in the period between the 18th century B.C.E and the 12th century B.C.E. Under the rule of this dynasty, the people had developed a wonderful culture by the 14th century B.C.E. The Shang dynasty was overpowered by the neighbouring Chau dynasty. The Chau dynasty continued the good traditions of the Shang culture and ruled till 250 B.C.E.

In the Chou dynasty there was a section of officials below the kings. The king allotted portions of land to the officials. In return for that, the officials supported the king during battles. In the social stratification, the communities in the next level were the merchants and craftsmen. Apart from them we can find a great majority of peasants as well. In the lowest

strata of social hierarchy were the slaves. The prisoners of war were made slaves by the kings.

The Great Wall of China



The Chinese Empire consisted of many small provinces. Seven big states were created bringing these smaller provinces under them. Every state that was created thus, constructed a wall along its boundary for protection. Emperor Qin Shihuangti ordered that the walls of the northern chinese states be connected. This enabled the northern walls to ward off the attacks of invaders from the north. The construction of the great wall began in the 7th century B.C.E. and continued till the 16th century. The worn-out parts were repaired and strengthened. When the work was completed it stretched to more than 5000 kilometers. It is one of the seven wonders of the world.

The Shang kings spent quite an amount of time in conquests and battles. Hence the army was in prominence. The soldier enjoyed a dignified place in society. Soldiers wore bronze helmets and metal armours. The bronze daggers, axes, bows and iron-tipped arrows which they used have been found. The people of the Shang dynasty depended on agriculture. They had a well-organized system of irrigation. They used to grow plenty of rice.

Porcelain

It is believed that porcelain originated in China. Semi-porcelain objects were in use from 1600 B.C.E. By the time of the reign of the Han dynasty (200 B.C.E.), glazed porcelain had been developed. It had developed into an exotic art. The ancient Chinese used to bury their dead along with porcelain pots, animals and the objects loved most during their lives.

The Chinese used to wear thin cotton dresses. They used silk too, and engaged in silkworm-rearing. Silk- manufacturing was a prominent industry. The Chinese used to make excellent pots, and had learnt to make various objects from porcelain. It was a custom of the Chinese to worship their ancestors. They believed that a dead man became a spirit and that the spirit had special powers. The dead body was buried along with various wooden articles, pots, bronze vessels and other objects. The tombs of kings used to be quite large. The Chinese tradition of writing began with pictures and got transformed into an ideographic script. Writers used to write on silk and bamboo slips. Porcelain and the Great Wall are the exceptional contributions of this culture.

EXERCISES

I. Complete the following sentences by using suitable words in the blanks:

1. Hieroglyphics are called _____.
2. The kings who ruled Egypt are called _____.
3. The Greeks referred to Mesopotamia as _____.
4. The most famous king of the Amorites is _____.

II. Match the following :

A

1. Hwang Ho River
2. Cuneiform
3. Cleopatra
4. Hammurabi
5. Chinese dynasty

B

- a. Mesopotamia
- b. King of the Amorites
- c. Shang
- d. China
- e. the last Egyptian queen

III. Answer in brief the following questions :

1. How are 'mummies' preserved?
2. Write a paragraph on the Pyramids.
3. How was 'Hwang Ho River' China's sorrow?

IV. Activity :

1. Collect information about the Nile river.



CHAPTER – 5

GREEK, ROMAN AND AMERICAN CIVILIZATIONS

In this chapter you learn :

- *The development of Greek civilization and contributions.*
- *The development of Roman civilization and contributions.*
- *The ancient Columbian civilizations of America - Maya, Aztecs and Inca.*

Greek Civilization

Greece is a peninsula in Mediterranean Sea. Aegean Sea separates Greece from Asia Minor. Since the Balkan mountain range passes through the middle of Greece, small hills and valleys divide Greece. Since all the parts of Greece are connected by Sea, Greeks could strengthen their navy. The Greeks belong to Indo-European race. The ancient Greek was called as Hellen's. Because their forefather was Hellen this name had come. Later, the Italians called Hellenes as the Greek. There were many tribes communities like Ayoulian, Ayonian and Dorius among the ancient Greeks.

City States :

Three thousand years back every tribe had a king and every king had an advisory committee of senior citizens. As the industries and business increased, the villages of the tribes slowly grew into small towns and later into cities. Later, these became the city states. The city states are called as 'Polis' in Greek language. The Greeks were basically loyal to their city but not the country. Every city state had its own army, city God and administration. Though the city states had maintained their separate identity, culturally they were similar. The Greek language, Homer's epic poetry, Olympic games, and Greek Gods were able to knit Greeks together. Athens and Sparta were the two important city states of Greece.

Athens :

Athens is the capital of Attica state. This was an ideal democratic city state in Greece. It had monarchy in the beginning and later had developed into oligarchy. The rich were electing an administrator named

‘Archon.’ A person by name Draco enforced inhuman laws in Athens. These were later modified and made human friendly by Solaan. After Solaan, anarchy set in Athens. The middle class and the working class that had emerged due to commerce, business and industries joined hands and played a significant role in removing the dictators and restoring back democracy. Later the age of Pericles started. His period is called as the Golden Age of Athens. During the time of Pericles, art, literature, science, philosophy and other fields of knowledge flourished. As a result of this Athens was called as ‘The School of Hellas’ by Pericles. Philosophers like Socrates, Plato, and Aristotle belonged to Athens.

Sparta : Sparta, the city state of Darien tribe, was the military state of Greek. Boys who attained the age of seven were separated from their family and were given rigorous military training. They were recruited to military after twelve years of training. Due to this, Sparta city state had a strong military strength.

Athens and Sparta had successfully encountered the invasion of Persian King Darius united and defeated the Persian forces in the marathion battle. Later, Athens state organized a federation of city states called ‘Confederacy of Delos’, that took the shape of an empire. This stimulated enmity between Athens and Sparta. As a result two Peloponnesian wars were fought against by these two states. Finally, Athens lost to Sparta and became a feudatory state of Sparta. Though Athens lost to Sparta militarily, culturally it overpowered Sparta. By 5 B.C.E., due to the invasion of Persia and the internal wars between Athens and Sparta Greek civilization lost its importance.

Religion : The Greek Gods like human beings had desires and aspirations. Greeks believed that these Gods resided on the Olympus mountain. Zeus is the most important God. Hera is his wife. Apart from them, Greeks worshipped Apollo, Aphrodite, Ares and other gods. Athena was the patron goddess of the Athens city. Zeus temple is located at Olympia. All the ancient city states participated in Olympic Games held at Olympia.

Education and Literature: The Greek had a great tradition of teacher philosophers. Socrates was the teacher of Plato, and Plato was the teacher of Aristotle. Alexander, the King of Macedonia, was the illustrious student of Aristotle. Plato had founded a learning

institution named 'Academy'. Aristotle founded a learning centre by name 'Lyceum' Demosthenes was a great orator. Homer, the blind poet, wrote two great epics 'Iliad' and 'Odyssey'. These two epics provide the details of life styles of then contemporary Greeks and their socio-religious system. Iliad narrates the victory of Greeks over Troy city and the Odyssey narrates the journey and adventures of Greek hero Odysseus while coming back home from the victorious battle of Troy. Herodotus and Thucydides are the important historians. Herodotus is called the father of history. Aeschylus, Sophocles, and Euripides are the important playwrights. Sophocles is the most renowned playwright who wrote the plays 'Oedipus the King' and 'Antigone'.

Art and Architecture: Slavery was universal in Greeks. This provided the Greeks ample leisure time and allowed them to engage in various art forms. They sang using a string instrument called 'Lyre'. Greeks excelled in music, theatre and dancing. Greeks made tremendous achievements in the field of architecture, sculpture and painting. Pericles built the Parthenon temple using white marble and is a fine example of beautiful architecture. A Sculptor named Myron has sculpted 'discuss throwing athlete's sculpture called 'Diskobolos'. Greek sculptors sculpted the realistic human shapes. Polygnatus was the most famous painter of that period.

Science: Pythagoras and Thales were the two stalwarts in mathematics. Democritus who presented Atom theory vaguely and Anaximander who advocated the evolutions of humans from fish are the important scientists. Hippocrates, called as the 'father of Medicine' had mastered the method of providing medicines scientifically to human diseases is from Greece.

Sports: Greeks had given equal importance to both physical growth and psychological growth. Hence, sports always had special acceptance among Greeks. Sportsman had respectful status in society. Different levels of sports events were organised. Olympics Games stands unique among these regular sports events. It started 2759 years back in Olympia. Sportsmen from all the city states represented their city states with much pride and happiness.

Greeks won the marathon battle against Persians 2500 years back. A soldier named Pheidippides ran twenty four miles to deliver the news of victory to Athens from the battle field. He died after delivering the news of victory. In his honour, marathon running was added to Olympic Games.

Olympic Games

The Olympic Games began in Greece in 776 BCE. The Games, which were held once every four years, were also used for measurement of time. They used to be arranged in Olympia in Illis area as part of the Olympic festival. This festival was celebrated in honour of the peace pact between Illis and Pisa city-states. In the beginning there were only running races. This race over 200 metres was called 'stadium'. Thus the term of measurement of distance was 'stadia'. An olive branch used to be placed on the head of the winner in the race. The Olympic Games were held for more than a thousand year. They came to an end when the Christian Emperor of Byzantine Theodossus banned them in the 4th century C.E. The Olympic Games were revived in the 19th century under the initiative of France. Even today olympic games are conducted once in 4 years.

The democratic political system of ancient Greece was destroyed by the king Philip of Macedonia of north Greece. Alexander was his son. He was a great conqueror. Aristotle was his teacher. He undertook an ambitious military expedition of conquering the world which resulted in the victory over Egypt, Babilon and Persia. He reached till India. There after while on his way back home he died at Babilonia. He built a city called 'Alexandria' in Egypt.

Alexander

He was the king of Macedonia in Greece. In his short life span, he set out to conquer the whole world. He was successful in building a huge empire. He defeated the Persian empire and advanced towards India. Aristotle, one of the greatest scholars of Greece, was his teacher. He died while returning after a war at the borders of India at Babilonia in 323 B.C.E.

Socrates

There are many anecdotes depicting Socrates intellectuality. The following is one such anecdote. Athens city was known as the city intelligents. Once a question arose among the intellectuals group. The question was there are many intelligents in the city. Who is more intelligent among all? As they failed to find a solution among themselves, they went and submitted before Athena, the patron Goddess of the city. Athena says the most intelligent of the Athens is Socrates. So intellectuals went in search of Socrates and located him. They asked him 'what is the secret of your intelligence and how you are more intelligent than us'. On hearing them Socrates answers like this 'I really don't know. Similarly you also don't know. But I know that I don't know. But you don't know that you do not know'. Thus he unfolds the vastness of knowledge and philosophy.

Socrates

Socrates was the philosopher who taught the Western world to think logically. Socrates was reknown for intellectuality and rationality. He gave a philosophical basis for early Greek thought. He believed in politics, social system, justice, morality, religion, patriotism, democracy, humanity and ethics. His life was a struggle, suffering and adventure. His intellectuality was mainly ethical. 'Knowledge is virtue: virtue is knowledge' – was the foundation of Socratic thought. He did not develop his philosophical thought within four walls. He used to carry on his intellectual exercise in the form of questions and answers with strangers in the crowded areas like market-places, shops and streets. Such thoughts of Socrates teaching enraged some Athenians and he earned their hatred. Some prejudiced people heaped various accusations on him in order to have him punished. As a result, the jury sentenced him to death and threw him into prison. One month later the jury decided to give him hemlock. Socrates told his students, "I'm not afraid of death, but I'm afraid to go against religion and truth". On the execution, a jail attendant brought him a cup of poison. Socrates drank the poison and left his earthly abode.

Plato

He is one of the famous philosophers of Greece. He was a disciple of Socrates and advocated ideas of social justice and ethics, among others. He was the architect of the idea of 'Ideal Republic'.

He was disturbed by the life around him when the city of Athens was in danger. In order to avoid social and political disintegration, he advocated ethics, philosophy and education with respect to society and the nation. He was a staunch supporter of education and started a school named 'The Academy' in Athens. This became famous as the first University of Europe.

Significant among Plato's scholarly works are 'The Republic' and 'The Text and History'. Socrates, Plato and Aristotle have been ancient Greece's most important philosophers. Proved to be able to influence even the 20th century political thoughts, Plato left Athens after the death of Socrates and travelled to Greece, Egypt and Italy. He was a scholar who distinguished himself not only in the field of Political Science but also in Mathematics and Jurisprudence.

Aristotle

Aristotle is as important as Plato in the tradition of western Philosophy. He was a disciple of Plato. The influence of Plato and Socrates are prominent on the thinking of Aristotle. As Aristotle was the teacher and admirer of Alexander, the great, he was opposed by some prejudiced people. The number of enemies increased. Finally, by consuming poison he committed suicide. He has discussed on the structure of the best State and its nature, status of women, slavery, extent of ownership of property, citizenship, education, revolution, socialism and democracy. His thoughts can be termed as the progression of Plato's thoughts. He established 'Lyceum' as a complementary to his teacher Plato's school. He told his students "I respect my teacher. But I respect the 'Truth' even more." He studied medicine and botany. He had studied deeply the 'investigative techniques' in research. He was the student of Plato at the age seventeen. He knew about Ethics, Aesthetics and early Greek Philosophy and was deeply influenced by Plato on these aspects. Due to these traits, he became a close associate of Alexander, the Great.

Roman Civilization

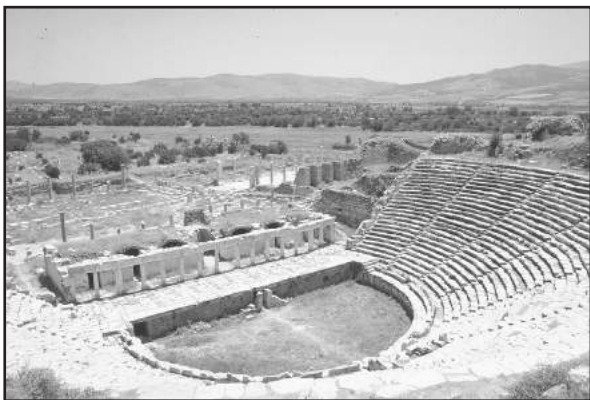
Italy is a peninsula spreading down into the Mediterranean Sea towards the south of Europe. Alps mountain range is to the north of Italy and Apennines mountain range passes through the centre of Italy. Rome is on the banks of river Tiber. It is twenty five kilometres away from Mediterranean Sea. In the plains between Apennines and the Sea, a tribe name Latins lived. Around 2700 years back people settled in the place called Rome on the banks of river Tiber. The ancient people of Rome were called as 'Patricians'. The word Patrician originates from the Latin word 'Pater' which means 'father.' Romans believed Romulus and Remus as their forefathers.

Rome was under the rule of a monarchy. The Romans had 'Assembly' and a 'Senate', as two political advisory institutions. The Assembly was made up of all the middle-aged men, whereas the Senate was an elite institution which was very influential. The Senate had the power to reject the proposals of the Assembly and the king. In the 6th century B.C.E., monarchy was abolished and a republic was established. Around 3rd century B.C.E. the administration of the whole of Italy came under the republican states. Even under the Roman republic, the Senate and the Assembly continued as advisory institutions. The members of

these institutions headed the armies during wars. They enforced the law and dispensed justice.

There were two classes in the Roman society: the Patricians and the Plebians. The Patricians were the elite in the society. They were land-owners and formed the upper class. It is they who controlled the Senate. The Plebians were the common people. They were the ordinary workers, small land-owners, artisans, small traders and soldiers. Their rights were limited. They were meant to pay taxes, and to undergo punishment. The decisions taken by the Council and the Senate regarding the Plebians could be rejected by the Tribunes. In the 5th century B.C.E. the Plebians rebelled against this system. As a result, the Patricians granted them some concessions. Thus the Plebians got the right to choose the members of the Tribunes. It was around this time that a rule-based on 'Roman law' was established. This provided awareness over their rights and learnt to oppose the violation of their rights.

A desire for expansion exposed the Romans into newer conflicts. Hence they battled with Carthage, a coastal town in North Africa. Sicily was a fertile area. The Romans fought for the control of this area for 118 years. These wars are referred to as the 'Punic Wars'. The Carthegens were defeated in this war. By early 1st century B.C.E., the Romans had conquered Greece, parts of Asia and Egypt.



Amphitheatre

Conquests and victories had enabled Rome to acquire vast wealth and riches. Rome won over a lot of gold and innumerable slaves. Rome not only had Patricians and Plebians but also had slaves. The slaves did not have the rights of citizenship. They were the private property of their owners. Slaves were also sold.

There were instances when the slaves secured their freedom under special conditions. The Romans who had immersed themselves in their pride of status used the slaves as gladiators. They amused at the combat of the gladiators from the amphitheatre. A majority of the slaves and prisoners lost their lives in such games.

Gladiator

The wrestlers of ancient Rome were called Gladiators. There were both expert and amateur wrestlers among them. The fights were organised to entertain the spectators. These fights which were fought between human beings, and sometimes between human beings and animals, ended in gruesome deaths of the participants. The place where gladiators fought were called as 'Amphitheatre' and 'Colosseum'. Criminals, slaves and prisoners-of-war who had lost their citizenship rights were taken as gladiators. Gladiators, very rarely used to obtain their freedom by becoming popular and wealthy. Recently, a film titled 'Gladiator' has become famous world-wide.

Over a period of time the chaos engulfed the Roman state. Now rebellions and assassinations took place regularly. Bribery and corruption during elections became the order of the day. At this juncture, around 60,000 poor and exploited slaves rose in rebellion under the leadership of Spartacus. One year after their struggle they were ruthlessly suppressed. Around 60,000 people were crucified at this time.

The Generals on the account of continual wars reduced the authority of the senate to insignificance. Pompey and Julius Caesar are prominent among the hundreds of such military generals.

Julius Caesar: In the course of time, the rule of the first triumvirate consisting of Crassus, Pompey and Julius Caesar started in Rome. As the military generals, Julius Caesar won France (Gal) and England, Pompey won Syria and Turkey. Crassus died while winning Parthia. Like this Rome which was just a city state became an Empire. Julius Caesar defeated and killed his rival Pompey. Caesar won the love of Cleopatra, the Queen of Egypt. The powerful Caesar declared himself as the dictator of Rome and weakened the republic system of Rome. He was assassinated. By that time, the Roman agriculture, industry and commerce had evolved a lot. He implemented the Julian calendar also. His work was further continued by Augustus Caesar.

Augustus Caesar: Augustus previous name was Octavius. He formed the Second Triumvirate with Mark Antony and Lepidus. Later he chased away Lepidus and shared the kingdom with Antony. Augustus Caesar defeated Antony as he sided with Cleopatra. Mark Antony and Cleopatra committed suicide. After this Augustus assumed the title of 'Imperator'. He consolidated all power with himself and ruled. The period of Augustus

Caesar is called as the 'Golden Period' of Rome. Jesus Christ lived during his period. Augustus undertook many welfare programmes. He himself declares that he changed the Rome from mere bricks city into white marble city. 'Pax Romana' was established. Pax Romana means peaceful period of Rome.

After Augustus, except Markus Aurelius and Constantine, the last rulers of Rome were incapable rulers. During this period a barbaric attack by Odoacer led to the fall of the Ancient Roman empire 1500 years ago.

Literature: Romans achieved a lot in the field of literature. Vergil is Rome's greatest poet. Aeneid was his epic poetry. Ovid is another great poet. He has documented the mystical stories of Greek in his book 'Metamorphoses'. Apart from them popular poets like Cicero, Plutous, Terrance and others are known names. Julius Caesar himself was a good historian. He has edited the Galic battles in seven volumes. Levi and Tasicanus are important historians.

Philosophy: Romans continued the philosophy and thoughts of Greeks rather creating new ones. Cato who is known as the Socrates of the West is of importance. Cicero, Seneca and Emperor Markus Aurelius advocated Stoicism. It advocated 'Living at peace with Nature'.

Art and Architecture: Colosseum and Amphitheatre are the two best examples of Roman's superior architecture. Pantheon is the largest building of Rome with the biggest dome. 'Cupid's statue and 'Ara Pacis' statue are the best examples sculpture of Romans.

Science: Romans had a deep knowledge in mathematics and Science. Pliny the Elder prepared an encyclopaedia named 'Natural History'. Delivering human babies through Caesarean operation (C section operation), vision correctional eye operations were done. Galen was the famous doctor of Roman period. Strabo and Ptolemy were the famous geographers of that time.

The laws of Romans are the base of all the modern laws. This is their unique contribution to the field of legal studies.

The American Civilizations

Maya, Aztec and Inca are the ancient Columbian civilizations of America. They represent the culture of the Indian aborigines of America.

The countries of Medieval Europe discovered new continents in their attempts to find out a new sea-route to India. America and Australia thus discovered were misunderstood as India and their inhabitants were called Indians. Thus, the aborigines of America and Australia came to be called Indians. In later history, the familiar countries came to be known as the Old World and the newly discovered continents as the New World. The ancient Columbian civilizations of America are distinct and special like the civilizations of the old world like the Egyptian, the Mesopotamian and the Chinese civilizations. We can see states, kingdoms, amazing monuments, cities, art, metallurgy and the practice of writing in the civilizations of the new world too.

The nomadic people of this area settled around 1500 B.C.E. They grew maize, cereals, fruits, pepper and cotton. The early villagers knew how to weave cloth, make pots and do other things like the people of the Neolithic age (or the New Stone Age). The beginning of the construction of pyramids and commemorative stone idols in the period between 1200 B.C.E and 900 B.C.E brought new changes in the hitherto simple lives of these people. These changes were first noticed in coastal Mexico. The commemorative idols depict leaders and kings. These are called Olmec. The evidences and the excavations found here reveal a centralized society with a hierarchical system. Gradually, vast kingdoms, capital cities and villages sprung up around this area. Even here the Olmec style of art was made use of. In this way, cultural boundaries were drawn for the first time and unity developed among the people therein. After 500 B.C.E the Olmec unified style led to separate local styles and regional states. These are the Maya, Aztec, Inca and other civilizations.

Maya Civilization

The American-Indian aborigines of Yucutan area of Mexico are called the Mayas. Their language is called Yucutec. Physically, the Mayas were short, brown complexioned, long-haired and generally round-headed people. The Mayas were the most advanced among the ancient American Indians. The ruins of cities built of stone have been obtained in Yucutan of Mexico, Guatemala and Honduras. This civilization rose to its cultural height around 1700 years ago. Their earliest cities were built around 320 C.E. We see the dissolution of Mayan culture with the attack of Spain from 1527 to 1546 C.E. under

the leadership of Cortes. A few descendants of Mayan Indians who survived these attacks can be seen even today in the Northern areas of Yucatan and Guatemala.

The life of the Mayas

The settlements of the Mayas included huge ceremonial centres. These have been called cities but they were not inhabited by people. These areas were utilized for religious ceremonies, markets, courts and city administration centres. People lived in villages around these areas. Except during the period of markets and religious celebrations, these ceremonial centres would be deserted at all times. Around a large site named Tikal, pyramids, 'palaces' and courtyards have been found all around stretching one square mile.

In all the ceremonial centres and on either side of the courtyards, there used to be pyramids. Beneath them were buildings with many rooms. In front of these, there used to be mammoth stone pillars, of which a few were plain pillars. Usually depictions of gods, priests, important leaders in administration and hieroglyphic writing would be carved on these pillars. Such stone figures are called Steles. The largest among these is approximately 35 feet high and weighs 65 tons. There were temples on top of the pyramids. The people used to assemble in the courtyards and watch the rituals held in front of the temple. Gradually, by about the 9th century, people abandoned these ceremonial centres. For the next six centuries, these areas did not enjoy much of an importance.

The ordinary Mayas lived in huts on the outskirts of the ceremonial centres. There used to be maize fields all around. The farmers grew maize and yam among others. The labour of innumerable peasants were utilized here to construct huge structures.

The noteworthy intellectual achievements of the Mayas can be seen in their writing (the hieroglyphics), astronomy and their use of the calendar. Their hieroglyphic writing is based on ideographic symbols and sounds. There are around 850 characters. The meaning for most of these are not known. These hieroglyphic texts have been carved on stone memorials, structures and on logs of wood. They were also written in books. All except three books were destroyed during the Spanish conquest. One of these, the Dresden Codex was used to predict the dates of eclipses.

There is no evidence of the use of metal among the Mayas. Even in early 16th century, copper and gold were rare. They used tools made of stone, bones and wood. Till the 9th century, they were not aware of the use of bow and arrow. The gods pertaining to the maize crops were the presiding deities for the Mayas. They treated Rain, Soil, Wind, Sun, Moon and the Maize itself as their gods. Throughout their history the Maya practised human sacrifice on a limited scale.

The Aztecs

Texcoco is a lake in Mexico. The Aztecs built their city on an island in this lake. They are called Tenochca, a name derived from their legendary, ancestor, Tenoch. Their city was called Tenochtitlan (the stone rising in the water). The city has also been called Mexica, and its inhabitants were also known by the same name. Their language was Nahuatl. Even today there are people who speak Nahuatl in Mexico.

Barring the Incas of Peru, there has been no one in the New World who has had an Empire like the Aztecs. It is the incredible story of a small wandering tribe that built and ruled an empire within the span of only one century. But its fall was equally rapid. Its rapid rise and fall have been recorded in its oral literature and can be understood from the excavations too. The Aztec oral literature has been translated by the Spanish historians and Social scientists. These have been called the Indian codices.

When the Spanish army entered the Mexican valley in 1519 C.E., they spotted the beautiful city on the island in a lake. That city was Tenochtitlan, the capital of the Aztecs, which had grown to symbolize their wealth and power. As the Spanish stepped into the city, they saw three wide roads. One of them led to the palace, the second led to the ornate temple and the third led to the pyramids. All these came under the Spanish conquest.

The Aztecs were basically nomadic people. It is said that they came to Mexico around the 13th century. They fought many times with a few tribes here, and also served under them. Thus, they imbibed the culture of the Toltecs, Mayas and Zapotecs. In the 14th century they took shelter on an island in a lake in Mexico and built the city of Tenochtitlan. Then they took new areas under their control and established an empire. Even today there are Indians in Mexico who are the descendants of the Aztecs.

The best of the architectural and sculptural representations are found on their buildings. Huge temples were decorated with carvings. They have recorded historical and religious events using symbols and numbers through hieroglyphic writing. They had learnt the use of the calendar from the Mayas. Their almanac gave the dates of festivals and also the list of gods influencing events periodically.

Trade connected Tenochtitlan with far-off places of the empire. Soldiers gave protection to the traders. Since there were no animals to carry loads, manual labourers were employed as beasts of burden to carry them. They used boats to sail in the canals while bringing the harvest from nearby farms. Their main crops were pulses, grains, pepper, fruit juices, tomato, tobacco and cotton. Trade was carried on by barter.

The Aztecs used their wealth and power to make their life luxurious in the capital. The king lived in a magnificent palace. The nobles and innumerable slaves were under him. There were beautiful gardens and zoos near the palace. Roads, bridges and canals led to the city. Provision was made for drinking water too.

The small islands around the island-city had been converted into agricultural land. These were called 'Chinampas'. The farmers lived in huts on the islands. The officials used to live in houses built of stone and burnt bricks. People were trained in the art of war, to use spears, bow and arrow. The prisoners captured during war would not be killed but kept in prison to be later sacrificed during rituals. The spaniards being horrified by these Aztec rites, ruthlessly destroyed the temples to uproot their old faiths. Thus the glorious days of the Aztecs were also their last days. The Aztecs were worshippers of Nature. They tried to please God in many ways, one of them was human sacrifice. As the Aztec empire grew, they sacrificed more and more human beings to please the gods. It is believed that when the temple-pyramid of Tenochtitlan was dedicated, around 20,000 prisoners were sacrificed. The Spanish army which advanced under the leadership of Hernando Cortez in 1517 C.E., is said to have caused its cultural defeat too.

Inca

The Inca empire which flourished during the 15th and 16th centuries spread in the areas of Peru, Ecuador, Chile and Argentina. Other cultures existed before the Incas. The Inca empire continued the old cultures. Since the Incas did not know writing, not much is known about their

early life. They came and settled in the Peruvian Cuzco valley around the 11th century, and gradually occupied the whole valley. Information about their lives till the 15th century is vague. Tupac was a prominent leader of the Incas. He had fought the earlier tribe of Chimus and overpowered them. Over a period of time, his descendents worked to establish an empire. But in 1532, a Spanish army of only 200 men defeated the Incas. It murdered the Inca soldiers in a gruesome manner and took over the kingdom.

The talent of the Incas can be seen more in their organizational ability than in their artistic interests. Their empire had been divided into four provinces. Chiefs looked after the provinces. Above them was the king. Officials and priests can be seen to be powerful classes of the society here. The land was divided into three parts. One part was reserved for families. The other two parts were meant for the Sun God and the king respectively. The facility of giant granaries was made throughout the kingdom. At the time of calamities, the food grains stored in these granaries and cloth would be provided to the people. Every year inspectors would visit the villages to enumerate people in every village and also to keep an account of food and animals. Majority of these people were farmers. Some were soldiers, whereas others were artisans.

Systematic planning was possible due to good communication facilities. The state had many narrow roads and two main roads. People were appointed to stand on the roads for passing on information speedily. The greatest contribution of the Incas can be seen in their huge stone buildings. Their architecture is spread throughout their empire. Their most important buildings are in Peru. Many palaces and temples have been found here. The fort built by Tupec is also here. The palace on the island in Lake Titicaca and the Moon Temple are two famous buildings of the Incas.

The Incas had developed new ways of making pots, cloth and in working with metals. Creation of gold jewellery had progressed very well in parts of North Peru. Armours, the picture of the Sun in the temple and various gold ornaments point to the skilful craftsmanship of these people in the use of gold.

The Sun God was the most important deity of the Incas. They believed that God Veerakocha was responsible for all creation. According to them, the Sun God was the link between the people and God

Veerakocha. This was the reason that there was a Sun Temple in all Inca centres. They worshipped objects of nature like the Moon, the Stars and lightning, and prayed to other natural phenomena.

EXERCISES

I. Complete the following sentences by using suitable words in the blanks:

1. The epics written by Homer are the Illiad and _____.
2. The Greeks referred to dictators as _____.
3. The one who laid the foundation for the study of medicine is _____.
4. The first to have analysed history was _____.
5. 'Princep' means _____.
6. The language of the Romans is _____.
7. The Stone Sculptures of the Mayan Civilization are called _____.
8. Texcoco is a _____ in Mexico.
9. The leader of the Incas was _____.
10. The ruling deity of the Incas was _____.

II. Answer in brief the following questions:

1. Explain the contributions of Homer to Greek literature.
2. Name the Greek city-states.
3. Describe the features of the Roman republic.
4. Which are the civilizations of ancient Columbia?
5. Who are the 'Mayas'?
6. How were the Aztecs worshippers of Nature?

III. Activities:

1. Learn about the life history of the Greek philosophers from your teacher.
2. Study and watch Shakesphere's drama Julius Ceasar.



CHAPTER – 6

RISE OF JAINISM AND BUDDHISM

In this chapter you learn :

- *Background of the rise of Jainism and Buddhism.*
- *Jainism and Buddhism.*
- *The principles of Jainism and Buddhism.*
- *The spread of Jainism and Buddhism.*

India is a land of many cultures and religions. This diverse culture is nourished by various religions. Of these, the Jainism and Buddhism are the two important religions. They emerged during 6th century B.C.E. in the mid region of river Ganga plains. Buddha and Mahaveera preached peace, non-violence, tolerance and human values which are the essence of plural cultures. The reasons for the emergence of these religions were in contemporary social and political systems.

The reasons behind the rise of Jainism and Buddhism.

By the time of 6 B.C.E., Indian society was divided on the basis of Varnas. All the four Varnas had emerged clearly. In the first two Varnas, Brahmin and Kshatriya were there, and below them were Vyshya and Shudra. Brahmins were the priests conducting 'Yagna' and were the heads of all the ceremonies of religious rituals. They had the rights to receive gifts and payments. They had held control over the Kshatriyas and were performing the role of guiding the kings. Kshatriyas were the ruling class and were in the second place in the hierarchy. They were sustaining by taxing the farmers. Though the Vyshyas, who were engaged in animal husbandry and business, were also called 'twice born' (Dvija), still certain prohibitions were on them. The Shudhras were considered as the labour class, and were there only as the household labourers and skilled workers. All the status and facilities of the society were reserved for the upper Varnas only. Women along with Shudhras were considered as profane. This varna based society, had created tensions and complaints among the communities. During this period, the teachings of Gauthama Buddha and Mahaveera appeared as new hopes for them.

In most of the ancient times, the contemporary agricultural practices and rise in the food production played a major role in profound changes to occur in the political and religious systems. The same are the reasons for the rise of Jainism and Buddhism. By that time, the east of present Uttarpradesh region, north and south of present Bihar were witnessing emergence of new economic structures based on new agriculture. By 5 B.C.E., iron implements came into use. With the iron blades in them ploughs became more effective and were driven by oxen. In order to improve the food production, the use oxen were inevitable. The oxen were sacrificed during religious rituals which brought down their number. In this background, since both Jainism and Buddhism rejected animal sacrifice and advocated non-violence a new hope became visible to people. As a result of all these things, people got attracted to them.

During this period cities grew. Koushambi, Kushinagar, Varanasi and Vaishali, Rajagruha, Chiranda cities in Bihar came into prominence Artisans and business people came and settled in these cities. Coins were used as means of exchange for the first time. The Vyshyas who were placed in third place in the Varna system, commanded no respect from the society. In order to escape from the limitations enforced by the Vedic religion on their social status, the business class supported the Jainism and Buddhism, which rejected varna system.

The major changes that took place in the political system of the contemporary society also contributed to the rise of new religions. The 'Janapadas' and 'Mahajanapadas' in the river Ganga plains were getting transformed into kingships. The new kings from these 'janapada' communities were looking for a way out to break the hegemony of the Vedic religion. They accepted the philosophy of Buddha and Mahaveera who preached the futility of war and supported non-violence.

The religions of Buddha and Mahaveera identified the desire as the main reason for all the human hardships. They gave a call to overcome them. They supported the simple living without accumulation too much wealth. They rejected luxurious life and advocated peaceful and moral family life. Instead of Sanskrit they preached the people in their own languages Pali and Prakrith. They offered new path to the people by rejecting the Vedic religion.

Jainism

Jainism is one of the very ancient religions. Traditionally, the Jains believed in the existence of 24 Tirthankaras. Rishabha was the first Tirthankara whereas Parshwanatha was the 23 Tirthankara. Parswanatha was born as the son of King Ashwasena in the 8th century B.C.E. It is believed that he renounced all luxury and indulgence, and attained immortality. He renounced society and became a hermit. He preached four principles for a peaceful life.

The four principles preached by Parshwanatha, were :

1. Non-violence
2. Truth .
3. Astheya (not to steal)
4. Aparigraha (not to own property)

The fifth principle of Bramhacharya was taught by Vardhamana. He was the 24th Tirtankara.

Vardhamana Mahaveera (599-527 B.C.E.)

Vardhamana was born in Kundala grama in Vaishali, one of the republics. His father was Siddhartha, the king of the Gnatrika tribe. His mother was Trishaladevi, the princess of the Republic of Licchavi.



**Vardhamana
Mahaveera**

At the age of 30 Vardhamana set out in search of truth and renounced his family and house. He wandered for 12 years in this quest, and meditated. He punished his body by fasting. At the age of 42, he achieved enlightenment (Kaivalya). Vardhamana controlled his senses and achieved power over comfort and pain. Due to this achievement, he came to be known as 'Mahaveer' and became a 'Jina'. A Jina was one who had over come his senses and become victorious. Thus his followers came to be called Jains.

Mahaveera spent thirty years, i.e., the rest of his life preaching his knowledge to the people around the Ganga and Yamuna rivers. He travelled towards Western India preaching his thoughts. He attained nirvana in his 72nd year in Pavapuri of Bihar.

Mahaveera taught five vows and three principles of behaviour. The latter are called Triratnas.

The 5 vows are as follows :

1. Non-violence
2. Truth
3. Astheya
4. Aparigraha
5. Brahmacharya

The triratnas are as follows :

1. Samyakgyan
2. Samyakdarshan
3. Samyakcharitra

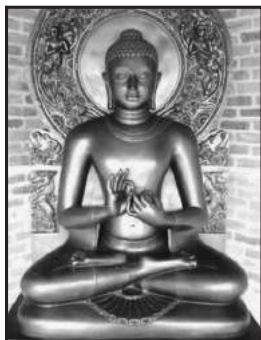
Jainism does not reject the existence of God completely, yet it advocates atheism. It denies the role of God in the daily affairs of people. It places God at a lower level than Jina.

The Jains believe that every animate and inanimate thing possesses a soul. They also believe that it is only through purification of the soul that one can achieve freedom from rebirth and attain nirvana. Purification is possible through meditation, fasting, punishment of the body and thereby, destruction of the body. This process is known as sallekhana. The concept of Karma is a very important aspect of Jainism. According to this, a human being can attain salvation only through good and holy acts. To attain enlightenment, the soul had to achieve freedom from the bondage of the body.

Traditionally, we get to see two important sects among Jains called Shwethambaras/Digambaras. Those saints and their followers who wear white clothes are called Swethambaras, whereas those saints and their followers who do not wear any clothes are called Digambaras. After the first Jain council, the preachings of Mahaveer were compiled in 12 volumes. These were called 12 angas by the Jains. They are in Prakrit language.

Very early, a group of Jains migrated to the South due to the famine in Bihar, and settled down at Shravanabelagola. Thus even here, Jainism spread and many works were written in Kannada, Telugu and Tamil languages. The famous Kannada poets Pampa, Ranna, Janna and Ponna were Jains.

Buddhism



Buddha

Siddhartha who later became known as Gautam Buddha was born in the 6th century B.C.E. His father Shuddodhana was the king of the Republic of Shakya. Renouncing kingly luxury and familial happiness, Siddhartha became a hermit. Disillusioned with the prevailing ways of life, he embarked upon a quest for truth. Attaining enlightenment, he became Buddha. After becoming Buddha, the 'Enlightened One', he first went to Sarnath near Banaras. There, in the deer park, he gave his first sermon. This has been called Dharma Chakra Pravarthana. Here he preached the Four Noble Truths and the Eightfold Path.

The Four Noble Truths declare that the whole world is full of sorrow and suffering. They also explain the root cause of sorrow. Buddha realized that desire was the root cause of sorrow. Only by the liberation of excessive desires could a peaceful life be led. Buddha preached the Eight Fold Path for eliminating desires. This is called the Middle Path.

The Eight Fold Paths are :

- | | | |
|-------------------|-------------|-----------------|
| Right - 1. Action | 2. Speech | 3. Vision |
| 4. Livelihood. | 5. Effort | 6. Recollection |
| 7. Resolve | 8. Thought. | |

Followers of the New Religion

Wealthy merchants, artisans and common people were inspired by the new teachings. Buddha gave his messages in Prakrit, the language of the common man and related them to various aspects of their tradition. The atmosphere of the new cities changed the ways of life of the people. The new religions became a ray of hope in the changed circumstances. Buddhism, especially, took on a new role of transforming the lives of people.

Buddha and his followers visited Kosala, Magadha and many cities on the Gangetic plain and spread his messages there. They walked from one city to another and devoted their lives for others. In his

80th year, Buddha's glorious life of selfless service came to an end at Kushinagar. This has been called 'Mahapari nirvana'. Viharas were constructed in all the areas in which Buddha wandered. People preserved his relics and bones in chaityalayas and stupas, and in memory of his accomplishments started worshipping him. This was how the first temples, idols and idol-worship began.



Sanchi Stupa

Buddhism spread not only in India but also in foreign countries. Chinese travellers like Fa Hien, It Sing and Hiuen Tsang have described vividly the glory of Buddhism. Buddhism had spread to Malaya, Burma, Thailand, Vietnam, Cambodia, Sri Lanka and Bamiyan too. Rocks have been cut from mountains and shaped into statues of Buddha. Even today we can see gigantic statues of Buddha in Angkor Vat of Cambodia and Bamiyan of Afghanistan. Unfortunately, the huge statues of Buddha in Bamiyan came under attack and were destroyed in recent times.

In 1956, inspired by Buddha's teachings, India's prominent social philosopher and architect of the constitution, Baba Saheb Dr. B.R.Ambedkar embraced Buddhism.

After Buddha's death, his followers collected his teachings and tradition in the form of Tripitakas. These are Vinaya, Dhamma and Abhidhamma pitakas. Over a period of time, disagreements developed in the teachings and different branches of Buddhism sprang up. Thus Hinayana, Mahayana, Vajrayana and their sutras came into being. Today we see many organizations across the globe adopting different ways of realizing Buddha.

Foreign Invasions

During this period, there sprang up city-states in Greece. Ancient Persia had grown into a powerful empire. These two areas engaged in continual conflicts. The Akhimenians were one group who ruled Persia. In 6th century B.C.E. King Darius of this dynasty established a strong

empire. His kingdom extended up to the Indian border during his time. In 4th century B.C.E., the Macedonian king Alexander won over the Greek city-states and captured Persia. Thus even the part of the Persian kingdom which had spread up to the Indian border, came under the control of Alexander. After overpowering Persia, Alexander entered India through the passes in Kandahar and Hindu Kush. He advanced till Ravi and Beas rivers, and unable to proceed further, he crossed the Indian border through river Jhelum, and on his way back home, he died at Babylonia.

The battle between Alexander and Paurava:

When Alexander accepted the invitation of Ambhi, the king of Taxila, and came to India, it was Paurava that he had to confront. Paurava was also called Porus. The two armies faced each other on the banks of the river Jhelum which was flooded and wild at that time. Alexander's army attacked Paurava who had never expected anyone to cross the swollen river, and won. Alexander asked the captured Purarava how he desired to be treated. Puravava replied with pride and courage, "As one king deserves to be treated by another". Puravava's brave adventures have been immortalized in Greek writings. Alexander's attack led to the consolidation of small and big republics and the establishment of the Mauryan dynasty. The arrival of the Greeks influenced North Indian art and science. Proof of this influence can be found in the famous art form known as Gandhara art which existed at that time.

EXERCISES

I. Complete the following sentences by using suitable words in the blanks:

1. The first Jain Tirthankara was _____ .
2. Vardhamana was born at _____ .
3. Mahaveera attained _____ in his 42nd year.
4. Mahaveera attained Nirvana at _____ in his 72nd year.
5. The original name of Gautama Buddha was _____ .
6. Buddha delivered his first sermon at _____ .
7. The first sermon of Buddha is called _____ .

II. Answer in brief the following questions :

1. Write in detail about Mahaveera's life.
2. What are the triratnas?
3. Name the sects among the Jains.
4. What is the middle path?
5. Who were the people influenced by the new religion?
6. Write a note on the Tripitikas.

III. Activities :

1. Collect information about the life of Mahaveera.
2. Collect pictures related to the life of Gautama Buddha.
3. Learn the meanings of words like dharma, sect, theism and atheism.



CHAPTER - 7

MAURYAS AND KUSHANS

In this chapter you learn :

- *The first ever empire of India was Mauryan empire.*
- *The emperor Ashoka's achievements, administrations and contributions to art and architecture.*
- *The history of Kushan's, administration and contributions of Kanishka.*
- *Locating the region of Ashoka's empire on the Indian map.*

Mauryas

India's first Empire was Mauryan Empire. They ruled from Magadha. Chandra Gupta Maurya, Bindusara and Ashoka are the important kings of this dynasty. This dynasty was established by Chandra Gupta Maurya. The name of Chandra Gupta Maurya was made eternal by recording it by Megasthenes the Greek Ambassador in his book 'Indica'.

Reference Sources

Though the source materials are less, the available sources provide valuable information on Mauryas. The following are the sources:

• **Megasthenes' Indica:** Megasthenes was in India as the ambassador of Greeks in the court of Chandragupta Maurya. He has recorded his experiences at Patliputhra, Mauryan empire in his book 'Indica'. Though the original book has remained untraced, later Greek writers like Arrian, Strabo, Diodorus, and Pliny refer to it in their works. 'Indica' reveals the city administration, social and religious life of Mauryan period.

• **Kautilya's 'Arthashastra':** 'Arthashastra' is written by the teacher and the Prime Minister of Chandra Gupta Mauryan, Kautilya. He is also known as Chanakya or Vishnu Gupta. Arthashastra is written in Sanskrit. It outlines the basic principles on administration, foreign affairs and judicial duties that a king ought to know. By reading this book, one can understand the politics, economy, and administration, social and other aspects of Maurya period.

• **Mudrarakshasa:** This is a Sanskrit play written by Vishakhadatta. It narrates the process of Chandra Gupta Maurya being brought into the power by Kautilya.

- **Deepavamsha and Mahavamsha:** These two are Srilanka literary works. They narrate the efforts of Ashoka to spread Buddhism in Srilanka.

- **Inscriptions of Ashoka:** Inscriptions are the authentic sources of information on Ashoka. They tell about the boundaries of Ashoka's empire, his efforts to spread the Dhamma and details of Kalinga battle.

Arthashastra : In 1905 C.E. R.Shamashastry discovered the manuscript of Kautilya's Arthashastra at the Oriental Library of Mysore. The economics discussed here is different from the economics known by the west. In the Arthashastra of Kautilya issues like administration, duties of the King and the Prime Minister and others elements of the states, state incometax collection, inter state relations are explained. It also details about the need for intelligence department and the management of finance. Kautilya's Arthashastra is still attracting the attention of experts even after thousand years of its writing because of its uniqueness.

Chandra Gupta Maurya (321-298 B.C.E.)

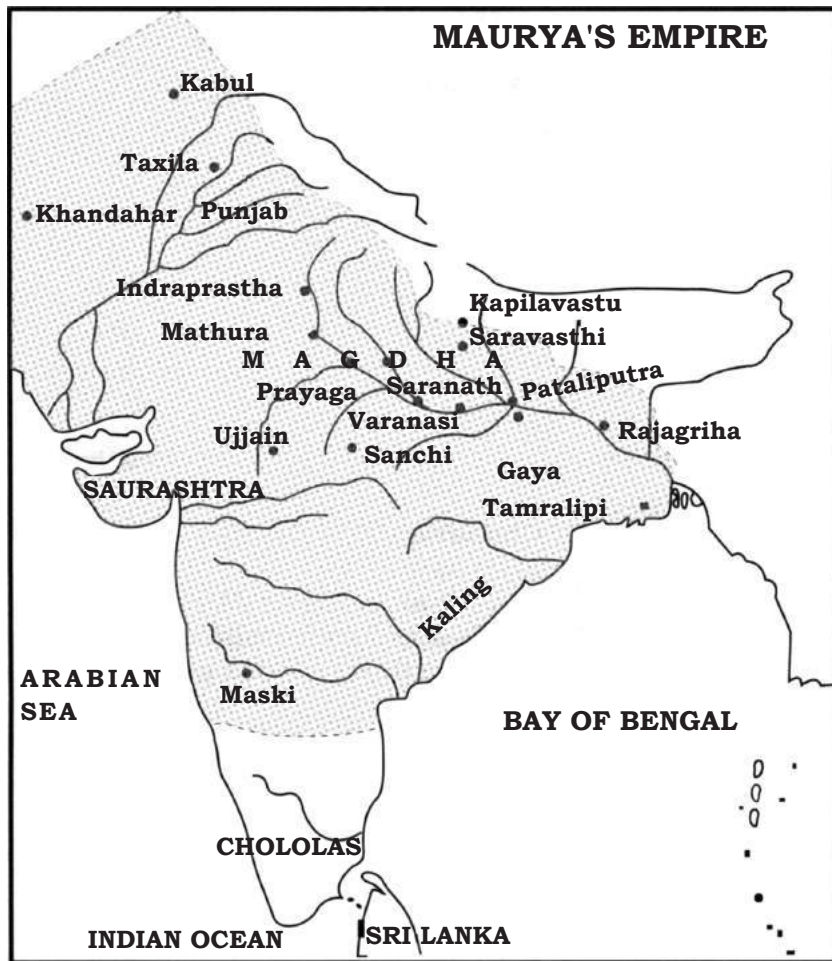
Chandra Gupta Maurya founded the Mauryan Empire. Chandra Gupta came to power by dethroning the last king of Nanda dynasty under the guidance of his teacher Kautilya at the age twenty five. By this time, the north west of India was ruled by the representative of Alexander Seleucus Nicator till Punjab. In 305 B.C.E., Chandra Gupta Maurya declared war against him and the battle ended in an agreement. According to it, Seleucus handed over four territories that included today's Afghanistan and Baluchistan to Chandra Gupta Maurya. Moreover, he married his daughter to him. With this, the Magadha empire established a rule over a vratha north western area.

As per a Jain tradition, it is said that Chandra Gupta Maurya handed over his reign to his son Bindhusara after accepting Jainism in his last days. It is said that he later travelled to Shravanbelagola in Karnataka along with Jain sages Bhadrabahu and others. Finally, the tradition says that he undertook 'Sallekhana Vratha' and passed away there itself.

Emperor Ashoka (273-232 B.C.E.)

The most popular Emperor of India Ashoka is from this dynasty. He was the son of Bindhusara. He was the governor of Ujjain and Takshashilla during his father's reign. He suppressed an uprising at Takshashilla. After the death of his father Bindhusara, it is said that, Ashoka had to kill all his 99 brothers to assume the throne, as per Buddhist traditions. Probably, there was an internal war among

the brothers for about four years. It is assumed that he ascended throne in the year 269 B.C.E. He waged a war against Kalinga eight years later. This was the only war waged by him after becoming a king.



Kalinga War: Ashoka declared war on the Kalingas who refused to accept the rule of Maurya Empire in 261BCE. The 13th rock inscription of Ashoka provides more information on this battle. According to it Ashoka declared war on Kalinga eight years after assuming the throne. In this battle one lakh fifty thousand prisoners were taken. One lakh people died. Many more became refugees. Though Kalinga was won by Ashoka, he was disturbed by the deaths and the pain of the battle. And he decided not to wage war there after. He considered victory of religion is better than the victory in the battle field. He went into repentance on seeing the devastation

created by the war. On being inspired by Buddhism, he dedicated his remaining life to spread the message of 'peace'.

Buddhism and Ashoka

Ashoka accepted Buddhism after the Kanlinga battle. He made donations to Buddhist monasteries and Viharas. He prohibited the killing of animals and birds in his kingdom. Ashoka declared that all his citizens are his children. He declared that all should be loyal to their parents and respect their elders and Gurus. He wanted people to show compassion to poor and slaves too. 'Live and let live' said he. He appointed officers named 'Dharmamahamathra' to preach the principles of Buddhism. He installed inscriptions all across the kingdom to preach the messages of Buddhism. Preachers were sent to other countries as well. A person named Rakshita was sent to Banavasi and another person by name 'Mahadeva' was sent to Mahishamandala (Mysuru). He also sent his son Rahula and daughter Sangamithre to Srilanka. In 250 B.C.E., he organised the third Buddhist conference at Pataliputhra.



**The Dharmachakra
engraved on the pedestal**

Ashoka's Inscriptions:

Ashoka is called as the father of inscriptions. Till today his inscriptions are the first inscriptions to be read. In 1837 C.E., a British officer James Princep deciphered Ashoka's inscriptions for the first time. In all the inscriptions instead of his name his titles 'Devanmpriya' or 'Priyadarshi' were used.

Charles Beadon a British engineer read an inscription at Maski of Raichur in 1915 C.E. In this inscription 'Devanampriya Priyadarshi Ashoka' reference appears for the first time. Based on this, it was decided that 'Devanampriya' and 'Priyadarshi' are the same. Later in other inscriptions, the name Ashoka appears.

Ashoka's inscriptions are found in Brahmagiri of Chitradurga district of Karnataka. The symbol depicted in the pillar of Saranath is used the national emblem of India. Ashoka's inscriptions are available at 45 places across Indian sub continent and Afghanistan with their 181 versions. In most of the parts of Maurya empire the inscriptions are in Brahmi script or Prakruth script. Some of the inscriptions the north west are in Aramaic language and Karoshti language, in Afghanistan they are in Aramaic and Greek scripts. They are in Brahmi script.

Economic System during Mauryan period :

There are evidences which prove that the lake and canal system of irrigation was good during Mauryan period. Pushyagupta, a governor during the reign of Chandragupta Maurya had built 'Sudarshan Sarvor', a dam in Junagadh of Gujarat. An officer named 'Tushaspa' during the reign of Ashoka built the canal system for this dam. Megasthenes has also recorded the existence of irrigation canals. The government was managing the agricultural sector. Prisoners of war and slaves were engaged in agricultural activities. Land tax was the main source of revenue for the state. A farmer was expected to pay one fourth of his income as tax to the state. Officers named 'Samahartha' and 'Sanidatta' were in charge of the tax collection and were also the custodians of the royal treasury. The technology of producing metal 'Alloys' had evolved during the reign of Mauryas. As a result, urban based artifacts production and their marketing found place in the economy of Mauryas along with agriculture. There were major roads connecting the different parts of the empire from Pataliputra, the capital city of Mauryas. A major road to Nepal passing through Vyshali and Chamaparanya from Pataliputra was also there. A highway to Takshashila from Kaushambi passing through the present Delhi and Punjab was there. Merchants were transporting goods on these roads to sell within and outside the empire. 'Kachhu' marked silver coins were in circulation in Maurya Kingdom. This period is marked as the second phase of urbanization.

Social System : The social system was evolving out of the varna based caste system of vedic period. During this period, people born in higher varna could migrate to another varna and gain better social acceptance and respect. There were few such openings for this mobility. Brahmana and Kshtriya could interchange their status. Though the society was divided into four Varnas, namely Brahmana, kshtriya, vyshya and shudra, several castes were also present. Megasthenes records the presence of seven castes in Mauryan society in his Indica. The Buddhist sources also confirm the existence of castes. Though these castes were less rigid than in later periods, caste system had started assuming rigidity during Maurya period itself. Indika does not record the existence of 'slaves' and 'dasas' in Mauryan society. Though slavery was in practice during Mauryan rule, it was less harsh than the slavery of Greek and Roman societies. Shudras, the last in the varna system, were employed as agricultural labourers and domestic help.

Administrative System: Mauryan's empire had centralised administration system. The power was concentrated in the hands of the king. Hence, a huge number of officials unseen before were appointed to run the administration. There was a strong espionage

network. Minister, priest, prince and generals were the higher subordinates of the king. The Empire was divided into provinces. These were ruled by either princes or relatives of the king's family. Takshashila, Ujjain, Douli, Suvarnagiri and Girnar were the regional administrative centres. Officials like 'Rujuka' (Justice officer), 'Yukta' (Information recording officer) and others were there. The administration of Pataliputra was done by a group of six committees consisting of thirty officials.

Art and Architecture : The contribution of Maurya's to art and architecture is of great significance. Megasthenes's 'Indica' records the grandeur of Maurya's palace in Pataliputra. The wooden ruins of the Palace and the fort around the palace in Pataliputra have been found during excavation. During the period of Ashoka, many 'Stupas' were built and 'pillars' were erected. Among all the stupas that are found the Stupa of Sanchi is the biggest. Around thirty pillars have been found and all of them are polished and made smooth. The images of Lion or Ox are sculpted on these pillars. Our national emblem of four headed lion is taken from the Ashoka pillar of Saranath. Apart from these Ashoka built three rock cut caves at Baarbar hill. His son Dasharatha, built three more rock cut caves at Nagaruni hills. These caves are also important creations of Maurya period.

The Kushans

After the Greeks, it has been the Kushans who have influenced Indian history and culture. They gave special impetus to the spread of Buddhism. The Mahayana sect received greater encouragement under their patronage. Gandhara sculpture flourished during their time.

An important dynasty after the Mauryan's is that of the Kushans. They were basically from a nomadic tribe which had migrated to India from Central Asia. They were the progeny of Yuchi. The Sakas and the Parthians were the other foreign communities that had settled in the north-western part of India. The Kushans defeated the Sakas and the Parthians, and settled in the Gandhara region.

The founder of this dynasty was Kujala khadphesus. Vimakadphesus and Kanishka are the noteworthy kings of this dynasty. The Yuchis were basically tribals. The Yuchi factions became united under the leadership of Kujala kadphesus. He crossed the Hindukush range and settled in Kabul and Kashmir. During the time of Vima khadphesus, gold coins were brought out into circulation. From then onwards, the Kushans minted mainly gold and copper coins.

Kanishka came after Vimakadphesus. During his reign, the Kushan dynasty expanded greatly. He established his rule in 78 C.E. and heralded a new era. This era is called the 'Shaka-era'.

Kanishka's rule had spread up to Sanchi in the south and Banaras in the east. His kingdom, which included Central Asia too, was a vast empire. Purushapura was his capital. Mathura was another significant town of his time.

Due to the patronage given by Kanishka, Buddhism could prosper much more than before. We get to see many Buddhist scholars like Ashwagosh, Vasumitra, Sangaraksha and others during his time. The fourth Buddhist conference was held at Kashmir under the leadership of Kanishka. Like Ashoka, even Kanishka sent missions to Central Asia and China to spread Buddhism. During his reign, art and architecture got encouragement.



EXERCISES

I. Complete the following sentences by using suitable words in the blanks:

1. Chanakya came to be known as _____.
2. Megasthenis's work _____.
3. The capital of the Mauryans was _____.
4. The founder of the Kushan dynasty was _____.
5. The new era of Kanishka's reign is called the _____.

II. Answer to the following questions in brief :

1. List the sources which reflect upon the history of Mauryas.
2. Name the important cities during Ashoka's period.
3. Ashok has been named as Great by the historians. Give reasons?
4. Describe Ashoka's administration.
5. Which dynasty did the Kushans belong to?
6. What was the extent of Kanishka's empire ?

III. Activities :

1. Learn about the Gandhara art.
2. Collect information from your teacher about the Buddhist Conference which took place during Kanishka's rule.



CHAPTER – 8

THE GUPTAS AND VARDHANAS

In this chapter you learn :

- *The important Gupta rulers and their political achievements.*
- *Their contribution to literature and science.*
- *The famous rulers, expansion and growth of Gupta empire.*
- *The growth of Vardhanas and their contributions to literature and education.*
- *To know the extent of Gupta empire in the map of India.*

After Maurya and Kushanas, the empire of Guptas arose. After the collapse of Maurya empire, the northern India was ruled by 'Kushanas' and the southern India was ruled by 'Shathavahanas'. Both the empires ended by the mid third century C.E. Guptas were the feudatory rulers of Kushanas. They were ruling in the present Uttarpradesh, and established the base for a vast empire after the decline of Kushanas. Their rule kept north India united from 335C.E. to 455 C.E.

The Gupta dynasty came into power by 275 C.E. ShriGupta is the founder of this dynasty. They started their rule from Prayaga. Later Guptas made Pataliputhra as their capital. Pataliputhra remained the capital of a vast Gupta empire. Guptas encouraged religion, art, literature and science during their period.

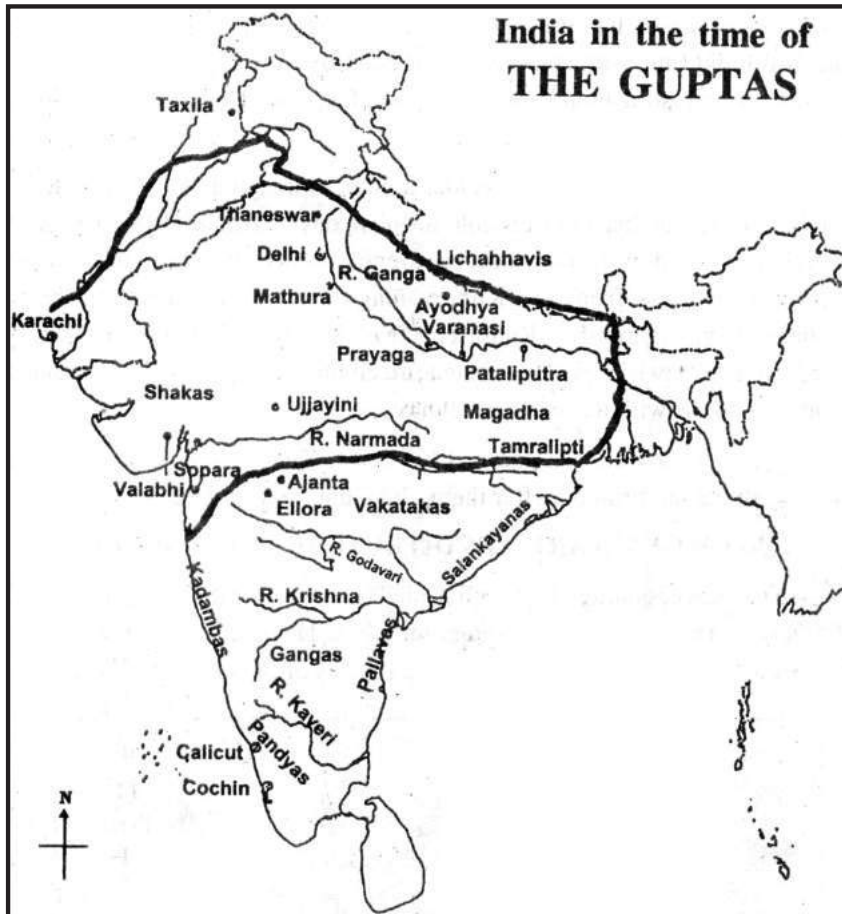
Sources of references:

The following sources are useful to know about Gupta's:

1. Pillar inscription of Alahabad.
2. Pillar inscription of Meharuli.
3. Vishaka Dutta's 'Mudrarakshasa' and 'Devi Chandragupta'
4. Rajashekar's 'Poetics'.
5. Kalidasa's literary works.
6. Kaumodi celebration of Vijjike.
7. The writing of Fahiyen and Itsing.

You should know : Historian V.A. Smith calls the period of Guptas as the 'Golden Period' in Indian history. This opinion is contested by many historians.

The Political history :



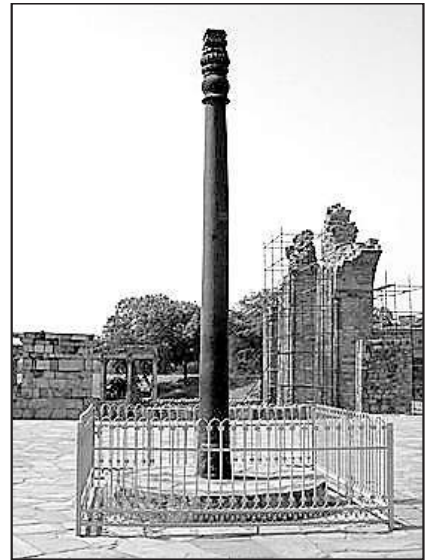
The Kings played a major role in making Guptas politically strong. Chandraguta I is identified as the first historical person of Guptas. He married Licchavi princess, Kumaradevi. This strengthened the status and power of Guptas. With the ascendance of Chandragupta to throne in 319 - 20 C.E., the gupta era started.

Samudra Gupta

After Chandragupta, we see his son Samudra Gupta. His achievements have been commemorated in the Allahabad pillar inscribed by Harisena. This is in Sanskrit language and has been inscribed on Ashoka's pillar.

Most part of India was under the rule of the Guptas during the time of Samudra gupta. His Ashwamedhayaga brings to mind the Vedic rituals and traditions Samudragupta was not just a conquerer, but a great poet and a lover of music too. His passion for music can be seen in the gold coins which depict him playing on the veena.

The Iron Pillar at Mehrauli in Delhi near Qutb Minar is important. It is 23 feet and eight inches in height and weighs 6,000 kg. It is one of the finest examples of the technical skill of the time. It has not become rusty till now. That shows in those days Indians had a sound Iron technology.



Mehrauli Iron Pillar

Meghadoota

This is a poetic creation of Kalidasa, and is one among his very famous works. Yaksha is exiled by King Kuber for having neglected his duties. In this situation, the yaksha stops a passing cloud and persuades it to carry a message of love to his wife who lives near the Kailash mountain. He describes the beautiful scenery on the route to his wife's place . Even today this poem is famous all over the world. It has been translated into all the Indian languages and major languages of the world. People have been enjoying the dramatization of Meghadoota till today.

Chandragupta II expanded the kingdom of Samudragupta and brought stability. He defeated the Sakas and made Western India a part of the Gupta Empire. He developed relationships with many Indian royal families through marriage and became very influential. He earned the title of Vikramaditya. His reign is memorable more for the encouragement given to literature and art, rather than for its battles. The famous Sanskrit poet and dramatist, Kalidasa, belonged to this age. Meghadoota, Raghuvamsha, Kumarasambhava and Ritu Samhara are his poems. Abhijnana Shakuntala is one of his noteworthy dramas. Shudraka's Mricchakatika and Vishakadatta's Mudrarakshasa are the other literary works of this period.

The Gupta Empire was subjected to continual attacks of the Huns and, thus, soon declined. The Guptas did not have a fully equipped large army. The kings vassals would fulfil the requirements during times of

war. Hence, the vassals had become very powerful. The bureaucracy consisted of Kumara Amatyas. They had various positions. The administration was decentralized. The priests received many grants. They would be granted many villages. Many temples saw development due to this. These areas not only enjoyed financial and administrative concessions but also became independent in all matters. However, over a period of time, the inhabitants, farmers, artisans began to be controlled by the landlords. In this way, society grew more and more complex.

Abhijnana Shakuntala



This is considered the best drama of Kalidasa. The story of Shakuntala is in the Mahabharata. In the story, King Dushyanta while on his hunt in the forest, happens to come to Sage Kanva's ashram. There he sees Shakuntala, falls in love with her and both get married in Gandharva style. All this takes place in the absence of Sage Kanva. After some time, Dushyanta leaves Shakuntala in the ashram and returns to his capital. During this period of separation, Sage Durvasa arrives at Kanva's ashram. Seeing Shakuntala lost in the thoughts of Dushyanta and finding none to attend him is enraged. Sage Durvasa loses his temper and curses her saying, "Let the one in whose memory you sit, forget you". When he realizes his own harshness, Sage Durvasa suggests a way to be free from the curse. He says that an object given to her would ultimately bring back his memories of her. The object was a ring that Dushyanta had given Shakuntala. As Sage Durvasa had said, Dushyant forgets Shakuntala. After a period of time the disciples of sage Kanva take the carrying Shakuntala to the court of Dushyanta to unite them. On the way, Shakuntala loses the ring which would have brought back recollection in Dushyanta. Thus Dushyanta is unable to recognize her. Shakuntala leaves the palace in humiliation. After a few days, the ring is found in the stomach of a fish, and on seeing it, Dushyanta recalls everything. He is filled with remorse. Some time later, while he is returning from a journey, he pays a visit to Sage Maricha's ashram. There he sees a small boy playing with lion cubs, and when he enquires about his background, he comes to know that the boy is his own son, Sarvadamana. In this manner, Dushyanta is united with his wife, Shakuntala, and son. Abhijnana Shakuntala is one of the greatest dramas in the world. It has earned great acclaim all over the world.

During this period, the trade that the Guptas had with the Westerners collapsed. Consequently, their economic system suffered. The restrictions imposed on their empire obstructed their internal trade too. Trade was limited to villages. The collapse of trade led to the decline of the city centres. Pataliputra got reduced to the size of a village.

This period witnessed great heights in the creation of various devotional and religious texts like the Puranas and the Dharmashastras. Varahamihira, Bhaskara, Aryabhata, Charaka and Sushruta were the great scientists of this time. Varahamihira, Bhaskara and Aryabhata made significant contributions to the study of astrology, astronomy and mathematics. Charaka wrote Charaka Samhita. Sushruta wrote Sushruta Samhita which dealt with surgery.

Scientists of the Gupta Period :

1. Dhanwantari: *He was a famous scholar in the field of medicine. He was a specialist in Ayurveda. He is the father of Indian Medicine. His chief contribution to the medical field has been the Ayurvedic dictionary.*

2. Charaka: *He was a medical scientist. His major contribution to the field of medicine has been the Charaka Samhita.*

3. Sushruta: *He was a surgeon. He was the first Indian to explain the process of surgery. He has recorded that in those days, there used to be a separate wing to treat soldiers. Like modern time surgery sushruta was a wellknown surgeon of ester years and contributed significantly to the field of surgery.*

4. Aryabhata: *He was a famous astronomer and mathematician. He is the prominent scientist who come after Varahimihira. His contribution to Astronomy and Mathematics has been highly significant.*

This is the reason that the Aryabhata award is being presented by the Indian Government to great scientists. The first Indian satellite have been named after Aryabhata. He is believed to have invented the zero. He was the first Indian to master algebra. He reiterated the fact that solar and lunar eclipses happen not due to Rahu but due to the rotation of earth on its own axis and revolution of the earth in its orbit around the sun.

5. Varahamihira: *He was a famous astronomer. He wrote a book on astronomy named Panchasiddhantika, which is considered the Bible of Astronomy. In addition to this, he wrote Bruhat Samhita, Bruhat Jataka and Laghu Jataka. He was a scholar in many fields like astronomy, astrology, geography, metereology, etc.*

THE VARDHANS

The Gupta Empire which had flourished for two centuries, disintegrated around 6th century C.E. Many small kingdoms sprang up at this time. The kingdom of the Vardhanas was one of them. They

ruled from Thanesar in 6th century. Some copper inscriptions, Bana's Harshacharita and the Chinese traveller, Hiuen Tsang's writings throw light upon this period.

Pushyabhuti is the founder of this dynasty. Prabhakaravardhana and Harshavardhana are the prominent kings of the dynasty. After the death of his father, Prabhakaravardhana, and his brother, Rajavardhana, Harsha became the king of Thanesar.

His sister Rajashree was married to the king of Kanauj. When the king of Bengal Sashanka killed the king of Kanauj, Harsha captured Kanauj, and attacked the king of Bengal. Bengal and Magadha came under his rule. But he could not advance beyond the Narmada river in the south. The Kannada king of the Chalukyas, Pulakeshi II, halted his progress, and forced him to go back. This achievement of Pulakeshi II has been immortalized in the panegyric (prashasti) written by the court poet, Ravikirti. He has expressed that the exultation of the king Harsha's joy had dried up on account of this defeat.

Nalanda



Buddha's followers believe that 'Nalanda' was the name of Buddha in his previous birth. This is famous as an ancient university. Buddha had visited Nalanda. Mention has been made of the 25 metre tall bronze image of Buddha that Harshavardhana gifted to Nalanda. Kumaragupta had made contributions to a fine arts school here. Nagarjuna the Chief exponent of middle path, Dinnaga and Dharmapala were the other famous scholars who taught here. The Chinese traveller, Hiuen Tsang, visited this place and stayed for some time. He has given a detailed description of this place. There were stupas, chaityas, viharas, rest houses, steps here and there to sit and rest awhile, meditation rooms, lecture rooms and many other structures reveal the glory of this place. The Gupta kings and Harshavardhana have been the famous patrons of this place. An accidental fire destroyed many texts at Nalanda.

The king's rule was assisted by the council of ministers. The bureaucracy consisted of the Mahasandhivigraha (the negotiator), Mahabaladhikruta (military general), Bhogapati (tax official) and

Doota. The kingdom had been divided into provinces. Land tax was the major source of income for the kingdom. Feudatory chiefs paid tribute to the king. The king gave them land grants and in return, got the help of their armies. When the king became weak, the feudatory chiefs became independent.

Land grants were given to other communities and religious people as well. Harsha gave prominence to Buddhism. We get details of the popularity of Buddhism from Hiuen Tsang's writing. The Buddhist Nalanda University was full of activity during this period. It enjoyed royal patronage.

EXERCISES

I. Complete the following sentences by using suitable words in the blanks.

1. The Guptas began their reign from the place _____ .
2. Chandragupta I was called _____ .
3. One of the great dramas of Kalidasa is _____ .
4. Vishakadatta's literary work is _____ .
5. The literary work written by Sudraka is _____ .
6. The founder of Vardhana dynasty was _____ .

II. Answer in brief the following questions:

1. Write about Chandragupta II.
2. What were the reasons for the downfall of the Gupta Empire?
3. Name the great scientists of the Gupta Age.
4. How was the administration during the Vardhana rule?

III. Activities :

1. Gather details about all the works of Kalidasa.
2. Collect information and pictures of the scientists of the Gupta period.



CHAPTER – 9

SOUTH INDIA- SHATAVAHANAS, KADAMBAS AND GANGAS

In this chapter you learn :

- *The growth of Shatavahanas in south India, their achievements, administration, art and architecture.*
- *The achievements of Shatakarni.*
- *The Kadambas were the first to establish an empire in Karnataka.*
- *The establishment of Ganga dynasty, their contributions to art, architecture and literature.*
- *To locate the areas of Shatavahana's, Kadambas and Gangas in a map*

The Vindhya mountains separate North and South India. The area between the Vindhya mountains and Kanyakumari in the south is called South India or the Deccan region. The Shatavahanas, Kadambas, Gangas, Chalukyas, Rashtrakutas and Pallavas have been the important dynasties of this region.

The Shatavahanas (230 B.C.E. to 220 C.E.)

The Shatavahanas were the first to have established a dynasty in the Deccan. They had settled themselves in the land between the Godavari and Krishna rivers. They were the vassals of Chandragupta Maurya and were paying tributes to him. In 220 B.C.E. Simuka became independent and made Srikakulam, his capital.

Gautami Puthra Shatakarni : He was a prominent king of this dynasty. He had done away with the bitter enemies of the kingdom, the sakas, beyond the borders of India. Shalivahana Shaka is supposed to have been inaugurated by him.

He expanded his kingdom to include not only Konkan, Birar, Saurashtra and Malwa, but also many new areas. He had titles such as 'Trisamudratoyapitavahana' and 'Shatavahana Kulayashapratishthanakara'. Yajñashri Shatakarni was the last king of this dynasty. During his time, on account of continual attacks by the Shakas, the empire stood devastated.

During the Shatavahana rule, the king was supreme. The

kingdom had been divided into provinces called Janapada for the purpose of administration and officers had been appointed to look after them. The cities and villages were looked after by self-governing institutions.

There was no discrimination on the basis of varna in the society. Even women held high offices and had high status in society. There were people of different occupations like farmers, merchants, goldsmiths, fishermen, carpenters, weavers, medicine man etc. There were occupational associations. Later these associations emerged as commercial and trade organisations. There was encouragement for even foreign trade and Nasik, Kalyan, Broach and Bhatkal were trade centres.

The Shatavahanas who followed the Vedic tradition, encouraged other religions like Buddhism and Jainism and believed in harmony.

They promoted art, literature and education. Literature was created in Prakrit, the language of both scholars and common people. *Gathasaptashati* written by Hala is an example of this.

The Ajanta and the Amaravati paintings were created during the period of the Shatavahanas. Temples, viharas and chaityalayas were also constructed. A chaityalaya was built in Karle by the Banavasi merchant Bhootapala.

During the period of the Shatavahanas, the Kannada land was prosperous and had adventurous and able administrators. They had enriched Indian culture by their contributions.



Chaityalaya at Karle

The Kadambas (325 C.E. to 540 C.E.)

This is the first dynasty to be established in Karnataka. Their capital was Banavasi which is in today's North canara district. Mayurasharma was the founder and a great king of this dynasty. When

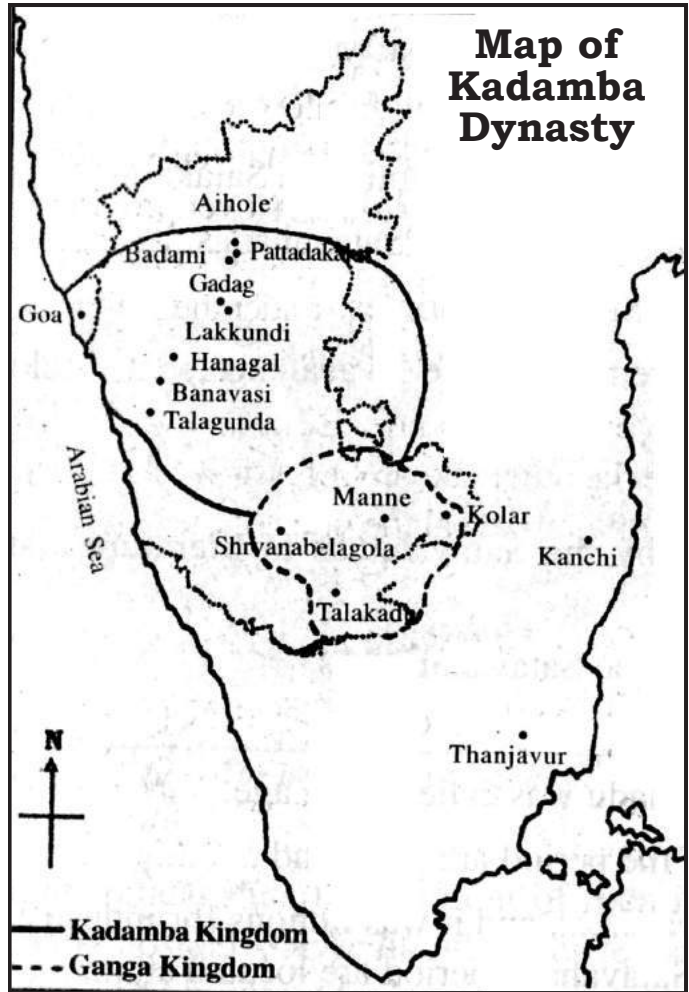
Mayura sharma was insulted by the Pallava king, Shivaskanda Varma, he adopted the kshatriya way of life and became Mayuravarma. He defeated the Pallavas in a war and established the Kadamba empire. He is the pride of all Kannadigas.

According to the Chandravalli inscription at Chitradurga, Mayuravarma is said to have increased the height of the wall of the chandravathi lake.

The Kadamba made special contributions to Karnataka and Indian culture. There was political unity for around three hundred years under the Kadamba rule. Royal priests, ministers and military generals played a significant role in administration. For administrative purpose, provincial officers had been appointed to look after the provinces.

Land revenue was the main source of income in the kingdom. The occupations such as carpentry, goldsmithy, blacksmithy, weaving, oil-extraction, pottery were the main ones in the society. There was greater encouragement for agriculture and trade. Most of the people followed varnashrama. Greater importance was given to patriarchy and undivided family.

Though they were the followers of the Vedic culture, the Kadambas encouraged Jainism and Buddhism. They gave charity to Jain temples and scholars at Hangal, Puligere and other places, and promoted the spread of Jain culture.



Buddhism was also flourishing in the Kadamba kingdom. It included Ajanta and Banavasi, two of the important centers of Buddhism. The temples were the centers of festivals and celebrations. Both Prakrit and Sanskrit received encouragement. First Prakrit and later Sanskrit became the court language. Kannada was the language of the people. The ancient Halmidi inscription shows the characteristics of the Kannada language which was in use in the 5th century. This has been the first inscription available in Kannada.



Madhukeshwara Temple, Banavasi

The Malavalli inscription is in Prakrit language. The Talagunda inscription is the first Sanskrit inscription to be found in Karnataka.

The Kadambas laid the foundation for architecture in Karnataka. They built many temples and basadis in Banavasi. During this period, educational centers like agraharas, brahmapuris and ghatikas were established. The main agraharas of that time were found in Talagunda and Balligave. The agraharas were like residential schools.

The Gangas (350 C.E. to 1004 C.E.)

The rise and fall of the dynasty of Ganga rulers constitute an important chapter in early history of Karnataka. The founders of the Ganga dynasty claimed their descent from the Ikshvaku dynasty. They ruled from Kovalala, Talakadu and Manyapura (today's Manne in Nelamangala, Bangalore Rural district).

The Gangawadi kingdom which began with the rule of Dadiga (also known as Kongunivarma), was ruled by 27 kings. Durvinita was a famous king of this dynasty. He was a brave warrior and scholar. He ruled for a long period and gained control of Punnata in order to strengthen his Kingdom. The Nallala copper inscription reveal that he constructed many lakes for the purposes of irrigation. He was a lover of Literature and wrote creative works in Sanskrit and Kannada. He even translated the Prakrit work 'Vaddakatha' of Gunadya in to Sanskrit.

The Contributions of the Gangas

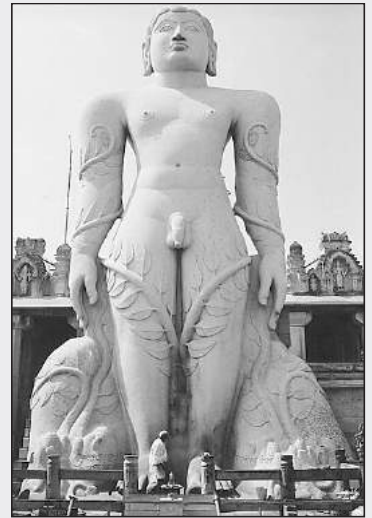
The king had a council of ministers to help him. The ministers supervised different branches of administration. The administration in the villages was very systematic. The village committee looked after land revenue, justice, sanitation and defence. Agriculture was the main occupation. There were other occupations like weaving and black smithy. They had trade relations with other countries.

Though the society at the time of the Gangas had been divided into different sects and castes, they were all interdependent. The practice of a patriarchal undivided family was common. Social values like honesty, loyalty, bravery and patience were prominent among the people.

Chaityalayas, temples, mathas and agraharas were the centers of education. There were Brahmapuris and Ghatikas for higher education. Talakadu, Shravanabelagola, Bankapura and Peruru have been named as centers of learning.

Bahubali- Gommateshwara

Gommateshwara (Bahubali) of Shravanabelagola is a symbol of life of renunciation. The Statue of Gommateshwara was installed by Chavundaraya, the minister of Rachamalla IV. Among 100 brothers, Bharata was the eldest, Bahubali the youngest. After Bharata was coronated as the king, he finds a Chakraratna (a special wheel), won all the kingdoms and became an emperor. Even before that, all his brothers accepted his sovereignty. But when Bahubali did not accept it, both of them got ready to engage in a battle. Bharata lost in drushti yuddha, jala yuddha and malla yuddha. At the end of malla yuddha, Bahubali lifted Bharata and spinning him in the air like a wheel, was about to throw him away, suddenly he lost all interest in everything around him, and put his brother down. He bowed to his brother and went away to meditate for nirvana, standing all the time. As he did not achieve salvation, he realises that as long as he stood in his brother's kingdom and meditated, he would not achieve nirvana. Later Bharata came and said that the whole kingdom was Bahubali's, and that he was ruling it on Bahubali's behalf. Then Bahubali achieved nirvana.



Gommateshwara

Since the Gangas were Jains, Jainism flourished here. Poojyapada, Vajranandi, Ajitasena and others popularized this religion. Further, they installed a 58 foot monolithic idol of Gommateshwara at Shravanabelagola and made it a famous centre. You must have

heard about the Maha Mastakabhisheka of Gommateshwara which takes place once in every 12 years even to this day.

The Ganga kings encouraged art and architecture. They built beautiful temples and basadis. The Kapileshwara temple at Manne, Pataleshwara and Maruleshwara temples at Talakad, Kolaramma temple at Kolar, Nagareshwara temple at Begur and the statue of Gomateshwara at Shravanabelagola are examples of their architecture. The significant contribution of the Gangas has been the tall pillars called Manastambhas and Brahmamanasthambas.



Pathaleshwara Temple in Talakadu

The Ganga kings were lovers of literature and due to their encouragement to Sanskrit, Prakrit and Kannada languages, many works were written in these languages. Madhava II wrote commentary on Dattaka Sutra.

Durvinita wrote the Sanskrit work 'Shabdavatara', and translated Gunadhya's 'Vaddakathe' into Sanskrit. Sree Purusha wrote 'Gajashastra' and Shivamadhava wrote 'Gajashtaka', a Kannada work. Poet Hemasena wrote 'Raghava Pandaviya', Vadibasimha wrote 'Gadya Chintamani' and 'Shatra Chudamani', whereas Nemichandra wrote 'Dravyasara Samgraha' and Chavundaraya wrote 'Chavunda Purana', and became famous.

EXERCISES

I. Complete the following sentences.

1. Simukha made _____ his capital.
2. The literary work written by Hala is _____.
3. The first inscription in Kannada is _____.
4. Banavasi, the capital of the Kadambas, is in today's _____ district.
5. The prominent king among the Gangas was _____.
6. The literary work written by Chavundaraya is _____.

II. Answer in brief.

1. Who was the last king of the Shatavahanas? How did their dynasty become weak?
2. Write about the art of the Shatavahanas.
3. What were the values which influenced the Ganga society?
4. Name four literary works of the period of the Gangas.

III. Activities.

1. Discuss with your teacher the way to read inscriptions.
2. Visit a historical temple nearby and collect its details. Share the information with your classmates.

IV. Projects.

1. Cultivate the habit of reading inscriptions.
2. Study one inscription and do a project on it.
3. Visit the capitals of the Gangas and collect information on them.



CHAPTER – 10

THE CHALUKYAS OF BADAMI AND THE PALLAVAS OF KANCHI

In this chapter you learn :

- *The beginnings of Chalukyas of Badami, the expansion of the empire under its foremost king pulakeshi II.*
- *The religious, social, military and judicial system.*
- *The extent of empire under the Chalukyas of Badami with the help of a map.*
- *The contributions of Pallavas of Kanchi to the field of literature, religious, art, architecture and the field of education.*

The Chalukyas of Badami (540 C.E. – 753 C.E.)

Many powerful kings ruled Karnataka in the 6th century C.E. They were the Chalukyas of Badami. They established their supremacy in Karnataka for over two centuries continuously, and ruled with immense glory. The Chalukya dynasty occupies an important position in the history of South India and is one of the powerful dynasties of India.

The rule of the Chalukyas began in the 6th century and ended in the middle part of the 8th century. Raja Jayasimha is the founder of this dynasty. The most powerful and noteworthy emperor of this dynasty is Pulakeshi II. Overpowering the Gangas, Kadambas and Alupas, he extended his empire. The Pallavas were at the peak of glory in South Deccan. Since Mahendravarma did not accept the sovereignty of Pulakeshi, Pulakeshi defeated him. When Harshavardhana, who was ruling in North India, he advanced upto the banks of river Narmada, Pulakeshi stopped him and earned the titles of 'Dakshinapatheshwara' and 'Lord of the Peninsula' for his daring act.

Pulakeshi II could not rule the whole of his kingdom from one centre. He appointed his younger brother, Kubja Vishnuvardhana, as the provincial head of Vengi and Jayasimha as the head of Gujarat province. Later on, Chalukyas ruled the kingdom for around five centuries under the name of 'Chalukyas of Vengi'.

Hiuen Tsang visited the Chalukya capital. He has given a detailed description of Pulakeshi II and the Chalukyan kingdom. He has said that the king was just and kind. The army was disciplined and the soldiers were courageous warriors who were not afraid of death. The subjects were lovers of truth, contented, self-respecting, prosperous and loyal to the king. They respected the king very much, and the king loved his subjects.

Pulakeshi II was an optimistic emperor. He had friendly relations with foreign kings too. Arab historians report that he had diplomatic relations with the Persian king, Khusru II.

After some years, the Pallava king, Narasimhavarma I took revenge on the Chalukyas for the defeat of his father Mahendravarma. He occupied the Chalukyan kingdom and captured Vatapi. During the time of the last Chalukya king, Kirtivarma, the Rashtrakutas captured this kingdom.



The Contributions of the Chalukyas

The Chalukyas developed the Kannada land, language and culture, and protected its religion, literature, art and architecture. They were the ones who gave the name ‘Karnataka’ to this land. The reign of the Badami Chalukyas is a great and glorious period in the history of Karnataka. This age is noteworthy not only for its military exploits but also for its art and literature.

They ruled for around 200 years. The king was actively involved in administration. The kingdom was divided into districts called vishaya and the vishayadhipati used to look after it. The village was the smallest unit of the administration. The village leaders looked after the village accounts.

The Chalukyas encouraged all traditions and sects like that of the Shaivas, Vaishnavas and the Jains. They supported the construction of Jain temples and Buddhist viharas too.

The Chalukyas of Badami patronized literature. Kannada and Sanskrit developed very well. Kannada was their state language. During this period, the tripadi form of poetry came into existence. Though there are no literary works produced in Kannada at this time, there are many inscriptions written in Kannada. One of the poem in the inscription of Kappe Arabhatta of Badami is in tripadi form. The Sanskrit scholars of this time are Ravikirti, Vijjika and Akalanka. Kaumudi Mahotsav, was written by Pulakeshi II's daughter-in-law, poetess Vijjika, and Hara Parvatiya of Shivabhattaraka are important Sanskrit dramas.

The Chalukyas of Badami were great builders as well as art-lovers. They built beautiful temples at Badami, Aihole and Pattadakallu. They developed a special style of sculpture called 'The Chalukya Style' in Indian architecture. They built cave-temples in the rocks of Badami. They encouraged many artists and sculptors.

**Poem in the inscription of
Kappe Arabhatta**

ಸಾಧುಸಾಧುಬಾಧುಷ್ಟುಷ್ಣಬಾಧುಷ್ಟುಂ
ದಾದಿ ಬೃಹದಿಗೃಹಬಿಷ್ಣುಗವಿಬ್ರಹ್ಮಿ
ದಾರವಸೇತಶ್ಚಿಹನದ್ರಿ

ಸಾಧುಗೆ ಸಾಧು
ಮಾಧುರ್ಯಂಗೆ ಮಾಧುರ್ಯಂ
ಬಾಧುಷ್ಟು-ಕಲಿಗೆ
ಕಲಿಯುಗ ವಿಪರೀತನ್
ಮಾಧವನೀತನ್ ಪೆರನಲ್ಲ ||

ಒಳ್ಳೆಯವರಿಗೆ ಒಳ್ಳೆಯವನು. ಮಧುರಗುಣ
ಉಳ್ಳವರಿಗೆ ಮಧುರವಾಗಿ ವರ್ತಿಸುವವನು.
ತೊಂದರೆಪಡಿಸುವ ದುಷ್ಟರಿಗೆ ದುಷ್ಟರಂತೆ
ಕಾಣಿಸುವವನು. ಈತನು ಅಸಾಮಾನ್ಯನಾದ
ಮಾಧವನೇ ಆಗಿರುವನು.



Virupaksha Temple, Pattadakallu

The best temples in the Chalukya style are in Aihole and Pattadakallu. Aihole was one of the cradles of temple architecture. Evolution of the series of temples architecture was first experimented here. This style found its full experssion at Pattadakallu. Thus we see the famous temples of Lokeshwara (Virupaksha) and Trilokeshwara (Mallikarjuna) here. We get conclusive proof of the Chalukyas' artistic achievement in the towering sculptures of Vishnu, Varaha, Harihara

and Ardhanarishwara in the caves of Badami. Even painting received encouragement. The Ajanta paintings of this period are world-famous.

The Pallavas of Kanchi (350 C.E. to 895 C.E.)

The Pallavas are the first kings of Tamilnadu. They enjoyed a special place among the dynasties which ruled South India. They ruled from the 4th century to the 9th century. In the beginning, they were the officials of the Shatavahanas. When the Shatavahana dynasty declined, the Pallavas declared themselves kings of the territory.

Shivaskandavarma was the first king of this dynasty. The Pallavas and the Kadambas harboured perpetual enmity towards each other. Subsequently, Pulakeshi II of the Chalukya dynasty defeated Mahendravarma of the Pallava dynasty. Narasimhavarma I who came later, was the most famous of the Pallava kings. He took revenge on the Chalukyas by defeating Pulakeshi II and capturing Vatapi. These daring acts won him the titles of Mahamalla and Vatapikonda. Hiuen Tsang had visited Kanchi during his reign. Narasimhavarma built a city on the sea coast near Kanchi and named it Mahabalipuram. Many monolithic temples were built by him. During the reign of Aparajita Pallava, Aditya of the Chola dynasty put an end to the Pallava rule.

The Contributions of Pallavas

They introduced systematic administration in Tamil Nadu. Their contributions are significant in literature, religion, art, architecture and education. When the Chalukyas reigned in Vatapi and the Pallavas in Kanchi, it was a heroic age in the South. Their kingdom was strong and organized. There were ministers and provincial officers. The kingdom had been divided into mandala, nadu and grama. The gramasabha dealt with the problems of the village. The gramabhojaka looked after the village administration.

The Pallavas encouraged both Sanskrit and Tamil. Kanchi was the center of Sanskrit literature. Bharavi (the author of Kiratarjuniya) and Dandi (the author of Dasha kumara Charita) were the poets in the Pallava court. King Mahendravarma himself wrote a social drama, 'Matta Vilasa Prahasana' and a book Bhagavadujjuka. The Pallavas encouraged all religions.

The early Pallava kings were Buddhists. The great scholar of Nalanda University, Dharmapala, was born in Kanchi. Since Mahendravarma was a follower of Jainism, there were many Jains in the kingdom.



Mahabalipuram Pancharatha

This age witnessed the rise of the Bhakti movement. It also supported the renaissance of the Vedic religion. Slokas were written in Tamil. These have become the treasure of Tamil literature.

Shaiva and Vaishnava religious sects became popular during the 7th century. 63 Great saints called Nayanmars propogated the Shaiva faith. 12 Alva saints propogated the Vaishnava faith.

The Pallavas were lovers of art and architecture. They built many temples in their kingdom, which are noteworthy for their artistic skill. The Pallava architecture can be classified into temples that have been carved out of stone, and temples with structural pattern.

Many temples carved in rocks can be seen in Mahabalipuram. Wonderful monolithic sculptures have been carved in these temples. They tell the stories from Mahabharata and Bhagavata. The Pancharathas are the famous monolithic temples. The carving of 'Arjuna's Meditation' has emerged as an excellent work of art.

The temples of Kailasanath, Ekambarnath and Vaikunta Perumal at Kanchi, and the coastal temple at Mahabalipuram are excellent examples of ancient Indian architecture.

The temples became centres of religious and artistic activities. The rural folk gathered in the courtyard of the temples in the evenings and discussed many issues. The people came here during their leisurely hours and either listened to the Puranas or sang devotional songs. In this manner, the temples became social and educational centres.

The Pallavas had a good naval force. Merchants had trade relations with South Asian countries like Malaya, Indonesia and others. We can see the influence of Indian language, faiths, traditions and culture in those countries.

EXERCISES

I. Fill in the blanks :

1. The Pallava king who was defeated by Pulakeshi is _____ .
2. The dynasty which gave the name *Karnataka* is _____ .
3. The writer of the Sanskrit drama *Hara Parvatiya* is _____ .
4. The Pallava king who earned the title *Vatapikonda* is _____ .
5. The painting *The Meditation of Arjuna* is in _____ .

II. Answer the following questions in brief :

1. How did Pulakeshi II extend his empire?
2. Describe the administrative system of the Chalukyas.
3. The Chalukyas were lovers of literature. Explain with examples.
4. Name the Pallava kings who ruled from Kanchi.
5. How did the Pallavas encourage Sanskrit and Tamil?

III. Activities :

1. Discuss in groups the contributions of the Chalukyas to Kannada language.
2. Learn about *tripadis* from your Kannada teachers and by reading Kannada books.
3. Pay a visit to Kanchipura and Mahabalipuram.

IV. Projects :

1. Pay a visit to a place of historical importance and collect information about it.
2. Draw pictures of temples, collect pictures and form an album.



CHAPTER - 11

THE RASHTRAKUTAS OF MANYAKHETA AND THE CHALUKYA'S OF KALYANA

In this chapter you learn about :

- *Dantidurga, the founder of Rashtrakuta dynasty and Amoghavarsha its most famous ruler.*
- *The contributions of Rashtrakuta's to administration, literature and architecture.*
- *The administration and literary contributions of Kalyana Chalukyas.*
- *The extent of Rashtrakuta territory from the map of India.*

The Rashtrakutas (753 C.E. to 973 C.E.)

The Rashtrakutas were Kannadigas. They were the feudatory kings of the Chalukyas in the beginning. Later they became famous as the rulers of the vast kingdom in the South. The Rashtrakuta age is a glorious epoch in the history of Karnataka. The credit of taking the glory of Karnataka to its peak goes to them. Their kingdom, which extended from the Narmada river in the North to the Cauvery river in the South, has also been immortalized by the Kailasanath temple at Ellora and by the first Kannada work, Kaviraja Marga.

The kingdom which began with Dantidurga, continued with Krishna, Govinda II, Dhruva, Govinda III, Amoghavarsha and others, and reached its peak. The early reign of Amoghavarsha had to face many obstacles. But he was not interested in feuds and desired peace. Hence he got rid of the enmity by developing marital relations with the Gangas and the Pallavas. Since he was a peace-loving king, he had to give up some territories in the north. The ports of the west coast were busy trading centres and enjoyed great prosperity by developing trade relations with Persia and Arabia. Many travellers and merchants visited the kingdom during this period. Prominent among them was the Arab traveller Sulaiman. He has praised Amoghavarsha as 'One of the four powerful emperors of the World.'

Amoghavarsha was brave and peace-loving, and encouraged all faiths. After him, Krishna II, Indra III and Krishna III ruled the kingdom.

The weakness in administration during the period of Karka II paved the way for the rise of his feudatory ruler Tailapa II of the Kalyana Chalukyas and brought the end of the Rashtrakuta rule.

The Contributions of the Rashtrakutas

The kingship among the Rashtrakutas was hereditary. There used to be a Council of Ministers to assist the King. There would be a prominent person in the Council of Ministers appointed as the Mahasandhivigrahi to look after the foreign affairs. For the purpose of administrative convenience, the kingdom was divided into Rashtra (Mandala), Vishaya, Nadu and Grama.



The Rashtrakuta Empire

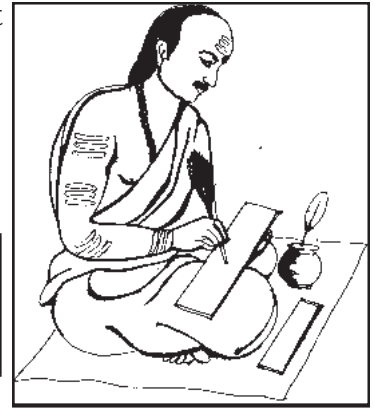
The leader of the grama was called gramapati or prabhugavunda. He was the leader of the village army too. He was assisted by the village accountant. There were grama sabhas also. There used to be an official called nadagavunda in the nadus. Similar officials would be there in the vishayas and rashtras. The vishayapati and the rashtrapati were the officers for the vishaya or the district and the rashtra respectively.

Land revenue, toll on goods, houses, shops, and tax on occupations like operating ferries, formed the income of the kingdom. Foreign trade also brought in lot of taxes.

The Rashtrakutas encouraged both Kannada and Sanskrit. Excellent works were written in Sanskrit. Trivikrama wrote Nalachampu, the first champu work in Sanskrit literature. Halayudha wrote 'Kavirahasya'. Jinasena, mathematician Mahaveeracharya, grammarian Shakatayana, Gunabhadra, Veerasena were in Amoghavarsha's court. Pampa, known as Adikavi wrote Adipurana and Vikramarjunavijaya in Kannada. Ubhayakavi Ponna composed

'Shanti Purana'. Shrivijaya, who was in the court of Amoghavarsha, wrote 'Kavirajamarga'. This is a very significant work in Kannada. All these reveal how Kannada literature has developed from ancient times.

The Kannada University, Hampi, has been awarding the title of Nadoja in memory of the first poet, Pampa, to great achievers in Karnataka every year.



Nadoja Pampa

Another noteworthy prose work of the Rashtrakuta period is Vaddaradhane. The author of this is Shivakottacharya. It is a collection of Jain religious stories. Special importance has been given to use of native Kannada words here. There is liveliness in plot, structure, characterization and dialogue. This is a great prose work belonging to the pre-Pampa age, and enjoys eternal significance in the history of Kannada literature.

Agraharas and mathas were the prominent educational centres in those days. Knowledge was imparted about Sanskrit, the Vedas, astrology, logic and the Puranas. Salotagi in Indi taluk of Bijapur district was one of the leading centres of learning.

The Rashtrakuta kings were devotees of Shiva and Vishnu, and have built many Shiva and Vishnu temples. Jainism had received royal patronage and became a wide-spread religion. Apart from these even other religions were encouraged.

The Rashtrakuta kings were patrons of art. Their great contribution to Indian art can be seen in the Ellora and Elephanta cave temples. The Kailashnath temple at Ellora built by Krishna I is a monolithic wonder. This temple has been carved from a rock 100 feet high, 276 feet long and 154 feet wide. Nearby is the famous Dashavatara cave temple. The sculpture at the Elephanta caves near Mumbai is a milestone in the Rashtrakuta sculpture. The statues of Ardhanarishwara and Maheshamurti (three-murthy) have been exquisitely carved. The Rashtrakuta temples are in Shiravala of Raichur district. There is a beautiful Jain temple at Pattadakallu.



Kailasa Temple, Ellora

The Chalukyas of Kalyana (973 C.E. - 1189 C.E.)

The period of the Chalukyas of Kalyana enjoys an honourable place in the history of India. They gave special encouragement to art, literature and education. They provided opportunities for the development of Kannada and Sanskrit. They gave patronage to famous Kannada poets like Durgasimha, Ranna, Nagachandra and others. Vachana literature came into prominence during this period. The credit for building a new city called Kalyana and making it the capital goes to Someshwara-I.

Tailapa-II who had been a feudatory king of the Rashtrakutas, defeated the Rashtrakuta king Karka-II and capturing Manyakheta, established the kingdom of the Kalyana Chalukyas. He ruled for approximately 24 years. Someshwara - I is one of the important kings of this dynasty. He built a new city called Kalyana and made it his capital. This is today's Basava Kalyana in Bidar district. Though Someshwara-I had to wage many wars, he took care to see that his kingdom did not shrink in any way. He defeated Rajadhiraja Chola in 'Koppam'.

Vikramaditya-VI son of Someshwara-I, is the greatest king of this dynasty. He was an extremely courageous warrior and excellent administrator. He began the 'Chalukya Vikrama era' in 1076 C.E. He suppressed the revolt of the Hoysala King Vishnuvardhana. He had established contact with the Srilankan King Vijayabahu.

Vignaneshwara (the author of Mitakshara) who lived during his time has remarked that there was never a great city like Kalyana in the past and can never be in the future. The king like Vikramaditya has never been seen nor heard of.

The kingdom began to decline during the period of kings who came after Vikramaditya VI and Someshwara II. It became very weak during the period of Someshwara IV and Kalachuri Bijjala occupied Kalyan and began to rule it. It was at this time that the social revolutionary Sri Jagajyoti Basaveshwara came to the limelight. He devoted his life to spreading the values of the Veerashaiva sect to the common people.

Mints were set up in Lakkundi and Sudi to mint coins like gadyana, pana, drumma, pon and suvarna.



Coins

Basaveshwara preached in three forms: soft advice, harsh criticism, strict warning. He taught that surrendering oneself to Shiva with total devotion was the only path to salvation. He declared that work is worship. He established Anubhava Mantapa in 1162 C.E. He wrote his vachanas in simple Kannada that resembled the spoken language of the common people.



Jagajyoti Basaveshwara

The Contribution of the Kalyana Chalukyas

Like the Chalukyas of Badami, the Chalukyas of Kalyana too have made special contributions in various fields. The kingship was hereditary. The kingdom was divided into provinces (mandala) and small provinces (nadu). There were kampanas (today's hobli) to enable smooth functioning of administration of villages.

Land revenue was the main source of income for the kingdom. The other sources of income included sales tax, toll and tax on professions. There was an officer called 'Kaditavergade' appointed to look after collection of land revenue. There were different guilds in trade and business.

Literature received encouragement during the period of the Chalukyas. Kannada literature prospered with the support of Jain scholars. The notable works of this period are 'Gadayuddha' (Sahasa Bheema Vijaya) written by Ranna, 'Panchatantra' written by Durgasimha, 'Vikramankadeva Charita' composed by Bilhana, 'Dharmamruta' composed by Nayasena and the legal work, 'Mitakshara', authored by Vignaneshwara. 'Manasollasa' written by King Someshwara III is considered a sanskrit encyclopaedia.

The unique contribution of the Chalukyan period has been the Vachana literature. Akkamahadevi, Allamaprabhu, Machayya and others were leading vachanakaras.

The Chalukyas were not only lovers of literature but also patrons of art. Their contribution in the field of art is vast. Famous temples like the Kashi Vishveshwara temple at Lakkundi, Mahadev temple at Itagi, Mallikarjuna temple at Kuruvatti, Trikuteswara temple at Gadag are noteworthy examples of their art. The kings of this dynasty built innumerable temples and contributed to making the Kannada land home to fine arts.



Kashi Vishveshwara Temple, Lakkundi

Music and dance forms too prospered. During their period Musicians and dancers used to be appointed to serve in the court. Queen Chandralekha patronised many music scholars and dancers. 'Manasollasa' and the work of Jagadekamalla II 'Sangeeta Chudamani' discuss many topics related to music, dance, art and jewellery.

EXERCISES

I. Fill in the blanks :

1. The founder of the Rashtrakuta dynasty was _____.
2. The Chalukya king of Kalyana who was responsible for the defeat of the Rashtrakutas was _____.
3. The author of 'Kavirahasya' is _____.
4. The famous poem written by Ponna is _____.
5. The most famous king among the Kalyana Chalukyas was _____.
6. The person who can be called 'The pioneer of the social revolution' is _____.

II. Answer the following questions :

1. How was the administrative system of the Rashtrakutas?
2. Write about the educational system under the Rashtrakutas.
3. Write about the Ellora temple.
4. How did the Kalyan Chalukyas encourage literature?

III. Activities :

1. Share from the experiences of students or teachers who have visited temples of the Rashtrakuta period.
2. Go on a trip to Manyakheta or Ellora.

IV. Projects :

1. Discuss on Ellora in peer groups and write an essay on it.
2. Collect pictures of Manyakheta.
3. Write an essay on the life of Basavanna.



CHAPTER - 12

THE CHOLAS AND HOYSALAS OF DWARASAMUDRA

In this chapter you learn :

- *The expansion of chola empire and the contributions to different fields.*
- *The establishment of Hoysalas, contribution to religious, literature, art, and architecture field.*

The Cholas (850 C.E. - 1279 C.E.)

After the Pallavas, the Cholas secured a firm hold on many areas in Tamilnadu, Andhra and Karnataka and ruled from the 9th century to the 13th century. To them goes the credit of spreading Indian culture in foreign lands. They constructed grand temples. 'Brihadeeshwara' temple is their contribution. They became famous by encouraging Tamil literature.

The Cholas were under the Pallavas for sometime and later became independent. According to Sangam literature, Karikala Chola is the founder of this dynasty. Vijayalaya Chola revived the kingdom and made Thanjavur as his capital.

An important king among the Cholas was Rajaraja I. He was a brave, great warrior and able administrator. As the founder of the Chola empire, he strengthened its foundations and expanded his kingdom. He overpowered the Cheras, Gangas and Pandyas. Building a naval force, he captured Sri Lanka. We can see the predominance of the Tamilians in Malaysia and Singapore. Their influence in the political, economic and cultural activities of those countries can be seen. They began overseas trade which continued till date. The Brihadeeshwara temple built by Rajaraja Chola I in Thanjavoor, is a very famous one.

The Chola empire weakened during the period of Rajendra Chola III, and the Pandyas could overpower them easily.

The Contribution of the Cholas

The Cholas had set up an able and efficient administrative system. The kingdom had been divided into mandalam, kotwangi, nadu, kurram or community of villages and tara-kurram. There was a committee of subjects called Ur in every village.

The foremost quality of the Chola administration was the development of the self-governance of the village. The grama sabhas were the first sabhas. Tara-kurram was a village. Every kurram had a village committee named mahasabha. This was also called perumguri and its members perumakkal. The members were chosen through election. Only Sanskrit scholars and rich people were allowed to stand for election.

One-sixth part of the land revenue used to be collected as tax. Special attention had been given to the irrigation system. The Cholas constructed many lakes, and the Bellandur lake near Bangalore is one of these. They built a huge pond in Gangaikonda Cholapuram.



Brihadeeshwara temple, Thanjavoor

The Cholas were Shaivites, and they built many Shiva temples. The Brihadeeshwara temple in Thanjavur is 500 feet tall and it is in a courtyard 250 feet wide. Its shikara is 200 feet tall. The Choleshwara temple was built by Rajendran.

The Aprameya temple near Channapatna, the Choleshwara temple in Begur near Bengaluru and the Mukteshwara temple near Binnamangala are the temples built by the Cholas in Karnataka. The temples used to function as economic and cultural centres. The idols of Shiva, Ganapati, Vishnu, Durga and Kartikeya of this time are famous.

The Cholas established many agraharas to encourage education. The Uttaramerur agrahara is famous among these. The temples were centres of education. They were also centres of religious activities. This was a period in which Tamil literature found an all-round development. Noteworthy works are Ramayana written by Kamba, Periya Purana composed by Sekkilar and Thirukkadeva's Jeevika Chintamani.

The Hoysalas of Dwarasamudra (984 C.E. to 1346 C.E.)

After the Chalukyas became weak in Karnataka, it was the Hoysalas who became strong. The founder of this dynasty, Sala, on the order of a Jain monk, Sudatta, fought with a tiger and killed it near Sosevuru village (today's Angadi) in Mudigere taluk of Chikmagalur district. It inspired the people to exclaim 'Hoysala!', and he established this empire. These kings made significant contributions to literature, education, art, architecture and irrigation.

Vishnuvardhana was the important Hoysala king who came after Nrupakama, Ereyanga and Ballala. As a great king of this dynasty, he won Gangavadi from the Cholas and earned the title 'Talakadugonda'. In order to commemorate this victory, he built the Kirtinarayan temple in Talakadu and the Chennakeshava (Vijayanarayana) temple at Belur.

He tried to expand his kingdom but was defeated by the Chalukyan king Vikramaditya VI.

Ramanujacharya could not spread the message of Vishishtadvaita sect in the Chola kingdom and came to Bittideva's (Vishnuvardhana) court and under his patronage, spread his faith in the whole of Karnataka.



The emblem of the Hoysalas

This kingdom declined during the reign of Ballala III. During the same period, the Vijayanagara empire came into power.

The Contributions of the Hoysalas

The Hoysalas had brought into practice provincial system of administration. The power to rule was given to the Prince, Queen and the Royal family. The officials looked after the administration of the nadu and vishayas. In the villages, there used to be the representatives of the government like the gowda, shanuboga, talawara and others.

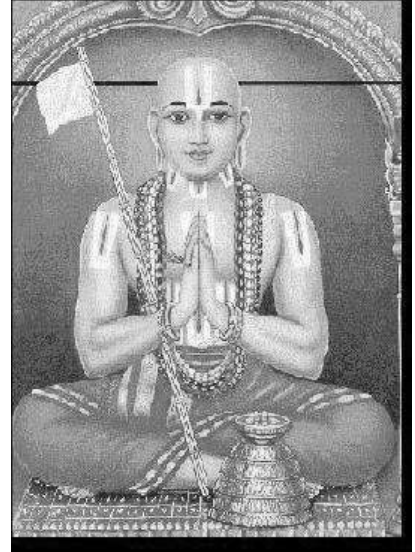
In order to encourage agriculture, the Hoysalas built innumerable lakes like the Shanti Sagara, Ballalaraya Samudra, Vishnu Samudra etc. In the cities, there used to be guilds among the people following different occupations. Land revenue was the main source of income for the kingdom. A

unique feature of this society was that the king used to have a special army of guards called 'garuda'. When the king died, these guards would also sacrifice their lives.

Agraharas, mathas and temples were centres of education. There were excellent educational institutions at Melukote, Salagame, Arasikere and other places. Here study of the Vedas, Vedashastras, Kannada and Sanskrit used to be carried on.

Kannada literature flourished immensely. Rudrabhatta wrote 'Jagannatha Vijaya', the great poet Janna wrote 'Yashodhara Charite', Harihara composed the Champu poem 'Girija Kalyana', Raghavanka authored 'Harishchandra Kavya' and Keshiraja wrote 'Shabdamani Darpana'. Even in Sanskrit, memorable works composed were Sreebhasya by Ramanujacharya and Parasharabhatta, composed Sri Guna Ratnakosha.

During the period of the Hoysalas, different religions like Jainism, Buddhism, Shaivism, Vaishnavism, Veerashaivism and Srivaishnavism were encouraged.



Ramanujacharya

**This poem from the Belur temple
advocates communal harmony:**

ಯಂತ್ರವಾಸ್ತುಮುಖಾರ್ಥಿವಿವಿಧವಿಧವಿ
ವಿಹಂತಿಸಿಗಾಬ್ದಾ ಬದ್ಧ ಇಲೆದಿಮಾನಪದಪೂರ್ವಿರೈಯ್ಯಗಿಕ್ಕಾಃ ಲೋಕ
ಶೈಲಿದಾ ಜೈನಶಾಸ್ತ್ರಮುಲಿಕಂಪ್ರೇರಿಡಿಪುಂಗುಕಾಳನಾಯಂಖವಿವಚಾರುಮಂ
ಎರನ್ನಲಂಠಿಕೆಶಿವಿಕ್ಕುವಾ||

ಯಂ ಶೈವಾಸ್ತುಮುಖಾರ್ಥೇ ತಿವ ಇತಿ ಬ್ರಹ್ಮೇತಿ ವೇದಾಂತಿನೋ
ಬೌದ್ಧಾ ಬುದ್ಧ ಇತಿ ಪ್ರಮಾಣಪಟಪಃ ಕರ್ತೇತಿ ನೈಯಾಯಿಕಾಃ
ಅರ್ಹಶ್ಚೇತಿ ಹ ಜೈನಶಾಸನಮತಿಃ ಕರ್ಮೇತಿ ಮೀಮಾಂಸಕಾಃ
ಸೋತ್ರಯಂ ವೋ ವಿದಧಾತು ವಾಂಛಿತಫಲಂ ಶ್ರೀ ಕೇಶವೇಶಸ್ವದಾ ||

ಶೈವರು ಶಿವನೆಂದು, ವೇದಾಂತಿಗಳು ಬ್ರಹ್ಮವೆಂದು, ಬೌದ್ಧರು ಬುದ್ಧ
ನೆಂದು, ಪ್ರಮಾಣದಲ್ಲಿ ಸಮರ್ಥರಾದ ನೈಯಾಯಿಕರು ಕರ್ತೃವೆಂದು,
ಜೈನರು ಅರ್ಹನೆಂದು, ಮೀಮಾಂಸಕರು ಕರ್ಮವೆಂದು ಯಾವನನ್ನು
ಉಪಾಸನೆ ಮಾಡುವರೋ ಅವನೇ ಆದ—ಈ ಶ್ರೀ ಕೇಶವನೆಂಬ ಈಶನು
ನಮಗೆ ಇಷ್ಟಾರ್ಥವನ್ನು ಪಾಲಿಸಲಿ.

There are beautiful idols of Madanikas (Shilabalikas) on the brackets of the pillars of Chennakeshava temple at Beluru.



Chennakeshava temple, Beluru



A shilabalike

The military general, Ketamalla, built the Hoysaleshwara temple at Halebidu. The Keshava temple constructed by Somadandanayaka at Somanathapura is famous. There are many temples and basadis in

Arasikere, Govindanahalli, Doddagaddavalli and Bhadravati. All these are noted for their extremely delicate carving. The Hoysala architecture has influenced all other architectural styles of the later years. Dasoja, Chavana, Jakana and Dankana were some of the famous sculptors of this time.

EXERCISES

I. Fill in the blanks.

1. The capital of the Cholas was _____.
2. The committee of the subjects in every village during the period of the Cholas was _____.
3. The most famous Chola educational centre or agrahara was _____.
4. The temple in Begur near Bangalore built by the Cholas was _____.
5. The army of bodyguards during the time of the Hoysalas was _____.
6. The poem written by Raghavanka _____.

II. Answer in brief the following questions.

1. Who was the founder of the Chola kingdom?
2. Write a note on the significant features of the Chola administration.
3. Describe the encouragement given by the Hoysalas to literature.

III. Activities.

1. Discuss in class the visit you paid to a nearby temple.
2. Learn more about the Belur *shilabalikas* from your teacher.

IV. Projects.

1. Visit Belur and Halebidu and write a project-report on it.
2. Learn in detail about Hoysala art.



POLITICAL SCIENCE

CHAPTER – 1

MEANING AND IMPORTANCE OF POLITICAL SCIENCE

In this chapter you learn :

- *The concept of political science.*
- *The process of development in political science.*
- *The political thinkers and their contributions.*
- *The importance of political science.*

Political science is one of the social sciences dealing with the political activities of man. It deals with the state and government. It studies the origin and nature of state and forms of political institutions. The study of state is the main subject matter of political science.

As a subject of study political science began with the Greeks. Though Egyptians, Babylonians, Persians, Indians and Chinese have mentioned their ideas or thoughts about politics much earlier to Greeks they failed to develop it as a systematic study. Politics was given the status of an independent science by Greeks. Greek philosophers like Socrates and his disciple Plato were great political thinkers. Plato in his famous book “Republic” for the first time discussed the nature and functions of state and government. Aristotle, the ancient Greek thinker and the student of Plato is recognized as the ‘Father of Political science’ for his valuable contributions to its growth and development. He wrote the first treatise in political science called “The Politics”. In this famous book Aristotle discussed the origin, development and functions of state. Kautilya’s work on economics also has more information about political principles.

Greeks used the term ‘politics’ for the study of state. The term ‘Politics’ is derived from the Greek word ‘polis’ which means ‘city-state’ and therefore a subject which deals with the affairs of city-state and its working was called politics by ancient Greeks. However in modern times scholars have preferred to use the term ‘political science’ for this study.

Political Science studies the origin, development, nature, administration, type, scope of a state and rights and duties of the citizens. Political Science is study of all facets of state.

Political Science is also the study of past, present and future of political institutions, political functions and political theories. The study of state, Government and human political activities is called as political science.

Importance of Political Science

The knowledge of Political Science is essential in the present age. The progress and development of a state depends upon the thinking, knowledge and Political involvement of the people.

- Political Science helps to understand the birth and growth of a state. It provides information about the type of Governments and Political activities involved in the functions of the State.
- Political Science provides information about the origin and development of ideas such as Monarchy, freedom, justice, laws, equality, good government, wars and peace etc.
- It provides information about the structure and functions of the state and government.
- In the light of the past and the present activities of the government, Political Science helps to plan the future activities of the state. It also helps to establish a modern welfare state.
- Political Science provides knowledge of the Constitution and laws of the state.
- Political Science helps to understand the organs of the government i.e., Legislature, Executive and Judiciary and their functions.
- Political Science develops political consciousness among the people. It keeps the government and the people politically alert and active.
- The knowledge of Political Science helps leaders and civil servants to understand and solve the problems of the people effectively.

- The knowledge of political science helps to raise good leadership and good citizen.
- Political Science helps to understand the important Political institutions like political parties, federations and local bodies.
- Political science deals with ideologies which inspire and influence political involvement of people.
- Political Science provides the knowledge of international relations especially the occurrence of wars among nations and the importance of peace and co-operation.

Thus the study of Political Science helps us to understand the need for a state, good governance of the state, the role of the leaders and people's participation. It helps the people to become good, responsible, cultured, and active citizens. The knowledge of Political science contributes to the establishment of a just, peaceful, progressive and a happy state, which is the dream of millions and millions of people for a long time every where.

EXERCISES

I. Fill up the blanks :

1. The word Politics was derived from the Greek word _____ .
2. 'Republic' is written by _____ .
3. Aristotle wrote a book on political science and it is called as _____ .
4. Kautilya's work relating to political science is _____ .

II. Answer the following questions :

1. What is political Science?
2. Who began the systematic study of Political Science ?
3. Who is called the Father of Political Science?
4. Give a definition of Political Science.
5. Mention any one use of studying Political Science?

III. Suggested Activities :

1. Prepare an album highlighting the nature of Political system in the early period of India.
2. Discuss the statement of Aristotle given in the book in your classroom with the help of your teacher.
3. 'The social needs of man led to the rise of the state' – is it so ? Arrange a talk on this topic in your classroom.

IV. Project Work :

1. Imagine that you are a member of ancient Greek city state and discuss on any particular issue of the city state.
2. 'Dictatorship suppresses the freedom of an individual and democratic institutions'- Collect information and prepare charts.
3. Collect information on political ideas found in our epic poetry.



CHAPTER - 2

PUBLIC ADMINISTRATION

In this chapter you learn :

- *Importance of Public Administration and meaning*
- *Scope of Public Administration*
- *Meaning of the recruitment and its methods*
- *Meaning of training and its methods*
- *Union Public Service Commission*
- *Karnataka Public Service Commission*
- *Central Government Secretariat*
- *State Government Secretariat*
- *Law and Order*

Public Administration

Public Administration has become more important as the modern society is undergoing complex and swift changes. The contribution of Public Administration to society is increasing day by day. Hence, Public Administration plays an important role in forming the human society as a civic society. This type of administrative experiments are as old as human society. Public Administration as a subject evolved in United States of America. The past President of USA, Woodrow Wilson is called as the 'Father of Public Administration'. At present, Public Administration is evolving as one of the main areas of Social Science studies in all the countries.

Public Administration is a specific field of study. The word 'Public' denotes Government. Alexander Hamilton used the word 'Public Administration' for the first time in 1812. The following are the definitions of 'Public Administration':

1. According to Woodrow Wilson, "The holistic and orderly implementation of law is Public Administration."
2. According to Pifnar , "The consolidation of community initiatives in implementing public policies is Public Administration."
3. According to Luther Gulick, "Public Administration is related to the executive of the government".

In nutshell, Public Administration is related to the total functioning of the government. Public Administration is that part of the government that runs day to day functioning of the state.

Importance

As the state is evolving from protective state to welfare state and from welfare state to functioning state, the importance of Public Administration is becoming more important. As a result the scope of Public Administration is enlarging. The holistic development of human society and the survival of civic society depend on effective Public Administration.

The life cycle of human beings depends on Public Administration. It is the heart of a state. There is no state without Public Administration. Hence, modern state is called as 'Administrative State'. The following explain the importance of Public Administration:

1. Public Administration is the Pillar of the Government : A state can be in existence without legislature and judiciary. But without an executive, government cannot exist. An administrative structure is needed for the implementation of public policy. Hence Paul Applebee opines, "Without Administration, a government is only a meaningless chatter".

2. It serves various functions in the interest of the public : Public Administration caters to a human being beginning from his womb to tomb. It maintains civil order and peace by protecting the life and property of citizens. It takes care of providing basic facilities, education, employment opportunities, protects the state and ensures economic equality. It provides numerous services like this.

3. Implementation of Law and policies : Public Administration regulates the activities of people by implementing law and policies. If the Public Administration does not function well, the policies remain only on the paper.

4. Necessary to protect Social Security : Public Administration functions as a tool of social security Even though the governments change, public administration remains constant and ensures stability to administration. This ensures smooth functioning of administration. In

the absence of good Public Administration, a strong state also fails. The destruction of the ancient Roman Empire is the good example for this. Public Administration ensures unity and harmony in society by solving the problems of society.

5. Support Legislature and Executive : Public Administration aides the implementation of policies formed by the legislature. It also provides inputs in the form of statistics and suggestions for the formulation of policies by the governments. Thus, Public Administration performs major role not only in the implementation of the public policy but also in its planning.

Scope : There is disagreement among the thinkers with regard to the scope of Public Administration. Experts like Woodrow Wilson and L.D.White argue that Public Administration has a wide scope. According to them Public Administration includes all the three pillars of administration: Legislature, Judiciary and Executive.

According to Luther Gulick and Simon, Public Administration has a narrow scope. According to them, ‘Public Administration’s scope is limited to the executive activities of the government’.

POSD CORB perspective :

Luther Gulick explains the scope of Public Administration through English letters: POSD CORB. Each letter explains the function of Public Administration.

- 1. P-Planning :** Planning any agenda that the government machinery seeks to implement by working on the methods of implementation.
- 2. O-Organization:** Forming various departments and structures like division, sub division and other administrative structures and entrusting roles and responsibilities for each for the achievement of desired goals.
- 3. S-Staffing :** Recruiting and training the needed staff. It also includes the framing the rules and regulations of civil service.
- 4. D-Direction :** Providing direction and orders to the various departments.
- 5. Co-ordination :** Facilitating better interaction between various departments by resolving conflicts by converging their functions.

- 6. R-Reporting :** Reporting by the officials to the senior officers on the functions various departments. Submitting reports to the legislature by conducting research, documentation and investigation.
- 7. B-Budgeting :** Managing the financial planning, expenses and income, calculation and auditing.

The scope of Public Administration is increasing these days. This does both the protective and regulative functions. The growth of civil society further expands the scope of Public Administration. The aspirations and desires of the people have further enlarged the scope of Public Administration.

Recruitment and Training

Recruitment :

The process of searching eligible candidates for the civil services and motivating them to compete for the civil services is called Recruitment. An efficient administration is based on efficient recruitment process. If an efficient, honest and eligible person is selected to civil service, the person delivers good public service through his creativity, intelligence and positive behaviour. If the recruitment process is more scientific and efficient, Public Administration becomes more efficient by having efficient civil servants.

Recruitment has a prominent role in the staff administration. According to O.G. Stall, "Recruitment is the base of staff structure".

Methods of Recruitment :

According to Staff Administration experts, there are two types of recruitment:

- A. Direct Recruitment (External Recruitment)
- B. Internal Recruitment (Recruitment by promotion)

A) Direct Recruitment : Direct Recruitment is the most popular and scientific method of recruitment. Recruiting eligible candidates through competitive examinations in a fixed pattern is called 'Direct Recruitment'. The candidates need to have some general qualification and specific qualification to enter into the service through direct recruitment.

B) Internal Recruitment : Selecting the eligible in-service personnel to higher positions is called as Internal Recruitment. Most of the countries have adopted this method. India too has adopted this method of recruitment.

Training

The efficiency of civil service personnel depends on the quality of the training received. As the modern administrative functions are complex in nature, the personnel need to undergo proper training to know and manage the administrative functions. Only through proper training, the personnel can gain the necessary knowledge to perform

Training has a special place in Public Administration. Since the challenge of managing and running complex technical works is part of the modern governance, the importance of training is increasing. Training is a continuous process.

Types of Training :

Training is divided into five types based on the method, duration, level of training, aim of training and institution providing the training. They are:

i) Formal and Informal Training : Formal training is a training that is received by the employee which is carefully planned in advance. This training is provided under the supervision of the experts.

Informal training means the training that an employee gains while doing his duty. An employee receives this training during his day to day execution of his duties.

ii) Pre-Service and Post-Beginning of Service training : Pre-service training prepares the future employees for the civil services.

Post-beginning of service training is provided to those who have been selected to specific posts. This training aims at imparting better skills and efficiency.

iii) Short term and Long term training : Short term training is of four to six week duration. For example, the doctors selected through public service Commissions, undergo six week training.

The long term training is continuous in nature and its duration would be of one to two years. The training given to candidates selected for all India services is the example for this type of training.

iv) Departmental and Central institutes' training : The training provided by specific department for the candidates selected for it is called as Departmental Training. Example: Police personnel training.

Training provided by a central government institution is called Central Institutes' training. Example: the training provided by Lal Bahadur Shastri National Administrative Institute in Missouri.

v) Skill training and Background training : A training aiming at increasing the skills of the personnel is called Skill training. Example: the compulsory B.Ed training for high school teachers.

A training that aims at providing general awareness is called as background training. Example: Training provided by Mysuru's Administrative Training Institute.

Union Public Service Commission

Only capable people should be selected for civil services. The political interferences and nepotism should not influence the selection process. Public service should be kept away from the influence of politics and personal agendas. It should uphold the respect and dignity of the civil service. The constitution provides for the formation of independent public service commission in order to select and recruit capable and honest civil servants.

Structure:

According to the Article 315 of the constitution, there should be a separate public service commission for the centre and the state. Two or three states can have a Joint Public Service Commission also.

The President appoints the Chairman and the members of the central and joint public service commissions. Half of the members of the commission should have served in government services. The tenure of the members is six years or attaining the age of sixty five years, or whichever is earlier. The President will have the powers to dismiss any

member or chairman on the grounds of misconduct. Commission works independently of legislature and executive. A secretary works for the commission and presently it is based at New Delhi.

Functions :

The commission functions under article 320 of the constitution and the following are the functions:

1. Conducting exams for the recruitment of Group A and B officers of central government.
2. Conducting interviews for direct recruitment.
3. Advising the central government on issues related to promotion and transfer.
4. Advising government on initiation of disciplinary actions against erring government employees.
5. On the direction of the President, advising the government any needed issue.

The commission conducts exams for civil service, technical service, Forest service and defense services at national level. In these, exams conducted for civil service are more prominent. I.A.S (Indian Administrative Services, I.P.S (Indian Police Service), I.F.S (Indian Foreign Service), I.R.S (Indian Revenue Service), I.A.A.S (Indian Accounting and Auditing Service exams are some the important exams. They are conducted at three levels:

1. Preliminary examination.
2. Main examination.
3. Personality Test.

Karnataka Public Service Commission

On the lines of Union Public Service Commission, states have public service commissions at their level as per the direction of the constitution. In Karnataka it is called 'Karnataka Public Service Commission. It was established on 18-05-1951. The commission has one chairman and nine members. They are appointed by the Governor. Their tenure is for six years or completion of 62 years of age or whichever is earlier. The main office is in Bengaluru and regional offices are at Mysuru, Belagavi, Kalburgi and Shimogga.

Functions :

1. Appointing the gazetted and non-gazetted officers of the state government through written exams and interview as per the directions of the state government and the concerned department's recruitment rules. Example: assistant commissioners, Tahasildhars, Deputy Superintend of Police etc.,
2. Conducting interviews for direct recruitment candidates.
3. Conducting departmental exams for state government employees
4. Advising government on initiating disciplinary measures against erring officials.
5. Co-ordinating various exams conducted by the Union Public Service Commission in the state.

Secretariat (Centre and State)

Central Secretariat:

To facilitate the efficient and capable administration, various departments and ministries are created. The Central Secretariat is a mix of various ministries and departments. The main responsibility of the Secretariat is to aid the ministers, who are the political heads, in running the administration. It has the Chief Secretary as the administrative head and the Prime Minister as the political head.

The Formation of the Central Secretariat : According to the Article 77(3) of the Constitution, the President of India has the powers to frame rules to facilitate smooth and efficient functioning of the central government, in assigning portfolios for the ministers.

Each Cabinet Minister will have an independent ministry. If their portfolio is bigger, state minister and deputy minister would be there to assist them. One portfolio may have more than one department. For example, though Home, Agriculture, Defence, Finance and others are independent departments, they can group under one secretary.

The portfolio is divided as following and each is entrusted to an official. The hierarchy of the Secretariat is as follows:

1. Department Principal Secretary/ Secretary/ Additional Secretary /Special Secretary.
2. Wing – Joint / Additional Secretary.
3. Division – Director / Deputy Secretary.
4. Branch – Under Secretary.
5. Section – Section Officer.

The role and functions of the Central Secretariat :

1. Secretariat is an organisation that aids the government in fulfilling its aims. It advises the minister in framing policies.
2. Secretariat aids the minister in performing his legislative duties.
3. Secretariat frames the regulations of administration.
4. Secretariat analyses the problems carefully.
5. Prepares the Budget by keeping close relationship with the finance department.
6. Secretariat works as the bridge between the central government and the state governments.

In nutshell, Secretariat is the Nerve-Centre of the government. It functions as the brain centre of the policy making.

State Secretariat

Every state secretariat functions as the nerve-centre of the state government. The secretariat includes the departments of the state. Ministers are the political heads of these departments, and the principal secretaries are the administrative heads of the departments. The Chief Secretary is administrative head of the state Secretariat. The Secretary would be the head of one or two departments. The secretaries are usually from the IAS cadre.

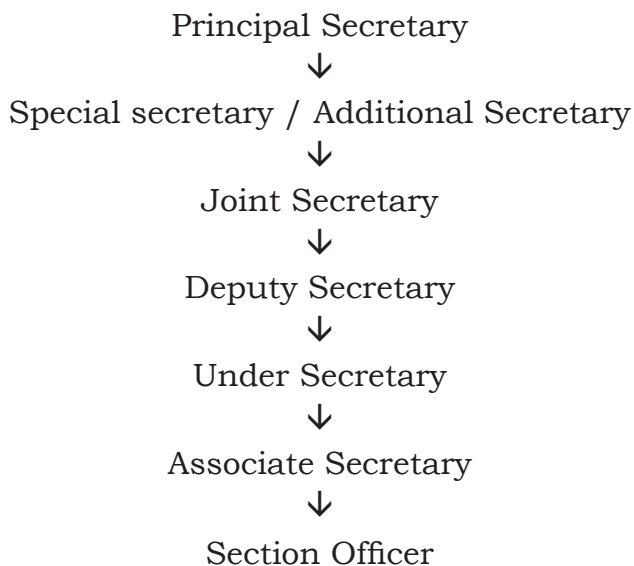
The Structure of Secretariat :

The Chief Minister distributes the Portfolios of the ministers. The portfolios are different from state to state. Usually the total number of departments varies from 16 to 35 in numbers.

The Chief Secretary is the administrative head and also the Secretariat head. Every department of the government will have a secretary. In some departments they are also called as commissioners. They advise the minister on administrative issues.

The office of the Principal Secretary is divided into many divisions. Every division functions under the direction of a Section officer. The Section officers duty is to verify the papers and files of his division and submit to the concerned personnel. Every division will have stenographers, first division assistants, second division assistants and others officials.

The state secretariat is made of many officials who are appointed for specific duration. The administrative structure of the State Secretariat is as follows:



Functions of State Secretariat

The State Secretariat is an advisory body, and functions as follows:

1. It is the apex body of state government and administration. It aids the policy making on all the issues related to the state.
2. It functions as the advisory expert committee to the state government.
3. It facilitates the internal harmony among the various departments and consolidates the various policies and programmes of the government.

4. It advises the minister in formulating draft of the bills and supports in formulation of rules and regulations related to financial discipline.
5. It prepares the budget and controls the public spending.
6. The State Secretariat is 'The Centre of political and administrative functions of the state.

Law and Order

In order to ensure peace in the country, the maintenance of law and order is of importance. In the fast growing society of now-a-days, the issue of maintaining law and order is a serious issue.

The maintenance of 'Law' and 'Order' are the two faces of the same coin. Under 7th schedule of the constitution, the law and order are included under the state subject. Hence, it is the duty of state government to maintain law and order. The Central Government has the constitutional right to advise the state governments on the issues pertaining to law and order.

The Role of Central Government

The role of Central Government in maintaining law and order is explained in various articles of the constitution. As per the article 355, the Central government has to protect the states from external aggression. As per the article 356, whenever there is constitutional failure of state government takes place, it should enforce emergency or presidential rule in the state.

The Central Home Ministry has paramilitary forces under its command to ensure law and order in the country. They are:

1. **Central Armed Reserve (CRPF)** : This force has the mandate to maintain law and order. It tackles any rebellion or provides relief whenever there is natural calamity.
2. **Border Security Force (BSF)** : This force is formed to check criminal activities in the borders. It polices the border to check illegal activities. Policing the border, and providing safety and security to the people living in the border areas are the main functions of Border Security Force.

3. **Railway Protection Force** : It protects the property of railways. It monitors the illegal activities in trains.
4. **Central Industrial Security Force (CISF)** : This force provides protection to various big industries of the central government. This force is also utilised to serve the airports.

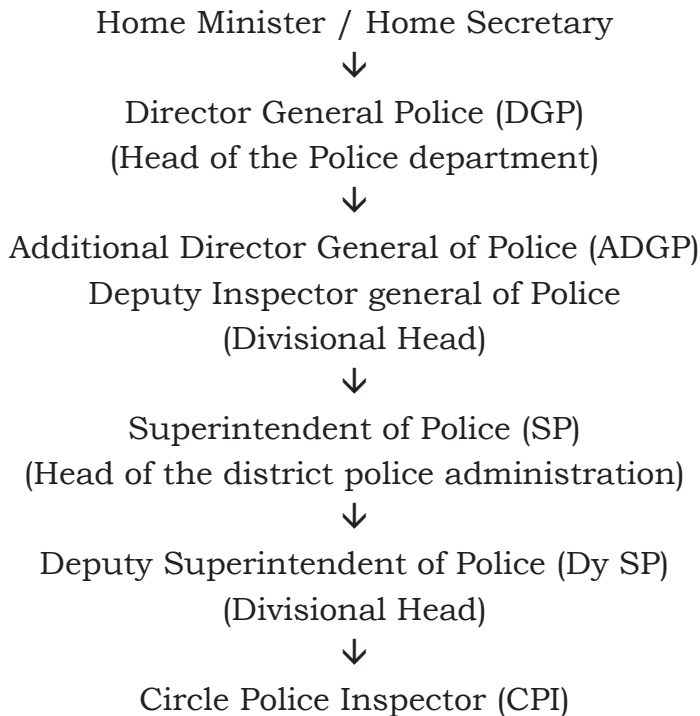
The Central government plays the converging role and fulfils the special role of maintaining law and order in the country. The Central government provides a frame work for the maintenance of law and order to the state governments by providing skilled personnel and advises.

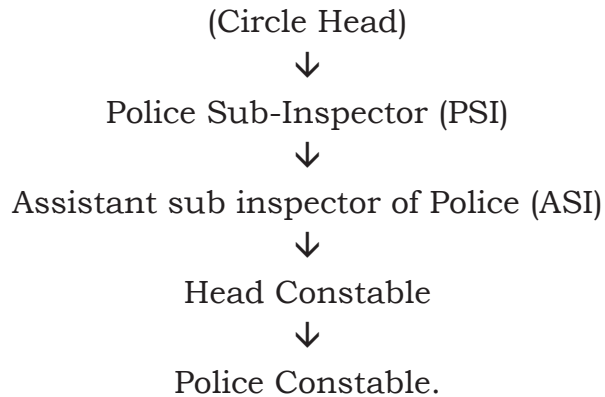
The role of Police: (The structure of State Police)

The primary role of the state governments is to ensure law and order in the state. In order to fulfil this duty, state governments have a police force that will have adequate training and functions.

The Police department comes under the Home Ministry. The Home Minister has the responsibility of police force. The Home Ministry is headed by a Secretary who would be from IAS cadre. The secretary aids the home minister in his day to day administration.

The State Police Structure is as follows:





The police force performs a major role in maintaining law and order of the state.

EXERCISES

I. Fill in the blanks :

1. The father of Public Administration is _____ .
2. The word Public Administration is used for the first time by _____ .
3. The members of Union Public Service Commission are appointed by _____ .
4. _____ article of the constitution discusses the state public service commission
5. The Head of the state secretariat is _____ .

II. Discuss the following in groups and answer:

1. Public Administration is today's need. Discuss.
2. Public Administration is spread across the birth and death of an individual. Prove it.
3. Explain the Recruitment process.
4. What are the different types of trainings?
5. How is the Central Secretariat formed?
6. What is the role of the state in law and order? Explain.

III. Project Work :

1. Make a list of services offered by the Union Public Service Commission.
2. Prepare a list of hierarchy of state secretariat officials.

IV. Activities :

1. Make a visit to the nearby police station to understand the role of Police department in maintenance of law and order. Have discussion with the Police Officer present in the station.



CHAPTER - 3

HUMAN RIGHTS

In this chapter you learn :

- *The meaning of Human Rights and its development.*
- *The declaration of Human Rights.*
- *Human Rights and the Indian Constitution.*
- *Ways of implementing Human Rights.*

The concept of Human Rights has developed along with growth of civilisation. This is essential for the peaceful living, co-existence and development of human beings. Rights are the building blocks of democracy. Renowned political thinker H.J. Laski declares that “A nation can be identified through its human rights”. Human Rights enable everyone to lead a life of dignity. This ensures the development of better society. Hence, the UNO has declared the Human Rights and has said it is the duty of the state to protect the human rights.

Human Rights : Meaning and Development

Human Rights are essential for every human being to lead a life of dignity. Human Rights are conducive to universal development of human beings.

The roots of Human Rights are traced to Athens and Sparta, the two city states of ancient Greeks. In the discussions of Plato, Aristotle and Socrates on the relationship between the State and the individual, Human Rights are discussed.

Magna Carta (1215 C.E.)

Magna Carta or the great agreement is the base of the English Constitution. During 1215 C.E., the King John of England broke many ancient rules and traditions. People revolted against the King pressing for their rights. As a result, the King entered into an agreement and signed ‘Magna Carta’. Due to this, the government’s interference in the Church came to an end. Citizens gained the rights to have private and ancestral property. The equality of all in front of law was asserted. Magna Carta is an important development in the process of modern democracy.

John Locke presented the first systematic discussion of Human beings' natural rights. According to him, the basic rights cannot be given to any individual. Every individual is born with the rights of living and freedom. This gave prominence to individual rights. The bloodless revolution of 1688 worked in support to this. And as a result in 1689, 'Bill of Rights' was implemented. With this, human rights were given legislative guarantee for the first time.

Revolutions took place in America and France due to the influence of John Locke, Rousseau and Montesquieu. The American Independence was declared in 1787. The list of Human Rights were declared on December 15, 1791 and included in the American Constitution, as the first amendment to the American Constitution. The Human Rights Declaration in France in the year 1789 is an important milestone in the history of Human Rights. With this, the dictatorship of France was removed and the French Republic came into existence. This declaration assured equal rights to all with respect to freedom, equality, property and security.

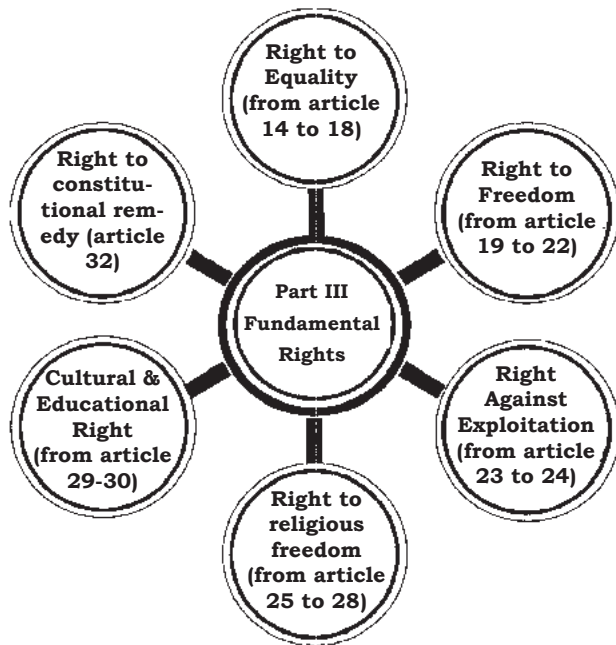
The development of Human Rights is not restricted to any single geographical area and it is universal in appeal. The League of Nations that came into existence after the First World War had a separate directive on Human Rights. After the Second World War, in order to protect the Human Rights and with the efforts of Stalin, Roosevelt and Churchill; the United Nations Organizations came into existence.

The Preamble of UNO declares: "We the people of the world have decided to protect our future generation from the destruction of wars. War has driven us to sadness twice in our life time". Hence, the establishment of UNO is to prevent Human Rights violations in any part of the world. In order to achieve this, the UNO, directed all its member countries to protect the Human Rights compulsorily on December 10, 1948.

Human Rights and the Indian Constitution

The declaration of Human Rights by the UNO is discussed in the preamble and fundamental rights part of the constitution. In preamble, equality, fraternity and freedom are discussed. This is discussed in the Part three of the constitution from articles 12 to 35 under fundamental

rights. There were seven fundamental rights in the original constitution. Later, by the 44th amendment of the constitution in 1978, the right to property was taken out of the fundamental rights and included under article 300A as the constitutional right. Hence, there are six fundamental rights now.



Do you know this :
By the 86th amendment of the constitution, according to article 21A, education has been made a right in 2002. According to this, government has to provide free and compulsory education to the children from six to fourteen ages.

(these are explained in the previous class)

Difference between Fundamental Rights and Human rights:

Human Rights are universal in nature and are necessary for the holistic development of human beings. These upheld the dignity of human beings. Their violations are not protected by the court of laws. The fundamental rights are ensured by the constitution. Their violations are addressed by the Supreme Court and high courts. The fundamental rights are specific in nature and are protected by the constitutional law.

Institutions of Human Rights protection

The UNO held meeting with all the member states in 1966 and has directed all the member states to remain committed to the protection of Human Rights. An international Human Rights Commission is formed at the international level. As supportive to this, National Human

Rights Commission and State Human Rights Commissions are framed at national and state levels.

National Human Rights Commission : National Human Rights Commission is a constitutional body. It was established through legislation in the parliament in 1993. It is a watch dog of human rights in the country. It is a multi member body. It has a chairman, and four members. The chairman should be the retired judge of the Supreme Court. The members should be either the current judges of the High Court or retired judges. And two members should have practical knowledge of Human Rights. The commission also has four ex-officio members.

The Chairman and the members are appointed by the President of India. Their tenure is for five years or till the attainment of 70 years of age, or whichever is earlier. They receive remuneration as fixed by the central government. The commission has been mandated to function independently without prejudice and interference.

State Human Rights Commission : As per the Human Rights Law 1993, the state human rights commissions are established at state levels. They take the human rights violation cases. The state commission has one chairman and two members. The chairman should be a retired judge from the high court. The members should be either serving high court judges or retired judges, or should have served at district courts for at least seven years. They are appointed by the governor.

National Commission for Schedule Caste : The National Commission for Schedule Caste and Tribes was bifurcated in the year 2003 by 89th amendment to article 338. National Commission for Schedule Caste and National Commission for Schedule Tribes were formed.

The National Commission for Schedule Caste has one Chairman and one Vice-Chairman and three members. They are appointed by the President of India. The commission addresses the issue of atrocities on schedule caste people and also identifies the violations of human rights against such people and provides relief to them. The commission also provides needed information and statistics to the central government and state governments to plan various programmes for the benefit of these people.

National Commission for Schedule Tribes : The National Commission for Schedule Tribes came into existence as per the 89th amendment to the constitution in the year 2003. The commission has one chairman, one vice chairman and three members. They are appointed by the President of India. Its functions are similar to that of National Commission for Schedule Caste.

National Commission for Backward Classes : This commission was founded in 1993. It has one chairman and four members. The commission protects the rights of backward classes.

National Commission for Women : In order to protect the rights of the women, the National Commission for Women was formed under the law in 1990. The commission has one chairman and five members. It sensitizes the women on their constitutional rights. It also studies the status of women with respect to education, sociological, economical, and health .

National Commission for Minorities : The National Commission for Minorities was formed in the year 1992 for the protection minority people. The commission has one chairman, one vice chairman, and five members. Six religious communities have been identified as minorities. They are: Muslims, Christians, Sikhs, Buddhists, Parsees and Jain. The commission undertakes the study of minorities and takes necessary steps to protect the interest of these minority communities.

You know this :

The Central Government has implemented many laws to protect from exploitation :

Minimum Wages Act 1948

Prevention of Unethical activities Act 1956

Prohibition of Dowry Act 1961

Prohibition of bonded labour Act 1976

Sati prevention Act 1987

Human Rights Protection Act 1993

Right to Information Act 2005

Domestic Violence Prevention Act 2005

EXERCISES

I. Fill in the blanks of the following sentences:

1. Human Rights were declared in the year _____ .
2. Magna Carta was signed _____ king.
3. At present _____ fundamental rights are there.
4. Right to property is _____ right.
5. The Chairman of the Human Rights Commission is appointed by _____ .

II. Answer the following after group discussion:

1. Explain the development of Human Rights.
2. Human Rights are essential for universal development of human beings. Discuss.
3. The Supreme Court is the custodian of Fundamental Rights. Discuss.
4. The National Human Rights Commission is the watch dog of human rights. Substantiate.
5. Which are the Institutions protecting the Human Rights?

III. Activities

1. Organise a speech competition on Human Rights Protection.
2. Make a list of differences between Human Rights and Fundamental Rights.



CHAPTER – 4

LOCAL GOVERNMENT

In this chapter you learn :

- *The importance of forming of local government.*
- *The objectives and functions of local government.*
- *The formation, administration, responsibilities and duties of local government.*

The concept of local government in India is very old. Many ancient kingdoms of India gave importance to the growth of local self government. Local self government provided a link between the government and the masses. It helped the people of the locality to voice their problems. The local government helped to solve local problems at the local level with the co-operation and involvement of the people. The involvement of people in administration strengthened the democratic institution at the grassroot level. The people were vested with powers of electing representatives to local administrative bodies. The self governing bodies called local self government became the basis for the decentralization of power. Lord Ripon tabled the Bill on Local Government in 1882. This Bill enabled the formation of the Local Government. Hence Lord Ripon is considered as the 'Father of Local Government in India.' Acts of 1919 and 1935 passed by the British provided more powers to local self governing institutions in India. After independence the government of India appointed many committees and passed Acts to realize the dream Grama swarajya of our father of the Nation.

In addition a direction was included in Indian Constitution which states that the state shall take steps to organise village panchayat and provide them with adequate powers and authority to function efficiently. 73rd and 74th constitutional amendments which came into effect in 1993 became the milestone in the history of Panchayat Raj system. As per the amendment, from article 243 to 243 O of schedule IX Panchayat Raj system is detailed. 74th amendment provides the Constitutional status to civic administration. In shedule IX A, articles from 243P to 243 ZG detailed the civic adminstration.

The local governments functioned in Karnataka in the pre – independence period. In the post independence period many

committees were appointed by our state government to establish and strengthen local bodies in our state. In 1983 the Panchayat Raj Act was introduced and it came into effect in 1985. According to this Act Zilla Panchayat at district level, Taluk Panchayat at taluk level and Grama Panchayat at village level were created through direct elections. The Karnataka Panchayat Raj Act was framed as per the 73rd amendment to the Indian Constitution in 1993. This was renamed as 'Karnataka Grama Swaraj and Panchayat Raj Act - 1993 in 2015.' The Current Panchayat Raj System is according to the act.

The objectives of the local government are :

- To involve the local people in solving the problems of their own locality.
- To provide the knowledge of administration to common people.
- To help in decentralizing powers and make the administration more efficient.
- To train or develop leadership qualities among people at the grassroot level.

Functions of Local Self Governments : The following are the important functions of the local governments.

- To maintain and protect the panchayat property.
- To prepare the annual budget of the local body.
- To undertake health and family welfare programmes.
- To plan and undertake the developmental works like laying of roads, electrification, housing and supply of drinking water, etc.
- To encourage and implement the primary, secondary, adult and informal education programmes.
- To maintain cleanliness and sanitation of the area.
- To prevent all sorts of pollution and to provide better health facilities.
- To provide facilities for the distribution of essential commodities like food grains, kerosene etc.
- To ensure prompt registration of birth and deaths.
- To encourage agriculture, animal husbandry, khadi and handicraft industries.

- To undertake the programmes for conservation of soil, water and forest.
- To execute the agricultural extension programmes to help the farmers.
- To plan and implement the welfare schemes for the benefit of SC, ST, weaker sections, women and children.
- To provide marketing facilities, street lighting facilities and reading room facilities.
- To collect taxes, fees and penalties.
- To identify the beneficiaries for the various and welfare programmes of the government.

Sources of Income : The local self governing bodies require funds to implement various plans and projects. The main sources of income for local bodies are

- Amount collected through water cess, health cess, education cess, library and reading room cess.
- Amount collected through building tax, vacant land tax, taxes on business establishments, markets, entertainment houses and advertising bodies.
- Taxes collected from the tourist spots.
- Rental and lease amount collected on their properties.
- Financial grants from the state government.

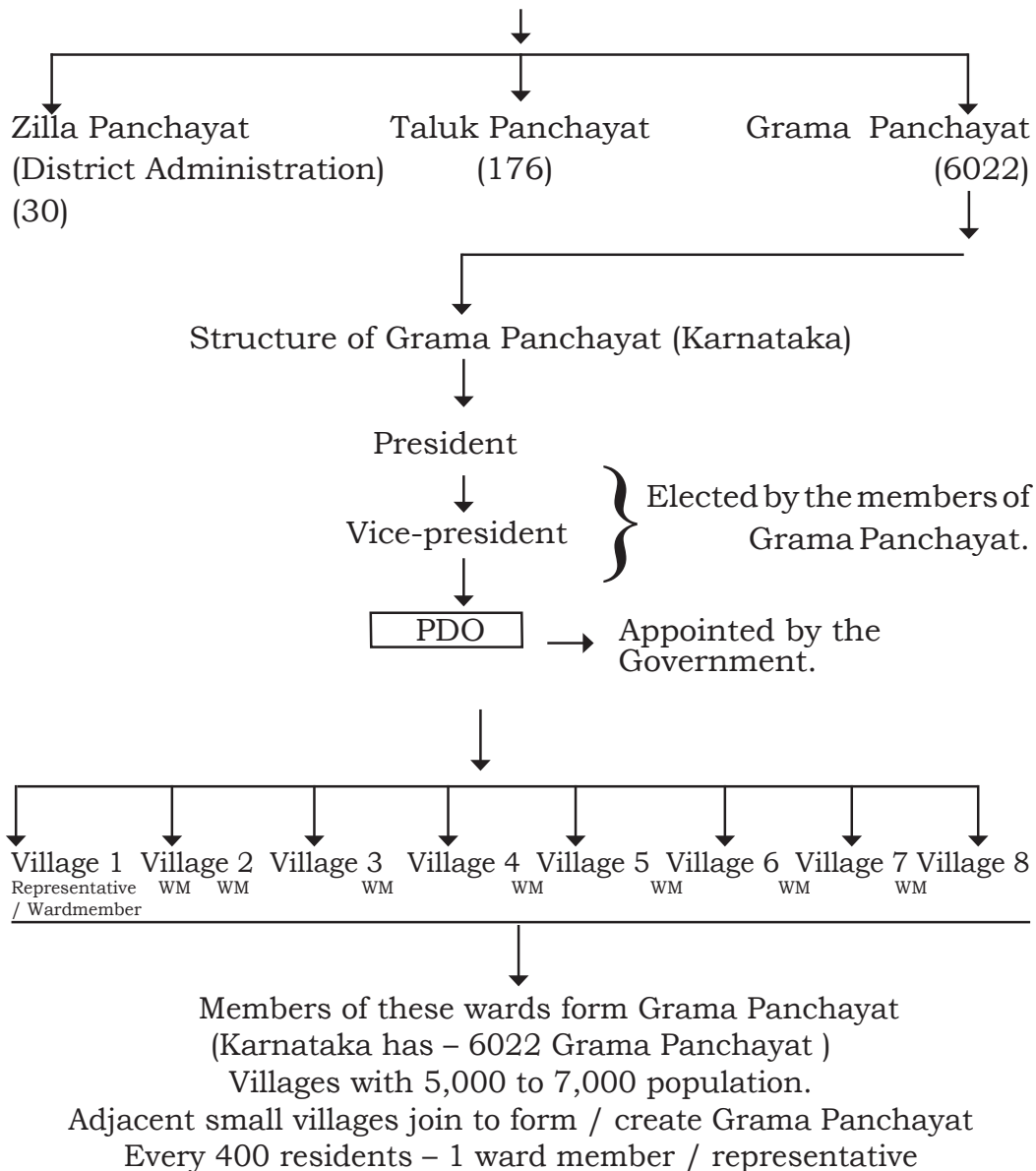
Composition of local governing bodies

Grama Sabhas : Grama Sabha is a primary unit of rural local government. It is a body that has all the voters of a village as it's members. This should meet at least twice in a year. Grama Sabha is called by the president of the Grama Panchayat. If the president of the Grama Panchayat



fails to call for the Grama Sabha, the Executive Officer (E.O.) of the Taluk Panchayat should call the meeting of Grama Sabha. The Grama Sabha is presided by either the president or the vice-president of the Grama Panchayat or any voter member of the Sabha. Villagers discuss the various problems of the village, measures taken to address them and also the future plan of action needed. The Sabha has to Choose eligible beneficiaries for the welfare schemes.

Chart of Panchayat Raj in Karantaka



The term of Grama Panchayat is five years and the term begins from the date of the first meeting of Grama Panchayat.

Grama Panchayats : Grama Panchayats are formed on the basis of population. Village or group of villages with a population between 5,000 and 7,000 form Grama Panchayat. Regions of Uttar Kannada, Dakshina Kannada and Malnad regions form Grama Panchayat only with the population of 2,000. The members of the grama panchayat are elected by the adult population of the Panchayat area. One representative for 400 voters is elected. Reservation is provided to schedule caste, schedule tribe, backward classes and women.

As per second amendment of Panchayat Raj Act of 2000, a panchayat member must have a toilet in his house. If he does not have, he must build one within one year of getting elected.

Grama Panchayat meetings must be held at least once in two months. Minimum one third of the members of the Panchayat must be present to take decisions. All the members of the Grama Panchayat together elect President and Vice-President for a term of 30 months. President presides over the meetings of Grama Panchayat and in his absence Vice-President manages the deliberations. Reservation policy is applicable to the posts of President and Vice-President. Standing Committees are formed for the efficient administration of Grama Panchayats. The Panchayat development officer (PDO) is the executive head of Grama Panchayat.

Taluk Panchayats : Panchayat Raj Act of 1993 provides an opportunity for the creation of Taluk Panchayat at Taluk level. Taluk Panchayat comprises of the members directly elected by the eligible voters. The number of members in the Taluk Panchayat is based on population of the taluk. There is one elected representative for every 12,500 to 15,000 voters. Reservation is provided to SC, ST, backward communities and women. Besides, one fifth of the presidents of Grama Panchayats serve as the members of Taluk Panchayat. The Presidents are chosen through lottery system. They are nominated on rotation basis for a period of one year. These nominated members have the right to vote and participate in all meeting except those in which election of the President and Vice-President takes place

and the no confidence motion is tabled. The term of the Taluk Panchayat members is five years. They have the right to resign or can be removed by the Government. MLAs, MLCs and MPs of that jurisdiction can attend the Taluk Panchayat meetings.

The Taluk Panchayat meetings must be held at least once in two months. In case of utmost importance special meetings are conducted. The president of Taluk Panchayat presides over the meetings. In his absence Vice-President presides over the meetings. President and vice president are elected by the Taluk panchayat members for a term of five years or till their membership ceases, or whichever is earlier. The standing committees are constituted to bring about efficiency in administration. The government appoints the executive officer to look after the executive work of Taluk Panchayat. Taluk Panchayats have certain functions to perform in addition to the functions of local bodies. They are,

- To consolidate the annual plan proposals of the Grama Panchayats and to submit those to Zilla Panchayat.
- To implement all the welfare programmes suggested or ordered by the Zilla Panchayat or state government.

Zilla Panchayat : Zilla Panchayats are constituted at district level to look after the administration. Earlier they were called district boards. The members of the Zilla Panchayat are directly elected by the people of the district. The total number of representatives vary from district to district based on the population. In Kodagu one member for 18,000 population, in chikkamagalur and Uttar kannada districts one member for 30,000 population. In Bengaluru Urban district one member for 20,000 population and in other districts one member for 35,000 to 45,000 population. In addition the presidents of Taluk Panchayats, MLAs, MLCs and MPs of that district are the members of Zilla Panchayat. They can attend the meetings and vote. Reservation of seats are provided to SC, ST, backward classes and women. The term of the members is five years.

Zilla Panchayat meetings are to be held at least once in two months. One president and one vice president are elected for a term of five years. The President of Zilla Panchayat is called Zilla Adhyaksha. Zilla Adhyaksha presides over the meetings of Zilla Panchayat. In his absence vice president will preside over the meetings. The president has the

powers to sanction one lakh rupees for relief measures during the period of calamities. Five standing committees are formed for efficient administration of Zilla Panchayat. Chief Executive Officer (CEO), equal to the rank of the District Commissioner is appointed by the State government to look after the executive work of the Zilla Panchayat. He takes part in Zilla Panchayat meetings and discussions, but has no right to vote.

Zilla Panchayat is like the district government. It has the vast powers in the implementation of developmental programmes and welfare schemes in the district. All the developmental programmes and schemes of the government are routed through Zilla Panchayats. In addition to these it has the following functions :

- To create an atmosphere of mutual trust, confidence and co-operation between Grama Panchayats, Taluk Panchayats and Zilla Panchayat for successful implementation of government projects and programmes.
- To bring about co-ordination among all the departments for successful implementation of programmes and also to supervise such developmental work.
- To encourage and provide support for the establishment of co-operative societies, co-operative banks and such other co-operative institutions.
- To execute the work as directed by the state government.

A separate Election Commission is constituted at state level to conduct elections to local bodies as per Panchayat Raj Act 1993. The Election Commission so constituted conducts the elections to Grama Panchayats, Taluk Panchayats and Zilla Panchayats in Karnataka.

Urban Local Bodies

There are many towns and cities in the state. Towns and cities are categorised as urban areas. In urban areas people have better facilities of education, health, transport, drinking water, sanitation and entertainment. At the same time there are many problems in urban areas. In order to solve these problems and to provide good governance,

the urban local self governments or urban local bodies are set up. There are three types in urban local bodies. They are :

- City Corporation (Mahanagara Palike) – Major cities
- Town Municipalities or city Municipalities – Town and Cities
- Cantonment Areas : under the control of Defence.

The state government has powers to declare a particular area as a city or a town on the basis of certain factors like population, income etc., These urban local bodies have many functions. They are :

- To prepare the budget and get the approval of the council.
- To look after the overall administration of the town or city.
- To prepare a good town planning system and implement it.
- To provide good roads, transportation, water supply, electricity, education, market and health facilities.
- To maintain cleanliness by providing good sewage system and disposal of urban waste.
- Granting permission to build structures, maintenance of local body buildings and properties.
- Registration of births and deaths.
- To provide parks, sports and entertainment facilities.
- To improve the living conditions in the slum areas by providing facilities.
- To establish orphanages, old age homes, beggar colonies, juvenile homes and child welfare centers.
- To undertake the construction of swimming pools, stadiums, museums, bus stations, reading room facilities, public libraries, veterinary hospitals, theatre for cultural programmes, whole sale market yards and crematoriums.
- To plan for rain harvesting.
- To encourage cultural activities.

- To undertake measures for the improvement or progress of backward classes and weaker sections.
- To encourage and undertake such measures which can help to maintain greenery, cleanliness, and beauty of the town or the city.

Sources of Income

In order to bring about the development and progress of the area and also to implement various plans and projects, the urban local bodies require funds. The main sources of income are from the taxes levied and collected on buildings, vacant sites, shops and vending carts etc. In addition, they collect rent from the buildings of the local bodies rented out to offices, market yards, shops and town halls etc. Water cess, market cess and cess on entertainment houses yield revenue. The grants provided by the state government help the local bodies to undertake welfare measures.

Composition of urban local bodies

Town Municipalities or Municipal Corporations : An urban area is classified as a town or a city on the basis of the population. An area with a population between 20,000 and 50,000 is considered as a town. Town municipality is the governing body of that area. Similarly an area with a population between 50,000 and 3 lakhs is considered as city. The governing body of that area is called a City Municipality. The governing bodies of Town Municipalities and City Municipalities have elected representatives called Councillors. The Councillors are directly elected by the people of that town or city. The number of councillors vary from place to place depending on the population of that area. In Town Municipality the number of councillors are between 23 and 27 whereas in City Municipalities the number is between 31 and 37. Beside, the State Government nominates five members who have good experience and knowledge in municipal administration. These nominated members take part in debates and discussions of the council meeting but have no right to vote. The local MLAs, MLCs and MPs can also

attend the council meetings and vote. SC, ST, backward classes and women are provided reservation as per the rule in these local bodies. The President and the Vice President are the heads of the local bodies. They are elected by the councillors. The President presides over the council meetings and helps in smooth functioning of the local body. In the absence of the President, the Vice -President looks after the functions. The term of the urban local bodies is five years. Under certain special circumstances the State Government has powers to extend the term. Four standing committees are constituted for the smooth and efficient administration of the local bodies. The Chief Officer is the Administrative Officer of the municipal body. He is appointed by the Government. He looks after the entire executive work of municipality besides providing the necessary information to the council.

City Corporation or Mahanagara Palike

City Corporation or Mahanagara palikes are constituted as per Karnataka Municipal Corporation Act of 1976. The City Corporation or Mahanagara Palikes are formed in the areas with more than two lakh population and an income of more than Rs. One crore. The members of the City Corporations are called Corporators. The number of Corporators in the corporation is decided on the basis of the population. The number of corporators should not generally be less than 30 and not more than 100. The state government decides the size of the corporation.

There are ten city corporations and one Bruhat Mahanagara Palike in Karnataka. They are, (1) Mysuru, (2) Huballi-Dharwad, (3) Ballari, (4) Belagavi, (5) kalaburagi, (6) Davanagere. (7) Mangaluru, (8) Shivamogga (9) Tumakuru, (10) Vijayapura and Bengaluru City Corporation is called Bruhat Bengaluru Mahanagara Palike (BBMP). There are 198 corporators in this BBMP.

City is divided into smaller electoral divisions called wards. One corporator is elected from each ward. Corporators are directly elected by the people of that city. Certain seats are reserved to SC, ST, backward classes and women. Besides these elected members, the state government nominates five members possessing good experience and knowledge in town planning, health, education and Municipal Administration. The five

nominated members can take part in corporation council meetings but have no right to vote. The MLAs, MLCs and MPs representing that area can also attend the meetings of the corporation council and vote. The term of the corporators is five years and the term can be extended upto one year by the state government depending upon the circumstances.

The Mayor and Deputy Mayor are the leaders of the corporation. They are elected by the corporators. Their term of office is one year. The Mayor Presides over the corporation meetings. He/She takes measures to implement the decisions of the council meetings. He/She establishes control over the executive work of the corporation. Standing Committees are set up to bring about efficiency in administration and also to assist the Mayor.

The Commissioner is the real executive of the City Corporation. Generally he is of IAS (Indian Administrative Services) cadre. He is appointed by the State Government for a term of three years. He participates in the council meetings and provides the required information to the council. He implements the decisions of the council. He assists the Mayor in preparing the budget and also in the executive functions of the corporation.

EXERCISES

I. Fill in the blanks :

1. Grama Sabha is presided by _____ .
2. The tenure of Grama Panchayat president is _____ years.
3. In Grama Panchayat one Member is elected for _____ population.
4. In Bengaluru Urban district a member is elected for _____ population.
5. The total number of City Corporations in Karnataka including Bangalore is _____ .

II. Answer the following questions briefly:

1. What are the functions of Local Government?
2. Write a note on Grama Panchayat.
3. Which are the sources of income for the Local Government?
4. Write a note on functions of urban local bodies.
5. Write a note on city corporation.

III. Activities :

1. Make a list of remedies to solve problems of a local body if you become a member of it.
2. Collect information on the reservation in local bodies.



SOCIOLOGY

CHAPTER - I

INTRODUCTION TO SOCIOLOGY

In this chapter you learn :

- *Origin, meaning, nature, scope and importance of Sociology*
- *The relationship between Sociology and other Social Sciences*
- *Early Western Sociologists*
 1. August Comte
 2. Karl Marx
 3. Emile Durkheim.
 4. Max Weber
- *Prominent Indian Sociologists*
 1. B.R. Ambedkar
 2. G.S.Ghurye
 3. M.N.Srinivas
 4. C. Parvathamma
 5. Iravati Karve
 6. A.R.Desai

The life of human being is a fascinating one. Human Beings have always tried to understand the environment, nature and self created social world since ages deeply and accurately. Human beings are different from other animals and are 'intellectual beings'. There are a lot of differences between animals and human beings. Apparent differences in body structure and rate of growth, food consumption, creativity, and evolution in brain can be noticed.

The human society has evolved stage by stage. It is attempting to know more about the neighbouring planets with the help of advanced science and technology.

Human Beings are Social Beings

The relationship between the individual and society are unique. There is no society without individual and there is no individual without society. If one thinks generally, whether an individual can live alone on the Earth, the answer is NO. Since a human being is a social being, he always longs to live with other human being. The social living is necessary for the well being and growth. Hence, human society is called as 'A web of social relationships'.

The Meaning of Sociology

The word Sociology originates from two words: 'Socius' of Latin language and 'Logos' of Greek language. 'Socius' means 'companion' and 'logos' means science or study. Thus, Sociology is the science of human society.

Definitions of Sociology

- August Comte: “Sociology is the science of social phenomena subject to the natural and invariable laws, the discovery of which is the object of investigation”.
 - Max Weber: “Sociology is study of Social Behaviour”
 - Emile Durkheim: “Sociology is the science of social institutions”.
- In general one can define “Sociology as the study of human society”.

Origin of Sociology

The beginning of Sociology as an independent and separate field of Science was during the middle of nineteenth century. It became a specific science in the later fifty years. Though other social sciences like History, Political Science, Economics, Psychology and others have longer history, they were recognised as ‘Social Sciences’ during 18th and 19th centuries. This was due to the ‘Industrial’ and ‘French’ revolutions. The intellectual stimulation provided by social and religious reform movements, renaissance and other movements of 16th and 18th resulted in the ‘Origin of Sociology’.

Scope of Sociology

Sociology studies the human society. It studies human social life, social relationships, social institutions, and social process.

Nature of Sociology

Sociology has a unique place among all the social sciences. It is different from other social sciences due to its unique nature. Sociology is considered as an independent and separate field of study. The features of Sociology are:

1. Sociology is a social science and not a physical science:

Sociology belongs to the group of social sciences and not to the group of physical sciences. It studies social life and activities of human society. It also has a close relationship with other social sciences like History, Political Science, Economics, Psychology and Anthropology.

2. Sociology is a definitive study but not a directive study :

Sociology studies human society as it is. It never engages in 'How it should be studied. It does not engage in value judgements. It aims at objective study only. Sociology remains 'neutral' in value based aspects.

3. Sociology is a pure science and not an applied science:

Sociology is interested in objective study that results in the formation of empirical body knowledge only. It is not an applied science which is interested in experiments.

4. Sociology is an intangible science and not a tangible science :

Sociology is not interested in some of the tangible aspects of human life. It has interest in the form and pattern of human events. It has no interest in any specific battle or revolution like History. It considers these events as patterns and forms of Social conflict and subjects them to a scientific study.

5. Sociology is a general science and not a special science :

Among all the social sciences, only Sociology studies the general interactions involving human beings like religion, politics and economy, moral and intellectual aspects. It has a wider scope than other social sciences.

Importance of Sociology

Though Sociology is the youngest science among all the social sciences, its uses are universal.

1. Sociology studies human society scientifically : Sociology constructs a systematic body of knowledge of human society with its scientific study. This aids progress in other fields of human life.

2. Supplements the personality development : Human being is mainly a social being who is often expected to get adjusted to the changing nature of society. By creating holistic understanding of social structure, growth and changes and individual responsibilities, sociology facilitates holistic personality development.

3. Understanding Social Processes : Sociology aids the proper understanding of social processes by studying the religion, traditions, culture, social rules and regulations, values and ideals of other various societies. Sociology is helpful in understanding the inter-relationship of various social institutions.

4. Aids in understanding social problems and their solutions: Every society suffers from its own social problems. Our society is facing problems like crime, juvenile crime, communal clashes, alcoholism, hunger, malnutrition, caste based discrimination, unemployment, gambling, prostitution, child labour, inequality, and various other problems. A scientific study of these problems provide better insights which aids in scientific solutions.

5. Sociology supports the effective implementation of development programmes : By studying human society scientifically, Sociology aids the effective implementation of development programmes.

The Inter-relationship between Sociology and other social sciences:

Sociology is the youngest among all the social sciences. It has its own field of study and has inter-relationship with other social sciences as well.

Relationship between Sociology and Political Science: There is close relationship between Sociology and Political Science. Political Science studies the interactions between political institutions, political life of human beings and political institutions of human society. Sociology studies the various social institutions like social groups and social institutions that function within the political structure.

Relationship between Sociology and History : Sociology and History are interrelated. History is the recreation of the life of a past society. Sociology is the recreation of contemporary society. Sociology supports historians by providing scientific knowledge of various social institutions and their roles and functions.

Relationship between Sociology and Anthropology : The relationship between Sociology and Anthropology are widely recognised. The culture and social path of human beings and its history is studied by Anthropology. Sociology grows independently by studying the social life holistically. It provides objective analysis of the various social institutions.

Relationship between Sociology and Psychology : Sociology and Psychology are complementary to each other. Psychology studies the behavioural aspects of human beings from psychological perspectives. Sociology seeks to study the social behaviour, social interactions and functions of social institutions.

Relationship between Sociology and Economics : Economics studies the economical activities of human beings. Sociology seeks to understand the interaction between economical and social activities of human beings. It also probes how human behaviour forms the economic activities.

In nutshell, while analysing the social behaviour, Sociology interacts with other social sciences in its own way.

Early Sociologists

1. August Comte (1798-1857) : August Comte is an important French philosopher. He is the first Social Philosopher. He is called as ‘the father of Sociology’. He studied society scientifically and provided the status of science for Sociology. This effort of August Comte was strongly supported by Hebert Spencer, Emile Durkheim, Max Weber and others. Comte used the word “Sociology’ for the first time while delivering a public lecture on ‘Positive Philosophy’.

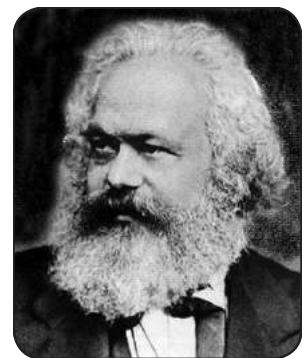


August Comte

His full name is ‘Isidore Marie Auguste François Xavier Comte’. He is generally known as August Comte. He was born in Montpellier of southern France on January 19, 1798 in a catholic family. He completed his studies in Imperial school. He later taught at Ecole polytechnic college.

His major contributions are : Positive Philosophy -1839, Positive Polity -1851, Human Religion – 1857. August Comte who wrote many other important books on Sociology, died on September 05, 1857 at the age of 59 years.

2. Karl Marx (1818-1883) : Karl Marx is important social thinker of world repute of 19th century C.E. He was a political revolutionary, clever organiser and a sensitive writer. Karl Marx is called as the founder of ‘Class Struggle theory’. His thoughts on working class and labourers led to a new direction in labour struggle.

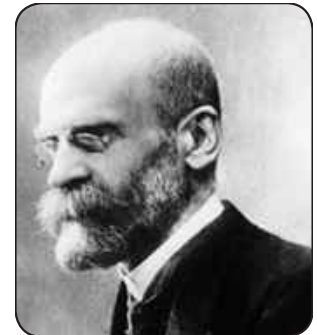


Karl Marx

Marx was born on May 05, 1818 in Trier of Germany. He was born to Heinrich Marx and Henrietta Pressburg. His wife was Jenny von Westphalen. Hegel, a German Philosopher, was his favourite teacher. He received P.hd in the year 1841 and started his career in law.

His major contributions : Das Capital -1865, The Holy Family, the German Ideology-1845, The Manifesto of the Communist Party -1848 and others. Karl Marx died on March 14, 1883. Even after a century of his death, theories advocated by Marx have remained relevant.

3. Emile Durkheim (1858-1917) : Emile Durkheim is the important Sociologist of 19th century France. He proved that Sociology is at par with any other science with his scientific writings. While August Comte is called as the 'father of Sociology', Durkheim is called as the 'father of the development of Sociology'.



Emile Durkheim

Durkheim was born at Epinal of Lorraine region of France on April 15, 1858. He belongs to Jewish family and completed his studies at Ecole Normale Supérieure and started his career as professor.

Major contributions of Durkheim : The Division of Labour in Society – 1893, Suicide – 1897, The Rules of Sociological Method – 1895, The Elementary Reforms of Religious Life – 1912 and others. He died at the age of fifty nine.

4. Max Weber (1864-1920) : Max Weber is an unforgettable personality in the field of Social Sciences. He was one of the most prominent writers and politicians of Germany. Weber had interest in law, economics, religion, art, history and sociology. He was born at Erfurt in West Germany on April 21, 1864 in a protestant family. Weber joined Heidelberg University of Germany by the age 18years, and earned his P.hd in Law. He started his teaching career at Berlin University. He died at the age of 56.



Max Weber

Major Contributions : The Protestant Ethics and the Spirit of Capitalism – 1904, The City, The Economy and the Society and others.

Prominent Indian Sociologists

Dr B.R. Ambedkar (1891-1956) : Ambedkar's contribution to the building of modern India is very important. His full name was Bhim Rao Ramji Ambedkar. He is one of the prominent social reformer and an expert in law. He fought against the exploitations of Dalits in India like untouchability. He organised agitations in favour Dalit rights and women rights.



Dr B.R. Ambedkar

More importantly, Ambedkar was the first to prove that all sorts of exploitation of Dalits can be overcome by education. Ambedkar's stand on education differs from other social thinkers radically. He proposes that education is the main tool of social transformation. According to him, education is the only means through which one can earn resources to understand and analyse critically. Particularly, Ambedkar argued that to overcome India's prejudices and prejudice induced social discriminations, one needs logical argument and this logical argument capacity is earned through education.

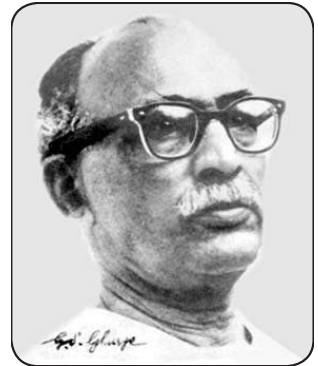
Ambedkar argued in favour of compulsory and free education to all. He argued that education should remain as a public property as it has the capacity to bring in social changes. With these radical thoughts, Dr Ambedkar played a pivotal role in the preparation of the Draft Indian Constitution. Because of this proactive role played by Ambedkar, the Indian Constitution has a unique way of assuring social justice and equality in the entire world.

Life and Education : B.R. Ambedkar was born in Ambawade village of Maharashtra on April 14, 1891. He lost his mother at the age of six and grew up under the care of his aunt Meerabai and started his primary education at Satara.

Ambedkar joined the popular Elphinstone High School of Mumbai and passed matriculation with first class in 1907. He married Ramabai. With the help of a scholarship awarded by Maharaja of rupees twenty five, Ambedkar earned his B.A and M.A degrees. He received his P.hd from Columbia University in 1916. He started a fortnightly magazine

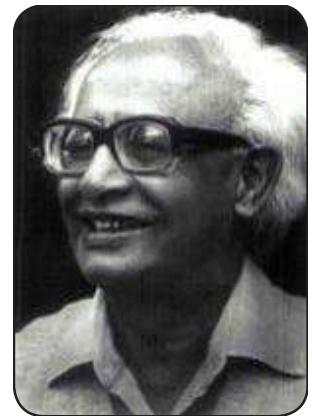
named 'MOOKANAYAKA' . His major works are Annihilation of caste -1936, Who Are Shudras-1946, Budha and his Dhamma-1957 and others. All his writings are published in 26 volumes from the Government of Karnataka in Kannada. Dr B.R.Ambedkar died on December 06, 1956.

G.S Ghurye (1893-1948) : Ghurye played an important role in the establishment of departments of Sociology in the Indian universities. His full name is Govinda Sadashiva Ghurye. He was born on December 12, 1893 at Malvan of Maharashtra. He completed his college education at Bombay University. After receiving his P.hd from Cambridge University, London, Ghurye returned to India and started his teaching career at the department of Sociology at Bombay University which he founded. Caste and Race in India -1932, Scheduled Tribes -1943, Indian Saints-1953 and many other books are written by him.



G.S Ghurye

M.N.Srinivas (1916-1999) : M.N.Srinivas is the internationally renowned Indian sociologist. He popularised the 'field based sociological studies' in India. While he was studying at Stanford University, his field study notes were lost in arson due to agitation of the students. Based on his memory of the field work done, he wrote 'A Remembered Village' in 1976. This has received universal acclaim and has been republished many times. Under the guidance of his teacher Radcliffe Brown, he wrote a book titled "The Religion and Society of Kodavas of South India" in 1952.



M.N.Srinivas

His full name was Mysore Narasimachar Srinivas and was born to Narasimachar and Rukmini on November 16, 1916 at Mysore. He received MA , LLB and P.hD from Bombay university. He also earned D.lit from Oxford University. He worked as professor at Delhi. His major contributions are: The Religion and Society of Kodavas of South India-1952, Indian Villages, Social Change in Modern India -1966, Remembered Village -1976.

C.Parvathamma : C.Parvathamma is the prominent contemporary sociologist from Karnataka. She grew up in a difficult situation and with a lot of determination became one of the leading Sociologists of India. she was born at Syagalli village of present Davanagere district (then taluk of Chitradurga district) in June 1928. In absence of genuine birth certificate, her birth date is as per the records in the school. She lost her father when she was only a nine month old baby. With the support from the maternal family, she grew up with her young mother.

Parvathamma completed her education in a single teacher school at her village. She continued her middle school education at the neighbouring Lokikere village, and high school education at Davanagere. A teacher named Kantharaja Shetty arranged for her intermediate education at Mysore by getting accommodation facility in a hostel. She finished her intermediate education at Maharani College, Mysore.

Parvathamma completed her intermediate education in Arts stream with second class. She later joined BA honours in Social Philosophy at Maharaja College, Mysore. She earned first rank in BA honours. She sustained her entire education on scholarships. A professor guided her to continue education in a foreign university.

C.Parvathamma returned to Karnataka after completing higher education in foreign university. She made genuine attempts to spread the learning of Sociology across Karnataka proves her commitment and sense social concerns. Her major contributions are 'Politics and Religion', 'Sociological Essays on Veerashaivism, and her studies on socio-economic status of Scheduled Caste and Tribes.

Iravati Karve : Iravati Karve is recognised as the prominent sociologist of India. She was the student of G.S.Gurje. She was the daughter-in-law of famous social reformist Maharshi Karve and had concern in social and national issues. She had her MA from Bombay University and worked at Pune College as professor. Her contributions are: Kinship and Organisation in India, Indian Society, Institutions and Relationship.



Iravati Karve

A.R.Desai (1915-1994) : A.R.Desai is important among the prominent sociologists of India. He worked as the UGC national fellow and as Head of Department of Sociology of Bombay University. His full name is Akshay Ramlal Desai and was born in 1915. He was the student of G.S.Gurye and later taught and became head of the same department. As he was following the Marxist Ideology in his sociological studies, he was identified as 'Marxist Sociologist'. His 'The Sociological Background of Indian Nationalism' work is the best work. Indian Rural Sociology, Slums and Urbanisation are his major works. He worked actively in Indian Sociological Society.

EXERCISES

I. Fill in the blanks:

1. Man is _____ being.
2. 'Logos' means _____ .
3. The Father of Sociology is _____ .
4. **Karl marx** is called as the founder of _____ Theory'
5. Annihilation of caste was written by _____ .

II. Answer the following sentences :

1. Who is called as the Father of Sociology?
2. Describe the nature of Sociology
3. What is Sociology?
4. Name the important early Sociologists.
5. Name the important Indian Sociologists.

III. Answer the following in four or five sentences :

1. Human beings are social beings. Explain.
2. Explain the relationship between Sociology and History.
3. What does Sociology study?
4. What books were written by Karl Marx?

5. Write a note on Ambedkar's early life.
6. Write a note on prominent sociologist from Karnataka C.Parvathamma.
7. Write a note on noted Indian Sociologist M.N.Srinivas.

IV. Activities :

1. Collect the pictures of prominent Indian sociologists.
2. Collect the important sociologists from Karnataka.



CHAPTER - 2

CULTURE

In this chapter you learn :

- *Meaning and nature of Culture.*
- *Features of Culture.*
- *Relationship between society and culture.*
- *Importance of cultural rituals and diversity.*

Meaning of Culture

Human being is not only a social being but also a cultural being. Culture keeps human beings different from animals. Every human being can be considered as a cultural representative. Culture and society are two faces of the same coin. Human beings Social, religious, political, economical and spiritual aspects are decided by culture. Culture is considered as the main aspect of social change. It is considered as the biological system of social tradition.

Culture indicates progress in life style, music, literature, art, science and technology of any given human society. Culture makes human society meaningful and unique. The word 'Culture' is used in specific sense in Sociology and Anthropology.

Culture means the transfer of knowledge, experience, belief, value, behaviour, hierarchy, relationship from generation to generation. Hence, culture is called as a system of life and knowledge shared among a social group.

Culture means a life pattern of a group of people. It contains the life symbols along with beliefs and values. Usually, they are transferred from one generation to another.

Meaning of Culture

The word culture is derived from the Latin word 'Colere'. 'Colere' means cultivate or tend in Latin. During medieval period culture was

in the form of Agriculture to indicate the improved yield of sown seeds. By 18th and 19th century, it came to indicate the human behavioural patterns.

Definitions of Culture

According E.B.Tylor, “Culture is that complex whole which includes knowledge, belief, art, rules and regulations, traditions and any other capabilities earned by the human being as a member of society”.

According to Malinowski, “the tool created by human being to design his aims of life is called as Culture”.

Types of Culture

Culture is divided into material culture and non-material culture. Material culture includes all those physical objects that are visible to eyes and the tools used by human beings. Non-material culture includes thoughts, ideas, beliefs and values.

In order to explain the unique features of culture, Ogburn divides culture into material and non-material culture. Both are human made. According to him, material culture is created by human beings by converting natural resources into man made structures like House, building, bridge, road, dam, machines, production centres, industries, computer, technology and others. Material culture is called civilisation. Material culture undergoes change swiftly. Non material culture means human achievements. Tradition, belief, ritual and custom, moral values, ideals, Art, literature, religion, language and many others are examples of non-material culture. When compared to material culture, non material culture undergoes slow change.

Features of culture

- 1. Culture is abstract :** Culture means the life style of a social group. The accepted way of life is carried from one generation to another generation. This process of shifting remains abstract. Hence culture is abstract.

2. **Culture is social** : Culture is not personal. It means sharing a community's way of life, food, dress, rituals and living with them. Hence Culture is social.
3. **Culture is Learnt** : Culture does not come by birth. It is not nature made either. This gets formed in the interactions with various members of the society. This means a child receives culture through the process of socialisation. Behaviours learned through interactions with various people, discussion is called culture. Children learn from teachers, from elders in the house, and they also learn from friends.
4. **Culture means co-existence** : Culture provides opportunities to every individual to share his ideas with others. Thus, culture assures sharing opportunities. This ensures sharing of traditions, values, knowledge, beliefs, and other aspects necessary human existence.
5. **Culture is continuous** : Every culture grows imbibing new aspects into it. Though art, imagination, rules and regulations get formulated into a complex environment; it sustains itself with minor changes.
6. **Culture is diverse** : Every social group has its own culture. Hence, culture is not uniform. Aspects of culture like customs, moral values, art, belief, language differ from society to society considerably. The difference is also visible in rural, urban and tribal societies. In food habit, the difference is visible when compared south Karnataka with North Karnataka. Not only this, even people living in the same place tend to have different culture. Achieving unity in this diversity is important.

Importance of Culture

1. **Culture is treasure of knowledge** : Culture provides the knowledge needed for the social and physical existence of the human beings. Animals survive and get adjusted with their

natural environment with the help of instincts. Human beings have to utilise their learned knowledge in order to survive. Language is part of culture. The future generation is guided by the present generation using language as a tool. The present and the past knowledge is stored in the form of proverbs, paintings, folksongs, writings and passed on to the next generation either orally or by written texts. Based on these instructions, the future generation forms its own culture and marches into the future. Hence, culture is not only a bundle of traditions it is also a treasure of knowledge needed for social development.

- 2. Culture explains situations :** Culture explains the situations of a particular period of time. The studies of culture reveal the evolution of human society in relation to the contemporary situations. The caves and the architecture of temples in and around Aihole and Badami of Bagalkote district reveal the progress of the human society of that particular period.
- 3. Culture defines Values :** Value is the tool that analyses the attitudes, behaviour and thoughts of a particular society. The Value advocated by our constitution seeks equality. People are expected to live without discrimination based on caste, creed and language. This value orientation creates a thought process. This thought process builds a set of attitudes. Hence, culture has the capacity to strengthen the human relationships.
- 4. Culture explains behavioural models :** Culture provides aims and means to achieve them to human society. It supports those behaviours that are complementary to societal aims. Similarly, it punishes those behaviours that are against the societal aims. The correction done by the teachers and elders whenever undesirable behaviour happens in children is an example of this process.

Relationship between Culture and Society

- 1. The relationship between culture and society is mutual :**
Culture is the base of the evolution of human society. Culture is part and parcel of human society since the beginning of civilisation. Culture is an indivisible part of society. The human interaction is based on culture. Without human interactions, no society can be in existence. Hence, without culture there is no society and without society there is no culture.
- 2. Culture and Society are the two faces of the same coin :**
The social world of humans consists of various societies with numerous human relationships. Culture and society are two faces of the same coin. Culture makes human beings different from other animals. Social controls in a society are based on cultural aspects. The social controls define the human behaviour. Individual in a society have memberships in various social institutions. Every institution regulates the behaviour of the individual through its cultural tools. For example our interactions with elders are guided by culture prevalent in our families and society.

Importance and significance of cultural rituals and diversity

We witness one or the other cultural ritual every day. Discussion on every such ritual is difficult. Hence, we shall concentrate on few examples that explain the role culture in ensuring the good of human society.

Fairs are the most important cultural rituals of rural societies of India. A fair is not only a religious expression; it also functions as a temporary market for the neighbouring villages. It is a place where agricultural produce is sold or bought. This market is utilised to sell or buy the domestic animals also. They are also the window for entertainment soon after harvest season.

People participate in the fairs irrespective of their caste, creed and language. Fairs reinforce social relationships. Often fairs have people

with different language and culture displaying their skills in the form of circus. Similarly, various artisans display their skills here. These displays are also culture expressions. Many performers narrate the local versions of Ramayana and Mahabharata.

The groups of people who participate in these fairs belong to different language, custom and culture groups. They all differ in their physical appearances too. But they assemble in these fairs to celebrate. They also appear to be showcasing our constitutions' desire of achieving unity in diversity. Like this, individual diversity is marked in these community rituals. Often, these are considered as the motivating aspects of social life. Hence, cultural practices have a pivotal role in human societies.

Similarly, during Republic day celebrations, the entire nation's cultural diversity is showcased. Tableaus depicting various cultural aspects of India get displayed at our capital city. A tableau displaying the rural life of northern Karnataka is displayed along with another tableau displaying the rural Rajasthan. Every year, the Republic Day celebrations showcase our unity in diversity.

Language is another example of this cultural expression. Children growing up in a social environment that has multi languages, learn more than two three languages. This learning not only involves that language, but it also includes the culture of that language. Thus, they go beyond the narrow jacket of religion or caste. Another simple example is that of various labourers working together in factory set up. Children growing up in this multi cultural social set up learn to mark festivals and other rituals of the social groups present there. This aids respecting the cultural diversity. The respect for cultural diversity fosters peace and development in human societies.

EXERCISES

I. Fill in the blanks with appropriate words:

1. Culture means _____.
2. Customs mean _____ activities.
3. **Unity** in _____ is found in India.
4. **Multiple** relationship is found between _____ and _____.
5. Culture is the _____ of transfer of ideas from generation to generation.

II. Answer the following in a sentence:

1. What is culture?
2. Give examples of cultural diversity present in your neighbourhood.
3. Who divided the culture into two groups?
4. What is material culture?
5. What is non-material culture?

III. Answer the following in four five sentences :

1. What is a custom? Give examples.
2. Explain the cultural diversity.
3. Explain the features of Culture.
4. Culture and society are two faces of the same coin. How?
5. Explain the features of fair.

IV. Activities :

1. You collect the details of fairs that are held in our place from elders. Make a list of its duration, period, and other details.
2. With the help of your teachers organise programmes that depict cultural diversity.



CHAPTER - 3

SOCIAL INSTITUTIONS

In this chapter you learn :

- *Meaning, nature and importance of social institutions*
- *The relationship between human beings and social institutions*
- *Role and functions of social institutions*

Meaning of Social Institutions

The study of social institutions is important to understand the society. Social institutions fulfil the social needs of human beings. The social institution is that whole of roles, status, moral values and functions catering to the social needs of human beings. It has organised belief, practices and activity systems.

Usually, when people get together to achieve their common needs and desires, institutions grow. It requires many rules and regulations to function. Since the social rules and customs remain in operation, social institutions are born.

According to 'Summer and Keller', "Like living beings that have organs and cells, societies also have customs and institutions". Summer also says "A social institution is a permanent structure that fulfils the desires of human beings". According to Maciver and Page, "Social Institutions are the structure devised to fulfil the desires of a particular social group". The state, family, marriage, court of law are the few examples of social institutions. Social institutions are those socially approved social structure that are devised to fulfil the desires of human beings.

Now let us learn the features of social institutions:

Features of Social Institutions :

1. **Universal :** Social institutions are found in all societies. They are as old as human civilisation. Irrespective of time and space, social institutions are present in all human societies. Family, marriage and school have been part of the human societies with necessary changes.

2. **Social Institutions have Rules** : The rules of the social institutions regulate the behaviour of the members. The members who violate the rules are prohibited from the participation. Social institutions direct their members to perform roles as per the rules strictly. In families, the role of elders and younger ones are fixed as per the rules framed by the individual families.
3. **Social Institutions fulfil the basic needs** : The social institutions fulfil the basic needs of human beings like shelter, food, sexual desire, procreation and personality development. Various social institutions work in coordination to fulfil these needs.
4. **Written and unwritten rules and regulations** : The social institutions have both written and unwritten rules and regulations. The customs, traditions, value systems and others remain unwritten. The modern social institutions like courts, schools and governments have written rules and regulations.
5. **Interconnected relationship** : The social institutions in a given society remain interconnected. In a traditional society, the family took care of bringing up a child, whereas in modern society, the school shares the role of bringing up a child. Children who come from different families undergo socialisation in the school. The social institutions remain interconnected and complement each other.

Importance of Social Institutions

1. **Medium of Culture**: Social institutions are the medium of transfer cultural aspects like knowledge, customs, values and others from generation to generation. Hence, social institutions are important for the social life.
2. **Fulfil the needs of the members**: Social institutions fulfil the basic needs of human beings and also regulate their behaviour.
3. **Define and regulate the behaviour of members**: The social institutions prescribe and define good and bad behaviours. Schools define our way of dressing and other behaviours. The school corrects our bad behaviour by various means like

punishment, reprimands and rustication. If the desired correction is not achieved, then the school resorts to legal course of action. Like this, social institutions thrive to regulate the human behaviours.

- 4. Social Institutions provide roles to individuals :** The social institutions assign role to their members based on their age and other yardsticks. Family assigns relationships based on the age. Similarly, social institutions assign role to members by defining their relationships.

Functions and role of Social Institutions

Every society has its own social institutions. Let us first understand 'Family', an important social institution found in all societies. It fulfils the needs of human beings. The important functions of family are:

Functions of Family :

- 1. Nourishment of the members :** The family assigns relationship to all its members. The members function as per their roles. The main role of the family is to nourish its members. The elders like grandparents take care of the babies with caution till they become grownups. Family also provides nursing for the sick member or the weak elder member.

- 2. Security and Socialisation :** The family educates the children about interacting with society through socialisation. It also provides social security to the members. It mainly provides skills and nourishment needed for the younger members to become part of the society as adults.

Functions of Marriage:

- 1. Social Sanction:** Marriage is an important social institution. It provides social sanction for a man and woman to live together. Marriage provides entry to the family life. It allows the couple to stay together and lead a life of religious, economic and cultural life. Marriage is as old as human civilization. It has also undergone various changes too.

- 2. Base for the Family:** Marriage is the base of the family. The procreation of children, their upbringing, and nourishment take place within the family. Marriage directs the other relationships in the family. Marriage often creates unity. Marriage brings together people from different social background and foster unity.

3. Legal Sanctity in relationship: Marriage is not only a relationship between a man and a woman it is also a relationship between their respective families. The child born out of this marriage is the legal heir for the property of both the families. The continuity of the society is ensured through marriage and family. The relationship is guided by the law of the land also.

Religion

Religion is another social institution found in all societies. Religion grew along with human civilisation. The following are its functions:

1. Socialisation: Religion is one of the main medium of socialisation. It aids the spread of values like truthfulness, patience, peace, sacrifice and others by various customs and rituals.

2. Social Unity: Religion fosters unity. Truthfulness, honesty and non-violence are some of the religious values that aid the social unity. By employing symbols and customs, religion creates unity among the members.

3. Protection of values: Religion aides in the preservation of values like truthfulness, honesty, and non-violence. These values are supported by all the religions. All of them instruct values in human life.

4. Social control: Religion is one of the major means of achieving social control. It controls the human life through God and spiritual concepts. Religion guides its members to be disciplined and civilised. There is a need to understand this function of religion and stop hating other religions.

EXERCISES

I. Fill in the blanks:

1. Social institutions fulfill the _____ of human beings.
2. Family is a _____ institution
3. Social institutions are _____ of cultural transfer.
4. Religion aids in _____ of values.

II. Answer the following :

1. What is a social institution?
2. Explain the functions of family.
3. What are the features of Social institutions?
4. What are the types of Social institutions?

III. Answer the following in four or five sentences :

1. Explain the relationship between social institutions and society.
2. Explain the ideals of religion as social institution.
3. Explain the functions of family as a social institution.
4. Write a note on Marriage.

IV. Activities :

1. Make a list of social institutions with pictures.
2. Organise group discussion on the functions of social institutions
3. Do the functions of family by children and give the information about importance of social institutions.

V. Project :

1. Organise a programme to create awareness on ill effects of child marriage.



CHAPTER - 4

TYPES OF SOCIETY

In this chapter you learn :

- *Meaning and types of Society*
- *Pastoral society*
- *Agricultural society*
- *Industrial society*
- *Hunting and Gathering society*
- *Nomadic Society*
- *Rural and Urban society*
- *Information society*

Meaning of Society

Society is the most prominent subject for Sociology. Sociology is a science devoted to the study of human society scientifically. Human being and society are the two faces of the same coin. Human being cannot live alone, and prefer to live in social groups. Society aids holistic development of human beings.

In Society, many aspects like jobs, life style, culture, thoughts, and rituals differ from one geographical area to another. If one enters a rural area, numerous cattle, sheep and other domestic animals are visible. Similarly, farmers working in fields are also visible. A visit to cities like Mumbai and Bengaluru reveals high rise buildings, crowded human beings, more number vehicles, slums and industries. Government offices, hospitals and many other modern institutions can be seen.

The word Society originates from the Greek word 'Socius' which means companionship or friendship. The structure that grow out of these interacting people can be called a society.

Definitions of Society

“The web of social relationships is society. The complex relationship of social institutions and social groups is Society.” – MacIver and Page

Nature:

1. Society is community of communities: Grouping of people is called as community. Society is formed with the grouping many

communities. Every society has family, neighbourhood, rural and urban settings, political parties and other communities. Hence, H.M.Johnson says “Society is community of communities.”

2. Society is web of social relationships: Society does not mean group of people only. It is a group with dynamic interaction between its members. The scope of its relationships is vast and varied. It includes teacher-student, Parents-children, Patients-doctors, husband-wife, and many other relationships. Hence, MacIver and Page defined ‘society as a web of social relationships’.

3. Similarity and Resemblance: Resemblances play an important role in society’s structure. Resemblances in various physical and psychological traits of human beings in society, form the base of society. Since similarities are visible in aspirations, values, interaction, love and affection among people, a sense of unity prevails among them.

4. Cooperation and Division of Labour: Cooperation means getting together of people to work towards a common goal. Since the spirit of cooperation prevails among people, they respond to each other’s needs. Division of labour means ‘Sharing task among a group of people’. Division of labour is done based on age, interest, skill and sex of the individual. Hence, cooperation and division of labour are mutually exclusive.

5. Social Control: Society has its own way of regulating human behaviour. The modern society regulates its members through formal controls like laws, rules and constitution. It also regulates through informal medium like customs, morals and traditions.

6. Society is dynamic: Society is always dynamic. Without change no society survives long. But the rate of change may vary. The rate of change is slow in a rural society and the rate of change in a urban society is fast.

Importance of Society

1. Universal: The human life and society go hand in hand. Human life is made possible by society. Society was there before the birth of an individual and remains even after his death. Hence society is universal.

2. Necessary for protection and nourishment: Society is needed for the nourishment and protection of individuals and social groups. With its complex structure of cooperation, division of labour, social control, institutions, and similarities society takes care of the needs of human beings.

3. Society plays major role in personality formation: Society decides the aims and patterns of human beings. The features of human nature develop in the society itself. Society provides proper channels to showcase one's talents. It regulates the natural human weakness and desires facilitating healthy growth.

4. Reinforces life: The vast aspect of society has enveloped our life. It not only envelopes from outside, it envelopes from inside as well. The relationship between human beings and society is not a simple one. It is a complex one forming an individual's uniqueness, thoughts and emotions.

Types of Societies

Society is not uniform. There are different types of societies. Societies are divided based on their nature of jobs and work. The following are the types of societies:

1. Hunting and Gathering society.
2. Pastoral Society.
3. Agricultural Society/ Rural Society.
4. Urban Society.
5. Industrial Society.
6. Information Society.

1. Hunting and Gathering Society: Hunting and Gathering society is the first stage of human evolution. It is a simple and ancient society. It is very small in size. The human beings were engaged in fishing, hunting animals and gathering foods from plants and trees. The role and status in the society were fixed based on age and sex. There was no desire of accumulation of wealth. Sharing the sources is the important trait. Hunting was done using stone tools.

2. Pastoral Society: Pastoral Society is the second stage in the evolution of human societies. The process of engaging in animal husbandry of cattle like sheep, goat, cow, and buffalo for general sustenance is called pastoral society. These consisted of several thousand

people. Cattle herding was the main occupation. The society was under the leadership of single leader. Apart from tending cattle for sustenance, the members were engaged in fishing, hunting and food gathering works.

3. Nomadic and semi-nomadic Society: Anthropologists had opined that only pastoral societies as the nomadic society in the beginning. According to encyclopaedia Britannica, 'Nomadic life is a type of life'. Movement of people from one place to another place in search of food and grassland, business is called as nomadic life. This is different from migration. Though the communities stayed for good in a particular place to practice agriculture and other professions, they continued to move out for cattle herding. Such communities are called as 'Semi Nomadic communities. Based on the social security, available facilities for education and economic activities the social status of the nomadic tribes is understood.

4. Agricultural Society/Rural Society: At this stage of societal evolution, human beings left nomadic life and settled in a place engaging in agriculture. This society is a village based society. Majority of the people engage in agriculture related works. Producing food primarily through agriculture is another important feature. 'Plough' driven by animals are used for agriculture.

India is called 'as a land of villages and agriculture'. In the ancient literature of India, there are references of villages and their administration. In Rig-Veda, the head of the village is called 'Gramastha'. A group of villages was called as 'visha', 'Jana', or 'Desha' for administrative purposes. In Mahabhartha, the head of the village is called as 'gramini'. The chief of group of villages is called as 'Dashamuki', 'Shatamuki', 'Adhipathi'.

Bogardus opines that, "The human civilisation evolved in the cradle of Villages'. Though village is an ancient system, it is not easy to define it. Bogardus says, "Village is a group of families engaged in simple life of thrift with less population density, and have primary relationships." As per S.C.Dube, "A group of families residing in a place is called village". In this society, socialisation and social control function efficiently.

With the invention of 'plough' during 3000 BCE, the agricultural revolution started. Villages are the life line of this country. There are about six lakh villages in India and they have retained the Indian culture and tradition intact. Majority of the people live in rural India. In rural areas, 59% of men and 75% of women are engaged in agriculture directly for their sustenance.

Features of Rural Society

1. Small in size : Majority of the Indians live in village as rightly noted by Max Weber. Villages are small in number and have less density of population.

2. Influence of primary and family relationships: Rural societies have primary relationship. One can notice friendship, love and kinship among individuals here. Family influences most of the social life. Joint families are another major feature of Indian rural societies.

3. Simple economic life: Indian farming is based on nature. Rural life is simple and thrifty. As there is limited source of income which is low, rural people, led a life of simple and non luxury. In spite of growth in civilisation, rural people have retained their traditional customs and practices. Their dependence of agriculture and tradition is the main reason for their low demands.

4. Neighbourhood: Neighbourhood is another main feature of rural societies. It takes part in all the public celebrations, rituals marking death and birth, and in festivals. In Karnataka the neighbourhood is identified as 'Keri' or 'Oni'. In Maharashtra, it is called as 'wad'.

The Structure of Agricultural Society

Agriculture is the major economic activity that takes place in agricultural society. The structure of agricultural society can be in relation to the land holdings, relationship with land and agricultural activity.

Jajmani System: Jajmani and caste system were working together once. Then, Jajmani system was the basic nature of Socio-economic life of rural society. In caste system, one caste depends on the other caste

for survival. This often results in cooperation and dependency on each of them. In Jajmani system, there are two major classes. One serving class and another served class. The serving class provided services related to agriculture and agriculture related works. And this class received provisions in return for its service.

Zamindari System: Zamindar is a Persian word. It means one who has lands. The system Zamindar has its root in the rule Delhi Sultans. During fourteenth century, the word Zamindar indicated the head of a region. The titles owned by Rajasthan 'Roy' and 'Rana' indicated land ownership. By the time Zamindars were emerging as important class. The word Zamindari came into use during Mogul rule. During the time of Akbar, 'any person who has the hereditary rights to have a share in famer's corps' was officially called as 'Zamindar'. By seventeenth century, the word Zamindari became prominent.

Ryotwari System: The British government undertook new ways of taxing farmers of India. When the British government moved to tax farmers, Zamindars started harassing them more. In order to save farmers from this exploitation, the court of directors introduced Ryotwari system in 1817.

Mahalwari System: When the Zamindari system and Ryotwari system failed to yield desired results, the British thought of another system name Mahalwari system. Under this system, based on the yield of estate or Mahal, tax was fixed on the owners of the such Mahal. A few among the Mahal owners were selected and given the roles of supervising and collecting taxes.

Tenancy System: The farmer who has secured the rights to till land is called tenant. Under this system there two types of tenants: permanent tenants and temporary tenants. Permanent tenants command little ownership over the land they are tilling, whereas the temporary tenants have no claim over the land they are tilling. The land lords always had the right to take away land from the temporary tenants and hand it over to others as per their wish. In order prevent this exploitation, governments brought in 'Tenancy Prevention' acts. This move is called as 'Land Reforms'. Maximum land ceiling limit is put under this act.

5. Urban Society: Urban societies are called ideal societies. They are very complex in their structures. Urban societies have dense population involving in varieties of jobs and works. Often they are pushed to the brink of severe problems due to overcrowding of population. Still, the urban societies are always welcomed. In recent days, the growth of urban centres is on the positive side. The urban society has become modern society.

Urban way of life is not new to India. It is one of those oldest civilisations that had urban based living. Sindhu Civilisation fostered the most improved urban way of life after Mesopotamia and Egypt civilisations. We had urban centres at Harappa, Mohenjo-Daro, Lothal and Kalibangan. Urban life and civilised life complement each other. In other words, urban life emerges out of civilization.

6. Industrial Society: Industrialisation gave rise to another type of society, the industrial society. Utilising scientific production ways and searching for energy sources is the feature of this society. Honk Kong, Singapore, South Korea, Brazil and Mexico join this list. Majority of the population depends on industrial work for their sustenance. And a very small group depend on agriculture for sustenance.

In an Industrialised society, the production depends on the automatic technology. The production is in large quantity. This depends on division of labour. Due to the influence of industrial revolution, there was a paradigm shift in the process of production in the European societies. As a result, the production process became mechanised. In the beginning they were powered by steam energy and later by electricity. Mechanisation in textile industry, which resulted in mechanised weaving, has reached a stage where anything is melted in huge boilers now. This includes iron also. The following are features of urban societies:

1. Industry Based economy: In this, society is divided into many classes. It will have capitalists, labour class and business class. Most of the economic activities are related to industries.

2. Professional works: Most of the works in the society are professional by nature. They need specific training and skills.

3. Transport and communication: In industrial society, transportation and communication are expanded. This network is used for transporting raw materials and finished goods also.

4. Increase in migration: Industrial revolution left a deep impact on rural agricultural economy. This in turn affected the traditional occupations and institutions. Due to its influence, the joint families of rural societies became nuclear families. Moreover, industrial societies foster individuality due to professionalization of labour.

6. Information Society: As the information society is needed for all, it has assumed more importance. In this society, people take help from information technologies to solve their problems and challenges. The information society helps to attain education, and do commerce and business needed for the future. The studies and theories on information societies focus on two issues related to the hold of knowledge on the economy: the first issue is that of the influence of information technology on socio-economical life. And the second issue is that the very information itself has become a commodity. Hence, knowledge has become the key to future productivity. It is no more the property of any individual or an institution. Knowledge is getting exchanged over new tools. Computers have become the information storage hubs.

EXERCISES

I. Fill in the blanks with suitable words:

1. The hunting societies use _____ tools for hunting.
2. _____ used to till the land in agricultural society the implement.
3. The distribution of skilled work is called as _____ .
4. In industrial societies, there is an increase in transport and _____.
5. The mechanised production takes place in _____ society.

II. Answer the following:

1. What are the different types of Societies?
2. What is a pastoral society?
3. How does agriculture gain importance in society?
4. What is an industrial society?
5. Information society is growing fast. prove.

III. Answer the following in four or five lines :

1. Explain the features of hunting and gathering societies.
2. Explain the features of pastoral societies.
3. Explain the relationship between land and agriculture.
4. List out the features of industrial society.
5. Write a note on Information Society.

IV. Activities

1. Compare and contrast the urban life and rural life with the help of the teacher.
2. Conduct group discussion on Ideal society concept.

V. Project

1. Make list of societies in your village. Interview a former to understand the problems agriculture and make list them.



GEOGRAPHY

CHAPTER - I

THE EARTH—OUR LIVING PLANET

In this chapter you learn :

- *Names of the Earth.*
- *The size of the Earth and distribution of water on it.*
- *Continents and oceans of the world.*
- *Latitudes and longitudes, time, local time standard time and international date line.*
- *Oceans and continents on the world map.*

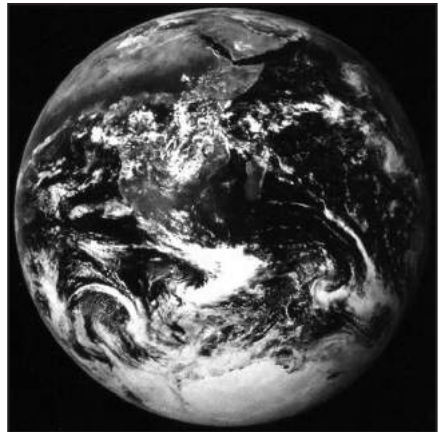
Do you know where we are living?

We are living on the Earth. It is the third planet from the Sun. The Earth is the home for all forms of life like plants, animals and human beings because of its suitable distance from the Sun, range of temperature, life supporting gases, atmosphere, water cycle etc. Our Earth is called by many names. Some of them 'Living Planet', 'Unique Planet', 'Watery Planet', 'Blue Planet'.

Size of the Earth : Distribution of Land and water bodies

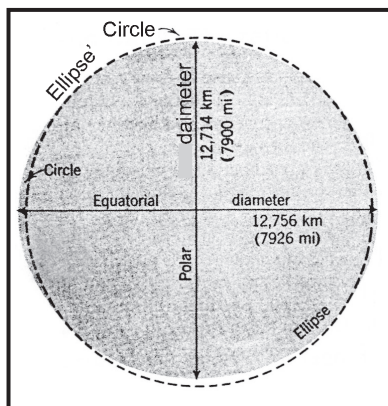
The Earth is the fifth largest planet in the Sun's family. The diameter of the Earth is approximately 4 times greater than the Moon and it is around 107 times less than that of the Sun.

The total geographical area of the Earth is 510 million sq kms of which 361 million sq kms (70.78%) is covered by water and 149 million sq kms (29.22%) is covered by land. Thus the Earth has unequal distribution of land and water. The ratio between the land and the water bodies is 1: 2.43.



Earth

The Earth's shape is often described as Geoid, which literally means 'Earth shaped', or 'Oblate spheroid'. The Earth is flattened at the poles and bulges at the equator. The Equatorial diameter of the Earth is 12,756 kms and the Polar diameter is 12,714 kms. Equatorial circumference - 40,076 kms and Polar circumference - 40,008 kms. The difference of 42 kms in diameter is the proof for regarding the Geoid shape of the Earth.



Shape of the Earth

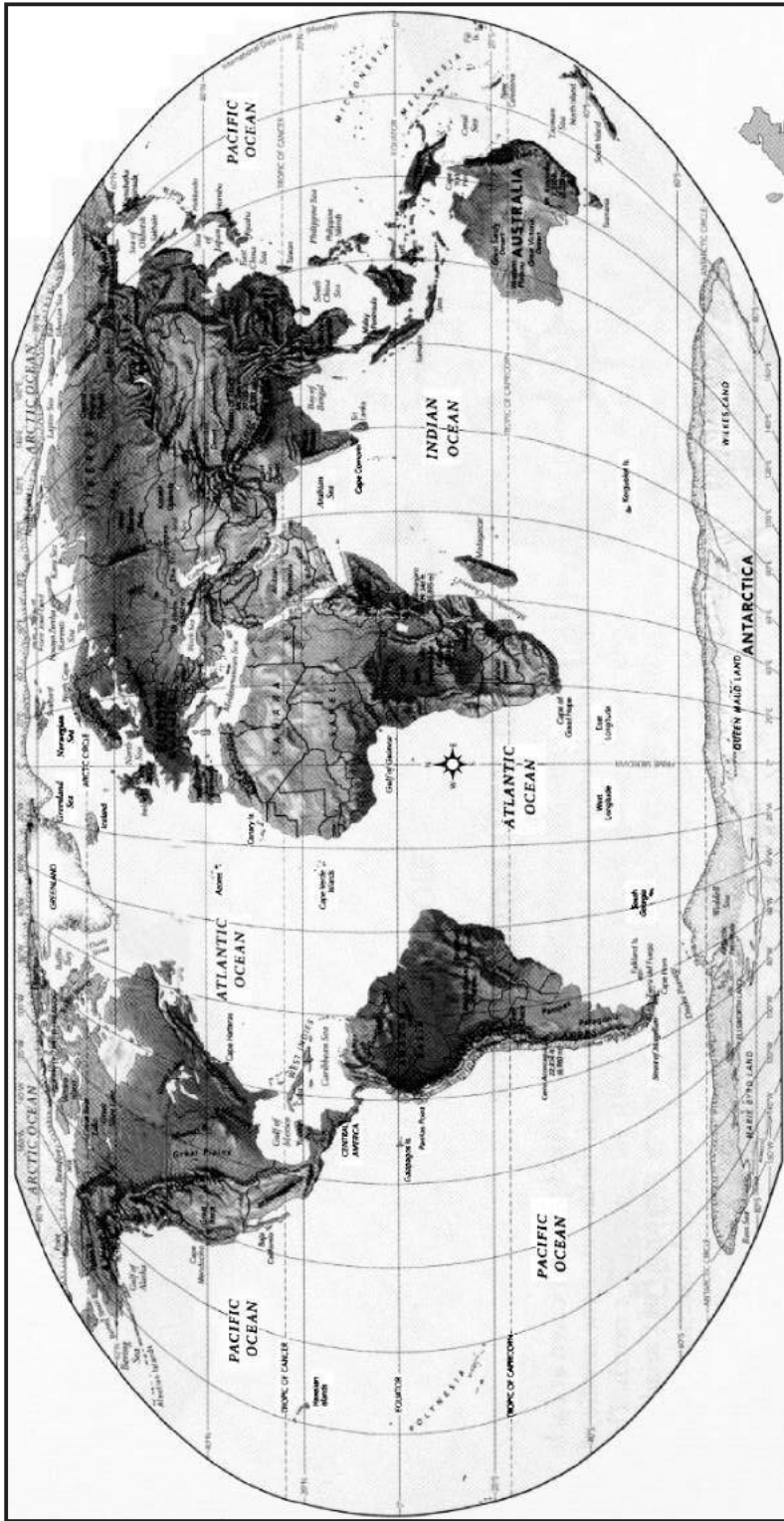
The land bodies of the Earth are known as Continents. There are seven continents, namely Asia, Africa, North America, South America, Antarctica, Europe and Australia. The continents are land masses of large size. Asia is the largest continent in the world while Australia is the smallest continent. The large water bodies on the Earth are called oceans. There are four major oceans. They are the Pacific ocean, the Atlantic ocean, the Indian ocean and the Arctic ocean. The Pacific is the largest and deepest ocean while the Arctic is the smallest and shallowest ocean.

The land and water bodies are unevenly distributed between the Northern and the Southern hemispheres. The Northern Hemisphere has 60% of land and 40% of water. Therefore it is called the 'Land Hemisphere'. On the other hand there is 81% of water and 19% of land in the Southern Hemisphere and so it is called the 'Water Hemisphere'.

Latitudes and longitudes

How do we understand the location of a place, direction and distance between places?

The Earth is spherical in shape. Therefore it is difficult to locate the places, the direction and calculate distance between places. In order to understand the relations between different places on the Earth and their exact location, we have to understand their position, their distance from any fixed point and also their exact direction. To know the position, distance and direction east and west or north and south, a network of lines are drawn on the globe. These are known as lines of latitudes and longitudes. The horizontal lines are the lines of latitudes and the vertical ones are the lines of longitudes. These lines intersect each other at right angles and create a network called grid or graticule.

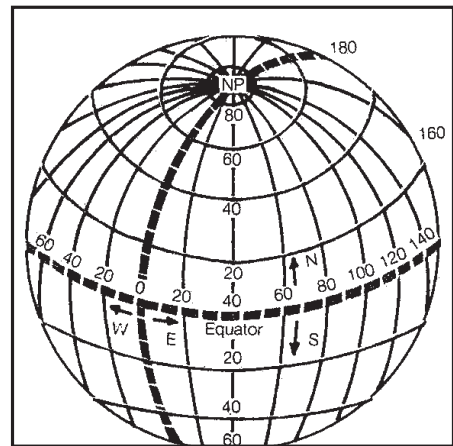


World Physical

LATITUDES : Latitude is an imaginary line which joins all the places which have the same angular distance north or south of the equator. It is measured in degrees. The Equator (0°) is the longest line of latitude known as the Great circle. It is equal to the circumference of the Earth. Other lines of latitudes are of shorter length. The length of lines of latitude decreases with the distance from the equator. All lines of latitudes are circles and parallel to the Equator. Therefore, lines of latitude are called parallels of latitude. There are 90° of latitudes on each side of the equator - 90° of North and South are points. Including equator totally there are 181 latitudes including the equator on the globe. The ground distance between two degrees of latitudes is 110.4 kms.

Important latitudes

1. 0° latitude-Equator or Great Circle.
2. $23\frac{1}{2}^{\circ}$ North latitude - Tropic of Cancer.
3. $23\frac{1}{2}^{\circ}$ South latitude - Tropic of Capricorn
4. $66\frac{1}{2}^{\circ}$ North latitude - Arctic Circle.
5. $66\frac{1}{2}^{\circ}$ South latitude - Antarctic Circle.
6. 90° North - North pole.
7. 90° South - South pole.



PARALLELS OF LATITUDE AND MERIDIANS OF LONGITUDE

LONGITUDES : The imaginary lines that intersect equator at right angle joining the north and south are called longitudes.

On the globe, longitudes are shown as a series of semi-circles that run from pole to pole passing through the equator. All lines of longitude are of equal length. Lines of longitude are called Meridians ('meri'-mid and 'dian'-day) because all places along the same meridian of longitude experience noon or mid-day at the same time.

The meridian passing through Greenwich (England) has been chosen as Prime Meridian. It is marked as 0° longitude. There are 180

of longitudes to the east of Greenwich and 180 to the west. Thus there are 360 of longitudes. The zone between the Prime Meridian and 180E longitude is called the Eastern Hemisphere. The opposite zone is called the Western Hemisphere.

The distance between two consecutive longitudes decrease gradually with distance from the equator. This is because the meridians of longitude converge at two poles. On the equator the distance between two consecutive meridians is 111 kms.

Longitude and Time : There is a definite relation between longitude and time. The earth is rotating on its axis and completes one rotation in 24 hours. This means 360 longitudes are covered in a period of 24 hours. This gives rise to a time difference of 4 minutes for every one degree of longitude, 60 minutes or one hour for every 15 degrees of longitude ($360 \times 4 = 1440 / 60 = 24$ hours). The time difference is to be added (E.G.A- East-Gain-Add) in case of places to the east of G.M.T and in case of places to the west the time difference is to be subtracted (W.L.S- West-Lose-Subtract).

Local time : The time according to the longitude of a place or according to the position of Sun at that place is known as the Local time. This is based on the local meridian passing over that place. When the Sun is shining vertically over the longitude it is 12 noon at that place. All places situated on the same meridian have the same local time. Every longitude has its own local time.

Standard time : As the local time varies from place to place, it would create considerable confusion if each place were to follow its own local time. In order to avoid confusion many countries follow uniform time throughout the country. Such uniform time is based on the central meridian of the country or the meridian on which the most important city is located. This uniform time which is followed throughout a country is called Standard Time of that country.

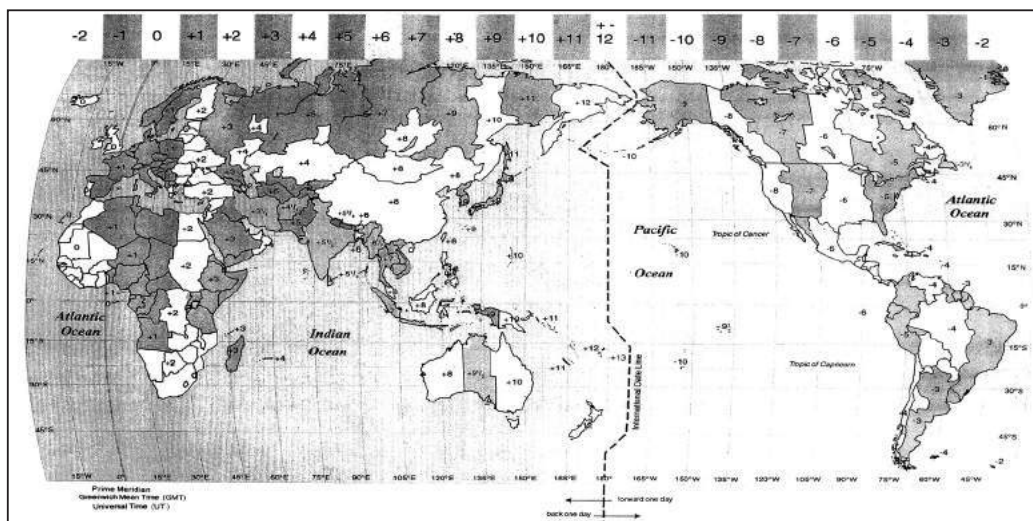
In India, $82\frac{1}{2}^{\circ}$ East longitude is considered as the Standard Meridian of the country. It passes through Allahabad of Uttar Pradesh. The time based on this Meridian is called the Indian Standard Time (IST). It is 5 hours and 30 minutes ahead of G.M.T.

Time Zones : In certain countries of the World, where the longitudinal extent is so large (more than 45° of longitude) that there is often a difference of three to four hours between one part and the other, the land surface is divided into Time Zones. The whole globe is divided into 24 such time zones so that the time in each zone differs from the other by only one hour.

Large countries like Russia, USA, Canada and Australia have vast longitudinal extent. Therefore they have different time zones. Russia has 11 time zones, USA and Canada have 5 time zones and Australia has 3 time zones.

International Date Line (IDL) : The problem of time in countries of the world was solved first by the standard time and then by the zonal time. But the circumnavigation of the world brought a new problem in keeping the correct date and day in the week for the travellers. Therefore a line passing through 180° meridian diametrically opposite to the G.M.T was adopted as the point where circumnavigators should make adjustments. This line is supposed to pass Pacific ocean along the 180° meridian but makes short detours in order to avoid land masses. This is known as the International Date Line because the date and day is changed whenever people cross this line by ships or aeroplanes.

Any ship crossing this line from west (Asia to North America) to east takes a day twice while the ship crossing this line from east (North America to Asia) to west drops one day.



Time Zones and International Date Line

EXERCISES

I. Fill in the blanks with suitable answer:

1. The total geographical area of the Earth is _____ sq. kms.
2. The shape of the Earth is _____ .
3. The equatorial and polar diameters of the Earth is _____ and _____ kms.
4. The $23\frac{1}{2}^{\circ}$ North latitude is called as _____ .
5. The Indian Standard Time is based on _____ . longitude.

II. Answer the following questions briefly:

1. Why is the Earth called 'Living Planet'?
2. Why is the Northern hemisphere called land hemisphere and Southern hemisphere called as Water Hemisphere?
3. What are latitudes and longitudes?
4. What is the difference between local time and standard time?
5. What is the International Date Line?

III. Define the following:

- | | |
|------------------|-------------------------|
| 1. Unique planet | 4. Continents |
| 2. Equator | 5. Prime Meridian |
| 3. Geoid | 6. Indian Standard Time |

IV. Terms to Remember :

- | | |
|------------------|----------------------------|
| 1. Living Planet | 4. Antarctic circle |
| 2. Geoid | 5. Zonal Time |
| 3. Arctic circle | 6. International date line |

V. Activity :

List out the countries of the Eastern hemisphere and the Western hemisphere on the basis of longitudes.



CHAPTER - 2

LITHOSPHERE

In this chapter you learn :

- *The meaning of lithosphere and its importance.*
- *The structure of the earth and its composition.*
- *The structure of rocks.*
- *The internal forces-volcanoes, earthquakes, tsunami etc., and their effects on life on the earth.*
- *The external forces like temperature, wind, rain and rivers.*
- *The meaning of underground water and its importance.*

Meaning and importance

The outer-most solid layer of the earth is known as the 'Lithosphere' (Litho means 'rock'). This layer is very thick in the continents and quite thin under the sea floor. The lithosphere consists of rocks, minerals, soils etc. Life exists on this layer with the help of the atmosphere and the hydrosphere. Continents are parts of the lithosphere where different land forms like mountains, plateaus, plains, etc., are found.

Earth's Interior and Composition

Do you know, what is there inside the Earth?

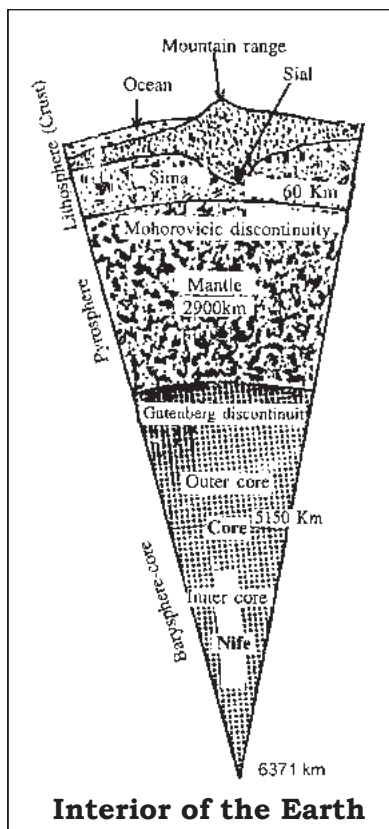
Our planet Earth is more than 4.6 billion years old and still in the process of changing. Man is in quest of understanding this change and eager to know more about inside the earth. What is inside the earth is still a mystery for man. With years of study and research human beings have been able to get information about the materials inside the earth up to 10 to 12 kms. Going beyond this depth is very difficult due to the increase of temperature (1°C for every 32 meters).

To understand more about the earth's interior humans are dependent on indirect evidences such as seismic waves, volcanic materials etc. The earth's interior comprises of various materials in different forms. On the basis of density of material, chemical composition and physical state of matter the earth's interior is classified into 3 main layers. They are the Crust, the Mantle and the Core.

The Crust : The crust is the uppermost layer of the earth, rich in Silica, Aluminium and Magnesium. The depth of this layer is around 60 kms from the surface. In the upper part of the crust only lighter materials are found. It is called SIAL (Silica and Aluminium) or continental crust. The lower part of the crust is rich in Silica and Magnesium and it is called SIMA or oceanic crust.

The Mantle: The Mantle is the second and the middle layer of the earth. The depth of this layer is up to 2900 kms from the surface. The materials are in semi liquid or partially molten state which is called magma. The mantle is composed of dense and rigid rocks which have predominance of minerals like magnesium and iron. The mantle has two parts a) Upper mantle or the Asthenosphere is partially in a molten condition and b) Lower mantle or the Mesosphere in solid condition. The contact zone of the crust and the mantle is called ‘Mohorovicic Discontinuity’ or Moho. While the boundary that separates the Mantle from the Core is called ‘Gutenberg Discontinuity’. Here the rocks are different in chemical composition from those below and above.

The Core: This is the innermost layer of the earth. The depth of this layer is up to 6371 kms from the surface. The most important materials of the core are Nickel and Ferrous (Iron). So it is known as NIFE. The core is divided into two sub layers a) The outer core is known as molten core, where the materials are in liquid and in molten form. b) The inner core known as solid core.



Facts File

Some deepest land mines in the world

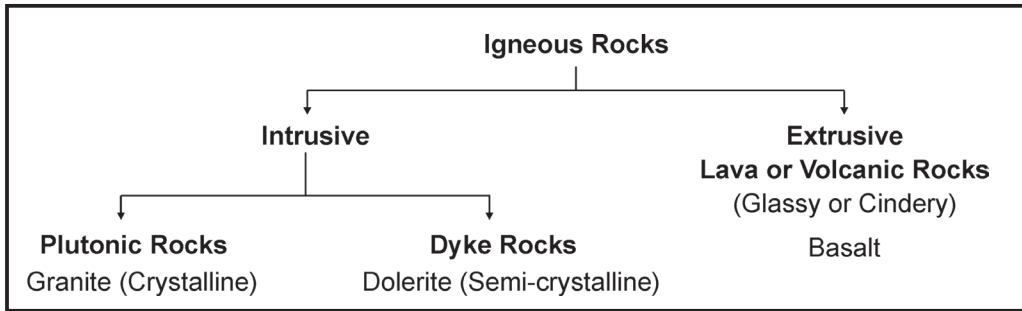
- The Akola peninsula of Russia is around 12 kms.
- The Kimberly diamond mine in South Africa is around 3.9 kms
- The Gold mine at KGF in India is around 1.5 kms.

ROCKS

Rocks are the solid inorganic substances that are found in the crust of the earth. They are aggregates of minerals. Rocks are formed due to various natural processes. On the basis of mode of formation, rocks are classified into three types. They are **(1) Igneous rocks, (2) Sedimentary rocks and (3) Metamorphic rocks.**

1. Igneous Rocks : The word 'Igneous' means 'fire' derived from the Latin word 'Ignis' or Sanskrit word 'Agni'. Igneous rocks are those which have been formed by the cooling of molten matter of the earth. Igneous rocks were the first to be formed, therefore they are also called Primary rocks.

The two important types of igneous rocks are :

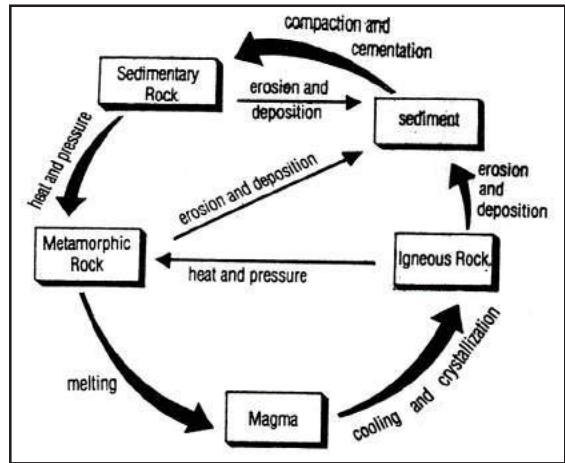


(i) Intrusive igneous rocks :

When the molten materials (magma) of the Earth's interior do not reach the earth's surface, they cool and solidify (quite slowly) below the surface are called loss of property and called intrusive igneous rocks. These rocks are made of large crystals and are found at great depth inside the Earth eg., Granite, Diorite and Gabbro.

(ii) Extrusive igneous rocks:

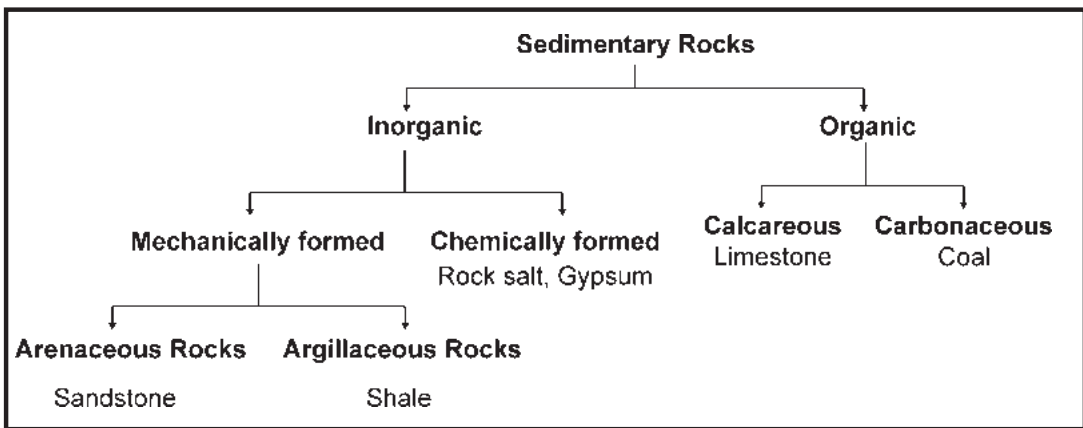
Rocks formed by solidification of magma above the earth's surface are called extrusive igneous rocks. These rocks are generally fine grained or glassy because lava after reaching the surface of the earth cools and solidifies quickly eg., Basalt and Andesite.



Cycle of Rock

The rock materials in the liquid or molten state is called '**magma**' and when it comes out from the earth is called '**lava**'.

2. Sedimentary Rocks : The word Sedimentary is derived from a Latin word 'Sedimentum', which means 'settling down'. Sedimentary rocks are formed by the agency of water, wind and ice. These agents break and erode the igneous rocks, transport those broken fragments and deposit them at certain places. The deposit of these materials often occurs in the form of layers or strata. Therefore sedimentary rocks are called stratified rocks. The sedimentary rocks are formed after the disintegration of igneous rocks. Therefore they are called secondary rocks. These rocks are also called aqueous rocks because they are formed in the water bodies (Lake, Sea and Ocean beds).



Mechanically formed sedimentary rocks: Rocks built up by fragments of pre-existing rocks which have been produced by the processes of weathering and erosion eg., Sandstone (Arenaceous rocks) and Shale (Argillaceous rocks).

Chemically formed sedimentary rocks: Chemical sediments are commonly formed by the process of evaporation of water containing salts in solution eg., Rock salt, Gypsum etc.

Organically formed sedimentary rocks: Organic sediments are those derived by the accumulation of remains of organisms, such as shells of marine organisms, remains of plants and animals eg., Limestone (Calcareous rocks) and Coal (Carbonaceous rocks).

3. Metamorphic Rocks :Metamorphic rocks are those which are formed by the process of metamorphism or alteration of pre-existing

rocks. Metamorphism means change of form which may be physical or chemical or both by the influence of heat and pressure.

Example:

- a) Granite -> Gneiss
- b) Basalt -> Schist
- c) Limestone -> Marble
- d) Sandstone -> Quartzite
- e) Coal -> Graphite
- f) Graphite -> Diamond

Metamorphic rocks are the hardest rocks on the earth. These rocks supply precious stones. ex :-Sapphire, Ruby and Emerald and Diamonds etc.

FORCES OF THE EARTH'S CRUST

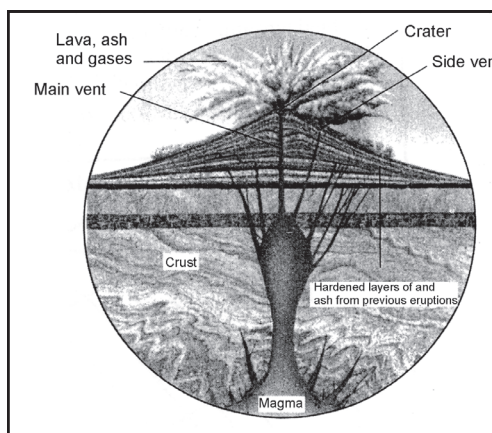
The Earth has two important forces that change the face of the earth. They are internal forces and external forces.

1. INTERNAL FORCES

These are the forces which originate inside the crust and influence the surface features of the earth eg., Volcanoes, Earthquakes etc. The internal forces are also called Endogenic forces.

VOLCANOES

A volcano is a vent or narrow opening in the Earth's crust connected by a pipe to an underlying magma chamber, through which magma, rock fragments, lava, ash, steam, flames and other gases are emitted from the interior of the Earth. A passage in the earth's crust through which magma and other volcanic materials are ejected is called 'Vent'. The funnel-shaped hollow at the top of the cone of a volcano is called 'Crater'. A large basin-shaped crater bounded by steep sides is known as '**Caldera**'.



Structure of a volcano

Types of Volcanoes : On the basis of the periodicity or frequency of eruption volcanoes are classified into three types.

Active Volcanoes: Volcanoes which constantly eject lava, gases, ashes etc., are known as active volcanoes. There are about 600 active volcanoes in the world eg., Mt. Stromboli and Mt. Etna in Italy, St. Helens in USA, Mauna Loa in Hawaiian islands, Pinatubo in Philippines etc.

Dormant Volcanoes: Dormant volcanoes are those which have erupted in the past and are likely to erupt again but have remained inactive for fairly long periods eg., Mt. Vesuvius in Italy, Mt. Fujiyama in Japan, Mt. Kilimanjaro in Tanzania, Mt. Krakatoa in Indonesia.

Extinct Volcanoes: Extinct volcanoes are those which were active in the remote geological periods. These are not likely to be active once again eg., Gorongoro in Tanzania, Arthur's Seat in Scotland.

Facts file

Super volcanic eruptions of the world

1. *Mt. Vesuvius (Italy)*
2. *Mt. Krakatoa (Indonesia)*
3. *Mt. Pelee (West Indies)*
4. *Mt. Fujiyama or Fuji, a volcano worshipped by people of Japan.*

Volcanic materials : The materials ejecting out from the volcanoes are of three types. **Solid :** Volcanic bombs, cinders, scoria, pumice, dust, ash. **Liquid:** Lava. **Gases :** Sulphur, Hydrogen, Carbon dioxide.

Distribution of Volcanoes : Volcanoes occur in many regions of the world, including islands, young mountain ranges and plateaus of the continents. Most important regions are: **1. The Circum-Pacific Belt or Pacific Ring of Fire:** Coastal margins of the Pacific Ocean consisting of Philippines, Japan, USA, Central America, South America etc. **2. Mid-Atlantic Belt:** Iceland, West Indies **3. Mid-Continental Belt:** Italy, Spain, France, Greece, Turkey etc., **4. Important Islands:** Hawaii, Indonesia.

EARTHQUAKES

Earthquake is a shock or series of shocks or tremors, due to a sudden movement of crustal rocks generated within the crust or mantle.

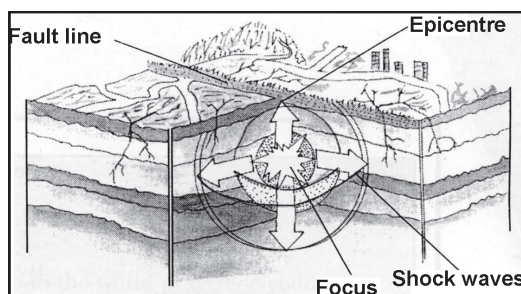
The point of origin of the earthquake in the earth's crust is called the Seismic focus or Hypocentre.

The point on the earth's surface vertically above the seismic focus is called the Epicentre.

The scientific study of earthquakes is called Seismology. The origin, time, velocity and direction of seismic waves are recorded by an instrument known as Seismograph.

Causes of the Earthquakes

Plate Tectonics : The earth's crust consists of many major and minor plates. These plates are not stationary. The plate boundaries are dynamic places and are the primary location of earthquake activity (Circum-Pacific Belt).



Actions of Earth quake

Volcanic Eruptions: Volcanic earthquakes are caused by gas explosions (Krakatoa volcano of Indonesia).

Faulting: A fault consists of a fracture in a rock along with a great deal of displacement takes place. Earthquakes occur when movement of plates takes place along a line of fracture (San Andreas fault of California in USA).

Man made factors: Over interaction of man with nature is also one of the main causes of the occurrence of many of the earthquakes. The extraction of minerals, deep underground mining, huge dams and reservoirs, nuclear tests etc., (Koyna dam in Maharashtra, Hoover dam in USA).

Earthquake Waves

The earthquake or seismic waves originate in the seismic focus and travel towards the epicentre in ripples or concentric circles. The three important earthquake waves are:

1. Primary Waves (PW): Primary waves are also known as longitudinal or compressional waves. These are the fastest earthquake waves and the first waves to reach the surface. They can pass through solid, liquid and gaseous matters.

2. Secondary Waves (SW): Secondary waves are also known as transverse or distortional waves. These waves cannot pass through liquids. They reach the epicentre after the primary waves.

3. Surface Waves (LW): Surface waves are also called long waves. They are the slowest earthquake waves but are responsible for the highest destruction on the surface of the earth.

*The magnitude and intensity of earthquakes is recorded by using **Richter scale**.*

The Earthquakes are very dangerous and destructive. They cause large-scale deaths, loss of property, landslides, flash floods, damage to bridges, roads, railway lines etc.

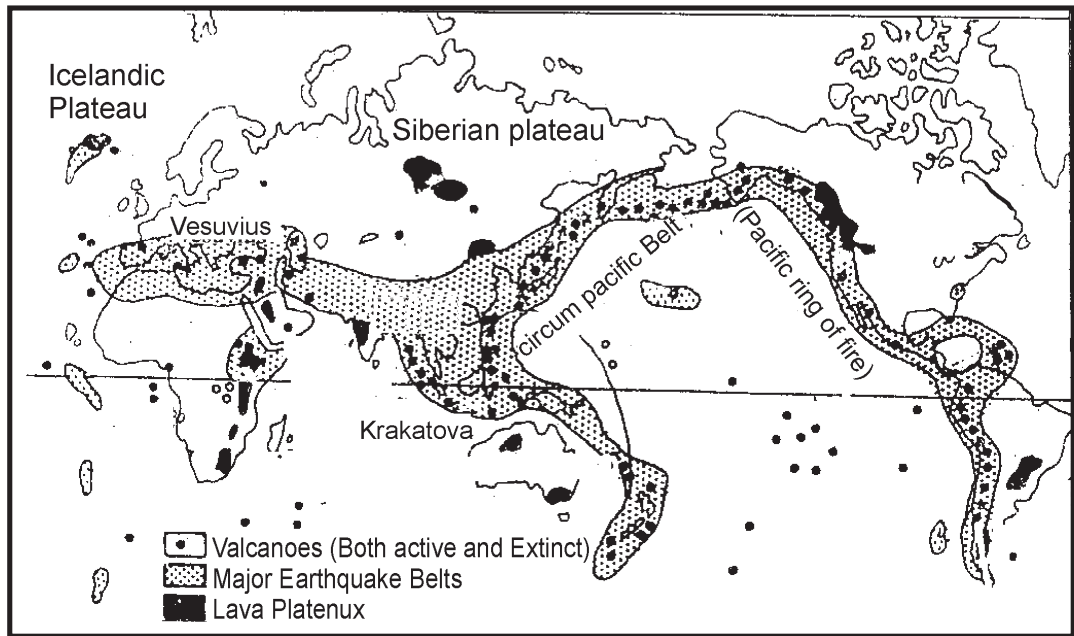
Tsunami : Tsunami is a large sea wave occasionally experienced along the coasts of Japan and in other regions caused by an underwater earthquake. In Japanese language 'Tsunami' means 'harbour waves'.

Facts file

1. On 26th Dec, 2004 a Tsunami in the Indian ocean swept the coastal low lands of Indonesia, India, Sri Lanka, Thailand etc.
2. On 11th Mar, 2011 a Tsunami in the Pacific ocean caused huge damage in the eastern coastal regions of Japan (Fukushima, Sendai, Miyagi etc).
3. Some seismic recording centers of India: Gowribidanur, Kodaikanal, Pune, Hyderabad, Dehradun.

Distribution of Earthquake - Prone regions

1. The Circum-Pacific Belt – Regions around the Pacific ocean (New Zealand, Philippines, Japan, USA, Peru etc.,).
2. The Mediterranean Belt – Regions around the Mediterranean sea.
3. The Himalayan Belt – The Siwalik region of India.



Earthquakes and Volcanic Regions

2. External forces:

External forces are the natural forces that modify the surface of the earth. The important forces are temperature, wind, rainfall, snowfall, river, glacier etc., These forces act on the surface of the earth and constantly change its features.

Weathering: Weathering is the wearing away or breaking down or gradual disintegration of rocks by agents (Temperature, rainfall, wind etc.) present in the atmosphere. The three types of weathering are:

1. **Mechanical weathering:** When the rock is broken and disintegrated without any chemical alteration, the process is called Physical weathering or Mechanical weathering. The important process of mechanical weathering are Granular disintegration, Block disintegration and Exfoliation. The agents of mechanical weathering are temperature, wind, frost etc.
2. **Chemical weathering :** Chemical weathering is mainly brought about by the action of substances dissolved in rainwater. This type of weathering results in changing the composition of minerals present in the rocks. There are four types of chemical weathering. They are :

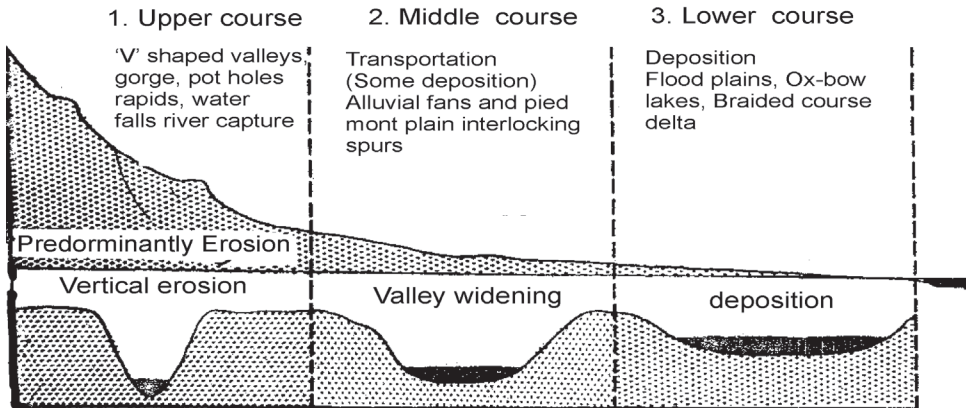
- a. **Oxidation:** In this type of chemical weathering oxygen dissolved in water reacts with certain minerals, especially iron, to form oxides.
 - b. **Carbonation:** When the rainwater falls on limestone rocks, the calcium carbonate present in the rocks absorbs carbon dioxide from rainwater and becomes calcium bicarbonate.
 - c. **Hydration:** Hydration is the process by which some minerals in crystalline form absorb water and become a powdery mass. Feldspar is a common rock forming crystalline mineral.
 - d. **Solution:** When the rain falls on the surface of the land, rainwater dissolves soluble minerals present in the rocks.
3. **Biological weathering:** Living organisms like plants, animals and human beings play a role in one way or another in the weathering of rocks. This type of weathering includes both physical and chemical weathering. (a) **Plants:** Growth and expansion of roots. (b) **Animals:** Burrowing animals, earthworms, rabbits, rats. (c) **Human beings:** Mining, quarrying, construction works.

DENUDATION

Agents of Denudation: Denudation is the action of changing landscape or changing the surface of the earth by various natural agents such as Rivers, Glaciers, Underground water, Wind, Sea waves etc., The work of these natural agents are Erosion, Transportation and Deposition. These processes produce distinct relief features.

River: A mass of fresh water flowing from its source to mouth along a definite course is called 'River'. The river is a most prominent agent of denudation. The place where a river takes its birth is called 'Source' and 'Mouth' is the point where it meets sea or ocean. 'Tributaries' are the feeders or small streams which supply water to river along its course. The point where a tributary joins the main river is called 'Confluence'.

Course of the River: The course of a river from its source to mouth is divided into three stages. These stages are Upper course, Middle course and Lower course.

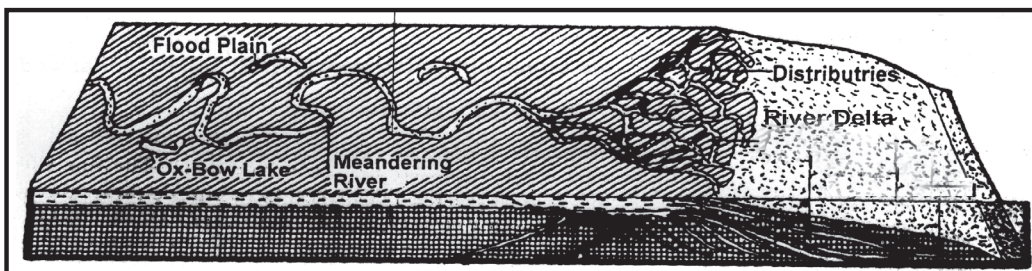


Stages of the river course and associated land forms

The Upper Course: Vertical erosion is most common due to steep slopes leading to deepening of valleys, resulting in the formation of gorges, canyons, 'V' shaped valleys, waterfalls (Angel falls, Niagara falls, Jog falls).

The Middle Course: In the middle course, the river path has a moderate slope and velocity is less than that in the upper course. The volume of water increases when many tributaries join the main river. The main work of the river in this stage is transportation of sediments and little deposition. The important landforms in this stage are Alluvial fans, Meanders.

The Lower Course: In this stage the slope of the river course is very minimum. The volume of river water is more and deposition is the main work of the river. The important landforms in this course are Flood plains, Natural levees, Ox-bow lakes, Deltas (Sundarban delta, Nile delta).



River

"The work of river is called "Fluvial Cycle".

Facts File:

Estuary – Tidal mouth of a river broadening into the sea / ocean.

Delta – A fan shaped, low lying area of deposits at a river mouth.

GLACIER : Glaciers are slowly moving, compacted masses of ice and snow found in the high mountains and polar regions. The mass of ice or snow is pulled down by its weight and due to the force of gravity.

Types of Glacier: Glaciers are divided into two types a) Continental glaciers and b) Mountain glaciers.

Continental glaciers: Continental glaciers are extensive ice sheets found in polar regions eg., Greenland and Antarctica.

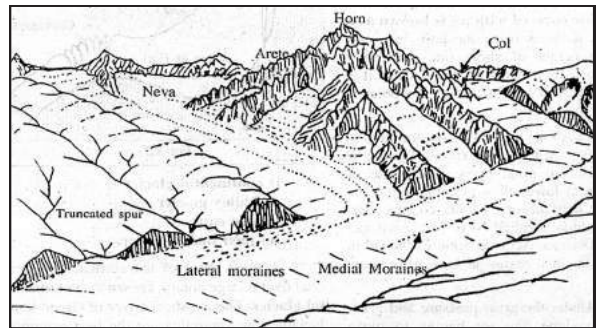
Mountain or Alpine or Valley glaciers: The glaciers found in the Polar regions are called Mountain glaciers.

Glacier as an agent of denudation performs the work of erosion, transportation and deposition. The erosional work of glaciers is mainly side cutting. The landforms resulting by this are Cirque, Horn, Arete, ‘U’ shaped valleys, Hanging valleys, Rock steps etc.

The transportation and the deposition work of glaciers goes almost together. The important depositional landforms produced by glaciers are Moraines, Drumlins, Esker, Kames, Outwash plains, Till plains etc.

‘Moraines’ are the most important landforms of the glaciated region. Moraines are of four

types. **a) Lateral moraines:** Rock debris deposited along the sides of the glacial valley. **b) Medial moraines:** When two lateral moraines meet, it forms medial moraines. **c) Ground moraines:** Rock materials found on the floor or at the bottom of the glacial valley. **d) Terminal moraines:** The glacial deposits found at the end of the glacier.



Work of Glacier

The work of Glacier is called “glacial cycle.”

UNDERGROUND WATER

Underground water is the subsoil water found on account of percolation or seepage of water into the ground. The underground water which seeps into the ground passes through various layers of rocks. The rocks which allow the water to percolate is called 'pervious' or 'porous' rocks and the rocks which do not allow the water inside are called 'impervious' or 'non-porous' rocks. The porous rock beds which hold large amount of underground water are called aquifers. The pervious rocks allows and hold water and form springs. A Spring is a place where the underground water comes out naturally.

Types of spring:

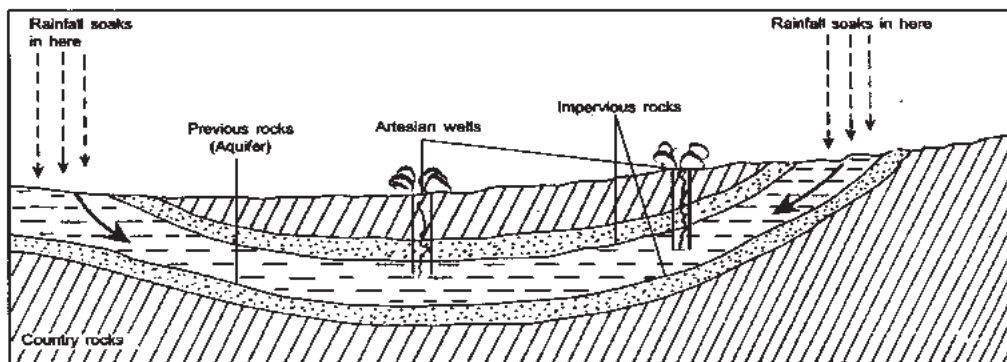
1. Perennial spring: It is a spring through which water comes out continuously.

2. Intermittent springs: These are springs through which water comes out intermittently (not continuous) and they are also called 'Periodic spring'.

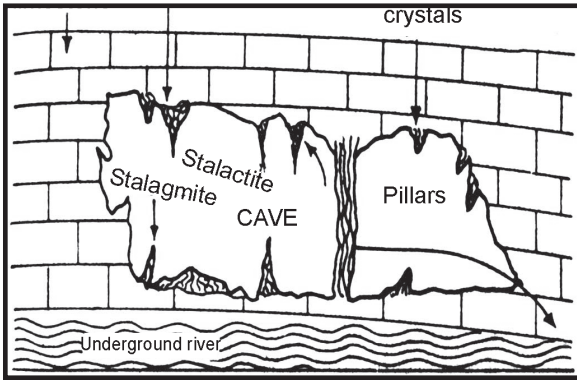
3. Hot springs: Whenever warm or hot water comes out naturally it is called hot spring or thermal spring. They are usually found near the volcanic regions.

4. Geyser: Geysers throw a jet of hot water (like a fountain) and steam into the air at regular or irregular intervals eg., Old Faithful in Yellowstone National Park of USA.

5. Artesian wells : When underground water is stored in a basin shaped layer between two non-porous rocks, the water cannot come out naturally. If an artificial hole is made to the porous rock, the water comes out like a fountain. These are called Artesian wells. These wells are common in Australia.



Artesian wells



Activity of Under ground water

Underground water performs the work of erosion, transportation and deposition. The work of underground water is predominant in limestone region. The important landforms associated with the underground water are Lapiés, Sinkholes, Limestone caves, Stalactites, Stalagmites, Calcite pillar etc.

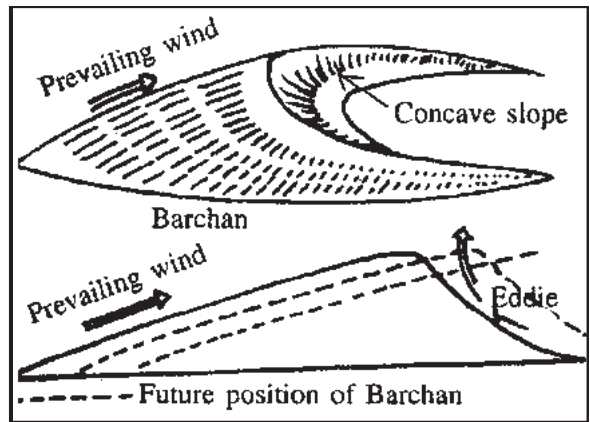
Facts File : Limestone caves

1. Akalagavi (Ulavi) caves of Uttara Kannada in Karnataka
2. Belum and Bohra caves of Andra Pradesh

Relief features formed by underground water in limestone region is called 'Karsttopography'.

WIND

The denudation work of wind is common in the arid or desert regions. When the winds of high velocity blow over desert areas they erode, transport and deposit materials to produce different landforms. The important landforms associated with the erosional work of the wind are Rock pedestals, Mushroom rock, Inselberg. The depositional landforms are Sand dunes – Longitudinal sand dunes, Barchans and Loess deposits.

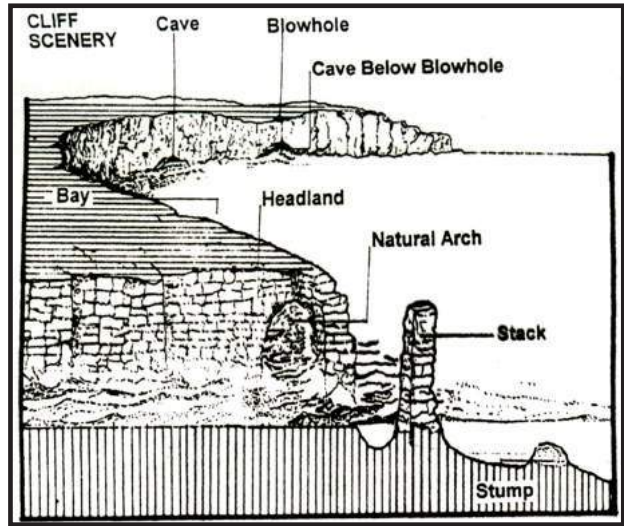


Barchans

Barchans are semi-circular or crescent shaped sand deposits most common in the deserts. Loess is the sand particles found beyond the borders of deserts (Yellow soil in China).

Work of wind is called "Aeolian cycle".

SEA WAVES : Like all other agents, sea waves are also an important exogenic agent of denudation. Sea waves are the regular undulation of water on the sea or ocean. The work of sea waves is significant along the sea shore or coasts. The important landforms associated with sea waves are Cliff, Sea cave, Sea stack, Sea arch, Headland, Sand bars, Beaches, Lagoons etc.



Sea Waves

EXERCISES

I. Fill in the blanks with suitable words :

- 1 The continental crust is also called _____ .
- 2 A large basin shaped crater is called _____ .
- 3 The most destructive earthquake waves are _____ .
- 4 Stalactities and Stalagmites are the land forms produced by _____ .
- 5 The Beaches are formed by the work of _____ .

II. Answer the following questions :

1. Mention the three major layers of the interior of the Earth.
2. Name the types of volcanoes on the basis of frequency of eruption.
3. Mention the important earthquake zones of the world.
4. What is weathering? Name the three main types of weathering.
5. Name the landforms associated with the work of river.

III. Match the following:

A

1. SIMA
2. Sandstone
3. Epicentre
4. Geyser
5. Loess

B

- a) Earthquake
- b) Yellow soil
- c) Oceanic crust
- d) Sedimentary rock
- e) Underground water

IV. Define the following:

1. Aqueous rocks
2. Seismology
3. Mechanical weathering
4. External forces
5. Tsunami
6. Continental glacier
7. Spring

V. Terms to remember:

1. NIFE
2. Arenaceous and Argillaceous rocks
3. Tectonic forces
4. Mountain glacier
5. Aeolian cycle
6. Beaches

VI. Activities:

1. Collect the different rocks from your environment.
2. Visit the nearest falls and know how they are formed ?



CHAPTER – 3

ATMOSPHERE

In this chapter you learn :

- The meaning, importance, composition and formation of atmosphere.
- The components of atmosphere, temperature, pressure, winds humidity, clouds and their functions and effects.
- The differences between atmosphere and climate.

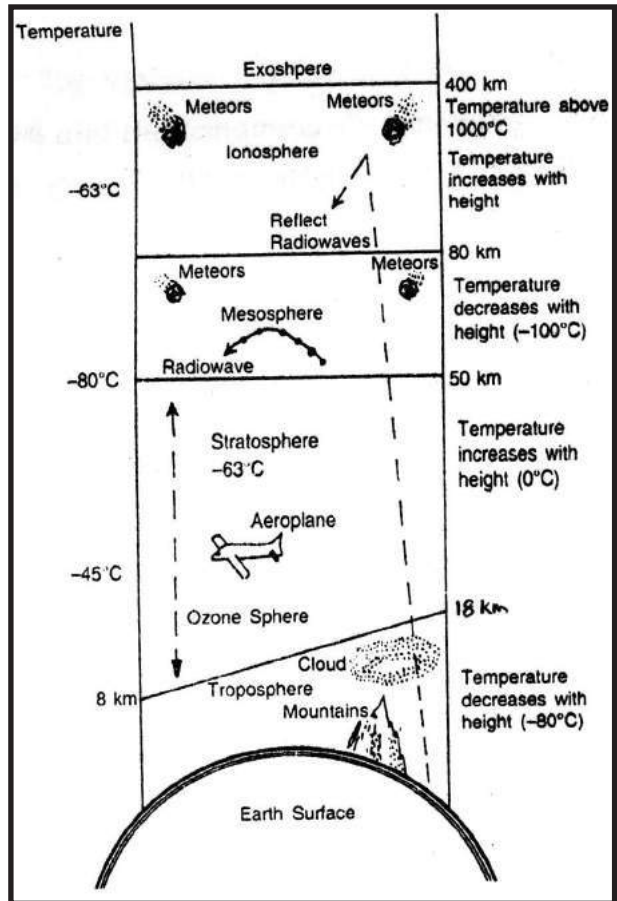
Do you know, how we are protected and helped by the envelope of air ?

Meaning and importance:

Atmosphere is a thin layer of gases, dust particles and water vapour surrounding the Earth. This layer of gases forms protective boundary between the outer space and the Earth's surface. The thickness of the atmosphere is around 1000 kms. Atmosphere is very important for all forms of life on the earth. Different gases of atmosphere help plants, animals and human beings. Atmosphere traps heat and makes Earth a planet for all the living organisms.

Composition of atmosphere:

The atmosphere is a mixture of different gases, dust particles and water vapour. The important gases in the atmosphere are Nitrogen - 78.08%, Oxygen- 20.94% and the remaining 1% consists of Argon - 0.93%, Carbon dioxide - 0.03%, Ozone - 0.000005% etc. The atmosphere also contains dust particles



Layers of atmosphere

which help us in the formation of water droplets. The water vapour in the atmosphere is the source of clouds and precipitation. The atmosphere traps heat and energy and has influence on the weather conditions of a place.

Layers of Atmosphere: The atmosphere may be divided into five important layers on the basis of its characteristic features. These are: Troposphere, Stratosphere, Mesosphere, Thermosphere (Ionosphere) and Exosphere.

Troposphere : Troposphere is the lowest layer of the atmosphere. It extends upto 18 kms at the equator and 8 kms near the poles. This layer has all the atmospheric elements such as temperature, pressure, winds, clouds, rainfall etc. All weather changes occur in the troposphere. Temperature and pressure decrease with the increase of altitude.

Stratosphere: Stratosphere is the second layer of the atmosphere. This layer extends upto 50 kms from the surface. It lies between troposphere and mesosphere. In this layer Ozone is the most important gas which absorbs ‘ultraviolet rays’ of the sun and protect all forms of life on the Earth. This layer is free from clouds and other important weather phenomenon and provides ideal flying conditions for jet aircrafts.

Mesosphere : Mesosphere is the third layer in the Earth’s atmosphere. It extends up to 80 kms from the surface and lies above stratosphere. In this layer temperature decreases with the increase in altitude. This layer has the coldest temperature in the atmosphere.

Thermosphere: Thermosphere layer lies next to Mesosphere. In this layer temperature rises drastically. It is also called ‘Ionosphere’ as the gaseous atoms are ionized due to very high temperature. The ions found in this layer help in reflecting radio waves.

Exosphere: Exosphere is the top most layer of the atmosphere. In this layer elements of atmosphere are rare and pressure is extremely low.

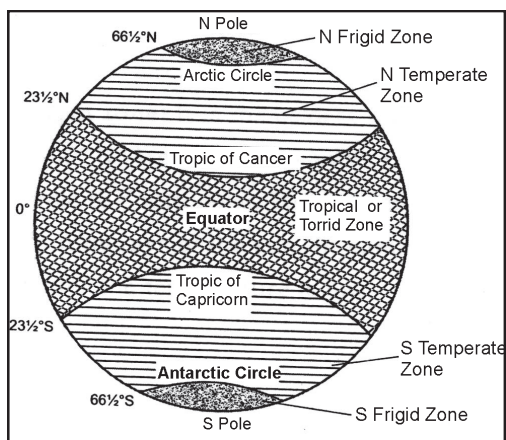
Elements of Weather

Weather condition of a place is influenced by various elements such as temperature, pressure, wind, humidity, clouds, rainfall etc.

Atmospheric condition of a place at a given time is called ‘Weather’. In contrast the average weather condition of an area over a long period of time is called ‘Climate’.

TEMPERATURE

The Sun is the main source of energy to the Earth which supplies heat through insolation. Insolation means incoming solar radiation from the sun to the Earth. Temperature is recorded by an instrument called 'thermometer'. Centigrade and Fahrenheit are the important thermometers used to measure atmospheric temperature. The important factors that influence atmospheric temperature are latitude, altitude or height, distance from the sea, wind, ocean currents, relief, clouds, rainfall etc.



Temperature Zones

Normal lapse rate: It is the decreasing rate of temperature with the increase of altitude. The rate of decrease is 1° C for every 165 meters or 6.4° C for every 1000 meters of height (1 km).

Inversion of temperature : In some situations temperature also increase with increasing height. This takes place in mountain valleys during long winter nights with clear sky, dry air, no wind and snow covered surface.

Temperature Zones : The distribution of temperature is not uniform on the Earth's surface. On the basis of insolation, the globe is divided into three temperature zones. They are:

Torrid zone : This is the zone of high temperature. This region is found between 0° or Equator and Tropic of Cancer in the north (23½° N) and the Equator and Tropic of Capricorn (23½° S) in the south. This region receives direct rays of the Sun.

Temperate zone : This is the region where the temperature is neither very hot nor cold. This region lies between 23½° N to 66½°N (Tropic of Cancer to Arctic circle) and 23½° S to 66½° S (Tropic of Capricorn to Antarctic circle).

Frigid zone : It is the coldest region. This zone is found between 66½° N to 90° N (Arctic circle to North pole) and 66½° S to 90° S (Antarctic circle to South pole). The temperature in this zone is very low due to slanting rays of the sun. In summer temperature is slightly high and in winter the temperature is low.

Isotherms : Isotherms are the lines drawn on the map or globe connecting places having the same temperature.

Facts file :

Places of highest and lowest temperature

1. Al Aziziya of Libya in Africa has recorded the highest temperature (average $+58^{\circ}$ C) Whereas Verkhoyansk of Siberia has recorded the lowest temperature (average -24° C).

2. In India Ganganagar of Rajasthan recorded the highest temperature in summer (average $+54^{\circ}$ C) and Leh of Jammu and Kashmir has recorded the lowest temperature (average -10° C) in winter.

3. Vostok of Antarctica is considered as the coldest place (average temperature -89° C) on the Earth.

ATMOSPHERIC PRESSURE

Air has weight and it exerts pressure. This is called atmospheric pressure. Air pressure is measured by an instrument called Barometer. The unit used to show the pressure is millibar (mb). The average air pressure of the atmosphere at the sea level is 1013.25 mb. The atmospheric pressure is affected by many factors such as temperature, rotation of the Earth, altitude, water vapour etc. Temperature is the most important factor that influences atmospheric pressure. The regions which have high temperature record low pressure due to expansion of air, while the regions of low temperature have high pressure due to contraction of air. Thus temperature and pressure are inversely related. The atmospheric Pressure decreases with the increase in altitude. The amount of decrease is about 34 mb per every 300 meters altitude.

Major pressure belts of the Earth

1. The Equatorial low pressure belt
2. North Sub- tropical high pressure belt
3. South Sub-tropical high pressure belt
4. North -Sub- Polar low pressure belt
5. South Sub-polar low pressure belt
6. North Polar high pressure belt
7. South Polar High pressure belt

Equatorial low pressure belt: The equatorial low pressure belt is a zone of high temperature and low pressure. It lies between 0° to 5° North and South of the equator. This region gets direct rays of the Sun almost throughout the year. Hence air is always very warm and hot. This is a calm region with very little wind. So it is known as 'Doldrum' means 'belt of calm' (equatorial calm). This region is also called Inter-Tropical Convergence Zone (ITCZ) where the trade winds converge.

Sub-tropical high pressure belts: Sub-tropical high pressure belts are found between 30° and 35° north and south of the equator. There are two sub-tropical high pressure belts. **(a) North sub-tropical high pressure belt:** This belt is found between 30° to 35° north latitudes. This region is also popularly called 'Horse latitudes'. **(b) South sub-tropical high pressure belt:** This belt is found between 30° to 35° of south latitudes.

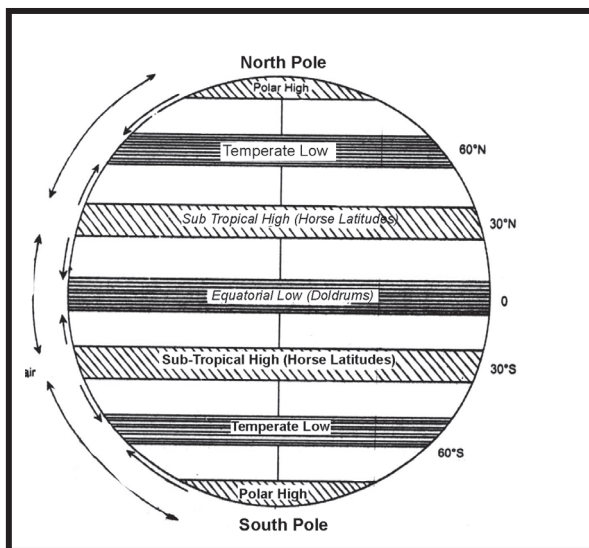
Sub-polar low pressure belts: Sub-polar low pressure region is found between 60° to 65° north and south of the equator. There are two sub-polar low pressure belt **(a) North sub-polar low pressure belt** (60° north to 65° north). **(b) South sub-polar low pressure belt** (60° south to 65° south). These are stormy especially in winter.

Polar high pressure belts: Polar high pressure belts region is found between 80° to 90° north and south latitudes in both hemisphere. These are extremely cold regions with very high pressure throughout the year.

Isobars: These are imaginary lines drawn on the map or globe connecting places having the same pressure.

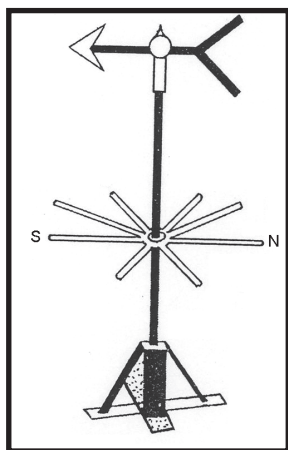
WIND

Wind is the horizontal movement of the air on the surface of the Earth. Wind blows on the Earth due to rotation of the Earth and difference in pressure.

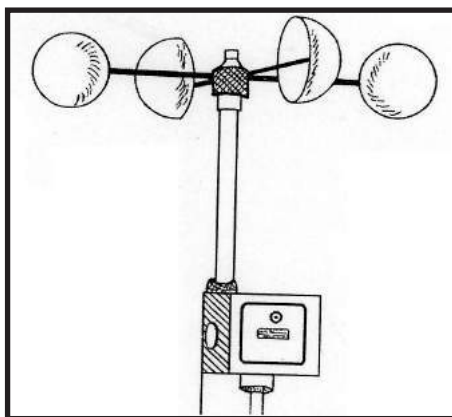


Pressure belts of the world

The direction of the wind is shown by an instrument called 'wind vane' or 'weather cock'. 'Anemometer' is used to measure the speed of the wind.

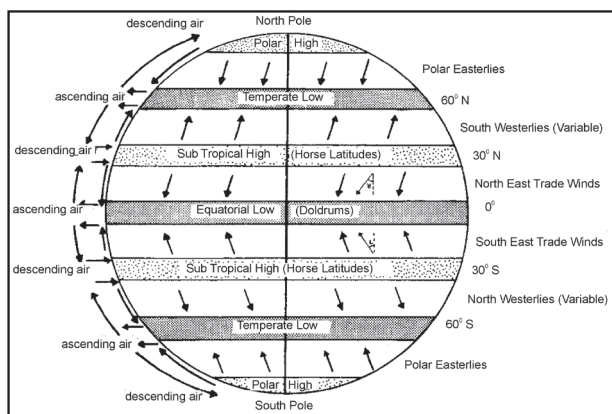


Wind Vane



Anemometer

Types of wind : Winds are classified into 4 major types. They are; Planetary winds, Seasonal winds, Local winds, Cyclones and Anti cyclones.



1. Planetary Winds :

Planetary winds are also called 'Permanent winds' or 'Prevailing winds' or 'Regular winds' which blow more or less in the same direction through out the year. These winds play a major role in climate change, desert formation, guide navigation routes, etc. There are three types of planetary winds. Trade

winds, Anti-trade winds and Polar winds.

Trade Winds : These winds blow from sub-tropical high pressure belts to equatorial low pressure region. The trade winds in the northern hemisphere blow from NE to SW direction (North East trade winds) and in the southern hemisphere they blow from SE to NW direction (South East trade winds).

Westerlies or Anti-trade Winds : These winds blow from sub-tropical high pressure belts to sub-polar low pressure belts.

These are from south-west to north-east in northern hemisphere and north-west to south-east in the southern hemisphere. The westerlies of southern hemisphere are very strong over the oceans. Hence they are called 'Roaring forties' (40° south latitude), 'Furious fifties' (50° south latitude) and 'Shrieking sixties' (60° south latitude).

Polar winds : These are also called Easterlies. These winds blow from polar high pressure belts to sub-polar low pressure belts. They blow from North East to South West in the northern hemisphere and South East to North West in the southern hemisphere. These are the cold dry winds blowing from the polar ice-caps.

2. Seasonal Winds: Seasonal winds are also called periodic winds. These winds change their direction periodically or seasonally. The monsoon winds of India are the typical periodic winds. In India South west monsoon winds blow from SW to NE direction during June to September and North east monsoon winds blow from NE to SW direction from late September to middle of December.

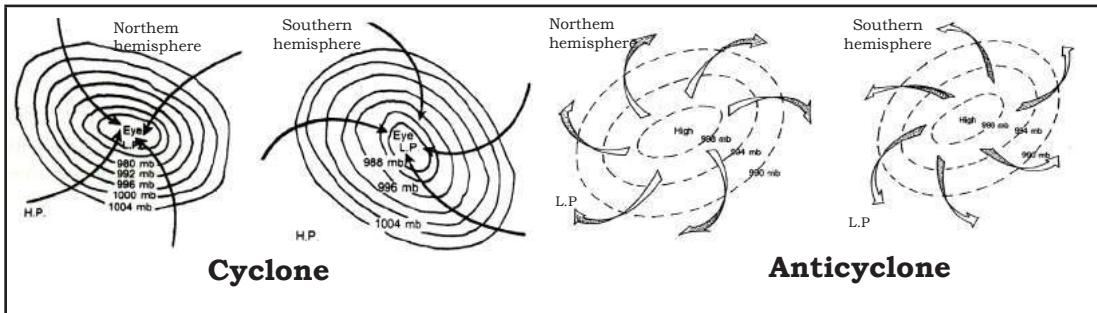
3. Local Winds: Periodic winds are the result of variation in local temperature, pressure, humidity which in turn are attributed to the formation of air currents, crossing mountain ranges, valleys and other relief barriers. The important periodic and local winds are Land breeze, Sea breeze, Mountain breeze (Katabatic winds), Valley breeze (Anabatic winds) and other few winds are Loo (India), Chinook or Snow eater (USA), Fohn (Alps region), Mistral (France), Sirocco (Sahara region), Brick Fielder (Australia), Blizzard (Antarctica) etc.

4. Cyclones and Anti-cyclones: These winds blow due to great variation in pressure. These are temporary but sometimes dangerous and destructive.

a. Cyclones: Cyclone is a small low pressure area in the center surrounded by high pressure. The winds blow spirally towards the low pressure area. In the northern hemisphere the direction of cyclonic winds is anti-clockwise or counter clockwise and in the southern hemisphere it is clockwise. Cyclones are of two types: • **Tropical cyclones :** These are found in the tropical region. They are very powerful and disastrous. • **Temperate cyclones :** These are found in the temperate region. They are comparatively less strong and less dangerous.

Cyclones are called by different names in different regions. Japan and China – **Typhoon**, USA and Mexico – **Hurricane**, Australia – **Willy willes**, India – **Cyclone**, Russia – **Whirlpool**. In the last few years Indian coasts has experienced few disastrous cyclones. Some of them are Bola, Nargis, Nisha, Aila, Laila, Bijli, Jal etc.

b) Anti-Cyclones: An anti-cyclone is a high pressure area in the center with winds blowing outwards, towards the low pressure areas. In the northern hemisphere the direction of anti-cyclone wind is clockwise and in the southern hemisphere it is anti-clockwise.



HUMIDITY

Humidity is the amount of water vapour or moisture present in the air. Humidity is measured by using an instrument called Hygrometer or Psychrometer.

Types : Humidity is expressed in different ways. Important among them are Absolute humidity, Relative humidity and Specific humidity.

- **Absolute humidity:** This refers to total amount of water vapour present in a given volume of air. It does not take temperature into consideration.
- **Relative humidity:** Relative humidity is the ratio between the actual amount of water vapour present in the air and the amount of water vapour the air can hold at that temperature. It is expressed in percentage.

$$\text{Relative humidity} = \frac{\text{The actual amount of water vapour in the air}}{\text{The maximum amount of water vapour the air can hold}} \times 100$$

- **Specific humidity:** It is the actual amount of water vapour present in a given mass of air.

CLOUDS

Cloud is a mass of small water drops or ice crystals, formed by the condensation of the water in the atmosphere, usually at a considerable height above the Earth's surface.

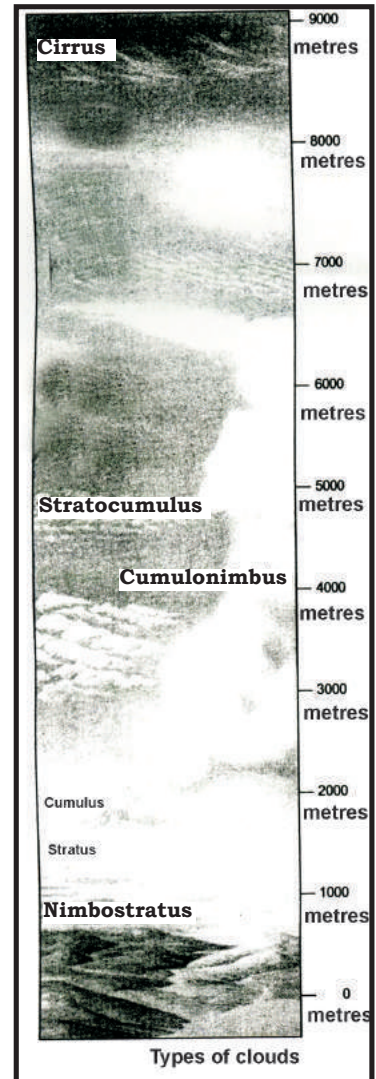
Types of clouds: Clouds are classified on the basis of their shapes and heights at which they occur. The important types of clouds are the Stratus, the Cumulus, the Cirrus and the Nimbus clouds.

- **Stratus:** Stratus clouds are usually low clouds occurring at less than 2 km of height. They appear as thin sheets or layers of large extent. Stratus clouds are associated with fair weather.

- **Cumulus :** Cumulus clouds are cauliflower-shaped clouds of great vertical extent. The base of cumulus clouds is nearly horizontal, while the top has a dome-shaped appearance. These are popularly called 'wool packs'. Cumulus clouds are rain-bearing clouds.

- **Cirrus:** Cirrus clouds are the highest clouds in the atmosphere. These clouds resemble 'curls of hair', have a feathery or fibrous appearance. They indicate fair weather and often given a brilliant sunset. They look like patches of cotton fibres floating in the air. Their popular name is 'mare's tail' or 'witch's broom'

- **Nimbus:** Nimbus clouds are rain clouds which occur at low levels. These clouds have the shape of stratus or cumulus. They are dark-grey or black in appearance. They cause heavy rainfall or snowfall. The Nimbo-stratus are thick, heavy, rain bearing clouds.

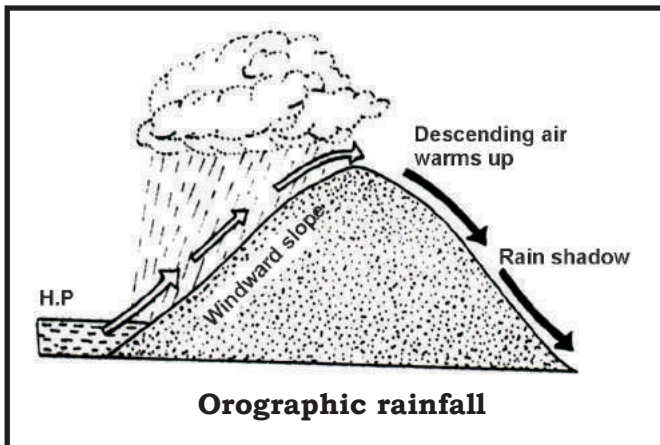
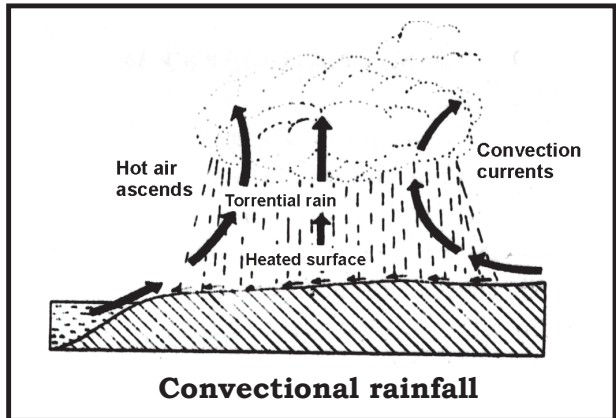


RAIN FALL

Precipitation in the form of water droplets is called rainfall. The total amount of rain received on a given area during a given time as measured by a rain gauge in MM or inches.

Types of Rainfall: Rainfall is of three types. They are Convictional rainfall, Orographic rainfall and Cyclonic rainfall.

Convictional rainfall : The rain caused by the process of convection is called convictional rainfall. In areas of high temperature, air rises up due to heating. This rising air cools, gets saturated, condensation takes place and later rainfall occurs. Convictional rainfall is very common in the equatorial region and also in the tropical regions in summer. In the equatorial region, convictional rainfall is called 'afternoon rain', as it occurs mostly in the afternoon. It is accompanied by thunder and lightning.



Orographic rainfall:

Orographic rainfall is also called 'Mountain rainfall' or 'Relief rainfall'. When moisture laden air is obstructed by a mountain barrier, the air is forced to rise up. As the air rises upwards, it cools and gets saturated. Further cooling of this air causes condensation resulting in

orographic or mountain rainfall. The windward side of the mountain receives more rainfall, while the leeward side receives less. The leeward side is generally called the 'rain shadow region' eg., Mangalore is the windward side and Hassan the leeward side or rain shadow region.

Cyclonic rainfall: In a cyclone the air blows spirally inwards. In the tropical cyclones the air rises upwards in circular movement. So condensation takes place to cause heavy rainfall. The temperate cyclonic rain is also called frontal rain. When the warm air mass and the cold air mass meet, the warm air being lighter is forced to rise over the heavier cold air. The warm air after rising, cools and condenses, resulting in rainfall.

Distribution: The distribution of rainfall on the Earth depends on location and the climatic condition of that region. The most important heavy rainfall areas in the world are the equatorial region, the eastern margins of sub-tropical belts, the western margins between 40° and 60° N and S latitudes. Scanty rainfall regions are the polar areas, the western margins of sub-tropical regions and the tropical and temperate deserts.

Do you know?

- 1. Mawsynram** of Meghalaya in India has recorded 1140 cm of rainfall per year. It is considered as the wettest or rainiest region on the Earth.
- 2. Agumbe** of Karnataka is called 'Mawsynram of South India'.
- 3. Royli** of Rajasthan in India receives lowest rainfall : 8 cm per year
- 4. Nayakanahatti** of Chitradurga is considered the driest place in Karnataka.
- 5. Atacama** desert of Chile is the driest region on the Earth. It has not received rainfall for the last 200 years.

Weather and Climate

The atmospheric conditions of a smaller area at a particular time is called weather. For example cloudy, sunny, fine weather, etc. The scientific study of weather is called 'Meteorology'. Climate is the average condition of the atmosphere over a long period of time of a larger area e.g., Equatorial climate, Tropical monsoon climate, Desert climate, Mediterranean climate, Tundra climate etc. The scientific study of climate is called 'Climatology'.

Factors affecting the climate of a place: The factors that influence the climate of a place or region are Latitude, altitude, winds, distance from the sea, distribution of land and water bodies, ocean currents, etc.

EXERCISES

I. Fill in the blanks with suitable words :

1. The two major gases of the atmosphere are _____ and _____ .
2. The lowest layer of the atmosphere is _____ .
3. The average air pressure of the atmosphere at the sea level is _____ .
4. Westerlies are also known as _____ .
5. The scientific study of weather is _____ .

II. Answer the following questions :

1. What is atmosphere ?
2. Name the important layers of the atmosphere.
3. What is the significance of ozone layer ?
4. What is Doldrum? Where is it found ?
5. Name the different types of planetary winds.
6. What are local winds ? Give any two examples.
7. Mention the different types of clouds.
8. Distinguish between weather and climate.

III. Define the following :

- | | |
|----------------------|------------------------|
| 1. Ionosphere | 4. Horse latitudes |
| 2. Normal lapse rate | 5. Orographic rainfall |
| 3. Torrid zone | 6. Climatology |

IV. Terms to remember:

- | | |
|-----------------------------|--------------------|
| 1. Insolation | 4. Roaring forties |
| 2. Inversion of temperature | 5. Nimbus |
| 3. Anemometer | 6. Meteorology |

V. Activity:

Draw the picture of planetary winds.



CHAPTER – 4

HYDROSPHERE

In this chapter you learn :

- *The different kinds of water bodies.*
- *The structure of the ocean bed.*
- *Ocean currents, their types and conservation of oceans.*
- *Know how to mark oceans, gulf, bay and strait on Indian map.*

Water- The source for marine life and maritime climate

Distribution of Water bodies

The Earth is popularly called ‘Blue planet’ or ‘Watery planet’ because about 71% of the total area of the earth or 361 million sq. km is covered by water. The major water bodies of the world are the Pacific ocean, the Atlantic ocean, the Indian ocean and the Arctic ocean.

Oceans: Oceans are deep and large expanse of water found between the continents. The Indian ocean between Asia, Africa and Australia. The Atlantic ocean between North America and Europe and so on.

Sea: A sea is a part of the ocean extended or projected far inland. Seas are smaller compared to oceans, e.g., the Arabian sea, the Caspian sea, the Red sea.

Gulf: Gulf is a part of an ocean or sea that penetrated into the land. It is smaller than a sea. The size, shape and depth of a gulf varies from one to another, e.g., the Gulf of Mannar, the Persian Gulf, the Gulf of Mexico.

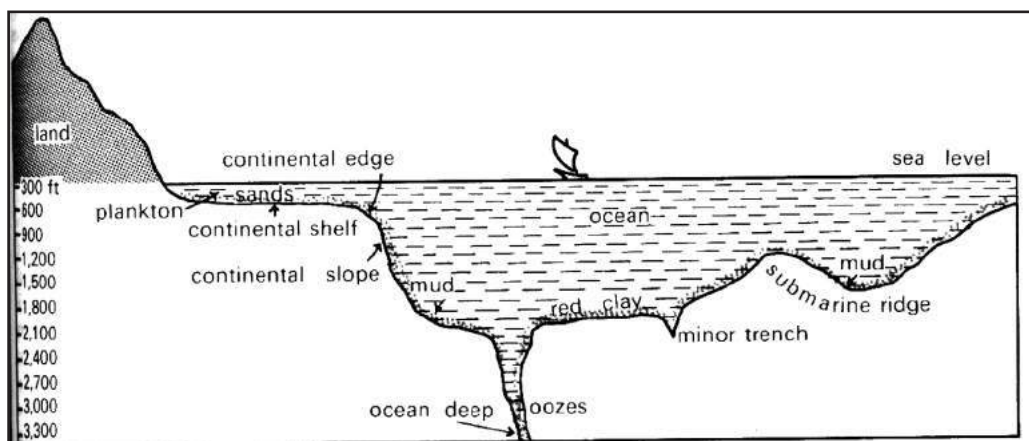
Bay: Bays are small semi-circular water bodies partially surrounded by land. The depth, extent and size of bays vary from one to another, e.g. the Bay of Bengal, the Bay of Biscay, the Bay of Fundy, Hudson Bay.

Strait: A strait is a narrow strip of water body joining two large water bodies, eg., Palk strait, Strait of Gibraltar, Bering strait.

Isthmus: Isthmus is a narrow stretch of land mass joining two large land masses. Isthmus is the most important location for constructing ocean canals eg., a) Suez canal between the Mediterranean sea and the Red sea b) Panama canal between the Atlantic ocean and the Pacific ocean.

RELIEF OF THE OCEAN FLOOR

The sea or ocean floor also has various features like the relief features of the earth's surface. The knowledge of relief features of the ocean floor is very necessary to know the importance of ocean. On the basis of the characteristic features, the ocean floor is divided into four major parts. They are : a) The continental shelf b) The continental slope c) The deep sea plain d) The ocean deeps



Ocean floor

1. Continental shelf : This is the shallow area along the sea coast. This part is bordered by the sea coast on one side and continental slope on the other side. The average depth of the continental shelf is 100 fathoms (1 fathom is equal to 6 ft). The depth of the sea in this region gradually increase towards the continental slope. The continental shelf is very important for fishing, aquaculture, navigation and extraction of minerals.

2. Continental slope: This is the second part of the ocean floor and it is very steep. It is a link between the continental shelf and the deep sea plain. Sub-marine canyons are a special feature in this region.

3. The Deep sea plain: This is the vast plain found at the bottom of the sea floor. The deep sea plain is also known as 'abyssal plain' and it covers the largest area of the ocean floor. In this region Sea mounts and Guyots are found.

4. The Ocean deep: The ocean deeps are also called 'Ocean trenches'. These are the deepest part of the ocean floor, e.g. The

Challenger deep of Mariana trench in the Pacific ocean near Philippine islands is around 11,033 meters deep and is the deepest point of the oceans. The other trenches are Tonga trench, Kurile trench in the Pacific ocean.

Temperature and salinity of the ocean water

Temperature: Sea or ocean water temperature varies according to latitudes and the depth of the ocean floor. The temperature of the ocean water near the equator is more than that of the temperature near the Arctic and the Antarctic circles. With the increasing depth the temperature of the ocean water decreases. It is because the sunlight can penetrate into the ocean only up to a depth of 200 meters. Within this depth various marine organisms are found in large numbers.

Salinity: Salinity is the percentage of salts dissolved in the sea or ocean water. The average salinity of the ocean water is 35 PPT (Parts per thousand) or 35 grams/¹⁰⁰⁰ grams). The salinity of ocean water is very high near the tropics and it is very low near the poles. At the equatorial region the salinity is average due to high evaporation and precipitation.

Why is sea water salty?

The water flowing from the land to the sea (river) carries many kinds of salts and deposits them in the sea or ocean. Due to high temperature, water is evaporated continuously and the salts remain in the sea or ocean. This continuous process over a long period of time has resulted in the accumulation of salts in the sea water.

Facts file

Saline water bodies of the world

- | | | |
|------------------------------|---|-------------------------|
| 1. Lake Van (Turkey) | – | 330/ ⁰⁰⁰ ppt |
| 2. Dead Sea (Asia) | – | 300/ ⁰⁰⁰ ppt |
| 3. Lake Sambar (India) | – | 265/ ⁰⁰⁰ ppt |
| 4. Red Sea (Asia and Africa) | – | 240/ ⁰⁰⁰ ppt |

OCEAN CURRENTS

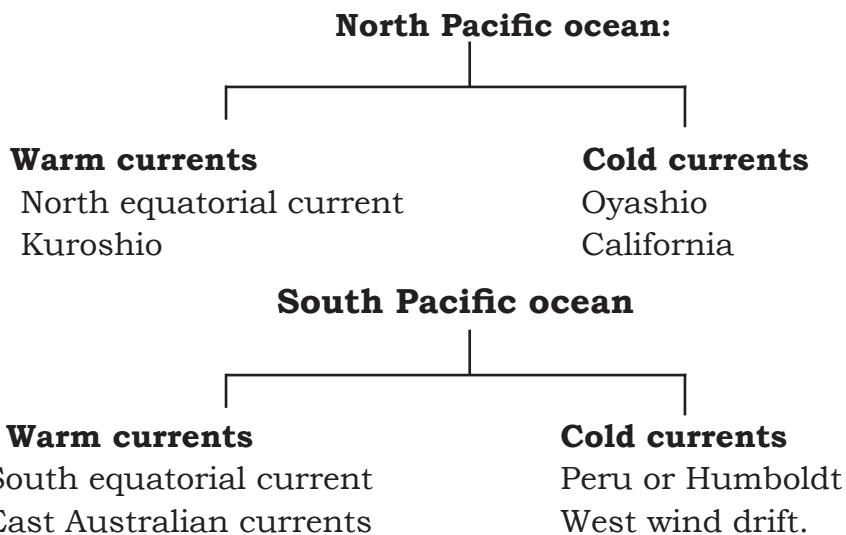
The ocean water has three types of movements. They are Waves, Currents and Tides. Ocean currents are the regular movement of ocean water from one region to another. Ocean currents are of two types.

Warm currents: These currents originate and flow from the equatorial regions to sub-polar regions.

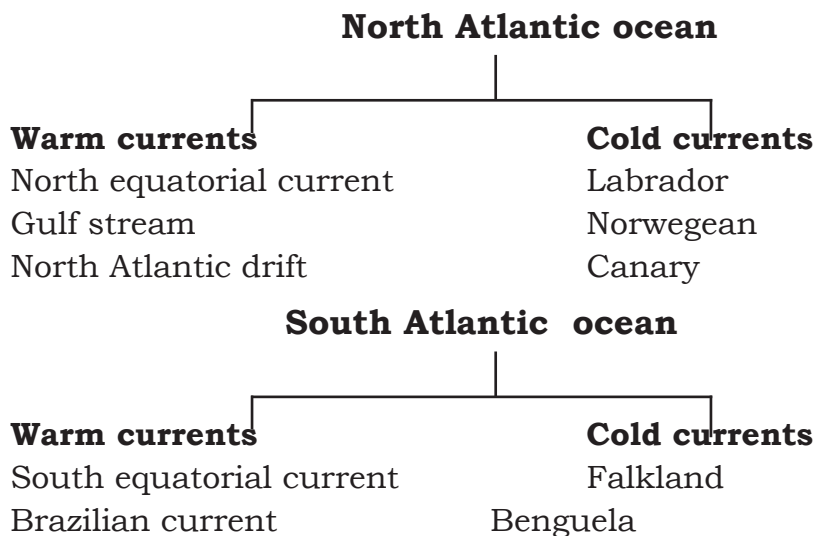
Cold currents: These currents originate in the polar regions and flow towards the equatorial region.

Factors that influence ocean currents are Rotation of the Earth, Temperature, Wind, Salinity, Shape of the landmasses, etc.

Currents of the Pacific Ocean are:



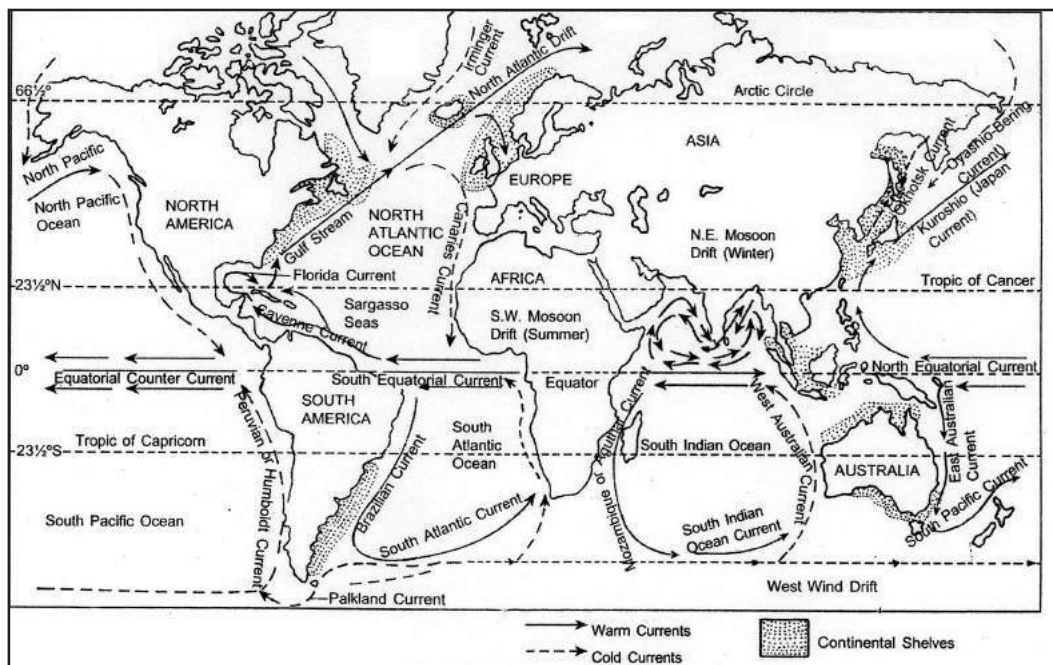
Currents of the Atlantic ocean are:



Current of the Indian ocean :

The north Indian ocean currents change their direction seasonally following the monsoons. During the south west monsoon the currents flow in a south west to north east direction and during the north east monsoon they flow in a north east to south west direction.

The south Indian ocean currents are Mozambique, Madagascar, Agulhas as warm currents and West Australian as cold current.



Major ocean currents of the world

Facts file : Major fishing grounds

1. Honshu Hokkaido fishing grounds – meeting place of Kuroshio warm current and Oyashio cold currents (Japan).
2. Grand bank – meeting place of Gulf stream warm current and Labrador cold currents (New Foundland USA).
3. Dogger bank – North sea region of Europe.

TIDES : types, causes and uses:

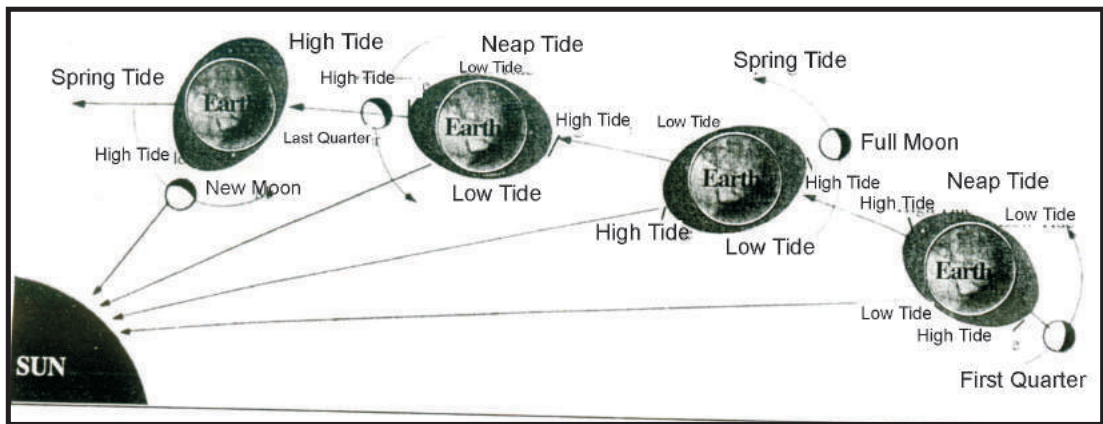
Tides are the periodic rise and fall in the sea or ocean level. They occur due to, gravitational attraction by the moon, gravitational force by the sun, rotation of the earth and, centrifugal force of the earth.

Types: Tides are of two types. High tide, also known as Flood tide and Low tide, also known as Ebb tide. On the water bodies of the earth there are alternate high tides and low tides. Between one high tide and a low tide the time is 6 hrs, 13 minutes. Between one high tide and another, the timegap is 12 hrs, 26 minutes. In 24 hrs, 52 minutes there are 2 high tides and 2 low tides.

There are two types of tides on the basis of the positions of the Moon and the Sun.

Spring tide: Spring tides take place when the earth, the moon and the sun are in the same straight line, eg., New moon and Full moon. When the spring tides take place, high tides are the highest and low tides are the lowest.

Neap Tide: Neap tides occur on the first quarter and last quarter days in the phase of the Moon. During neap tides the sun and the earth are in the same straight line and moon is in right angle to the earth. In this type of tides the high tides are not very high and low tides are not very low.



Spring Tides and Neap Tides

Uses : Tides are directly and indirectly useful to mankind in following ways.

1. Tides help navigation for big ships during high tides.
2. Tides prevent some extent the freezing Sea or Ocean water in the coast.
3. Tides help to keep the harbours clean.

4. They help fishing.
5. They also help to generate tidal energy.

Conservation of Oceans: Conservation of oceans is very important. Oceans help us in many ways and they are the habitat of millions of marine organisms. Considering the rate at which the oceans are being contaminated, they may not remain what they should be in the future.

The following are the important methods of conservation of oceans.

1. Oil transportation should be done through pipelines.
2. Nuclear waste should not be dumped into the sea or ocean.
3. Petro-chemical industries in the coastal regions must avoid dumping effluents into the sea or ocean.
4. Dumping of any waste near the ports and harbours must be controlled.
5. Ore deposition and mineral exploitation along the coast must be controlled.
6. Exploitation and destruction of beaches must be controlled.

EXERCISES

I. Fill in the blanks with suitable words:

- 1 The average depth of the continental shelf is _____.
- 2 One fathom is equal to _____ ft.
- 3 The deepest place in the Pacific ocean is _____.
- 4 The average salinity of the ocean water is _____.
- 5 During full moon, _____ tides occur

II. Answer the following questions:

- 1 What is hydrosphere ?
- 2 Mention the four major parts of the ocean floor.
- 3 State the difference between ocean currents and tides.
- 4 Distinguish between spring tide and neap tide.
- 5 How can we conserve the oceans?

III. Match the following:

A

1. Fathom
2. Oyashio
3. Gulf stream
4. Sea mounts
5. Agulhas current

B

- a) Pacific Ocean
- b) Eastern coast of USA
- c) Cold current
- d) Indian ocean current
- e) Depth of ocean

IV. Define the following:

1. Continental shelf
2. Salinity
3. Warm and Cold currents
4. High tide and Low tide
5. Benguela current
6. Tides

V. Terms to remember:

1. Gulf stream
2. Salinity
3. Warm currents
4. Kuroshio current
5. Flood tides
6. Tidal energy

VI. Activity :

1. List out the cold and warm currents in the Atlantic ocean.



CHAPTER – 5

BIOSPHERE

In this chapter you learn :

- *The meaning of biosphere and its Importance.*
- *The meaning of environment, environmental pollution, types of pollution and preventive measures.*

Do you know, what the Earth has given to us? But what are we giving back to the earth ?

Meaning : Earth is the only planet which has various forms of life on it. Biosphere is the part of the earth where life exists. The biosphere is the fourth component of the earth and it is the totality of all living things on earth.

Ecology: Ecology is the study of the interaction of living organisms with their physical, chemical and biological environment. In a natural environment, there is a perfect balance between the various organisms living together in the biosphere. This is known as ecological balance.

Ecosystem is a community of plants and animals, together with their immediate environment, including the inanimate part of that environment. It is also defined as ‘the total assemblage of components entering into the interactions of a group of organisms’.

Without ecosystem or ecological balance in the biosphere one cannot imagine the existence of plants, animals and micro organisms either single or in community. Every organism adjusts itself with its physical habitat.

Environment: Environment is the surrounding where an organism, a community or an object exists. It creates favourable conditions for the existence and development of all living organisms. The environment is of two types- Natural or geographical and Cultural or man-made.

Environmental pollution: Environmental pollution is the unfavourable alteration of our surrounding, wholly or partly by human action through direct and indirect effects.

Environmental pollution is one of the most terrifying ecological crisis of today. The factors like over population, industrialization, urbanization, over exploitation of resources, over utilization of automobiles, etc. have influenced a change in the living conditions of plants, animals and human beings.

Pollutants are the substances that cause pollution. Pollutants are natural and man-made. The man-made pollutants are considered to be more dangerous and hazardous than natural pollutants. The pollutants may be visible like smoke, gases, dust, garbage, sewage, etc., and invisible like bacteria, toxic chemicals mixed with water, food, soil, etc.

Types of Pollution: Environmental pollution are of different types. On the basis of pollutants and medium of pollution they can be classified into the following types: Air pollution, Water pollution, Soil pollution and Noise pollution.

1. Air pollution

According to World Health Organisation (W.H.O)., air pollution is defined as, 'Substances put into the air by the activity of mankind in concentration, sufficient to cause harmful effects to his health, vegetation and property'. The important sources of air pollutants are, **Natural:** Volcanoes, forest fire, cosmic dust, etc. **Man-made:** Gases from industries, domestic use, automobiles, mining, nuclear power plants, nuclear explosions, etc.

The important pollutants are : Carbon dioxide, carbon monoxide, sulphur dioxide, nitrogen oxides, chlorofluorocarbons (CFC), hydrocarbons etc. The important effects are change in weather and climatic conditions, ozone depletion, greenhouse effect, global warming, effect on human health, problem with respiratory system, effect on life of animals and plants.

Measures to control air pollution are : Control of gaseous pollutants, control of emission from automobiles, planting of more trees, use of non-conventional energy sources, awareness programme, legal control, literacy and education etc.

2. Water pollution

Water pollution is 'alteration in physical, chemical and biologi-

cal characteristics of water which may have harmful effects on human and aquatic life'. The important sources of water pollution are **Natural:** Soil erosion, landslides, volcanic eruption, decay and decomposition of plants and animals etc. **Man-made:** Industrial effluents, urban waste, domestic waste, agricultural waste, thermal waste, oil spill, offshore drilling, nuclear waste etc. Water pollution is of different types: Sea or Ocean water pollution, Ground water pollution, River water pollution, Lake pollution etc.

The important effects of water pollution are: It spreads water-borne diseases and epidemics like cholera, typhoid, diarrhea, jaundice, etc, Causes death of aquatic life, affects irrigation water and on agricultural crops, nature and features of water etc.

Measures to control water pollution : Industrial effluents must be treated; drinking water sources must be kept clean; sewage treatment plants, disposal of waste on the water bodies must be controlled, etc.

3. Soil pollution

Soil pollution is 'decrease in the quality of soils either due to human sources or natural sources or by both'. It results in the increase of soil erosion, lack of humus, decrease in soil micro-organisms, plant nutrients etc. Sources of soil pollution are, industrial and mining waste, Domestic and urban waste, agricultural waste, nuclear waste etc.

Effects of soil pollution are: it decreases the fertility of the soil, converts the region into wasteland, destroys the micro organisms in the soil etc.

Measures to control soil pollution: Controlled and judicious use of chemical fertilizers, pesticides and insecticides, proper disposal of industrial and urban waste, proper use of land and crop management, awareness programme on proper soil utilization and its maintenance etc.

4. Noise pollution

Noise pollution is 'any undesirable sound dumped into the atmosphere leading to health hazards'. The important sources of noise pollution are **Natural:** Thunder, cyclones, heavy rainfall, hailstorms, waterfalls, ocean waves etc. **Man-made:** Industrial noise, automobiles, air crafts, domestic noise, mining etc.

Effects of noise pollution are: noise pollution causes temporary or permanent hearing problem, headaches, restlessness, cardiovascular diseases, Psychological disorder, behavioural changes, lack of concentration, etc.

Measures to control noise pollution: Industries must be located away from the residential areas; construction of sound proof walls in the factories, restricting unnecessary use of sirens, horns and loud speakers; airports must be located away from the residential zones; protective instruments the workers in the industries, noise producing vehicles must be checked etc.

Global warming : The temperature of the earth is increasing slowly over the years. For the last few years global temperature has increased. This phenomenon is termed as Global warming. The warming of atmosphere is caused by greenhouse effect and trapping of heat by the atmosphere. The world is getting warmer, climatic zones are shifting, glaciers are melting and sea level is rising due to global warming eg., high rate of melting of ice in Himalayas, Arctic and Antarctic regions.

Greenhouse effect : The energy that the earth receives from the sun has to be balanced by the radiation emitted from the earth's surface. The use of fossil fuels is increasing greenhouse gases in the atmosphere. Carbon dioxide and other greenhouse gases trap the heat radiated from the earth. Thus increasing of greenhouse gases is causing an increase of temperature. This is called 'Greenhouse effect'.

Ozone depletion : Ozone is a thin layer of gas found in stratosphere. Ozone absorbs ultraviolet rays and protects all forms of life on the earth's surface. In recent years the use of air conditioners, refrigerators, sprays and deodorants are destroying the ozone due to the synthetic chemicals released into the atmosphere, primarily 'chlorofluorocarbons' (CFC). The highest ozone depletion in the world is recorded in the atmosphere over Antarctica. The ozone depletion has caused the ozone hole. This has to be controlled for the sake of the people of the present and future generation.

Acid rain : Acid rain contains high amounts of acids particularly sulphuric acid and carbon monoxide. It is caused when the rain drops pass through the polluted atmosphere. The rainfall with poisonous acids kill marine organisms. Acid rain is damaging forests, agricultural crops, old buildings, monuments etc.

Acid rain is also referred to as 'lake killer'. The 'Black Triangle' stretching over Poland, Czeck Republic and South-east Germany is one of the worst acid rain affected regions in the world.

Bio-Diversity : The variety of flora (plants) and fauna (animals) in a region is known as biodiversity. Distribution of different kinds of plant and animal species in a region shows the richness of biodiversity. The maintenance of biodiversity is very important both for the quality of environment and also for human survival.

The conservation of 'Biodiversity' is very important to save and protect rare plants and animal species. Providing good environmental condition for their living is the best means of protection.

The earth is the only living planet in our solar system. The way in which changes, disturbances, hazards are taking place on the earth, can lead to the destruction of the quality of life on our earth in the near future.

To 'Save Earth' and 'Mother Planet' we must educate people, formulate awareness programmes, utilize resources judiciously, control pollution awareness through education, symposiums, seminars, skits, films, summits. These necessary to save our "MOTHER EARTH".



"Save Earth", "Save Mother Planet"

EXERCISES

I. Answer the following questions:

1. What is Biosphere?
2. Define ecology.
3. Name the different types of environmental pollution.
4. What are the measures to control water pollution?
5. What is Bio-diversity ?

II. Define the following :

1. Biosphere
2. Ecological imbalance
3. Global warming
4. Greenhouse effect
5. Ozone depletion
6. Acid rain

III. Terms to remember:

1. Pollution
2. Environmental Day
3. Climate change
4. Chlorofluorocarbons (CFC)
5. Earth Hour and Earth Day
6. 'Save Earth'

IV. Activity :

1. Collect information on the impact of global warming. Also enlist the ways of controlling global warming.



ECONOMICS

CHAPTER - 1

INTRODUCTION TO ECONOMICS

In this chapter you learn :

- *The meaning of Economics and basic concepts of Economics.*
- *The importance of studying Economics.*
- *Identify economic activities through narrating the basic economic problems.*
- *The difference between Micro economics and Macro economics.*

Meaning and Importance of Economics

We use various things in our daily life. These are called 'goods' and 'services'. Goods are the physical and tangible objects like food, clothes, book, bicycle, phone, TV, etc. On the other hand, services are intangible things that are also required for our use. The common services used are electricity, transportation, education, medical care, tailoring, music, mobile and internet service, etc. While the people using goods and services are called the 'consumers', people engaged in the production of the goods and services are called the 'producers'. These goods and services are made available to us at our place through transporters, traders and shop keepers, who are called the 'distributors'.

We buy the required goods and services by paying the given 'price'. It is the value of the goods or services expressed in terms of money. This means that to be able to buy different goods and services required by us in our daily life, we need money. How do we get money? We are engaged in work or we are employed. By virtue of the 'employment', we get 'income'. The income we spend becomes the income of the producers and distributors. There is also the 'government' which is responsible for maintaining law and order and providing some common basic facilities like good roads, electricity, internal and external security. The government imposes 'taxes' for the goods and services it provides.

Therefore, a normal day is characterized by interaction among the producers, distributors, consumers and the government. How each of them earns income and how they spend forms the core of economic activity. Economics may be described as the study of these economic activities of individuals or as a science that deals with the production, distribution, and use of goods and services.

An important aspect is that we cannot have all the goods and services we wish, because the money to buy them is limited or 'scarce'. It is a common tendency on our part to choose the most pressing or important want first and postpone the less urgent ones. Hence, food is more important than going to a movie; purchasing seeds and fertilizers is more important than purchasing a tractor, etc. This classification of wants as more important or less is called as 'prioritizing'. Once prioritized, we allocate most of our resources (money) to purchase that commodity which satisfies the chosen wants. Therefore, in situations of scarcity we choose the most desirable wants or prioritize them in order of importance.

Suppose you have only Rs. 20 to spend. Your teacher has asked to buy a book, you want to see the latest movie, you want to buy medicine for your headache, you have to go home, and you are hungry. With Rs. 20 in hand, you cannot meet all the requirements. Definitely, you will choose among which wants to be satisfied now and which later. Thus, you may eat something, buy few tablets, and think of going home and put off buying books and viewing movie later. This is prioritization and allocation of resources (Rs.20) which you had.

Therefore, scarcity and choice are basic problems which everyone faces and which are the central problems of Economics.

In this background "Economics is defined as the social science that examines how people choose to use limited or scarce resources in attempting to satisfy their unlimited wants." Economists have defined Economics variedly, but the above definition describes the central idea of Economics.

Definitions of Economics from Economists

- *"Economics is the study of wealth" - Adam Smith (1776) (Father of Economics)*
- *"Economics is the study of people in the ordinary business of life." - Alfred Marshall (1890)*
- *"Economics is the science which studies human behavior as a relationship between given ends and scarce means which have alternative uses." - Lionel Robbins (1932)*
- *"Economics is the study of how societies use scarce resources to produce valuable commodities and distribute them among different people." - Paul A. Samuelson (1948)*

The word “economics” comes from the Greek words “oikos,” meaning “household,” and “nomos,” meaning “management”. Thus, economics refers to the art of “household management” that involves using the available means to satisfy the basic needs of the family as well as to prosper. The same rule when applied to the whole society implies that economics is the study of how the society uses its resources to satisfy the basic needs of the people as well as for their economic prosperity. The organization of economic activities is called ‘economy’.

Importance of the Study of Economics

The study of Economics is very important for the individual as well as to the society.

- Recognize the scarcity of resources against the unlimited wants;
- Prioritizing the use of resources and identifying more important and less important.
- Economize (save) on the use of resources and search for more efficient ways of using the resources;
- Engage in economic activity to support family as well as the country;
- Contribute to government’s revenue and assist it in discharge of its developmental and welfare programmes;
- Understand socio-economic problems of the country like poverty, unemployment, inflation, etc., and try to provide solutions to the same; and
- Suggest better policies and better ways of implementing policies for bringing about desired growth and development of the country.

The study of Economics is not only enlightening but also profitable.
– A. C. Pigou

Economic Activities

Wants are the basis for all economic activities

Most of the goods and services that we use everyday are limited in supply, and hence are not available free of cost. These goods and services are called economic goods and services. We use our skills and labour to earn money and satisfy our wants by using that money. The varied activities which we perform in order to earn money and wealth,

for satisfaction of our wants, are called economic activities. These economic activities can be classified into four kinds:

i. Production: Production activities are those that produce goods and services. For ex: agriculture, animal husbandry, fishing, mining, forest development, different kinds of industries, transport, communication etc.

ii. Consumption: Goods and services are produced for consumption. Man satisfies his wants by buying goods and services. All these activities are known as consumption activities.

iii. Exchange: The producers produce goods for the consumers. There is a marketing system to supply the produced goods to the consumers. In this system, activities of collection of goods, transportation, selling and buying take place.

iv. Distribution: The income that is earned through the production of goods has to be distributed to the various factors of production (land, labour, capital and entrepreneurship or organization) that have enabled the production. This process involves activities undertaken to determine the price of the factors of production. Steps have to be taken to ensure that the income earned is distributed among all factors in a just manner.

Sometimes many activities which are not economic in nature become economic activities. For ex: when a teacher gives free tuitions at home to students is not an economic activity. When the same teacher charges fees for giving tuitions, it becomes an economic activity.

Micro and Macro Economics

Since Economics is a study of human economic activities, it is a very vast subject. Therefore, in order to study the different activities, it is divided into two broad branches called as 'Micro' and 'Macro' economics.

Micro Economics

The word micro means very small and micro economics implies study of economics at a very small level. Micro economics is the study of decision making to use resources by the smallest components of the society, namely individuals, households and business firms. Some such decisions are:

- (a) You have to buy various goods and services to satisfy your wants. Which wants will satisfy you? How much price are you willing to pay for a specific goods or service? How many hours of work are you ready to work and where to work? etc., are some of the decisions to be made. The individual consumer makes

these decisions for achieving the maximum satisfaction from consumption.

- (b) A production or a business unit, called a firm, that produces goods and services will have to decide about the quantity to be produced and the price at which the goods or service to be sold. It has to decide about the combination of inputs (or factors of production) so that it produces the desired quantity at the minimum cost.
- (c) The price is determined by the interaction of the buyers and the sellers in a market. How they interact and on what basis they decide a mutually acceptable price is also the subject matter of micro economics.

Macro Economics

The word macro means 'total' or 'large'. The society or the country or the economy is a very large entity compared to an individual. Some decisions have to be taken at such aggregative level. The economic decisions taken at the level of the economy as a whole are the subject matter of macro economics. The economic decisions like collection of taxes, expenditure on public amenities and welfare activities, regulation of inflation, promotion of economic growth, etc. which affect the whole economy fall in the purview of Macro Economics. Such decisions are usually taken by the government.

Micro economics studies individual buying and selling. As a buyer, the expenditure by an individual consumes their consumption expenditure, then we add consumption expenditure of all individuals we get the aggregate consumption expenditure of the whole society. Similarly, when we add up incomes of all individuals in the society, it becomes the total income of the country or national income. Study of these aggregates such as national income, total consumption expenditure of the country etc, comes under macro economics. Inflation or price rise is another issue studied by macro economics. Inflation or price rise affects the whole economy. So understanding its causes and effects as well as controlling it, comes under the study of Macro Economics. Similarly, problem of unemployment, economic growth and development etc. affect the whole nation and hence are covered under the study of Macro Economics.

It is said "Micro Economics is like studying a single tree in the forest while, Macro Economics studies the whole forest; Micro Economics provides a worm's eye-view of the economy but Macro Economics provides a bird's eye-view of the economy".

Basic Economic Problems

The problems in Economics arise due to scarcity of resources which forces us to make a suitable choice. This is both at micro and macro levels. In this context, Economics tries to provide answers to the following questions:

i. What to produce? An individual or a society has to decide about what goods and services to produce. Whether to produce more of food or weapons; agricultural or industrial goods; education or health; consumer goods or machinaries? The type and quantity of various goods produced depends upon the resource availability on the one hand and requirements of the people, on the other.

ii. How to produce? There are different ways to produce given goods. Different combinations of inputs and resources can be used to produce a given amount of goods or service. This is called the technology of production. Whether to use a technology that uses more labour (labour intensive technology) or capital (capital intensive technology) is to be decided by the society. This is essential to minimize the cost of production and efficient use of existing resources.

iii. For whom to produce? Who will get the goods so produced and in what quantities? This is the problem of issue of distribution such that each person should get at least a minimum quantity of goods and services for consumption. For instance, it may be availability of food, basic education or primary health. Thus, every society has to decide the distribution of scarce resources and goods and services among all individuals.

Thus, the study of Economics helps us to understand the current use of resources and plan for their more efficient use in the future. The economists usually advise government on these matters. As a result, the well-being of the individuals and the country can be improved.

EXERCISES

I. Fill in the blanks with suitable words:

1. The word 'Economics' originates from the Greek root words _____ and _____ .
2. The basic economic problems of every individual is _____ and _____ .
3. The activities that generate income are _____ .

4. Micro Economics is the study of _____ units.
5. Macro Economics is the study of _____ units.

II. Answer the following in a sentence each:

1. What is Economics?
2. Define scarcity?
3. List the different economic activities.
4. When you buy a pen, which branch of Economics analyses your decision?
5. Define Micro Economics?

III. Answer the following in three or four sentences each:

1. What are economic activities?
2. Why do we need to study Economics?
3. Differentiate between micro and macro economics?
4. What are the basic economic problems?
5. What major economic decisions are taken by the government?

IV. Suggested Activities:

1. List the economic activities that members of your family are engaged in.
2. Identify the various economic activities of the people around you are engaged in.
3. List the goods that you consume every day.
4. Observe how farmers decide what crops to grow and which inputs are to be used to grow those crops.
5. Does your school Head Master adopt economics? Conduct a small interview.



CHAPTER - 2

MEANING AND TYPES OF ECONOMY

In this chapter you learn :

- *The meaning and types of economics.*
- *The different economic systems and identify their merits and demerits.*
- *The features of Indian economic structure.*
- *The Evaluation of the performance of public sector in India.*

Introduction

Economy refers to the nature of organization of economic activities in a society. As you have learnt, given the scarcity of resources, economic activities are undertaken to earn money for buying goods and services to satisfy ones wants. Depending upon the nature and level of economic activities pursued in an economy, the income of the people engaged in those activities differ. Some activities like software development yield high and fast growing income while others like agriculture yield low and slow growing income. Thus, countries grow faster or slower depending on their mix of activities. Economies with fast growing activities will achieve development faster while others lag behind and may remain as underdeveloped or developing economies. They are also known as rich or poor economies. Economies are also classified based on ownership of resources. The resources may be in private ownership or collective ownership. Economies are also classified on the basis of the administrative divisions. Thus, you come across village economy, district economy, state (Karnataka) economy, and national (Indian) economies which may be at different levels of development. Therefore, there are different ways to look at the economy and its level of development. In this chapter you will learn about types of economies and the nature of Indian economy.

Meaning

An economy may be described as a man-made organization for the satisfaction of human wants. A.J. Brown defines economy as “A system by which people get a living”. You might have observed that man is engaged in varied ways to earn a living. It also differs from place

to place and from time to time. In the primitive days 'earning a living' was simple but with growth of civilization it has become much more complex. More than that, you must note that the person must earn the living by fair and legal manner. Unfair and illegal means such as robbery, smuggling may earn income for oneself but is socially harmful, hence not considered as gainful economic activity. We can, therefore, describe an economy as a framework of economic institutions where all economic activities are carried out to improve individual and social welfare. It is also referred to as an economic system. Described thus, an economy has the following features:

i. Economy consists of individuals, economic institutions and government and their interactions.

ii. Economy is a dynamic entity which is continuously changing. Economic institutions are continuously created, destroyed, replaced or changed. For example, Planning Commission was set up to plan for socio-economic development of India in 1950, but it was replaced by NITI Ayog in 2015. Similarly, communism was adopted by Russians in 1917, but was replaced by capitalism in 1989. Earlier, barter system was followed but today money plays a vital role in economic transactions.

iii. Production, consumption and investment are the crucial activities of an economy.

iv. Depending on the type of economy, economic activities keep on changing. Thus, in developing economy low income yielding primary (resource based) activities are predominant while in developed countries high income yielding secondary (manufacturing) and tertiary(service based) activities are predominant. Similarly, the technology of production is also different.

v. Individuals are both producers and consumers. As producers they produce goods and services and as consumers they consume the same. However, we are all consumers but only few of us are producers.

vi. Modern economic system is complex and there are many institutions to regulate the activities of the individuals. Thus, we have institutions like the RBI, SEBI, World Bank, IMF, WTO, SAARC, ADB, etc., that govern the activities of individuals as well as countries.

RBI	: Reserve Bank of India;
SEBI	: Securities and Exchange Board of India,
IMF	: International Monetary Fund
WTO	: World Trade Organization,
SAARC	: South Asian Association for Regional Co-operation
ADB	: Asian Development Bank

Capitalist, Socialist and Mixed Economies

Economic systems are classified into capitalism, socialism and mixed economies based on ownership of means of production and extent of government intervention and regulation of economic activities. Let us understand the meaning, features, merits and demerits of these economic systems.

Capitalist Economic System

In a capitalist system, the means of production are owned by the individuals and are free to use them in any way that benefits them. Hence, it is also called a free enterprise economy. Here the government intervention in the economic activities is minimal. The important features of a capitalist economy are as follows:

i. Private property: An individual is free to own, acquire and bequeath property according to his/her wish. Since, the property is used for one's own benefit; the incentive to acquire and accumulate wealth is very strong.

ii. Freedom of enterprise: In a capitalist economy the individuals are free to choose any occupation. Business firms are free to acquire resources and use them in the production of any goods or service and are free to sell their products in the markets of their choice for earning the highest possible profit.

iii. Consumer's Sovereignty: It is said that the consumer is a king in capitalist economy. They are free to spend their income on goods and services which give them the maximum satisfaction. In a capitalist system, production is guided by consumer's choices.

iv. Profit Motive: Since acquisition and accumulation of wealth is not restricted in a capitalist system, individuals are guided by their

self-interest. Especially, the producers known as the capitalist class are motivated to maximize their profit by minimizing cost and maximizing revenue.

v. Competition, markets and prices: Since everybody is free to pursue occupation of their choice for earning profits, there is an intense competition in capitalist system. The market forces of demand and supply freely operate to determine the price.

vi. Absence of government interference: Government interference in the operation of market, determination of prices and decisions by economic agents is either absent or kept to the minimum in a capitalist system.

However, pure capitalism is not seen in the world in today's world as the government has assumed an active role in economic development, promoting welfare of the people and regulating economic activities of business firms. USA and many countries of Europe are more capitalist in nature.

Socialist Economy

When productive resources are owned and controlled by the government to promote the overall interest of the society, it is called a socialist system. In this system, a central planning agency plans and regulates various economic activities in the interest of all. The socialist economy has the following features:

i. Collective ownership of means of production and wealth: In a Socialist economy the government owns the means of production on behalf of the people. All wealth is collectively owned.

ii. Social welfare objective: The government acts on behalf of all people to maximize their welfare. Government decides about the type and levels of output and the distribution of the same, keeping in view the broader social welfare of the people.

iii. Central Planning: Identification of national priorities and allocation of resources to meet them is done through economic planning. For this purpose a Central Planning Authority is created which keeps the national priorities and availability of resources in mind and allocates resources. All economic decisions regarding production, consump-

tion and investment are made by the government keeping in mind the present and future needs. Market and prices have little role to play in socialist economies.

iv. Reduction in Inequalities: Non-existence of private property and accumulation reduces economic inequality in a socialistic economy.

v. No class conflict: All are co-workers in socialistic society and there is only the working class. Hence, there is no class conflict.

Socialism which was a prominent idealism after the second world war and embraced by countries like Russia, China and many eastern European countries. But the wave of liberalization since the 1990s has made almost all these countries to allow private sector to participate extensively in economic activities.

Mixed Economy

A mixed economy combines the good features of both capitalism and socialism. It has a combination of elements of both free enterprise or capitalist economy as well as a government controlled socialist economy. It is defined as an economic system where the public and private sectors co-exist. The features of a mixed economy are as follows:

i. Co-existence of public and private sectors : The private enterprise that owns production units and works with profit motivation exists along with production units owned by the government which work with welfare objective. The economic activities are generally demarcated. Government adopts the planning mechanism to direct the utilization of resources of the economy for overall development. It also regulates the activities of the private sector through various policies such as licensing policy, taxation policy, price policy, monetary policy and fiscal policy.

ii. Individual Freedom : Individuals are free to choose occupation and consumption as per their choice. But producers are not given the freedom to exploit consumers and labourers. Government exercises regulations and controls keeping in mind the welfare of the people. But within these rules, regulations and restrictions of the government, the private sector enjoys complete freedom.

iii. Economic Planning : Planning mechanism is used by the government to prepare development plans and decide the roles to

be played by the private and public sectors in the development of the economy. While the public sector is under the direct control of the government and works as per production targets and plans formulated the private sector is supported through incentives, support and subsidies to work as per national priorities.

iv. Price Mechanism : The government policies influence the prices significantly in a mixed economy. There are administered prices for public sector units (e.g. railways in India) and the government provides price subsidies to help the weaker sections.

Indian economy is a classic example of a mixed economy. The areas for functioning of public and private sectors are well defined and economic planning is a key activity for achieving development.

Types of Economies on the Basis of Level of Development

On the basis of level of development, economies can be classified into two categories as (i) developed economy and (ii) developing economy

Developed countries have higher national and per capita income, high savings and investment and therefore, high rate of capital formation. They have highly trained human resources, better civic facilities, good health and sanitation facilities, low birth rate, low death rate, and low infant mortality. They also possess well developed industrial and social infrastructure including strong financial and capital markets. People in developed countries have high standard of living.

Developing countries are low on the ladder of development. They are also called as underdeveloped, backward or poor countries. The national and per capita income in these countries is low. They have backward agricultural and industrial sectors with low savings, investment and capital formation. They have low standard of living, poor health and sanitation, high infant mortality, high birth and death rates and poor infrastructure.

India as Mixed Economy

India is a classic example of mixed economy with both public and private sectors operating within the planning and regulatory framework of the government. The need to achieve higher and faster development

and ensuring better living standard to all classes of people compelled India to adopt a mixed economic system soon after independence. The important features of Indian mixed economic system are:

i) Coexistence of Public and Private Sectors : Industrial policies of 1948 and 1956 formulated by the Indian government made the provision for coexistence of the public and private sectors, with a larger role for public sector. Basic and heavy industries were under the public sector. However, with the liberalisation of Indian economy since 1990s, the scope of private sector has further widened.

ii) Planned Development : Five year plans were prepared within the framework of the Directive Principles of State Policy to rebuild economy and lay foundations of industrial and scientific progress. The Planning Commission was set up in 1950 to prepare plans for all round development of the country and people. The Planning Commission has so far prepared and implemented twelve five-year plans and many annual plans. In 2015, the Planning Commission has been replaced by the NITI (National Institution for Transforming India) Ayog.

The broad objectives of Indian plans are :

- (a) Economic growth;*
- (b) Modernisation;*
- (c) Self-reliance;*
- (d) Social justice;*
- (e) Elimination of Poverty;*
- (f) Creation of conditions of near full employment; and*
- (g) Satisfaction of basic needs like food, clothing, shelter, education health etc.*

iii) Role of Public Sector: The public sector has played an important role in the development of Indian economy. It increased the pace of economic growth and reduced disparities of income and wealth. It has prominently contributed to: (a) development of infrastructure; (b) establishment of basic and heavy industries; (c) disperse industries in several backward regions; and (d) promoting trading and marketing activities, including international trade.

iv) Private Sector: It not only includes industry, but agriculture, small industry, trade and great deal of activity in housing and construction activities as well. It provides employment to three-fourths of our manpower. Many policies and laws have been enacted to control the private sector.

v) Coordination between Public and Private Sectors: Both the public and private sectors have worked together for achieving the goals set by the Planning Commission.

However, today the role of public sector is declining and more space is provided to the private sector.

Performance of public sector in India

The public sector was given dominant role so that it could control the 'commanding heights' of the economy. Achievement of rapid economic development, reduction of concentration of economic power, balanced regional development, employment generation, import-substitution and export-promotion and resource mobilization were the key objectives of public sector promotion.

Accordingly, public sector made significant contribution to the country's economy by filling the gaps in the industrial sector, generating employment and achieving balanced regional development. The growth profile of public sector has been very impressive. It has a good hold on the commanding heights in terms of investment in key sectors like steel, electricity generation and petroleum.

But the public sector did not show better financial performance or profitability because of many critical problems like defective pricing policy; excessive political interference; delays in decision-making; over-staffing; lack of accountability; and under-utilization of capacity.

Hence, since 1980s various efforts were made to improve performance and with the economic reform process initiated since 1991, privatization has become a key policy of the government. Government is selling its shares of public sector industries, which is called disinvestment.

EXERCISES

I. Fill in the blanks with suitable words.

1. Economy refers to the nature of organization of _____.
2. NITI Ayog was set up in _____ .
3. Free enterprise is a basic feature of _____ economy.
4. Good example of capitalist economy is _____ .
5. Co-existence of public and private sectors is seen in _____.

II. Answer the following after discussing them in groups:

1. What is an economy?
2. Mention the features of capitalist economic system.
3. What are the defects of capitalist system?
4. What is planning?
5. How are economies classified on the basis of level of development?
6. How does government regulate the activities of the private sector in a mixed economy?
7. What is disinvestment?
8. Why is India considered a developing economy?

III. Project work.

1. List the objectives of planning in India

IV. Activity.

1. Make a list of public sector enterprises of India and understand their problems.



CHAPTER - 3

NATIONAL INCOME AND SECTORAL ASPECTS OF THE INDIAN ECONOMY

In this chapter you learn :

- *The concepts of national and per capita incomes.*
- *The growth of Indian economy through the growth of different sectors.*
- *The importance of small scale industries in India.*
- *Identify the reasons for agricultural distress and to study remedial measures.*

National and Per Capita Income

We all work to earn income. Our prosperity or poverty depends on the income we earn. This is true of a country also. Higher the income generated in a country, more prosperous the country is and vice-versa. You may have wondered why some countries are poor (Kenya for e.g.) and why some are rich (USA for e.g.). Similarly, while some are growing at faster rate (China, for e.g.) others are lagging behind (African countries for e.g.). The African countries are less developed despite having rich natural resources. Thus, it is not mere the possession of natural resources that decides the level of development but also how far these resources are converted into useful goods and services for generating income and wealth.

National income refers to the total value of goods and services produced annually in a country. Simon Kuznets has defined national income as, “the net output of commodities and services flowing during the year from the country’s productive system in the hands of the ultimate consumers”. Since ultimately individuals are recipients of income, the total income accruing to a country from economic activities in a year’s time is known as national income. It includes payments made to all individuals in the form of wages, interest, rent and profits. Naturally, national income indicates the size of the country’s productive system, volume of consumption, savings and investments made in various sectors as well as its transactions with other countries. However, unlike the measurement of individual

income, the measurement of a nation's income is very difficult and involves complex procedure. Measuring the level and rate of growth of national income is important for observing:

- i. The rate of economic growth
- ii. Changes in average living standards
- iii. Changes in the distribution of income

Per Capita Income :

The average income of the people of a country in a particular year is called per capita income (PCI) for that year. For instance, in order to find out the per capita income for 2011, the national income of a country in 2011 is divided by the population of the country in that year.

$$\text{Per Capita Income in 2011} = \frac{\text{National Income in 2011}}{\text{Population in 2011}}$$

PCI helps us to know the average income and the standard of living of the people. But it is not very reliable, because in every country distribution of national income is unequal and a major portion of it goes to the richer sections of the society. The income received by the common man is lower than the per capita income.

National and Per Capita Income of India

In India, the Central Statistical Organization (CSO) estimates and publishes the national income data.

The national income of India has grown from Rs. 2,69,724 crore in 1950-51 to Rs. 94,00,266 crore in 2014-15, at constant (2011-12) prices. This indicates more than thirty four times rise over sixty five years. However, this growth has neither been uniform nor steady during this period. The per capita income has also increased almost ten times from Rs. 7513 to Rs. 74,193 during the same period.

The trends in national and per capita income of India are presented in table.

**Table : National Income and Per Capita Income in India
1950 - 51 to 2014 -15**

Year	National Income (Rs. Crores)		Per Capita Income (Rupees)	
	Current Prices	Constant Prices	Current Prices	Constant Prices
1950-51	9829	269724	274	7513
1960-61	17062	411519	393	9482
1970-71	44550	596470	823	11025
1980-81	138565	795193	2041	11711
1990-91	526017	1342031	6270	15996
2000-01	1947788	2291795	19115	22491
2010-11	6942089	4657438	58534	39270
2014-15	11217079	9400266	88533	74193

Source: Economic Survey 2014-15.

The World Bank's assessment of the Indian economy:

- i. India's national income crossed the \$2 trillion mark in 2014. After taking 60 years to reach the \$1-trillion mark, India added the next trillion in just seven years. The Indian economy, at \$2.06 trillion, has more than quadrupled from the start of this millennium.*
- ii. The World Bank data also show that India's per capita income rose to \$1,610 (around Rs. 1 lakh) a year during 2014. It would take India a little more than a decade to rise from its current 'lower middle income' category to the 'upper middle income' level.*
- iii. India's growth rate, at 7.4 per cent in 2014, makes it the fastest growing major economy along with China.*

Sectoral Shares and Growth of Income in India

Any economy consists of many activities because people need various goods and services for consumption. These activities differ on the basis

of raw materials used by them and the purpose for which the production is carried out. Food items, grains, vegetables, fruits, milk, fish, etc., are produced using mainly the natural resources and most of them are directly consumed. These goods are bulky and cannot be stored easily.

Many other goods are 'manufactured', i.e., raw materials are transformed into more usable and storable forms. Thus, cotton is transformed into cloth, iron ore into steel, wood into furniture, lime stone into cement, and so on. These manufactured products can be stored for a longer time and can be easily transported.

Then, we also need services provided by different people. These services must be used as they are provided and cannot be stored. Because of this they are more valuable. The coaching by your teacher, treatment by your doctor, transportation by your driver, finance from your banker, communication by your mobile service operator, etc., are some of the services you use as they are being provided. The quality of service depends upon the ability of the provider rather than the raw materials unlike in agricultural and manufacturing activities.

It is customary to classify the above activities as falling into three sectors, viz., primary, secondary and tertiary. Let us discuss them below.

Primary Sector

The primary sector consists of all nature based activities like agriculture and allied activities like Sericulture, Horticulture, Animal husbandry, Poultry, Fishery, Floriculture, etc.

Importance: In the primary sector, agriculture is the predominant activity and has the largest share in national income. So let us concentrate on the role and importance of agriculture in the Indian economy. Even today, it is considered to be the backbone of our economy.

Secondary Sector

Secondary sector, also called as manufacturing sector, converts raw materials into finished products. Usually, the secondary sector consists of all industrial activity along with construction and power generation. However, industrial activity is a dominant and important activity.

Importance of industrial Sector: The importance of Industrial sector has been increasing after independence as discussed below. Industry contributes nearly one-third of national income, has helped in building the basic infrastructure like transportation, power and communications and produces a wide array consumer goods which you use in your daily life.

Tertiary sector

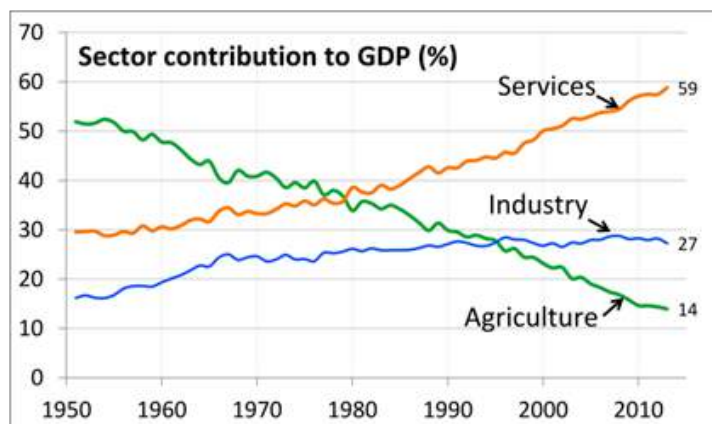
Tertiary sector is also called Service Sector. It has been growing at a fast rate throughout the world including India. You will be astonished to see the number of different types of shops; telephone services; educational institutions; hospitals; health centres; hotels; restaurants; financial and banking establishments; coaching, training and consultancy activities; and social service agencies around. All these services aim at making your life more comfortable and valuable. Hence it is important to know the role and importance of service sector in our economy.

Service sector is the largest contributor to the national income at 59% and employs about 28% of workers. It has helped in attracting huge amount of foreign capital and in earning large sums of foreign exchange. India earned Rs.5 lakh crores through exports of services in 2014-15.

Sector wise shares and growth rates of national income

The sector-wise shares have changed overtime. The following chart shows the contribution of different sectors to our national income during 1951 to 2013.

Figure : Changes in Sectoral Shares of GDP in India, 1951 to 2013 (%)



The chart clearly shows the declining importance of the primary sector and the growing importance of the tertiary sector. The industrial activity has also expanded. Growth rate of income by sectors is given in Table.

Table : Average Growth Rate of GDP by Sectors (% per annum)

Period	Agriculture	Industry	Services	National Income
1951-1965	3.13	6.61	4.58	4.09
1966-1980	2.55	3.90	4.33	3.41
1981-1995	4.21	5.44	6.37	5.26
1996-2013	3.23	7.10	8.61	7.01
1951-2013	3.00	5.14	6.13	4.97

Source: Calculated from Planning Commission data

The data shows that while the growth of the service sector is the highest, agriculture has grown at very low rates. The service sector has emerged as the engine of economic growth. Industrial growth has fluctuated due to many reasons. The declined share of agriculture and its lower growth rate have deepened rural poverty India.

Small Scale Industries – Importance and Problems

Industrial development is a prerequisite for faster development of any economy. Small industries which can be set up anywhere with simple technology, employing fewer number of people and catering to the local market, are considered to be vital components of development.

The small and medium enterprises have always been defined in terms of investment in plant, machinery and equipment. The present definition of the enterprises as given by the Micro, Small and Medium Enterprises development (MSMED) Act, 2006 is as follow :

Enterprise	Manufacturing Sector	Service Sector
	Investment in plant & machinery	Investment in equipments
Micro Enterprises	Below 25 lakh rupees	Below 10 lakh rupees
Small Enterprises	Rs. 25 lakh to Rs. 5 crores	Rs. 10 lakh to Rs. 2 crores
Medium Enterprises	Rs. 5 crores to Rs. 10 crores	Rs. 2 crores to Rs. 5 crores

Importance of Small Scale Industries

Increase in small industrial activity is considered as essential for the economic growth and development of the country.

i. Employment generation: Small scale industries are labour intensive in character. They generate huge employment opportunities.

ii. Mobilisation of resources and entrepreneurial skill: Small-scale industries have succeeded in mobilizing savings and entrepreneurial skill from rural and semi-urban areas. who otherwise would have gone unnoticed.

iii. Equitable distribution of income: Small entrepreneurs stimulate redistribution of wealth, income and political power in a society.

iv. Regional dispersal of industries: The concentration of industries in a few cities leads to over-crowding, pollution, creation of slums, etc. This problem is solved by small scale industries which can be located in small town and bring about dispersion of industries across the country.

v. Development of technology: Small scale industries have a high capacity to generate and absorb innovations. They provide ample opportunities for the development of technology and its adoption They play a strategic role in commercialising new inventions and products and Transfer of technology.

vi. Promotes exports: Small scale industries also contribute to exports and foreign exchange earnings. Their contribution to exports is about 40% of India's total exports.

Small Scale Industries in India

According to the Annual Report of the MSME Department there were 488.46 lakh enterprises working in the country in 2013-14, which employed 11.14 crores of people with a total investment of Rs. 13,63,700 crores. The share of MSME in the national income in 2013-14 was 7.8 per cent. They account for 35% of the gross value of the output in the manufacturing sector, about 80% of the total industrial employment and 40% of total export of the country.

Problems of Small Scale Industries

Despite the importance of small scale industries in the national economy, they face numerous problems.

1. **Non-availability of raw materials** : Small scale industries in India suffer from lack of raw materials, vital components and equipment.
2. **Problem of finance** : The small enterprises do not possess adequate capital for themselves and their borrowing capacity is also restricted.
3. **Low technical skill** : Technical skill and managerial ability are lower in the sector. They are unable to purchase and adopt the latest technology.
4. **Marketing problems** : Small producers cannot engage into organized marketing or aggressive advertisement as the large producers do. They are also not in a position to conduct market research to promote their sales. This constrains their sales growth.
5. **Competition from large scale industries** : In many situations, the large scale industries work to the detriment of the small scale industries either through aggressive marketing or procurement of inputs making the small industries helpless.

However, the Government of India has taken many measures like Startup India, Standup India, MUDRA Bank, etc. to help the small scale industries

Agricultural Distress : Causes and Remedial Measures

You have already noticed the importance of agriculture in the Indian economy. The large number of people depending on it for livelihood underscores the importance of its better performance sector. But agriculture is facing a severe crisis which is manifest in stagnation of rural areas leading to mass migration and suicides by many farmers. We will briefly study the causes and remedies to the distress.

Causes of Agricultural Distress

Many factors have reinforced each other to deepen the malady. The major causes of agricultural distress are:

i. Uneconomic size of cultivated holding: A holding refers to the area of land cultivated by a household. As the population dependent on agriculture has increased, the holdings have been subdivided into smaller pieces. According to the Agricultural Census of 2011-12, small (1 to 2 hectares) and marginal (below 1 hectare)

holdings together accounted for nearly 85 per cent of all holdings. Further, the average size of holdings was just 1.16 hectares in 2011-12. It is not possible to take up any kind of development works on such a small piece of land. The modern methods of production cannot be conveniently adopted. As a result, the productivity is lower and farmers are poorer.

ii. High population pressure: With many workers working on small plots of land, the production and income per head are very low. Many small and marginal farmers also work as agricultural labourers for factory wages.

iii. Rain-fed farming and recurrence of droughts: Indian agriculture depends on rainfall which is uncertain, erratic and inadequate. Irrigation is provided to only 30 per cent of agricultural land (43 million ha out of 143 million ha of cultivated land) and the rest of the area (about 70%) depends on only rainfall. It is said that 'Indian agriculture is a gamble with the monsoons'. Thus, lack of irrigation and frequent droughts have impoverished the farmers.

iv. Partial impact of the green revolution: The much talked about green revolution had a greater focus on rice and wheat under irrigated condition. It did not help the farmers in dry regions. The small and marginal farmers were unable to adopt the green revolution technology because of its costly nature. Therefore, a large proportion of farmers continue to remain poor and backward.

v. Decline in public investments in irrigation and other related infrastructure: The slowing down of agricultural growth is mainly attributed to the slowing down of public investment. Especially, the decline in investment in irrigation has crippled the agricultural growth.

vi. Inadequate credit from institutional sources: Supply of credit from formal sources like banks and co-operatives to the agricultural sector has been inadequate leading to greater borrowing from informal sources at higher interest rate.

vii. Inability to get Remunerative Prices: Marketing of agricultural produce is plagued with numerous problems. The farmers do not get better prices, payment is not made on time, and many deductions are made from the total bill leaving very little returns to the farmers. The price support policy of the government has also not functioned well.

Thus, there are multiple risks in agriculture – income, yield, price, input, technology and credit – that have made agriculture a less sought after job.

Remedies to Farm Crisis

The causes of the crisis also point to the remedies, some of which could be:

i. Increasing public investment: There is an urgent need to step up the government investment in drought proofing, water harvesting, research in new varieties of seeds, new cultivation methods that use less water, and retain soil fertility, extension and training of farmers in adoption of efficient crop production practices.

ii. Expanding credit availability: The small and marginal farmers, who hesitate to approach a bank or any financial institution, should be ensured greater amount of credit.

iii. Marketing reforms: Farmers should be guaranteed remunerative prices for their produce. For this purpose, markets and marketing infrastructure need to be strengthened.

iv. Crop Insurance: An insurance scheme that covers and compensates the losses of farmers for all types of risks needs to be put in place.

v. Counseling and moral support: There is a need to set up counseling centres at village level to provide moral support to distressed farmers so that they do not resort to extreme step of committing suicide.

vi. Regulating private money lenders: Apart from the above, there is a need to regulate the activities of money lenders so that they do not oppress the poor farmers who have borrowed from them for various purposes.

EXERCISES

I. Fill in the blanks with suitable word.

1. Per capita income = National income divided by _____.
2. Agency responsible for estimation of national income in India is _____ .
3. The highest share in national income of India today is from _____ Sector.
4. Small scale industries are defined in terms of _____ .

5. Indian agriculture is said to be _____ with monsoons.
6. Extent of irrigated area in India is about _____ per cent of cultivated area.

II. Answer the following questions and discuss them in groups.

1. Define national income.
2. If the total income of a family of 5 members in 2015 was Rs. 567890, calculate the per capita income of the members of the family.
3. State how small industries are helpful for growth of a country like India.
4. What are the reasons for decline in the size of agricultural holdings in India?
5. Examine the reasons for crisis in Indian agriculture.
6. Discuss the measures to overcome agricultural crisis in India.

III. Project Work

1. Visit a small scale industry in your vicinity and discuss with the owner/manager about its problems.

IV. Activity

1. Organise mock parliament in school, discuss in there about agricultural problems and remedies.



CHAPTER - 4

GOVERNMENT AND THE ECONOMY

In this chapter you learn :

- *The importance of planning in promoting economic development.*
- *The successes and failures of planning in India.*
- *The concepts of liberalization, privatization and globalization (LPG).*
- *The major ongoing programmes for development in India.*

Introduction

Government plays an important role in promoting economic development and improving the welfare of the people. It undertakes a number of activities that promote growth, stability, equity and rule of law in the economy. It also takes measures to overcome the problems like unemployment, poverty, inflation, lack of basic facilities and inequality.

When India attained independence in 1947, the economic conditions were deplorable. The per capita income was low; food production was less than the requirement; there were few industries; much of our machineries had to be imported; transport, energy, communication infrastructure were insufficient; educational, health and financial services were available to only a few people; and there was a situation of backwardness everywhere. Therefore, the government's participation in bringing about development and removing the bottlenecks to development was crucial. The leaders responded positively and initiated several measures to bring about overall socio-economic development of the country. For this purpose, planning was adopted as the strategy to bring about all round progress in the economy.

Planning in India

Planning refers to the deliberate actions of the government to systematically allocate and utilize available resources to achieve predetermined goals in the interest of all. Thus, planning involves identification of requirements, setting goals, mobilizing resources, designing action plans to utilize the resources and monitor them, and evaluate whether the goals are achieved or not.

To perform all these activities, the Planning Commission was established in 1950. However, the Planning Commission was replaced by the National Institute for Transforming India (NITI Ayog) in 2015. The Planning Commission adopted the strategy of preparing five year plans for giving specific direction to the economy within the framework of mixed economy. The NITI Ayog aims at preparing long run vision strategies as guide posts for steering economy to achieve desired goals.

Objectives of Planning in India

The general objectives of Indian planning are as follows :

i. Increasing the rate of economic growth: The increase in national income was planned for, to bringing down the poverty.

ii. Bring about modernization in the economy: Indian planning aimed at modernization for enhancing its capacity to produce more goods and services.

iii. Achieve self-reliance: Initially, we were dependent on other countries for most of our requirements, especially technology, food and fuel. in order to avoid foreign intervention in domestic policies, the planners emphasized reduction of imports by promoting domestic production.

iv. Reduction in the inequality of income and wealth: The planners also gave importance to redistribution of wealth in the economy. The focus was on ensuring that the benefits of economic growth reach the poorer sections and that every Indian is able to meet his or her basic needs such as food, a decent house, education and health care.

v. Development of Infrastructure: Greater importance was given to strengthening basic infrastructure like transport, communication, power, irrigation facilities, schools, hospitals, research and extension for faster and higher growth of countries.

vi. Development of financial institutions: It was aimed to establish broad based financial institutions and strengthen the same for mobilization of resources and to make them available to the priority sectors for smoother growth.

vii. Balanced regional development : Due to many reasons, some regions tend to remain backward or grow at slow rates. Hence, in order to help such regions to catch up with the fast growing ones, planning in India aimed at balanced regional development.

viii. Promoting private sector : Indian planning adopted a mixed economy framework and provided sufficient scope for the private sector also.

So far we have implemented eleven five year plans and almost completing the twelfth five year plan. These plans have been implemented within the broad framework of the above objectives. But each plan has focused on critical problems of the period during which it was implemented. Table provides information about plans in India.

Table : Five Year Plans in India

5 Year Plan	Period	Focus	Investment (Rs. Crores)
First	1951-1956	Food Production	1,960
Second	1956-1961	Industrial Production	4,672
Third	1961-1966	Self-reliance	8,577
Annual plans	1966-1968	Growth in food production	6,251
Fourth	1969-1974	Growth and Poverty Alleviation	6,160
Fifth	1974-1979	Poverty Alleviation and Self-reliance	42,300
Sixth	1980-1985	Poverty Alleviation and Self-reliance	1,09,953
Seventh	1985-1989	Food Production, Employment and Productivity	2,22,169
Annual plans	1990-1991	-----	Not available
Eighth	1992-1997	Employment generation	4,34,100
Ninth	1997-2002	Accelerating Growth	9,41,041
Tenth	2002-2007	Comprehensive and faster growth	15,25,639
Eleventh	2007-2012	Inclusive growth	36,44,718
Twelfth	2012-2017	More inclusive growth	76,69,807

The tremendous increase in investment could be noticed.

Achievements and Failures of Indian Planning

Indian planning is a classic example of very notable achievements and serious failures. That India has become a very huge economy and one of the fastest growing economies is itself a testimony to the achievements of Indian planning.

Achievements

i. Increase in National Income and Per Capita Income: The size and growth rate of national and per capita incomes have both increased. During planning period national income has increased manifold. The per capita income was Rs. 7513 (at constant prices) in 1950-51 which increased to Rs. 74193 in 2014-15.

ii. Development in Agriculture: The production of food-grains which was 51 lakh tonnes in 1950-51 increased to 176.4 million tonnes in 1990-91 and further to 252 million tonnes in 2015-16. Production of all crops like cotton, sugarcane, oilseeds, vegetables, fruits, milk and other agricultural produce has also increased manifolds. The much needed food security to the nation, has been ensured,

iii. Development of Industry: There has been a substantial improvement of the capital goods industry including iron and steel, machinery, chemical fertilisers, etc.

iv. Development of Economic Infrastructure: Five-year plans laid the foundation for development of economic infrastructure which include transportation, power generation, communication, irrigation, etc.

v. Development of Social Infrastructure: Development of social infrastructure is another important achievement of our five year plans. It consists of such vital services as education, health and family welfare, housing, labour welfare and welfare of backward classes etc.

vi. Self Reliance: India was able to achieve self reliance in the production of basic consumer goods and food grains required by our people. The emphasis was laid on the development of basic industries like steel, power and chemical fertilizer.

vii. Employment Generation: Large employment opportunities have been created through establishment of small and cottage industries, spread of technical education, development of self-employment schemes, creation of larger industries, improvement of agriculture and service sectors etc.

viii. Capital Formation: Development of agriculture, industry and defence and increased income have increased the rate of capital formation has also.

ix. Development of Science and Technology: India has also progressed in the field of science and technology. India stands third in the world in the sphere of science and technology. Indian engineers and scientists are in a position that they can independently establish any industrial venture.

x. Social Justice: The fundamental objective of Indian planning is to achieve growth with social justice. Measures like land reforms, abolition of bonded labour, liquidation of rural indebtedness, fixation of minimum wages, provision of basic minimum needs, and reduction of concentration of power and economic disparities have contributed towards achieving social justice.

Failures

There are also many failures of Indian planning. Prominent of them are as follows:

i. Slow growth in Production and Income: In the five year plans, growth rate of production was slow in many sectors and lower than targeted levels.

ii. Rise in Prices: Due to slow growth of production but a higher increase in population, prices continued to rise in every plan.

iii. Increase in Unemployment: During the five year plans, unemployment went on rising. Although employment opportunities were created, they were not in tune with the rising youth population resulting in huge unemployment. Actually, the growth during the last 25 years is described as job-less growth

iv. Persisting Poverty and Inequality: Plans have also not succeeded in reducing poverty and inequalities. Although, the population living below poverty line has come down from about 45% in 1970s to about 22% now, the total number of poor in the country is one of the largest in the world. Inequalities have also not come down.

v. Inadequate Development of Infrastructure: The infrastructure facilities in terms of transport, communications, power, irrigation, educational and health facilities and financial institutions have not expanded. in tune with the requirement for a faster growth and not on par with that are available in other countries.

vi. Inefficient Administration: One of the main short comings of Indian plans has been poor implementation. Plans are formulated after a good deal of discussion and deliberation but their targets are not achieved due to inefficient administration, dishonesty, vested interests and red tapism etc.

vii. Increase in Exports not as expected : Due to slow increase in production, use of traditional technology and inefficient production, our goods are not competitive in the export markets. Our policy was more inward-looking. Because of these reasons, rise in exports and export earnings are not as expected.

Thus, many deficiencies and inadequacies are identified with reference to planning in India. We can conclude that plans are sound but the problem is of proper implementation.

Economic Reforms (LPG Policies)

Many economists became dissatisfied with the performance of the Indian economy, especially the public sector enterprises. During 1990-91 India faced serious economic problems. The huge deficit in trade balance, declining foreign exchange reserves, severe inflation, and very high budget deficit crippled the Indian economy and also life of the people.

In this context, the need for reforming economic policy was widely felt and hence the new economic policy was initiated in 1991. The new economic policy is also called as 'economic reforms'. As these policies comprise of liberalization, privatization and globalization they are also called as LPG policies.

Meaning

Economic reforms refers to the adoption of policies to eliminate the market barriers, encourage economic participation from private

sector, reduce the fiscal deficit, increase exports and reduce imports, etc. for increasing the growth rate of the economy. This package of reforms consisted of:

- i. A liberal industrial policy to invite foreign investment by privatization of industries and abolishing the licensing system.
- ii. Automatic approval for Foreign Direct Investment (FDI) for many activities.
- iii. A liberal import-export policy for ensuring easy exports of Indian goods and obtain the necessary raw materials.
- iv. Reforming the banking and financial sector in accordance with the internationally accepted standards.
- v. Reforms in the tax structure for ensuring higher coverage of tax payers and increasing the tax revenue.
- vi. Withdrawing and restricting government interference on investment and also privatization of public sector enterprises.

The economic liberalization has helped India to grow at faster pace. India is now considered one of the major economies of Asia. The Foreign investment in India has increased over the years. Many multinational companies have set up their offices in India. The per capita GDP of India has increased, which is a positive sign. India has emerged as a leading exporter of services, software and information-technology products. Many companies such as Wipro, TCS, HCL Technologies, Tech Mahindra have worldwide fame. Thus the new economic policy is taking India towards liberal economy or market economy. It has relieved India much of her hardships that she faced in 1990-91. More than everything else India could withstand the economic recession that swept the world in 2008-09.

Current programmes for economic development of the Government

The governments have implemented various programmes for accelerating economic development. Few prominent current programmes are as follows:

1. General Development

- i. **Digital India** : To ensure that government services are available to citizens electronically and people get benefited from the latest information and communication technology.

2. Agricultural and Rural Development

- i. **Pradhan Mantri Fasal Bima Yojana** : Provide insurance cover to rabi and kharif crops and financial support to farmers in case of damage of crops
- ii. **Pradhan Mantri Krishi Sinchayi Yojana** : Irrigating the field of every farmer and improving water use efficiency to provide 'Per Drop More Crop'.
- iii. **Mahatma Gandhi National Rural Employment Guarantee Scheme**: Legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage
- iv. **Pradhan Mantri Gram Sadak Yojana** : Good all-weather road connectivity to unconnected villages

3. Industrial development

- i. **Make in India** : To encourage multi-national, as well as domestic companies to manufacture their products in India and create jobs and skill enhancement in 25 sectors
- ii. **Startup India and Standup India** : To provide support to all start-up businesses in all aspects of doing business in India
- iii. **Pradhan Mantri MUDRA Yojana** : The small businesses/ startups or entrepreneurs can avail loans from Rs. 50 thousand to 10 Lakh to start/grow their business under the three, Shishu, Kishore and Tarun categories of the scheme.

4. Social Sector

- i. **Swachh Bharat Abhiyan** : To fulfil Mahatma Gandhi's dream of a clean and hygienic India
- ii. **Skill India** : To provide encouragement to youth for development of employable skills by providing monetary rewards by recognition of prior learning or by undergoing training at affiliated centres.

- iii. Pradhan Mantri Jan Dhan Yojana :** National Mission for Financial Inclusion to ensure access to financial services, namely Banking Savings & Deposit Accounts, Remittance, Credit, Insurance, Pension in an affordable manner
- iv. Pradhan Mantri Jeevan Jyoti Bima Yojana :** Life insurance scheme aimed at increasing the penetration of life insurance cover in India. The scheme is open and available to all Indian citizens between the age of 18 to 50 years.
- v. Pradhan Mantri Suraksha Bima Yojana :** Accident insurance scheme aimed at increasing the penetration of accidental insurance cover in India. The scheme is open and available to all Indian citizens between the age of 18 to 70 years.
- vi. Atal Pension Yojana :** The scheme provides a monthly pension of Rs 1000 to Rs. 5000 per month based on the contribution amount to targeted to the private unorganized sector and is open to all Indian citizens between the age of 18 to 40 years

5. Urban Development

- i. Atal Mission on Rejuvenation and Urban Transformation (AMRUT):** To enable better living and drive economic growth stressing on the need for people centric urban planning and development
- ii. Pradhan Mantri Awas Yojana:** To enable better living and drive economic growth stressing on the need for people centric urban planning and development.
- iii. Smart Cities Mission :** To develop 100 cities all over the country making them citizen friendly and sustainable

The country is witnessing higher growth than many developed countries and is slated to be the emerging economic super power. The state government also implements a number of similar programmes to improve the welfare of the people.

EXERCISES

I. Fill in the blanks for the following questions

1. Planning Commission was established in the year _____ .
2. The twelfth five year plan is implemented during the years _____ .
3. India is among the _____ largest country in the world in terms of GDP.
4. The current rate of poverty in India is about _____ per cent.
5. For many years India's economic policy was _____ oriented.

II. Answer the following questions in about two sentences each.

1. Define planning.
2. List the prominent objectives of planning in India.
3. What are the major failures of Indian planning?
4. Describe India's economic situation during 1990-91.
5. List the major initiatives under the economic reform measures.

III. Activity

1. Make a chart of various currently ongoing programmes of development and discuss with your friends about them
2. Gather information about development and welfare programmes being implemented by the Government of Karnataka

IV. Project

1. Prepare a report of 1000-1500 words indicating the progress of Indian economy since economic reforms.

