

**SOCIAL SCIENCE**  
**STANDARD NINE**  
**TERM I**

# HISTORY

## 1. ANCIENT CIVILIZATIONS

The history of the human race covers the entire period since man first appeared on earth. By about 4000 BC the accumulated knowledge and skills of the preceding thousands of years, combined with new discoveries of metals enabled man to live in urban societies. The emergence of this stage was a revolution in human history known as the metal age revolution. It led to the emergence of the first civilizations which are known as **River Valley Civilizations**. Such river valley civilizations were noted for the effective use of metal for cultivation, weapons and domestic use.

The **Bronze Age civilizations** which flourished in different parts of the world between 5000 BC and 500 BC were

1. The **Indus Valley civilization** or the **Harappan culture** 3250 to 2750 BC.
2. The **Tigris – Euphrates civilization of Mesopotamia**, the modern Iraq (3500 BC to 1000 BC)
3. The **Nile Valley Civilization** in Egypt (4000 – 500BC)
4. The **Hwang – Ho** or the **Yellow River civilization** in **China** (3500-3000 BC)

### The Nile Valley Civilization of Egypt

Among the four civilizations of the **Bronze Age**, the **civilization of Egypt** which flourished in the valley of the Nile, is believed to be the oldest of which systematic records are available. The **archaeologists** were able to find huge **pyramids**, the mysterious **sphinx**, ruins of temples and **tombs**, furniture

and clothing and even well preserved human bodies (**Mummies**). Egypt is known as the “**daughter of Nile**”. Herodotus, the Greek historian aptly called Egypt, “**the gift of Nile**” The Egyptian civilization was at its pinnacle of glory about 5000 years ago.

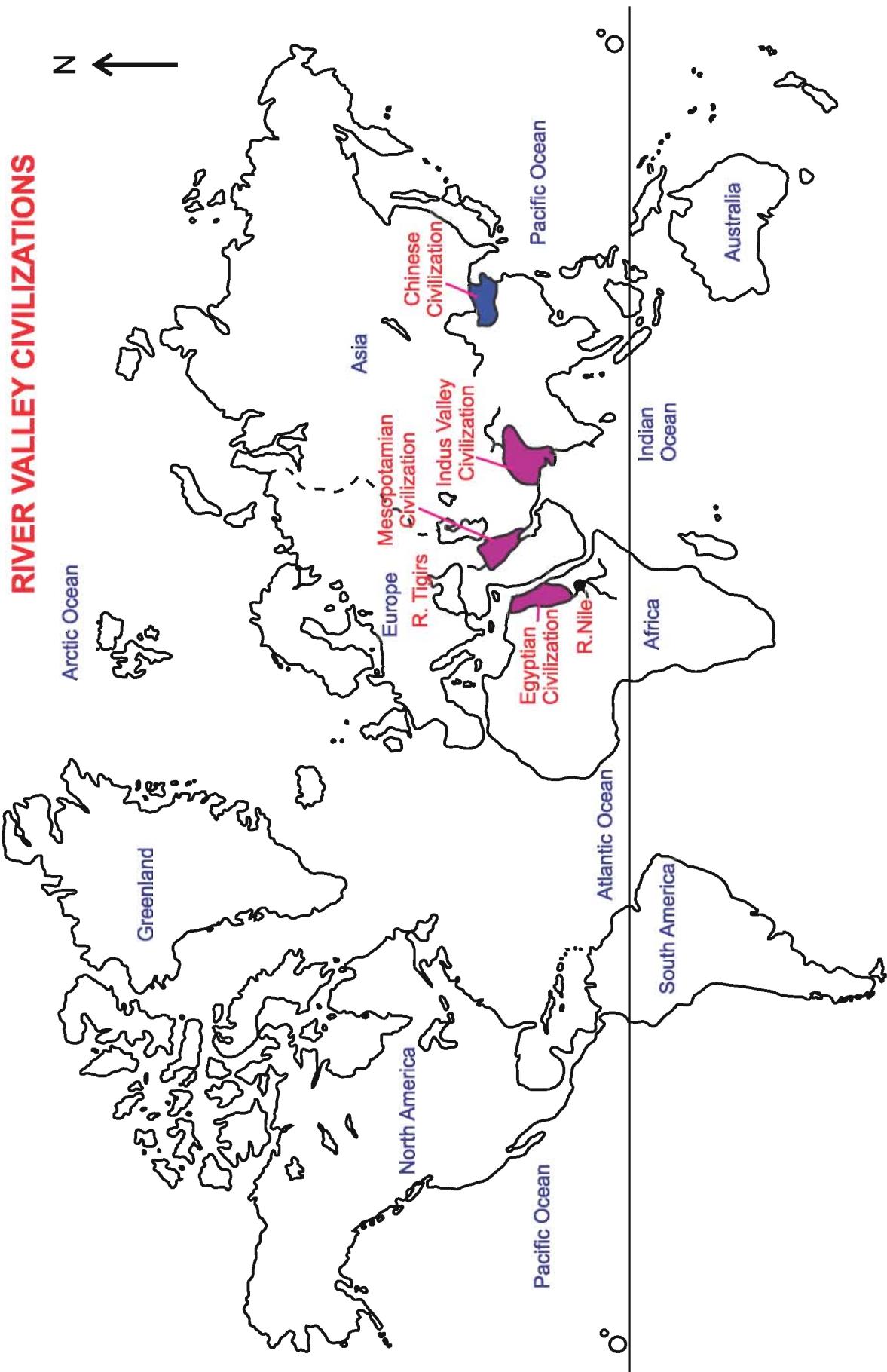
#### Political Condition

The people of ancient Egypt consisted of various tribes. The innumerable tribal chieftains (**Nomes**) were gradually merged into two kingdoms under strong kings. Later on entire Egypt was united under one **Pharaoh**. The Pharaohs were absolute monarchs. The kings were believed to have descended from the **Sun God**. They lived in great luxury. The Pharaoh was the chief justice, chief priest and chief commander. After his death his body was preserved in the form of a ‘**Mummy**’. He had the power to declare wars and make treaties. The foremost among Egyptian kings of this period were **Thutmose I**, and **Thutmose III**. Emperor **Thutmose III** was known as the “**Napolean of Egypt**”.

#### Socio – Economic Condition

The Egyptian society was composed of three classes namely the **aristocracy**, the **middle class** and the **slaves**. The slaves were forced to work for the construction of pyramids, temples, canals and dams. Generally speaking, the king and his lords were at the top in the social ladder. The priests and the nobles formed a privileged class. They lived a life of comfort. Merchants, artisans, small land owners formed the middle class of the society.

## RIVER VALLEY CIVILIZATIONS



The position of women was a unique one. They practiced monogamy and endogamy.

**Agriculture** was the main occupation. They introduced the process of irrigation by digging canals in basins. They knew the art of making several articles of metal, particularly of bronze. **Ship-building** became an important trade, along with pottery and cloth weaving. Both internal and external trade were highly developed. Their main means of transport was navigation in the river Nile and the sea.

### Religion

Religion dominated the **political, economic, intellectual and social life** of the Egyptians. The ancient Egyptians practiced polytheism. Their principal god was the **Sun God, Amon or Aton or Ra**; the other important gods and goddesses were **Osiris, Isis and Horus**. The images of these gods were carved out of big stones. They were shaped as partly human and partly animal. They believed that man would have a resurrected life, and a trial by God. This religious belief inspired them to **mummify their corpses** and to construct pyramids (**Tombs of the Pharaohs**) to preserve dead bodies. The great **pyramid of Gizeh** built for the **Pharaoh Cheops (Khufu)** is 481 feet high.



Pyramid of Gizeh

The preserved and embalmed dead body inside the tomb was called mummy. The mummy was placed in a wooden **coffin** and it was sealed in a stone box called **Sarcophagus**.

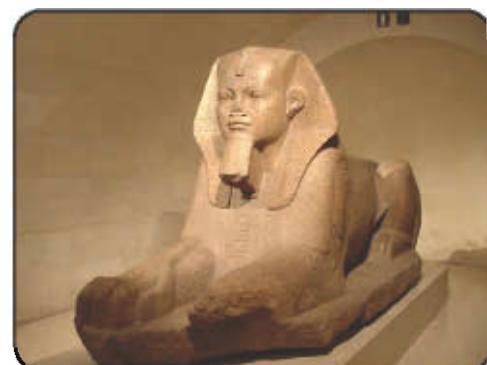


The Mummy case

In order to make the journey of the Pharaoh to the next world comfortable, food, clothing and furniture were placed inside the tomb. **Pharaoh Amenhotep IV**, popularly known as **Akhnaton** enforced **monotheism**, with **Aton** as the only god to be worshiped by people. He also declared that he was against fighting and wars.

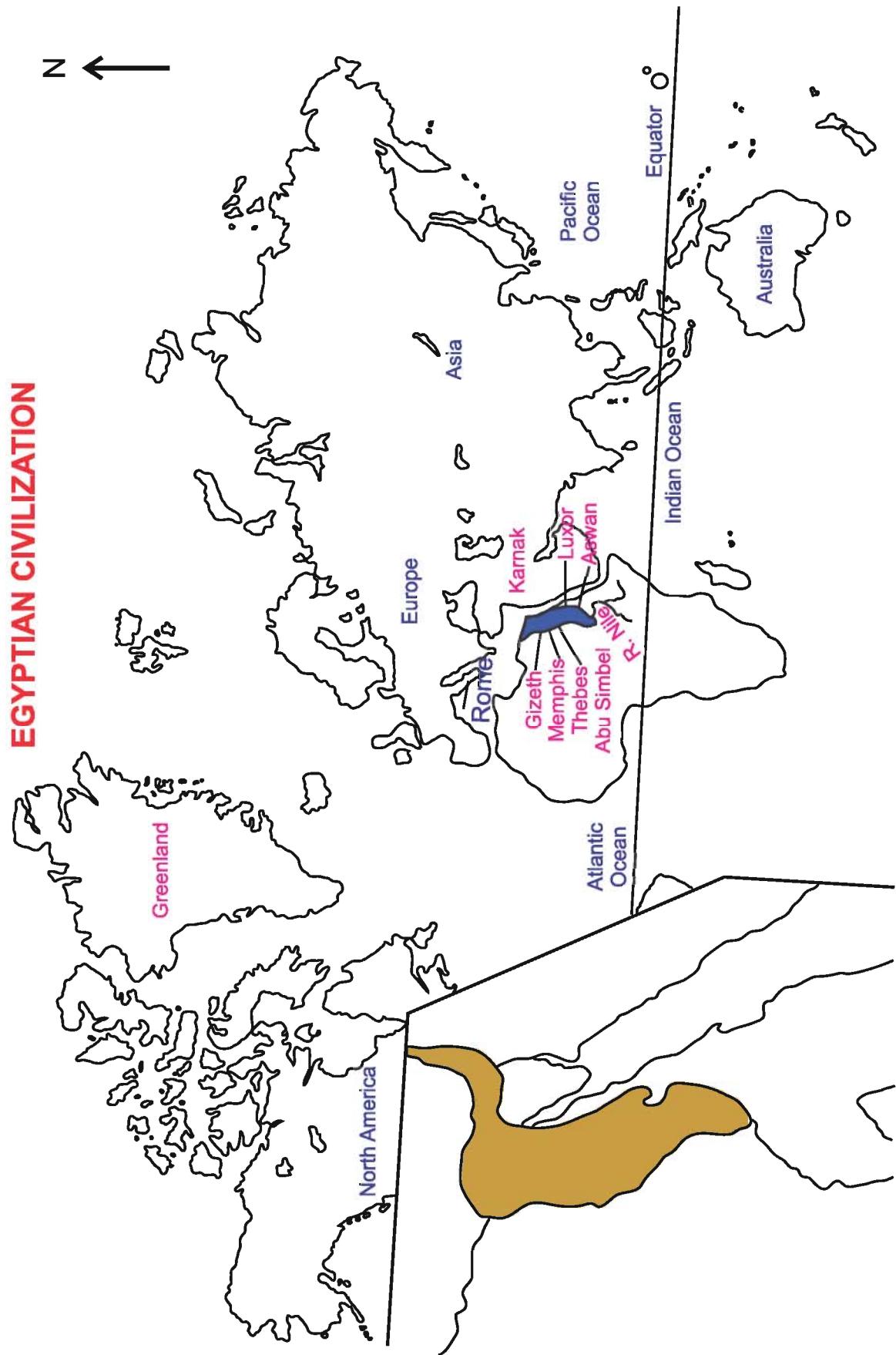
### Art and Architecture

Egypt was the earliest home of art, **architecture** and **sculpture**. The pyramids and the sphinx are the most



The Sphinx

## EGYPTIAN CIVILIZATION



beautiful and wonderful specimens of their architecture and art. The sphinx is a **mythological** animal with the head of a man and body of a lion.

The Greek historian and the father of history **Herodotus** wrote that 30,000 men worked for 20 years to complete the structure of the pyramid of Pharaoh **Cheops (Khufu) at Gizeh**. It is regarded as one of the seven wonders of the ancient world. The temple at **Karnak** is a fine monument.



**The Karnak Temple**

### **Writing**

The ancient writing of Egypt was known as **Hieroglyphics**. Hieroglyphics is a Greek word, which means Holy picture. They first used a system of pictographs. There were more than 2000 pictograph symbols. Writing materials consisted of **papyrus, reed pen, ink and ink pot**.

Egyptian literature is predominantly religious in nature which included book of '**the dead**' and '**coffin texts**'. They also discovered the secrets of eclipses, movements of planets and prepared a solar calendar. They calculated the days between floods in the Nile and fixed the solar year with 365 days. The cycle of Zodiac is a gift of

Egyptians to the science of **Astronomy** and **Astrology**. They prepared star tables. Tremendous progress in the field of medicine and surgery were made. They were the first to introduce a decimal system and to develop geometry.

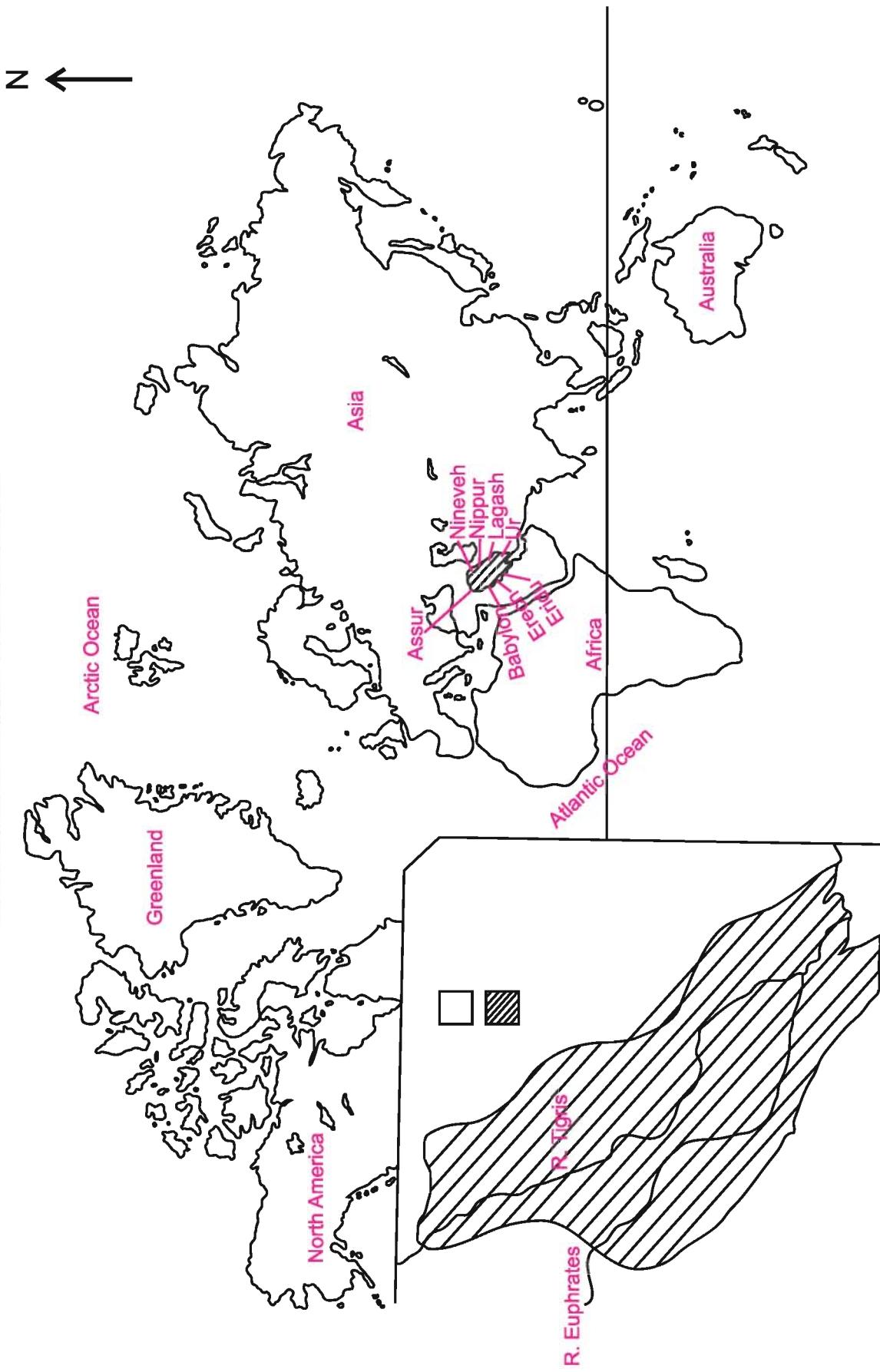
### **Trade and Commerce**

Agriculture was the main occupation of the Egyptians. The Nile Valley became the centre of great economic activity. They carried on trade in **ivory, gold, ebony, ostrich feathers** and **slaves** with Libya and Sudan. They imported spices, scents, colours, fine cloth and sandal from India. They learnt the art of making jewellery, glassware and furniture. The world is deeply indebted to them not only for their contribution to the civilization but also for their art and crafts. Thus Egypt made several unique and valuable contributions to the world.

### **Mesopotamian Civilization**

The great Mesopotamian civilization comprises the Sumerian, Babylonian and Assyrian cultures. This civilization flourished in a region between two rivers, i.e., Euphrates and Tigris, hence the name Mesopotamia (meso - in between, potam - rivers; i.e., the land between two rivers). Both the rivers, the Euphrates 2760 kms long and the Tigris 2000 km long, have their source in the mountains of Armenia. The valley between these two rivers is in the shape of crescent and the region is fertile, hence is known as the 'fertile crescent'. The Garden of Eden mentioned in the Old Testament of the Bible was believed to have been situated within this region. The fertility of the soil and availability of water

## MESOPOTAMIAN CIVILIZATION

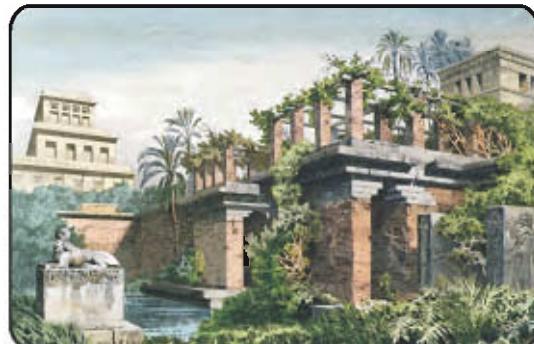


attracted many tribes to this region. The peculiar feature of the Mesopotamian civilization was its complex character.

### Political Life

The word Sumerian means black headed. The historians tell us that they did not belong to the Aryan or the Semitic race. They settled in the southern part of Mesopotamia near the Persian Gulf. They adopted a city state type of government. Sumer was their chief city state, so they were called Sumerians. Their city states were governed by patesis (Priest Kings). The most important city-states were Ur, Larsa, Kish, Lagas, Eridu and Ammon. They had no physical barriers to prevent immigrations. So their kingdom was conquered by the Semitic king of Akkad, Sargon I.

Bab-Ilu was made the capital of Amorite by king SUMMUABU, and their city was popularly known as Babylon. Amorites were called Babylonians and their powerful king was Hammurabi. His reign witnessed all round prosperity and was sometimes described as the golden age of Mesopotamia. Later on Assyrians conquered Mesopotamia. They were cruel and believed in terror activities. The chief centres of Assyrian power were Assur and Nineveh. Later on they were conquered by the Chaldeans. The Chaldean empire reached the zenith of its prosperity



Hanging Garden of Babylon

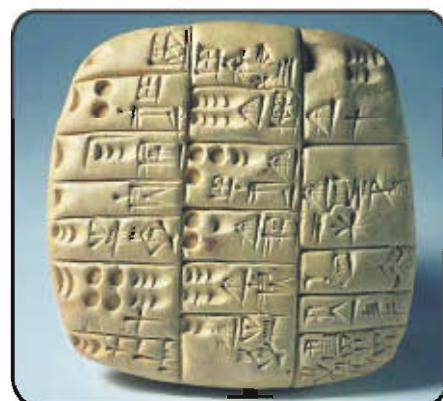
during the reign by Nebuchad Nezzar. He built the famous "Hanging Garden", which is considered as one of the wonders of the ancient world. As a result of the joint contribution of the Sumerians, the Babylonians and the Assyrians, there flourished a great civilization in Mesopotamia for long time.

### Social Life

The society was divided into three strata, the farmers, labourers and the slaves. The social regulation was based on religion. The temples were the centres of education. Women had a honoured position. Agriculture was highly developed. They carried trade with Indus and Nile Valley people. The Babylonian merchants carried on commerce by barter at first, and the city of Babylon became the centre of the international commerce.

### Cuneiform Script

The Sumerians evolved a system of writing with wedge shaped letters called cuneiform. They wrote on wet clay tablets. They were then baked or dried. A large number of these clay tablets have been found. They used nearly 350 signs. Their writings were from right to left. Most of the books of this period described gods and their activities. The most famous of these is the Epic of Gilgamesh.



Cuneiform Script

## Science and Astronomy

Science, especially astronomy and medicine made astonishing progress. Sun dials and water clocks were used to measure time. They made use of a Lunar calendar of 365 days divided into 12 months. They divided the circle into 360 degrees ( $60 \times 6$ ). The ziggurat or towered building also served as an observatory. The Sumerians knew planets like Jupiter, Venus, Saturn and Mars. Ancient Chaldean astronomers Naburi and Kidinnu made many contributions to the science of astronomy.

They adopted units of sixty to count time. The Sumerians mostly used Hexadecimal system of counting. The concept of seven days constituting a week also goes back to the days of Chaldeans.

## Religion

Religion played an important role. Their chief god was Marduk and his queen Nanshe. Ishta the mother of the gods possessed control over reproduction among plants and beasts. The Gods named Shamash, Nannar and Tammuz were worshiped by them. The tower temples known as Ziggurats were built by them. Their sculptures were inferior to those of the Egyptians.

## Code of Hammurabi



Hammurabi Code

Hammurabi was the greatest of the Babylonian rulers. He is famous in history as a warrior, conqueror, administrator and builder. The code of Hammurabi is the first written code of laws known to history. This had earned Hammurabi the title "**The World's first Lawgiver**". The code covered almost all aspects of man's life, for example debt, marriage, divorce, property, payment of taxes etc., The Laws were engraved in Semitic Language of the Amorites on a piece of stone at the top of which was a scene representing Hammurabi receiving the laws from the sun god. The code contained 4 parts namely a civil code, a code of procedure, a penal code and commercial code. The civil code recognized 3 classes of citizens, freemen, semi-freemen and slaves. The second part dealt with courts, rules and appointment of civil and religious judges. The penal code fixed punishment of crimes. This law based on the idea of "**an eye for an eye and a tooth for a tooth**" is similar to the Mosaic Law. The laws fixed prices and wages, organized trade and fixed the rate of interests. These Laws, were engraved on a tall column of 2.5m high in cuneiform script and exhibited to the public. 285 Laws were arranged in logical manner.

## Art and Architecture

The Mesopotamians developed a distinct form of architecture. Arches, tombs and pillars were the notable features of their architecture.



Temple of Karnak

The tower of Babel was considered one of the wonders of the ancient world and another which finds mention in the Bible was a Ziggurat raised to the Sun God. According to one account it rose to a height of about 200m and measured about 95m wide at the base.

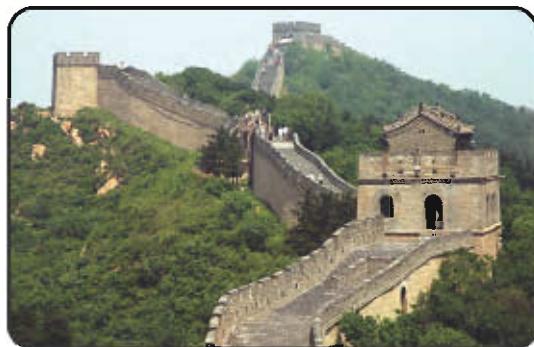
### **The early Chinese Civilization or The Hwang-Ho Valley Civilization**

The Hwang-Ho is known as Yellow river because it brings the Yellow alluvial soil and deposits it on its banks. The civilization represents the largest unbroken chain of development known to humanity. The role of rivers Hwang-Ho, and Yang-tze Kiang are significant in shaping the culture, civilization and History of China. The Hwang-Ho is called sorrow of China as its annual floods cause widespread destruction of both possessions and to agriculture. The geography and topography of China caused the civilization to develop in isolation. The Chinese people belonged to the Mongol race. They have yellow complexion, short, oblique eyes, snubbed nose and black hair.

### **Political History of Ancient China**

Fu Xi was the first known king. The Shang dynasty (1766–1122.BC) unified the territories of Yellow river. The succeeding Chou dynasty and its ruler Wu-Wang introduced many reforms, and the Chou Age is known as the classical Age of China. After the decline of Chou Dynasty China became disunited and feudal lords reigned supreme. Hence this age is known as feudal age. Shi – Huang – Ti who belonged to Chin dynasty, put an end to the feudal control.

He is remembered in history as the builder of the great wall of China, one of the wonders of the ancient world.



**The Great wall of China**

The Chinese honoured the teachings of great philosophers named Confucius, and Lao tze.

### **Socio - Economic Condition**

The Chinese society was divided into the privileged and unprivileged classes. The nobility and the priests enjoyed most of the privileges in China. The life of peasants was generally miserable. Slavery and forced Labour were common features. Women were not given much freedom in the society. The system of foot binding was common among women. They had no right to property. However there was no hereditary bureaucracy in China. The officials were chosen from a class known as "Mandarin" who were selected through a series of public examinations. After the spread of Confucianism, there was marked change in the society.

The Chinese cleared and drained the Hwang-Ho basin and cultivated crops; there canal irrigation was in practice. They wove silk garments which attracted the attention of the world trade. They developed the ceramic art to a very fine manner and even now ceramic cups are called China cups. The horse was known to them and was used in warfare.

The earliest commodities of trade in China were silk, ceramics, salt and iron. The trade was taken through the

inland canals. There were guilds to protect the interest of the merchants. During this period commercial contacts with Asia, South East Asia, the Mediterranean region and South Asia were established. The popular drink "Tea" is also a gift of the ancient Chinese to the modern world.

### Religion and Philosophy

Chinese believed in ancestor worship and made offerings to them. They also worshipped petty village deities and believed in the existence of good and evil spirits. To welcome the good spirits and ward off evil spirits, they used to build towers in each village and burst crackers to ward off evil spirits. They believed that a mythological dragon was protecting their land and people. The great Chinese thinker LaoTse condemned ritualistic practices, and advised people to go with nature. Confucius, the great Chinese philosopher emphasized that, moral living, discipline and duty consciousness alone would lead us to peaceful and prosperous society. Later on Buddhism was introduced and it soon became the most influential religion in China.

### Chinese Script

The Chinese developed a pictographic script and later brought out many changes in it. Their writing was done on bones or tortoise shells with the help of some sharp instrument. In 2<sup>nd</sup> century A.D they invented paper. Silk pieces were also used for writing. Ink was invented in 5<sup>th</sup> Century AD. The Chinese pencils were made of bamboo.

Some of the valuable scientific discoveries owe their origin to ancient China. Theories of Lunar and Solar eclipses were also developed. They

made some scientific inventions like the Water Mill, the Mariner's compass, gun powder and paper currency.



Water Mill

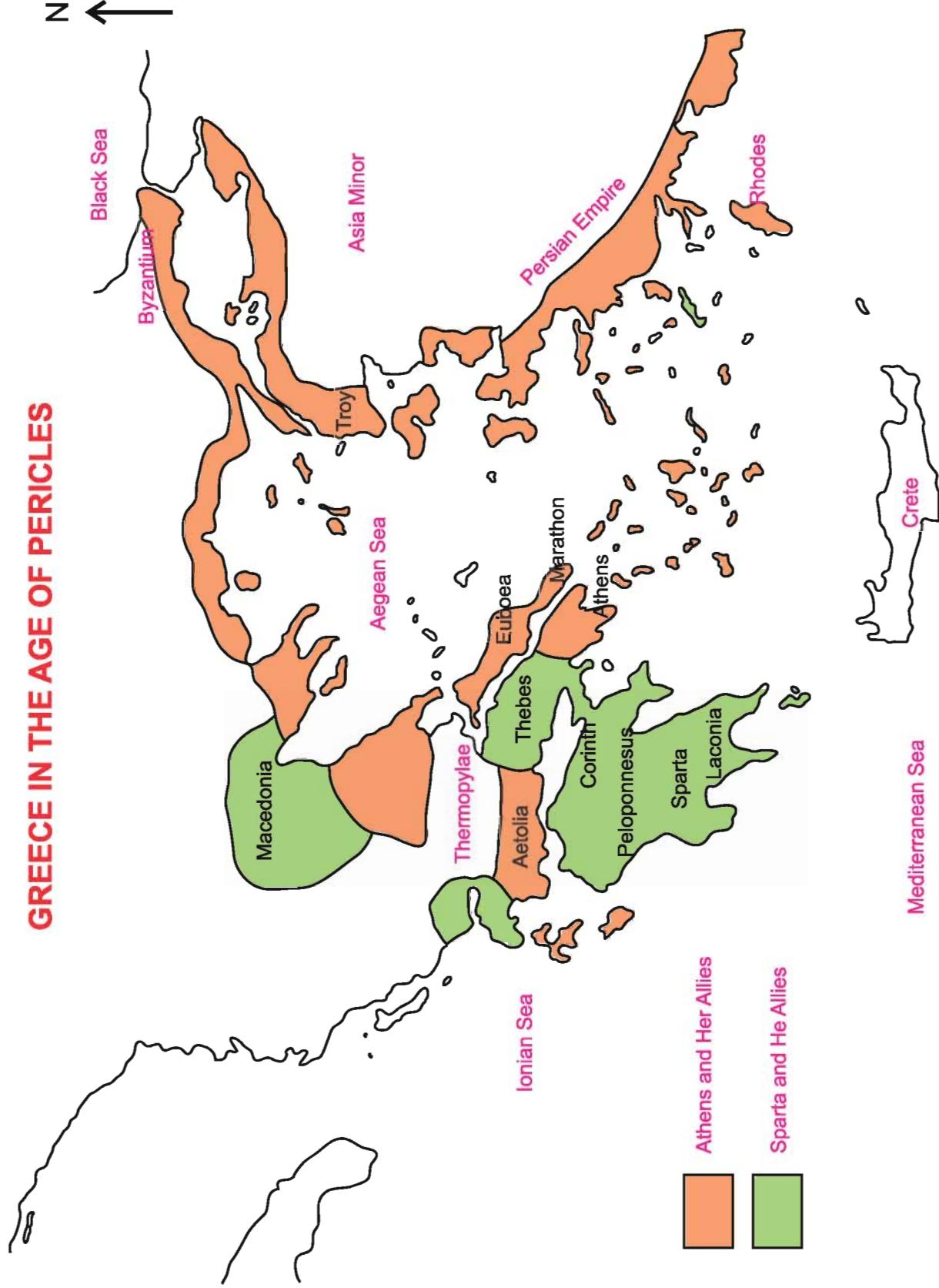
An anatomical study of human bodies was popular. In mathematics they introduced the abacus method. One of the noblest contributions of ancient China was its art of block printing. The Chinese civilization has left an indelible mark on human progress and cultural legacy of the world.

### Civilization of Europe Greek and Roman Civilization Greek Civilization

Greece is situated in the Balkan Peninsula on the south eastern part of Europe. Balkan Peninsula is separated from Asia Minor by Aegean Sea. The early Greeks came and settled in Greece in different groups as Achaeans, Ionians and Dorians. They came from the Danube River Valley. Greece is a peninsula washed by the Adriatic, the Mediterranean and the Aegean seas. The main land of Greece is full of rugged mountains. Its crisscross ranges cut up the main land into hundreds of valleys.

One of the significant features of Greek civilization has been their city states. Athens, Sparta, Corinth, Thebes etc. were the important city states in ancient Greece. Each of the city states

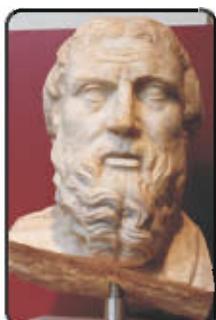
## GREECE IN THE AGE OF PERICLES



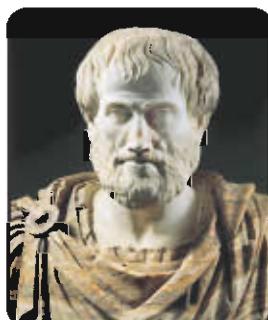
had its own government and rulers. Democratic Governments were set up. The city states often quarrelled among themselves. In the end there emerged, two powerful city states of Sparta and Athens. The Athenian democracy reached its zenith during the rule of Pericles. Ultimately the wars and conquests of Philip and Alexander of Macedonia put an end to the city states and Alexander built the first Greek Empire. As a result of this, trade developed between Europe and Asia. During the 2<sup>nd</sup> Century BC the Romans attacked the Greeks and Greece became a part of the Roman Empire.

### Contributions of Ancient Greece to World culture

Ancient Greece has contributed a lot to enrich the culture of the world. In the field of language and literature the contribution of Greece is unparalleled. The Iliad and Odyssey are the great epics written by a blind poet Homer. Herodotus, Thucydides and Plutarch were famous historians and biographers of ancient Greece. The most famous Greek philosophers were Socrates, Plato and Aristotle. Plato was a student of Socrates. He wrote the book "**The Republic**". Aristotle was a philosopher and a scientist, and he was also Alexander's teacher. Socrates is regarded as the father of Western philosophy. Herodotus is known as the 'father of history'.



Herodotus



Aristotle

The Greeks considered science and philosophy as two sides of the same coin. Hippocrates is considered the '**father of western medicine**'. Ptolemy, a geographer and astronomer believed that the earth was the centre of the universe (geocentric theory). The Greek contribution to the science of Mathematics, especially to geometry was really great. Pythagoras was a great mathematician, astronomer, astrologer and philosopher.

The temples in ancient Greece especially that of Zeus in Alexandria are the best specimens of Greek art and architecture. The best example of Greek architecture is the temple dedicated to goddess Athena in Parthenon. Myron and Phidias were the famous sculptors of ancient Greece. The Greeks were pioneers in the field of sports and games too. They used to conduct the Olympiad festival once in every four years since 776BC. This proved to be the forerunner of the Modern Olympic games.

**achievement of Myron**

ancient Greeks in the spheres of philosophy, literature, science and sports are marvellous. It is the Greeks who gave the world the idea of freedom, namely freedom of thought, speech or writing.



Myron

### The Roman Civilization

The Apennine peninsula in the centre of the Mediterranean region was the cradle of the Roman civilization. That peninsular territory is called "**Italy**" and the name Italy is of Greek origin. The river basins of "**Po**" and "**Tiber**" were the centres of

civilizational activities. The Alps mountain ranges in the north prevent the cold polar winds from penetrating into Italy, thus provide a very pleasant climate to Italy. In fact the Roman civilization can be deemed as Italian Civilization.

In the beginning monarchical system prevailed in Italy. There were Assemblies and Senates to advise and assist the kings. In due course, kingships were given up and "republics" were established. Of these republics the Republic of Rome emerged as the most powerful one. It is believed that the city of Rome was founded in B.C. 753 by two brothers named Romulus and Rhemus. By 6<sup>th</sup> century B.C. it became a Republic. The "Senate" was the legislative wing of the Republic. In that senate the propertied and influential class known as the Patricians wielded much influence. The common people who had no property were called "Plebeans". After a protracted struggle, the plebeans too gained representations in the senate. The administrative powers were in the hands of three elected consuls. The plebeans later on secured recognition of their rights through codes of law. These codes engraved in slabs of woods were known as the "Laws of Twelve Tables".

Rome in the process of its expansion, had to fight three wars with the state of Carthage in North Africa. These wars were called the Punic wars and were fought between 264 BC to 146 BC. The brave Carthaginian general Hannibal was finally defeated. All these wars made Rome a society of slaves and slave holders. The rich vied with one another to possess slaves and accumulate wealth which resulted in moral decay of the whole society. The

rule of the Consuls was followed by the rise of Julius Caesar, the most powerful general and popular leader and the foremost of the dictators of Rome. Though he introduced many reforms in the senate and improved the condition of the poor, the enemies of Caesar murdered him in a senate meeting in 44 BC. After his death, his nephew Octavious Caesar became the undisputed master of the Roman Empire. He was given the title of 'Augustus' meaning the "magnificent". He ruled for forty one years. He completed the work which Caesar started. This period was known as "Golden Age of Rome"



Julius Caesar

#### Socio-Economic Condition

Agriculture was the chief occupation of the Romans. They grew barley, wheat, beans, grapes, figs etc. Along with agriculture, they domesticated animals, such as oxen, sheep, horses, asses and goats. Roman nobles employed large number of slaves for doing agricultural work and cattle rearing. The Romans had trade relations with India, Arabia, and China. Once Rome's expanded territory there arose another class in society. This class consisted of slaves, who were engaged to work in estates. As time passed on, the slaves began to occupy a high position in the state. Roman conquests and its affluence, made the rich squander their wealth in extravagance.

## Contribution of the Roman civilization to the world

The most lasting contribution of the Romans was in the field of Law. The Roman Law developed in three main branches as (1) The civil Law, (2) The people's Law (3) The Natural Law. These Laws were codified by a later ruler Justinian and that code is known as the "**Corpus Juris Civilis**" or "**Justinian code**". The Roman concept of "**Pax Romagna**" ensured rule of law throughout the empire and it prohibited discriminations in Judicial procedures.

Religion played an important part in Roman government and life. They worshipped many gods; Janus, the double faced god, protected their home and family, Jupiter was the god of sky and Mars protected their armies. Venus was worshipped as the goddess of love. Prayers and sacrifices were offered by the priests on behalf of the Roman people. At first the emperors were hostile to Christianity and persecuted Christians. Christianity was popular among the slaves. Then in 313 AD Roman emperor Constantine made Christianity a state religion. In due course Rome became the seat of the Pope, the religious head of the Christians.

Roman art shows distinct Greek influence. They copied the Greek style in the construction of columns, or pillars. One of the most famous temple



Pantheon Temple

was that of the Pantheon. Pompey was a great architect. Their contributions to architecture are the arch and the dome. They developed mural paintings.

The Romans developed their own alphabet and their language was known as Latin. Rome produced some remarkable literary figures. Livy wrote History of Rome. Another famous historian was Tacitus. His "**Annals and Histories**" is a trust worthy work on Roman Government and society. Virgil wrote an epic in poetry. Cicero was a versatile genius. Seneca, Plautus and Terence were the most popular Roman dramatists who borrowed liberally from the Greeks. Cicero, Seneca and Marcus Aurelius Antoninus were notable philosophers. '**Meditations**' written by Marcus Aurelius is considered to be a master piece of stoic philosophy.

In the field of science, the Romans improved the medical science, Pliny, the Elder wrote a Natural History which contains scientific facts. Ptolemy a Greek and a great astronomer and geographer lived in the Roman empire. Galen was the greatest physician of his time. He studied the respiratory system and related diseases and wrote number of medical treatises.

The world is indebted to the Roman's for their share in the march of human civilization. The Romans acted as agents to spread and preserve much of what the ancient Greeks had left behind as their legacy. The Latin language, the concept of Pax Romagna (emphasising on one world, one citizenship and one law) the military system, works of engineering and codified law are precious contributions of the Romans to the world civilization.

## FEATURES OF DIFFERENT CIVILIZATIONS

<b>MESOPOTAMIAN CIVILIZATION</b>	<b>Egyptian Civilization</b>
Situated in the valley of two rivers, the Euphrates and the Tigris.  J.H Breasted described the area as the “fertile crescent”.	Situated in the valley of Nile.  Described as the “Gift of Nile” or the “Daughter of the Nile”.
Different groups like the Sumerians, the Amorites, the Assyrians and the Chaldeans ruled.	Monarchs known as Pharaohs ruled.
The form of writing was cuneiform.	The form of writing was Hieroglyphics.
Epic of Gilgamesh was famous. The code of Hammurabi is the first written code of laws to history.	Egyptians were first to make paper from a plant called papyrus.
They were polytheistic in the religion. They worshipped Enil, Shamash, Ishtar, Venus, Marduk, Saturn etc.,	They were worshippers of Nature, Ra, Osiris, Iris and Horus was their god and goddesses. The embalmed dead body known as Mummy was famous.
The tower of Babel is one of the wonders of the ancient world. The hanging gardens of Babylon were also another wonder of the ancient world.	The Pyramids and the Sphinx were the most beautiful and wonderful specimens of Egyptian art and architecture. The most famous and the largest of pyramid is found in Giza. The temple of Karnak and Abu Simbel were fine monuments of the Egyptian temple architecture.
The contributions in the field of Astronomy, Medicine and Geometry were noteworthy. The Ziggurat served as an observatory. The Astronomers Nabu and Kidinna were famous.	The contribution in the field of Mathematics was astonishing. The cycle of Zodiac is a gift of Egyptians to the science of Astronomy and Astrologers.

## FEATURES OF DIFFERENT CIVILIZATIONS

### CHINESE CIVILIZATION

Developed on the banks of two rivers the Yangtse and the Howang-Ho.

Described as "Yellow River" and also referred as the "River of Sorrow".

System of Monarchy was followed.

The teaching of Confucius was very popular and important.

The hot beverage "Tea" is a gift to modern world.

"The great wall of China" measured about 2880 km in length, is considered as one of the wonders of the ancient world. It was built by the Chinese Emperor Chin-Shi - Hung-Ti.

The Chinese Scholars have also contributed to the Astronomical Science. They could also foretell the Eclipse correctly.

### GREEK CIVILIZATION

The land of Greece lies in the region of the Balkan peninsula.

The land juts into the Mediterranean Sea.

Different groups as Achaeans, Ionians and Dorian's settled in Greece.

The most famous philosophers were Socrates, Plato, Aristotle.

Iliad and Odyssey were the great epics. The language was of Indo European origin.

The Greeks were masters in Epic, Drama, Poetry and History.

Homer, Aeschylus, Sophocles and Euripides were dramatists.

Herodotus, Thucydides and Plutarch were historians and Biographers.

Science and Philosophy are the two sides of the same coin. Euclid was a eminent mathematician Hippocrates is the father of modern medicine.

The best architecture of Greece is the temple dedicated to Goddess Athena in pantheon. Myron and Phidias were the famous Sculptors of ancient Greece.

### ROMAN CIVILIZATION

Italy was the centre of the early Roman Civilization. River Tiber runs through the centre of Italy.

Oligarchy was the form of government and the idea of republicanism was their contribution.

"Vesta" the goddess of the earth was worshipped. Jupiter, Mars, Juno and Mercury were the other gods.

Romans developed their own Alphabet and Latin became their language.

Cicero, Marcus and Aurelius were the most famous Philosophers of Rome. Horace and Virgil were famous Poets.

The Romans contribution to architecture is the Arch and the Dome.

The Romans improved the Medical Science by giving medicines freely to the poor. The significant contribution of Romans is their calendar.

## EXERCISE

### I) Choose the correct answer.

1. \_\_\_\_\_ was called as "father of medicine".  
a) Alexander      b) Hippocrates      c) Aristotle      d) Galileo
2. The Egyptian king was called as \_\_\_\_\_.  
a) Rajan      b) Guru      c) Pharaoh      d) Minister
- 3) The Sumerian calendar based on \_\_\_\_\_ days in a week.  
a) Five      b) Seven      c) Ten      d) Nine
4. Gun powder was invented by \_\_\_\_\_.  
a) Egyptians      b) Babylonians      c) Chinese      d) Indians
- 5) The Egyptian civilization grew along the \_\_\_\_\_ river.  
a) Nile      b) Euphrates      c) yellow      d) Sind

### II) Match the following.

- |                      |              |
|----------------------|--------------|
| 1. Pyramids          | Hilly region |
| 2. Great wall        | Babylon      |
| 3. Hanging garden    | Rome         |
| 4. All roads lead to | China        |
| 5. Greece            | Egypt        |
|                      | Nile         |
|                      | Euphrates    |

### III) Answer all the Questions given under each caption.

- 1) Egyptian civilization.
  - a) Who built the great Pyramid of Gizeh ?
  - b) What was the Egyptian king called?
  - c) How did the Egyptians preserve the dead bodies ?
  - d) What is a Pyramid ?
- 2) Chinese civilization.
  - a) What was known as the "sorrow of China"?
  - b) Name the great philosophers of China ?
  - c) Which was the popular drink in China ?
  - d) Who built the Great wall of China ?

**IV) Answer briefly.**

- 1) How was the Egyptian society divided ?
- 2) Write a note on Hanging garden?
- 3) Name the two great epics of the greeks.
- 4) Mention two important contributions of the Chinese to the world?

**V) Answer in a Paragraph.**

- 1) What were the gifts of China to the modern world ?
- 2) Write a note on the contribution of Romans to civilization.

**VI)** 1) Mark the following places on the outline map of the world.  
Egypt, China, Babylon, Assiriya, Greece, Rome  
2) Prepare an album to show the development of the human race.

**FORMATIVE ASSESSMENT**

1. Collect pictures and write a small note on the wonders of the ancient world. Paste them in your scrap book.
2. Collect samples of scripts used by the people of ancient civilization and paste them in your scrap book.
3. Have a discussion on the differences in lifestyle between modern man and ancient man.
4. Collect the information on the History of the Olympics games and prepare a chart to show it evolved. Show the difference and similarities between the ancient games and modern games.
5. Conduct a quiz on the features of ancient civilizations.

## 2. Intellectual Awakening of 6th Century B.C

### Confucius,Zoroaster,Mahavira and Buddha

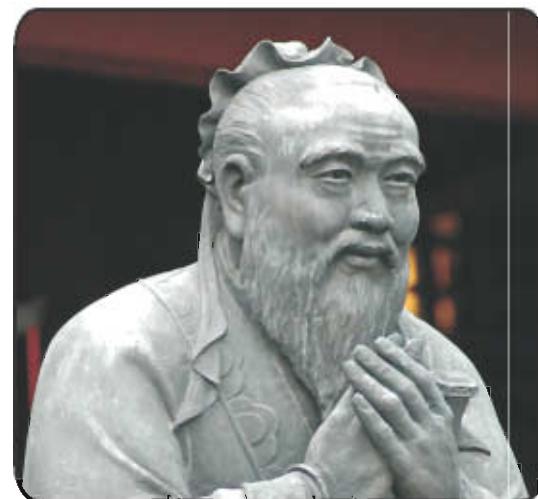
The sixth century B.C. witnessed a great intellectual awakening in various regions of the world . The reformers of all over the world raised their voice against the existing social beliefs and systems and endeavoured to reconstruct them on a rational basis. In Persia, Zoroaster launched his protest against the prevailing religious superstitions and in China, people welcomed the philosophic teachings of Confucius which gave them a higher conception of duties in life. It was an age when people in India were disgusted with old philosophical, religious and social dogmas and were striving for holistic alternatives. The new philosophy of revolt was anti - establishment in form and anti-caste in spirit. The ultimate aim of the revolt was not only spiritual but also materialistic. In due course some of the socio-intellectual movements assumed a religious form. (Example: Jainism, Zoroastrianism, Buddhism.)

The thinkers of the new movements were intellectual philosophers—and concerned with life as a philosophy of power and knowledge. In India such thinkers were the wandering teachers (*Sramanas*). They rejected the authority of the Vedas and Vedic priests, denounced the bloody sacrifices which constituted a very large part of the Religious rituals and they did not make their philosophy and doctrines, god-centric ones.

### Confucianism

Early Chinese religion was

essentially a worship of spirits and ancestors, but there was a tendency towards monotheism in the form of worship of the supreme ruler or the spirit of heaven. Heaven was the chief nature-spirit, the forefather of the emperor, and chief of the ancestor spirits. Heaven was not considered a place.



Confucius

Confucius was not the founder of any religion nor was he even a religious reformer. In his own words, he was "not a maker but a transmitter, believing in and loving the ancients". Like Gautama, he at first lived a life of luxury. His restless and penetrating mind would not allow him to remain in active. Like Socrates, Confucius was a great teacher. He established a school, in which he taught history, poetry and rules of propriety. "A man's character", he said, "is formed by the odes, developed by the rites (ceremony and courtesy), and perfected by music".

He spoke very little of gods and religious rituals, but spoke of disciplined society and of healthy social relations. Truthfulness and obedience

had to regulate social relations. Those who were in superior positions such as a father, teacher, husband or king had the responsibility of providing protection and fair treatment to the dependents; and if they failed in their responsibility, revolt would become unavoidable. Thus Confucius (**Kung-Fu-Tse**) was advocating a fair social order based on discipline and fairness to all. It would be difficult to overestimate the influence of Confucius on the Chinese people. Most Chinese scholars took pride in being his disciples. For more than 2,000 years, the philosophy of Confucius moulded and dominated the Chinese mind. **Confucianism, Christianity, and Buddhism** furnish the most conspicuous examples in the history of civilization, of efforts to convert into idealism the natural brutality of mankind.

### Zoroastrianism

Before the advent of Zoroaster, the Persians followed a socio-religious faith that resembled the beliefs and practices of Early Vedic Aryans. At that time they practiced polytheism and worshipped several deities representing natural forces, like Mitra, Varuna, Surya etc; they indulged in costly, bloody and senseless rituals, leading to exploitation of people by



**Zoroaster**

priestly class. Polytheistic faith and superstitions obstructed social unity, rational thought and moral life. Greed and selfishness ruined Persian Society. There was a need for a healthy philosophical base to redeem the Persian society from degeneration and chaos. It was at that time that Zoroaster (Zarathustra) appeared in Persia and gave them a better socio-religious order in the form of Zoroastrianism.

Zoroaster, the founder of Zoroastrianism was born in about 600 BC in North Western Iran. He was concerned about the superstitions, barbaric religious cults, polytheism and moral degeneration in Iran. He was pained to see that his people showed no discrimination between good and evil, right and wrong, individual greed and social need and between faith and superstitions. To begin with, he asked the people to give up polytheistic cults, and to accept Ahura Mazda as the only god, representing good and right. Ahura Mazda, personified as sun, fire and light, had been carrying on a relentless struggle against the evil forces (Asuras) who represented ignorance, selfishness and all vices. The struggle between good and evil became the central theme of Zoroastrianism. This struggle is manifested not only among humans, but also in all natural expressions. He asked his people to be with the good, and abjure everything that was evil so as to attain salvation and immortality. His concept of good and evil strengthened the moral base of Persian society and his monotheism served the cause of social unity among Persian people. The Zoroastrian Ahura Mazda cult did not involve any costly rituals.

Zoroastrians could practice Mazda worship in the form of fire worship in their own houses. For them the body is only the instrument of spirits hence the corpse(dead body) did not deserve reverence or preservance. Hence the Parsees neither cremate nor bury their dead, instead they expose the corpses to disposal by nature (to decomposition or to be consumed by animals or birds). This method of disposal of the dead is considered as rejection of superstitious practices centered around death, and this contrasts the Egyptian practice of mummification. Zoroaster's teachings are found in Zend Avesta, the holy scripture of the Parsees.

The social unity brought about by Zoroastrianism ensured economic and political strength. Soon, the Persians built a political civilization and powerful empire. Their Achaemenian empire emerged as the largest empire in the middle east.



Ahura Mazda

In due course superstitious rituals, and priestly dominance crept into the Zoroastrian system. However the Zoroastrian concepts of monotheism and the ongoing struggle between the good and evil, the necessity of humans identifying themselves with the good for salvation, influenced the theologies and philosophies of Judaism, Christianity and Islam.

## Jainism

Jainism and Buddhism in the 6<sup>th</sup> century B.C. satisfied the need of the time by introducing the most necessary changes. They recognised the realistic view of life. Their doctrines of Karma did not accept the belief that man's destiny is being pre-determined by supernatural forces. Instead, man's own activities (Karma) determine his future. Hence man can seek salvation not from religious rituals, but by righteous conduct.



Mahavira

Jainism was as old as the Rig Veda. It was a revolt against the then existing Brahmanism. The new system wanted to make religion simple and avoid irrational rituals. It gave new socio-religious code of conduct. The Jains claim that their religion derives its tenets from 24 preceptors of different ages. These preceptors are called Thirthankaras. The earliest Thirthankara was called Rishabha. However only the 23<sup>rd</sup> and 24<sup>th</sup> Thirthankaras are considered to be historical figures.

The 23<sup>rd</sup> Thirthankara, named Parsavanath, was a prince who lived

250 years before Mahavira. He became an ascetic and preached four disciplines to his disciples.

1. Non – injury to living beings (ahimsa)
2. Not to speak untruth
3. Not to steal
4. Not to possess

Vardhamana, the 24<sup>th</sup> Thirthankara was born in Kundagrama, near Vaisali, in 599 B.C. in a royal family. His father was Siddhartha and mother Trisala. Vardhamana married Yashodha and had a daughter. After the demise of his parents Mahavira renounced worldly life and became an ascetic. After twelve years of wandering and severe penance, Vardhamana attained the KevalaGnanam(realisation of ultimate truth) at the age of 42.

There after he came to be known as Jina (conqueror of senses) or Mahavira (great hero). He went on propagating his doctrine to people and princes for 30 years. He received patronage of powerful kings of the Gangetic valley (Bimbisara, Ajatasatru etc). The Jain sangha that he founded, helped to spread this new doctrines. At the age of 72 he died at Pava near Rajagriha.

### Teachings of Mahavira or Doctrines of Jainism

Mahavira had no faith in God and also rejected the authority of the Vedas. He believed that the matter and soul were two eternal elements. The soul suffers due to impurities caused by its contact with the matter and is to be born again and again until it frees itself from the bondage of cycle of births. He preached the three gems i.e. **Tri Ratnas; Right Knowledge, Right Faith and Right Conduct.** Mahavira had a

strong faith in the doctrine of ahimsa or non – injury to any living being. Ahimsa became the most prominent principle of Jainism. The Jains started to cover their mouth with a piece of cloth, to prevent even a small insect from being killed. Care was taken not to injure even a plant or tree, nor to cause pain to men, birds and beasts. This principle was against the principle of animal sacrifice associated with yagnas.

Mahavira had no faith in the caste system, and preached equality of human beings. He stressed that all human beings, irrespective of their birth, could attain salvation from the cycle of life, i.e. death and rebirth, by leading a pure and austere life based on ahimsa. He advised his followers not to make any discrimination between man and man on the basis of colour or caste.

**Jainism advocates the following principles to be followed by a householder**

The state of Moksha or Nirvana can be attained by observing the following three principles or Tri Ratna. (Ratnatraya) i) Right Belief, ii) Right Knowledge, iii) Right Action. (Conduct)

The code of conduct that Mahavira preached has five disciplines

1. Non injury to living beings
2. Not to utter untruth
3. Not to steal
4. Not to posses and
5. To practice celibacy (Brahmacharya).

After the death of Mahavira, Jains were split into two major groups. Those who followed the extreme tenets of Mahavira, and gave up clothes came to be known as Digambaras; others, who

practiced the simple disciplines of Parsavanath and wore white robes, were called Swetambaras. The Jains preferred people's languages to spread their messages. They contributed much to the native languages like Magadhi and Kannada. In Tamil they made rich contribution to the Sangam and post-Sangam literature. Many of the Sangam ethical works, Silappadikaram, five minor epics, and grammatical works like Yapperumkalam were authored by Jain Scholars.

Jainism had its influence on social, political and religious life of our people. The literary and cultural fields were also enriched by Jainism. Anga, Upa Anga, and Kalpasastras are beautiful literary works.

Chandra Gupta Maurya and Kharavela of Kalinga embraced Jainism. It was patronized by the Rashtrakutas of Deccan and the Pallava King Mahendiravarman of Kanchi. Jains built many beautiful temples at Kanchi, Sittannavasal and Kalugumalai. Temples at Girnar and Mt. Abu, also belonged to the Jains.

### Buddhism

Buddhism was founded by (Gautama) Siddhartha. His father was Suddodana, the chief of the Sakya clan and mother was Maya. He was born in about 567 BC in Lumbini in Nepal Terai. Siddhartha was provided with a comfortable and happy life. He married Yasodhara and had a son Rahul. Yet the royal splendours did not make him content; he was moved by human miseries in the form of old age, sickness, death, and disillusionment.

The misery of the human life cast a deep spell on Gautama. In order to find

a solution to the miseries of mankind he left his wife Yashodhara and son Rahul at the age of 29 and wandered from place to place in ascetic garb. This event is known as the Great Renunciation.



**Buddha**

Gautama spent 6 years as a wandering ascetic and had discussions with sages and Brahmins. Their teachings did not help Gautama to find a solution. In order to find the truth, he resorted to rigid austerities of various kinds of self-torture. Ultimately he abandoned everything and went to Uruvela on the banks of Niranjana river and sat under a pipal tree (Bodhi Tree) and meditated. He attained the "Supreme knowledge" (Enlightenment) on the 49<sup>th</sup> day of his continuous meditation. The place where he got enlightenment is known as Bodh Gaya. Thence forth he came to be known as the Buddha(the Enlightened one); He proceeded to the Deer park at Saranath near Varanasi, and gave his first sermon which is described as "Dharma Chakra Pravartana". (setting in motion the wheel of Dharma).

The royal families of Kapilavastu, Magadha and Kosala were attracted towards Buddhism. It was in about 487 BC he died at the age of 80 at Kusinagara.

### Teachings of Buddha

The Buddha did not accept the God as a creator or destiny maker. He preached Anatmavadha (No Athma) and Anitya Vadha (nothing is eternal and everything undergoes change). He did not accept the sanctity and supremacy of Vedas and yagnas and rejected the caste system. He stressed that "man is the maker of his own destiny".

The first sermon of the Buddha at Sarnath contains his philosophy. His teachings were simple and conveyed to the masses in their languages i.e. Prakrit (Pali) and not in Sanskrit. The essence of his teachings are contained in the 'four noble truths' and the 'eightfold path'.

### The four noble truths

- i) The world is full of suffering.
- ii) All sufferings have a cause. Desire, ignorance and attachment are the causes of sufferings.
- iii)The suffering can be removed by destroying its cause i.e. by the curbing the desire.
- iv)In order to remove suffering, one must pursue the right path. This path is the eightfold path (Ashtangika Marga) which leads to salvation (since this path avoided ritualism and self-mortification, it is also known as golden path or middle path (Madyamika marga). In order to end our sufferings Gautama Buddha advocated the Eight Fold Path. (Eight codes of conduct)

### The eightfold path consists the following principles

Right belief, Right thought, Right speech, Right action, Right means of livelihood, Right effort, Right meditation and Right remembrance or memory.

This eightfold path is considered as the middle path between extreme asceticism and self indulgence. The Buddha preached 'Nirvana', the ultimate goal in the life of a man. By a process of elimination of desire, one can attain 'Nirvana'. Prayers and sacrifices will not end the desire. He laid emphasis on the moral life of an individual.

According to his Karma theory, the present is determined by the actions of past. The condition of a man in this life depends upon his own actions. As his actions or karma are responsible for his sufferings, he can secure salvation by perfecting his own deeds. No eternal force, either God or rituals can give him salvation. Thus man becomes the maker of his own destiny.

The Buddha neither accepted nor rejected the existence of God (agnosticism). He was more concerned about the individual and his action. Buddhism also did not believe in the existence of soul. The Buddha emphasized the spirit of love. Love could be expressed on all living beings by following 'Ahimsa' (non-violence).

The Buddha preached the basic equality of all men. He had no faith in caste system. His egalitarian principles attracted deprived masses towards Buddhism. He also disapproved the supremacy of Brahmins and he laid down the concept of universal brotherhood.

The Buddha condemned the practice of rituals and sacrifices, especially animal sacrifice. He rejected the authority of the Vedas, and insisted that everything must be subjected to scrutiny or reason.

He laid stress on morality. He advised his disciples to lead an honest and disciplined life. He also advised people to practice non-violence and not to indulge in corrupt practices. The Buddha established Sangha to propagate his principles and to render services to people. During the life time of Gautama Buddha, his movement made rapid progress. In the fourth council convened during Kanishka's reign, the Sangha split into two; Mahayana and Hinayana sects.

The preachings of the Buddha and Confucius have at least two things in common. They are pacific and they are rational. Their philosophies and

doctrines are not God-centred. They stressed more on 'reason' than on faith. The Buddhist scriptures, known as Pitakas are divided into three sections, namely, the Sutta, the Vinaya and the Abhidhamma.

As a result of these philosophical or intellectual awakening, the existing social and political system had to undergo changes. These philosophers liberated the people from clannish considerations and made them have a universal outlook. A better social order and a humane administration were recognized as objectives of the people and princes. Rituals were replaced by a moral order. Rational philosophies gave a better purpose for individual and social activities. Such a development marked another progressive turning point in the history of mankind.

## EXERCISE

### I) Choose the correct answer.

- 1) \_\_\_\_\_ period witnessed a great intellectual awakening in the world.  
a) 5th Century      b) 6th century      c) 7th century      d) 8th century
- 2) \_\_\_\_\_ did the Philosophy of Confucius mould and dominate the Chinese mind.  
a) 1000 years      b) 2000 years      c) 3000 years      d) 4000 years
- 3) \_\_\_\_\_ was the founder of Zoroastrianism.  
a) Zoroaster      b) Buddha      c) Mahavira      d) Confucius
- 4) \_\_\_\_\_ was the 23rd Thirthankara.  
a) Rishaba      b) Parsavanath      c) Mahavira      d) Buddha
- 5) In \_\_\_\_\_, Buddha get enlightened.  
a) Saranath      b) Bodh Gaya      c) Sanchi      d) Kapilavasthu

**II) Match the following.**

1) Zoroastrianism	Buddha
2) Jina	Mahavira
3) Yasodhara	Buddhism
4) Triratnas	Pipal tree
5) Sangha	Rajagriha
	Ahura Mazda
	Conqueror of senses

**III) Answer all the questions given under each captions.**

**1) Zoroastrianism.**

- a) Who founded Zoroastrianism ?
- b) Which was the wise spirit of Zoroastrianism ?
- c) What type of worship represented the monotheistic basis of Zoroastrianism?
- d) What was the name of the Holy scripture of the Parsees.

**2) Jainism.**

- a) How many Thirthankaras were there in the Jain religion.
- b) Who was the earliest Thirthankara ?
- c) What was the name of the last Thirthankara ?
- d) Name the Tri Ratnas.

**3) Buddha.**

- a) Who founded Buddhism ?
- b) What was his original name ?
- c) Where did he give his first sermon ?
- d) Where did he get Enlightenment?

**IV) Answer in brief.**

- 1) Why did Intellectual awakening start in the 6th century B.C.?
- 2) Write a short note on Ahura Mazda ?
- 3) What was the five disciplines preached by Mahavira?
- 4) Write about Pitakas.
- 5) Mention the two sects of Buddhism.

**V) Answer in a Paragraph.**

- 1) Give an account on Confucius.
- 2) What was the importance of Zoroastrianism.?
- 3) Enumerate the code of conduct that Mahavira preached .
- 4) Write a paragraph on the Eight fold path of Buddhism.

**FORMATIVE ASSESSMENT**

1. Compare any two religious doctrines propounded during the 6<sup>th</sup> century B.C.
2. Collect information and prepare a project on any one festival celebrated by the Jains, Parsis or the Buddhists.
3. Prepare a slide show on the places of religious importance for the religious that were founded in the 6 century.

### 3. MEDIEVAL AGE

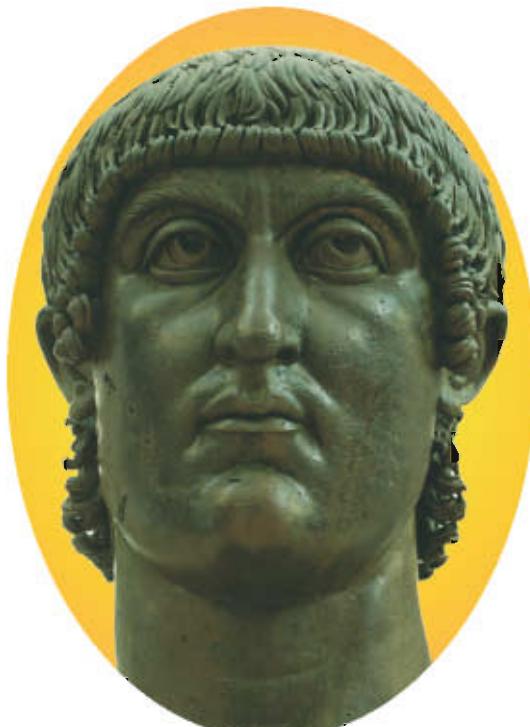
#### The Medieval Europe

The period from 600 AD onwards till 1500 AD is known as the Medieval age, in European history. It did not begin exactly at the same time in all the countries of Europe. Historians divided the medieval period into two parts. From the beginning of the fall of Roman empire till 1000 AD is called the Early Medieval Age and from 1000 AD to 1500 AD the Later Medieval Age. The beginning of the medieval age is marked by the fall of the Roman empire. The early medieval period has been termed as the "Dark Age", because of the chaos and degeneration prevalent everywhere. The central authority of the government became weaker and exploitation of the common people increased. The medieval age saw the emergence of a new religion Islam, which became internationally important.

On the political front, Medieval Europe saw the rise of the Eastern Roman Empire or Byzantine Empire with its capital at Constantinople. This empire held sway over whole of East Europe till about 1400 AD. The Romans proved to be great warriors and conquerors. It was because of their ability and wisdom that strong rulers emerged. After the fall of the Roman Empire in about 800 A.D Emperor Charlemagne established his power over a vast area—comprising modern France, Germany and a part of Italy. This empire lasted till his death and by about 1000 A.D another empire called the Holy Roman Empire was established. Thus towards the end of 14<sup>th</sup> century, Europe's political map had undergone many changes with many

rulers holding power in different parts of Europe at different times.

Rome was not built in a day. Similarly the decline of the Roman empire was not the work of a sudden or abrupt event but a long-drawn-out process spreading over nearly three centuries. The death of Marcus Aurelius in AD 180 was a turning point in the history of the Roman Empire. The safety, security and integrity of the empire was threatened from within and without. In fact the steady decline of the empire started from the latter half of the second century. Before their final decline in A.D.476. Many successful emperors like Diocletian (A.D. 284–305) Constantine I the Great (A.D. 306–337) and Theodosius I the Great (A.D.378–395).



Constantine I

## **Causes for the down fall of the Roman Empire**

The decline of the mighty Roman empire of the Caesars was wrought by time and nature, Hurricanes and earthquakes. Fires and inundations reduced the works of ages into dust.

The influx of wealth into the country brought in its wake moral degradation. The Romans lost all their old virtues of discipline and duty to the state.

The growth of the Christian church formed "a state within a state". In policy and action, the church stood against the empire.

The political mechanism of Rome with her constitution was quite unsuitable to an empire. A corrupt and expensive bureaucracy further worsened the situation. Rome became a big empire and territorially it became vast and impossible to control it. The Romans did not treat their colonial people well. The administration was weak and relaxed. Frequent wars, also contributed to her decline.

## **Decline of the Roman Empire**

As Roman Empire expanded trade, industry too increased. Colonial people were exploited and their wealth flowed into the capital. Romans gave up hard work and wanted their slaves to work and fight. The empire was a Republic in theory but in practice Rome began to be governed by emperors. The people lost their freedom of speech which was so valuable. Senate and general assembly included wise people. When dictators came to power senate became subservient to them. In society, atmosphere became tense and suffocating. The indifferent attitude of masses towards their rulers became a cause for the downfall.

There was no regular law of succession under the Roman legal system. The internal disputes, action of Alison and groupism weakened the empire. Thus vastness of Empire, frequent civil wars, luxurious life of Romans, despotism of Roman emperors, confused social atmosphere, high taxes and invasion of barbaric tribes led to the downfall of Roman Empire.

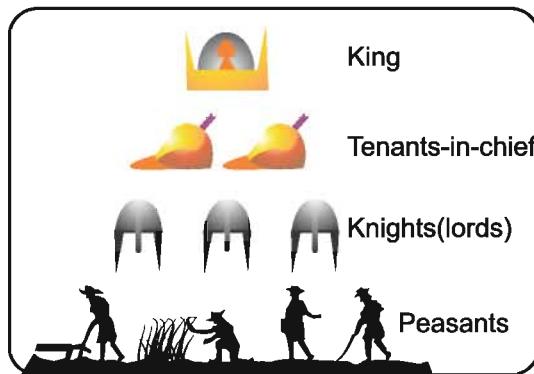
## **Barbarian Invasions**

When the star of the empire was falling into evil days, the stunning blow to the tottering empire was given by the barbarian invasions. These invasions shook up the Roman solidarity. Barbarians like the Goths, Huns and Vandals poured into the country in large numbers and waited for the most opportune moment to strike at the trunk of the withering empire. Their aim was to loot the people of the conquered territories. The soldiers of the barbarian tribes had no love for the country but often revolted against weak rulers. Thus the barbarian invasions disturbed the internal peace. Under this condition the kings failed to realize taxes from the people. They felt unsafe and insecure. In this way the circumstances bound the kings, Lords and the common people to accept the new system of feudalism.

## **Feudalism**

An important feature of the Middle ages was feudalism. The word "Feudalism" is, derived from the Latin word "feud" or "fief" which means a land held on condition of service. Feudalism was essentially an agrarian system. The peasants or the farmers were obliged to give a portion of the produce from the land to the lords as rent or taxes or they had to work on their

lord's land or farm without any payment.



A chart depicting feudal hierarchy

### Features of Feudalism

Feudalism was an organization of society and its government based on land ownership. According to the system all lands belonged to the king who divided the kingdom into several fiefs and gave each fief to a baron or tenant-in-chief on condition of military and administrative services and other aids to the lord. As the fiefs were granted to bishops and other church dignitaries, they also came under the category of tenants-in-chief. The king in his turn granted protection to them in times of danger. Thus feudalism was a political arrangement in its origin. The baron in his turn subdivided the land into several manors and gave each manor to a sub tenant on similar conditions. Thus the three important features of feudalism were feudal tenure, vassalage and immunity.

### Merits of Feudalism

Feudalism proved to be a useful institution to protect the people from chaos and anarchy. It brought safety security and orderliness to the medieval society. The decentralization of political authority and distribution of power made the way to a new political development namely "parliamentary

democracy" in the later centuries. The lining of military and agricultural services with a well-graded social hierarchy fixed specific rights and duties upon the rulers and the ruled. The manorial system, an integral economic part of the feudal system saved Europe from utter confusion in the farm front. The exhibition of skill and valour by the knight errants encouraged a spirit of sacrifice and devotion to general cause among all people.

### Demerits of feudalism

Feudalism was not an unmixed blessing. It brought the growth of baronial power. Jealousies among the barons and suspicion between the king and the lords encouraged local feuds. The king had to rely upon the military services provided by his vassals. The extensive holdings of the church gradually created the conflict between the Popes and the kings.

The feudal system was opposed to the emergence of a strong national government. The feudal lords ruled over their people in a tyrannical manner. They were either at war with the king or with the fellow lords. The army was not given uniform training in the kingdom. Different systems of justice were practiced from fief to fief. The society was divided between the rich and the poor. As a result, peasants suffered many hardships. The church also became a very big feudal organization. Thus the feudal system became largely responsible for the conflicts between the kings and the church.

Feudalism degenerated into the sharp division of society of the haves and the have-nots. Growth of learning and education did not materialize in full

bloom under feudalism. Justice became a mockery under the feudal system.

### **Decline of Feudalism**

Feudalism as a social force began to decline even from the 12<sup>th</sup> Century onwards, and as a political force from the 13<sup>th</sup> century. The rise of strong monarchies along with the rise of the bourgeoisie or middle class as a major class, completely changed the political values. The growth of representative institutions in different parts of Europe undermined the feudal setup. The crusades and the invention of gun powder sounded the death-knell of feudalism.

During the Age of Faith, the conflict between spiritual authority and temporal power resulted in victory to the former. The Age of Faith gradually gave place to the Age of Reason. The renewed study of Roman law made it to understand the superiority of such a law as against the clumsy feudal laws.

### **The rise of the papacy**

Christianity got political support under the Roman Emperors from the days of Constantine. By the 6<sup>th</sup> century A.D the Pope became the head of the church and kings were the rulers of the kingdoms. Sometimes, the Popes were stronger than the king. There developed in Europe a system of dual leadership under the Popes and the kings. Later, this dual leadership led to the rivalries between the church and the state. The Pope was considered as the representative (Vicar) of Jesus Christ. He was the highest authority of the church and was stronger than the kings. They could give directives to the kings and force them to obey their orders.

The papal authority became supreme due to missionary spirit of Christians. In the establishment of papal supremacy, monasteries played a very significant and important role. The character of monks, educational institutions of monasteries attracted the people towards papacy. It made certain valuable contributions.

### **Effects of papacy**

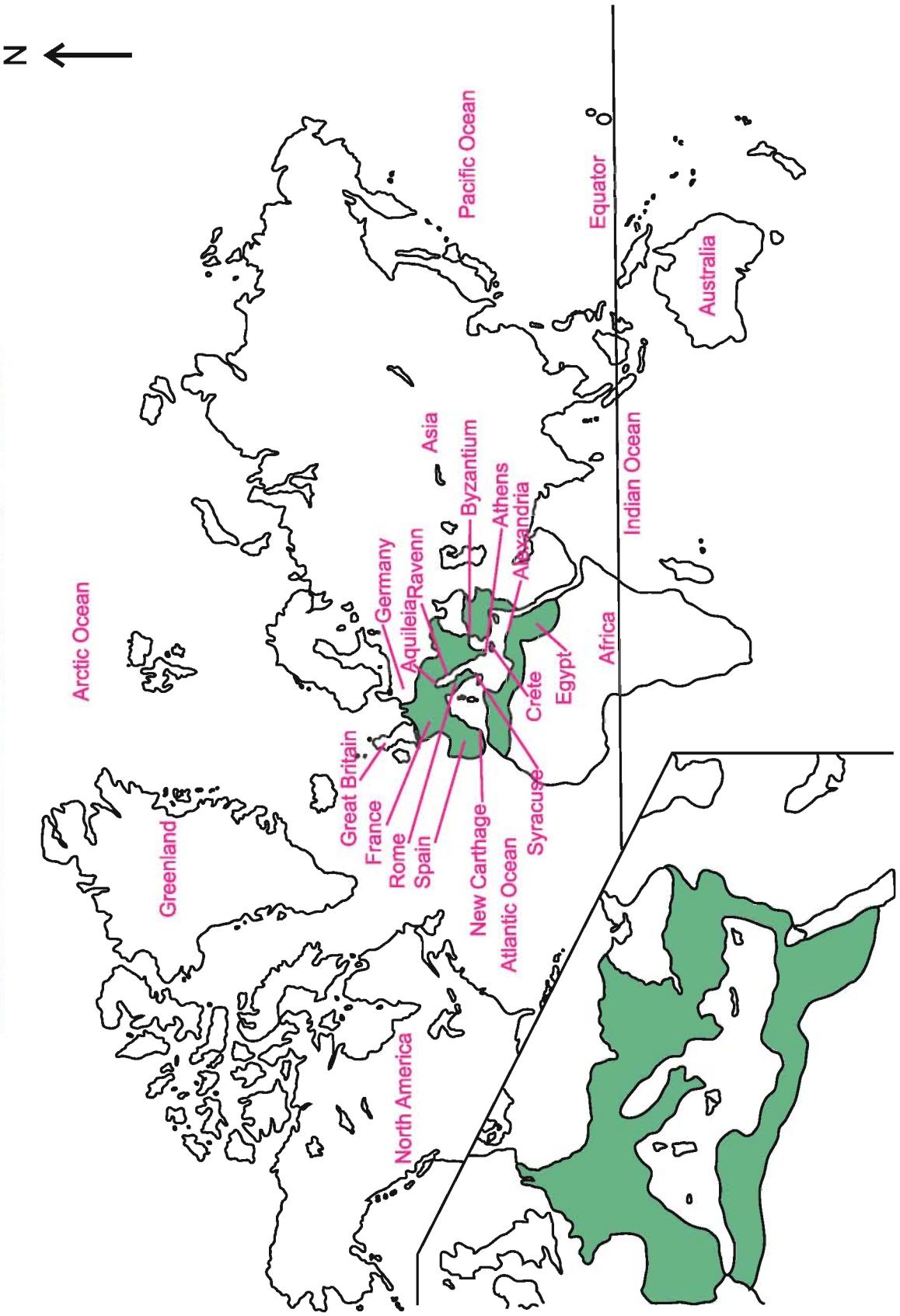
In the social life, people became God fearing, began to help the poor, the needy and the deserving. The sense of morality and character as well as dignity developed. Beautiful churches were developed. Religious dogmas and hymns became the themes of literature. In the eyes of the papacy, all the high and the low were equal. With the result it created a sense of equality among all. It was due to papal educational institutions that knowledge developed and also could be passed on to the present generation.

### **Holy Roman Empire**

Holy Roman Empire was an attempt by the kings to attain political unification of Christian Europe with close co-operation of the church. In the old Roman empire there was no place for Christianity. In the new empire Christianity was the recognised religion. Rome was only nominal centre of authority. The old empire was Italian in its outlook whereas the new one was Christian in nature and character. Thus the main idea of creation of an empire was to bring all Christian states together in a fraternity. In the empire, the emperor was required to be crowned by the Pope.

The king possessed vast powers. He wanted that the Pope should be under his control. The Pope belonged to the other world and had a superior

## ROMAN EMPIRE AT ITS GREATEST EXTENT



position over the emperor. The greatest service of the Empire was that the whole of European continent, which was divided into small units, were united into one empire. It strengthened hereditary system and weakened the republican system. The Holy Roman Empire contributed a lot by way of crushing feudal lords and feudalistic tendencies. Mainly it was responsible in bringing national unity in Germany. It was as a result of Holy Roman Empire that nation states of England, France and Spain came into being.

### Medieval Towns and Universities

New towns began to emerge as centres of craft and trade. The early towns were very small, as the number of artisans increased and the trade became extensive, the towns too became bigger. When western Europe traded with the East, Italy enjoyed an advantage over others because of their location. Genoa, Florence and Venice became trade centres. Genoa and Venice were coastal towns whereas Florence, Pisa and Milan were situated on inland trade routes. In Holland, Belgium, Germany, France and England a number of cities grew up that were either sea ports or centres of trade and commerce. These medieval towns became centres of the Medieval European civilization and culture.

### Education

In the early medieval period it was the church that gave education to the people. It taught the subjects like grammar, logic, arithmetic and theology. Some of the monasteries became centres of learning. Many universities were set up. The monks dominated the universities. Theology and philosophy were given prominence. History and science were

ignored. The books were hand copied. The university of Bolonga became famous for law. Arabic and Hebrew that were taught in this Spanish University.



Bologna University

The University of Oxford in England was modelled on the Paris university of France. The Cambridge university came into existence in the 12<sup>th</sup> century.

### Rise of Islam

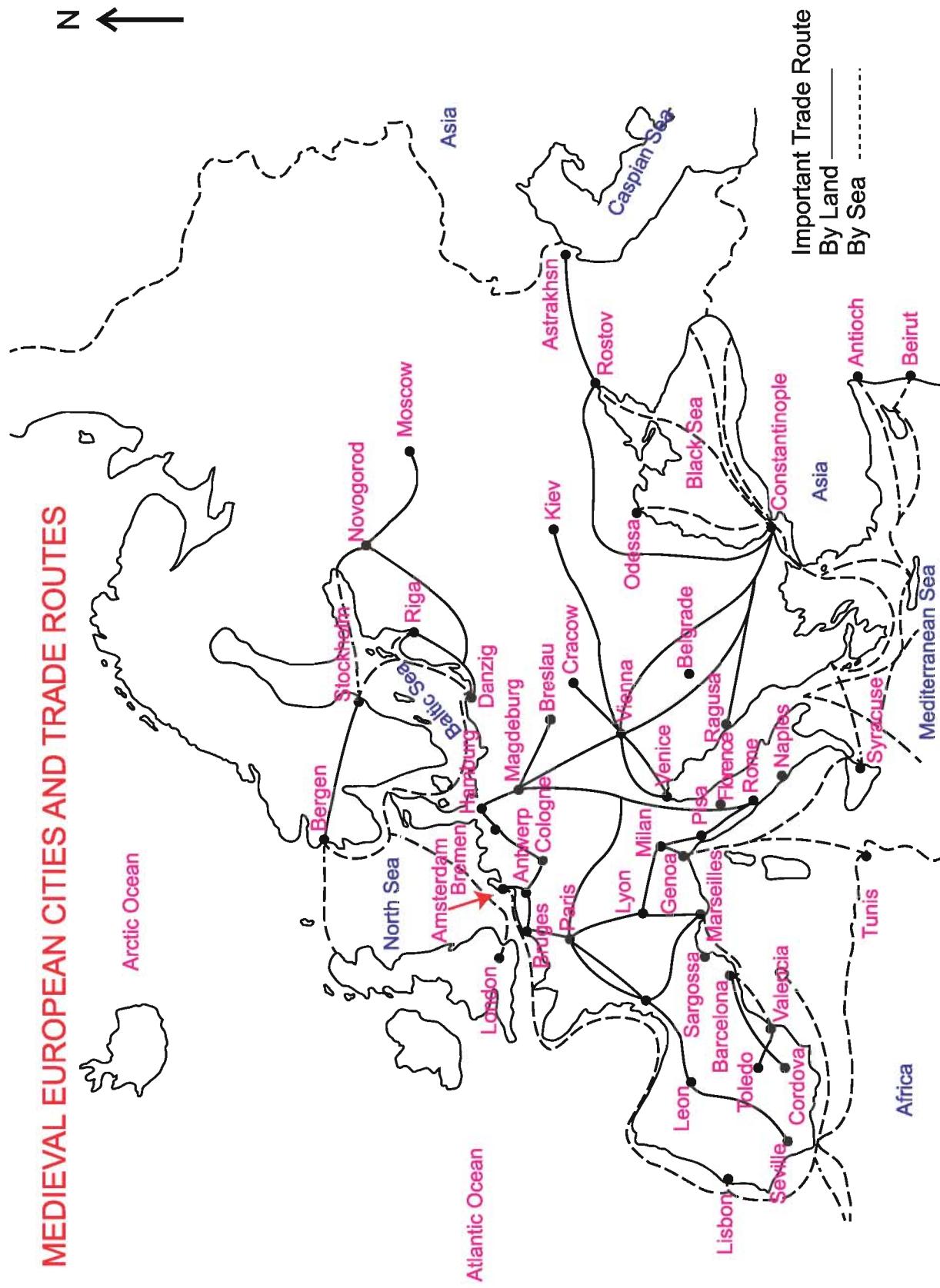
During the middle ages, Arabia, a vast desert land in south west Asia, became the birth place of Islam. Islam is one of the most important world religions. It united the various warring tribes.



Mecca

The founder of the Islamic religion was Prophet Mohammad. Islam laid stress on the Unity of God and on following high moral standards and

## MEDIEVAL EUROPEAN CITIES AND TRADE ROUTES



principles. Mecca and Medina became two important pilgrim centres in Arabia. The main and significant contributions of Islam were in the field of literature, science and medicine. Due to their superior organization, faith in their ultimate victory and unabating zeal in their mission, the Muslims were in a position to secure power in many countries. The Islamic culture served as a link between the Christian west and the rich fabulous Orient (east). It posed a serious threat to the Christian culture. The Arabs wanted to spread their religion in the conquered regions. This enthusiasm for the spread of their religion led to the fast expansion of their empire.

### **Crusades (1095 – 1444)**

The Crusades were Holy wars fought by the Christians of Western Europe against the Turks, the Muslims. They were fought to have free access to their holy lands in the Middle East. Every pious Christian considered it his sacred duty to visit their Holy places where the relics of Christ were available. Jerusalem was one such important place which was captured by Turks in 1071 from the Fatimid Caliph of Egypt. Upto 1076, there was no real problem due to the tolerant policy of Caliphate. But in 1076, Jerusalem went under the control of Seljuk Turks, who were religiously intolerant.



**Crusades**

To save themselves from the persecution and humiliation and to retrieve access to their holy places the Christians undertook a crusade. Pope Urban II gave a call to the Christians all over the world to come together and to take arms. There were different factors responsible to their quick response. The religious fanatics joined to discharge their religious duty. Some joined to show their fighting skills and for plundering and looting. The wars of the "Cross against the Crescent" according to tradition, were eight in number. The first four were Major Crusades and the last four Minor Crusades. After a meeting of council at Clermont, they affixed a cross on their garments. The Muslim had a crescent on their banners. Thus the crusades, the long drawn out "wars of the cross against the crescent" began.

### **Children's Crusade (1212)**

The leaders of the children's crusade were Nicholas of Germany and Stephen of France. They believed in their heart of hearts that God would mysteriously guide and guard the children in their endeavors. But none of the children went beyond Italy. Many died of hunger and starvation.

### **Causes for the failure of the crusades**

The wars were fought in a far distant, alien and inhospitable regions. It exhausted the energies and sapped the spirit of the people. The crusaders failed in their primary motive of recovering the holy places of Jerusalem and Bethelham.

The Crusades were not properly organized. There was lack of unity and discipline among the leaders. The struggle for supremacy between the papacy and their Empire had a baneful effect on the issue. The weakness of the Byzantine empire was another serious cause for the collapse of the crusades.

### Results of the Crusades

The Crusades failed in their most important objective of recovering the holy places in Palestine but led to the establishment of new Christian kingdoms in Spain and Portugal.

The Crusades in the end left Byzantine power vastly reduced in prestige and honour. The loss of Byzantine prestige was never fully recovered.

The crusading spirit spread like a contagious disease and it led to the conversion of Slave races on the shores

of the Baltic sea to Christianity and the Germanisation of the population. Feudalism received its rudest shock from the Crusades.

The crusades seriously affected the future of the military orders. The power and prestige of the Pope increased.

The extensive travels undertaken during the crusades provided the people with an opportunity to promote their knowledge of geography. It prepared the way for the discovery of new trade routes in which Portugal and Spain became pioneers. It gave an added fillip to the ship building industry which in turn paved the way for the use of Mariner's compass, etc.

The Crusades created a spirit of enquiry and prepared men's mind for the Renaissance of the 16<sup>th</sup> Century.

### EXERCISE

#### I) Choose the correct answer.

- 1) Early medieval period has been termed as \_\_\_\_\_.  
a) Golden age      b) Copper age      c) Dark age      d) Iron age
- 2) Feudalism was a social system based on \_\_\_\_\_.  
a) Religion      b) Army      c) trade      d) Land
- 3) Prophet Mohammad founded the religion of \_\_\_\_\_.  
a) Christians      b) Hinduism      c) Islam      d) Sikhism
- 4) The title of Lion heart was given to \_\_\_\_\_.  
a) Philip      b) Richard I      c) Fredrick      d) Nicholas
- 5) The Holy Land of Christians is \_\_\_\_\_.  
a) Mecca      b) Italy      c) Vatican      d) Jerusalem

**II) Match the following.**

- |                 |                 |
|-----------------|-----------------|
| 1) Constantine  | Tribes          |
| 2) Feud or Fief | Land            |
| 3) Cambridge    | Constantinople  |
| 4) Genoa        | University      |
| 5) Barbarians   | Coastal town    |
|                 | Code of conduct |
|                 | Emperor         |

**III) Answer Briefly.**

- 1) What is Feudalism ?
- 2) What are the coastal towns and trade centers of the medieval Europe ?
- 3) Who were the leaders of the children's crusade ?
- 4) Name some of the universities of medieval Europe ?
- 5) What was the aim of the crusades ?
- 6) Who was the authority of the Church ?

**IV) Answer all the questions given under each heading.**

**1) Feudalism.**

- a) From which word is "feudalism" derived ?
- b) Who were the Feudal Lords?
- c) What was the Feudal village called ?
- d) When did this system prevailed in Europe?

**2) Papacy.**

- a) Who was the head of the Church ?
- b) How was the relationship between the Pope and the king ?
- c) What was the role of the Pope ?
- d) What was the result of the dual leadership ?

**3) Crusades.**

- a) Which was the holy land of the Christians ?
- b) Who gave call to the Christians all over the world ?
- c) Where did the council meet ?
- d) How many Crusades have taken place?

**4) Mohammed the Prophet.**

- a) Which was the birth place of Islam ?
- b) Who was the founder of Islam ?
- c) What are the important Pilgrim Centres in Arabia ?
- d) What did Islam religion stress on ?

**V) Answer in a paragraph.**

- 1) Describe the Barbarian invasion.
- 2) Describe the rise of Islam in Europe.
- 3) What were the results of the Crusades.

**VI) 1) Mark the following places on the outline map of Europe.**

- a) Rome      b) Constantinople      c) Venice      d) Genoa
- e) Paris      f) London      g) Pisa      h) Florence

**2) Mark the following countries.**

- a) Italy      b) Greece      c) Spain      d) England      e) France
- f) Germany      g) Arabia

**FORMATIVE ASSESSMENT**

1. Collect pictures, stick them in your scrap book and write a short on 5 important religious places of
  - a. Hindus
  - b. Christians
  - c. Muslims
2. Explain the religious customs and traditions followed by the people when celebrating
  - a. Deepavali
  - b. Christmas or Easter
  - c. Ramzan
3. Prepare a chart to show the social order under the Feudal system.
4. Divide the class into 2 Groups. One group could enact a play to show the rise and spread of Christianity and other of Islam.

# GEOGRAPHY

## 1. TAMIL NADU

**Tamil Nadu**, a state in southern India, is bordered by Puducherry, Kerala, Karnataka and Andhra Pradesh. The state, lying on the southern tip of the Indian peninsula, is surrounded by the Bay of Bengal in the East, Indian Ocean in the south, Kerala in the West, Karnataka in the North West and Andhra Pradesh in the North. The native language spoken here is Tamil which has become the official language with effect from January 14, 1958. It is the sixth most populous state of India and a leading producer of both agricultural and industrial products.

The state extends latitudinally between 8°4' North and 13°35' North and longitudinally between 76°18' East and 80°20' East. The state of Tamil Nadu is a triangular landmass in shape. It is the eleventh largest state in India by area (about the size of Greece).

Tamil Nadu is one of the most urbanized states of India. It is a home to many natural resources, rare flora and fauna, cool hill stations, grand Hindu temples of Dravidian architecture, beach resorts, multi religious, pilgrimage sites and few UNESCO World Heritage sites. It is one of the foremost states in the country in terms of over all development.

### Administrative Division

Total area of Tamil Nadu is about 1,30,058 sq.km., which is 4 % of the total land area of India. For the purpose of administration, the state has been

divided into 32 districts. The following table gives the list of the districts.

**Table: Districts of Tamil Nadu**

S.No.	District
1)	Ariyalur
2)	Chennai
3)	Coimbatore
4)	Cuddalore
5)	Dharmapuri
6)	Dindigul
7)	Erode
8)	Kancheepuram
9)	Kanyakumari
10)	Karur
11)	Krishnagiri
12)	Madurai
13)	Nagapattinam
14)	Namakkal
15)	Nilgiris
16)	Perambalur
17)	Pudukkottai
18)	Ramanathapuram
19)	Salem
20)	Sivagangai
21)	Thanjavur
22)	Theni
23)	Thiruchirappalli
24)	Thirunelveli
25)	Thiruvallur
26)	Thiruvannamalai
27)	Thiruvarur
28)	Thoothukudi
29)	Trippur
30)	Vellore
31)	Villupuram
32)	Virudhunagar

### Know the facts



State Bird: Emerald Dove



State Flower: Gloriosa Lily



State Animal: Nilgiri Tahr



State Tree: Palm Tree

#### Do you know?

The southernmost point of the Indian Union—"Indira Point" got submerged under the sea water in 2004 during the Tsunami.

#### Table: Local bodies of Tamilnadu

City Corporations	12
Municipalities	124
Town Panchayats	528
District Panchayats	31
Panchayat Unions	385
Village Panchayats	12524

#### Activity

Find out which of the above local bodies you belong to?

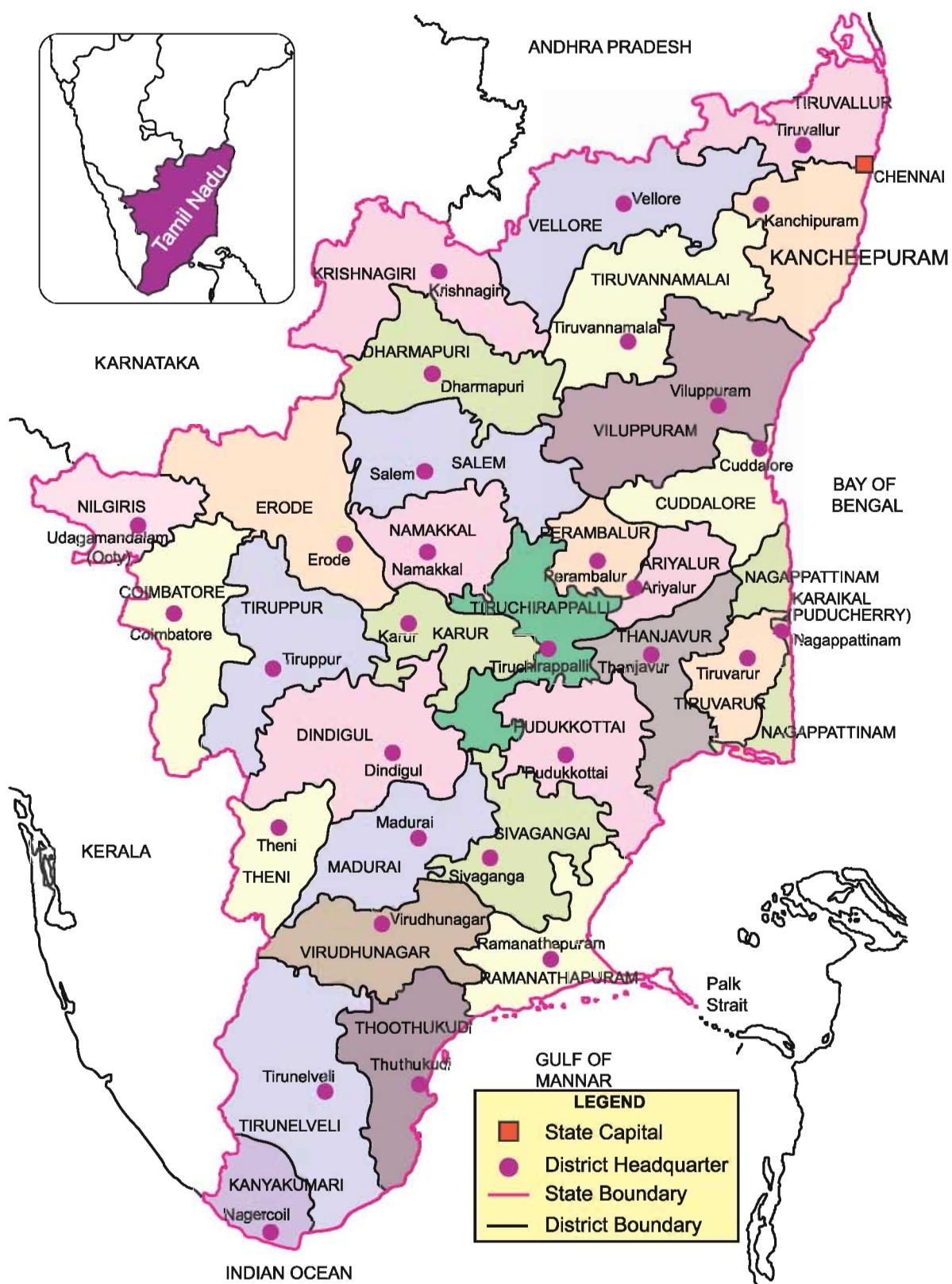
#### History of Tamil Nadu

Tamil Nadu has a very ancient history that goes back to 6000 years or

so. Though the state is a home for Dravidian culture, it also acquired Aryan culture almost a thousand years ago. It is regarded as the cradle of Dravidian culture with its cultural gear speckled all across the state in the form of magnificent temples, gateways, intricate carvings, and the society steeped in tradition.

Sangam or the Institute for the growth of Tamil language existed in three phases. The first one was at Madurai devastated by the sea, the intermediary one was at Kapadapuram and the third one seated at Madurai. The Tamil language with its grammar Tholkappiyam belongs to the last sangam period. Classic works like Ettuthogai and Pathuppattu also belonged to the sangam period.

## Tamil Nadu District Map



In his work Thirukkural, Thiruvalluvar has not mentioned any religion, country or people. It contains universally acceptable ideas and thoughts and is regarded as a renowned piece of world literature. Thiruvalluvar is often portrayed as a holy saint of Tamil Nadu. Tamil which has obtained the semmozhi status is now one of the eight classical languages of the world.

Tamil Nadu was once the home of four Tamil Kingdoms, namely, Chera, Chola, Pandya and Pallava. Their

period was known as the golden age of Tamil Nadu during which art, music as well as trade and agriculture reached their peak.

### Know the fact

The first Tamil printing press was established at Tarangambadi in Nagapattinam district by the Danish missionaries.

## EXERCISE

### I) Choose the correct answer.

1. Tamil Nadu is the \_\_\_\_\_ largest state of India (as regards area)  
a) 5th      b) 7th      c) 9th      d) 11th
2. There are \_\_\_\_\_ districts in Tamil Nadu.  
a) 28      b) 30      c) 32      d) 34
3. \_\_\_\_\_ district lies on the east coast.  
a) Nilgiris      b) Theni      c) Nagapattinam      d) Coimbatore
4. Tamil Nadu lies in the \_\_\_\_\_ part of India.  
a) North East      b) South West      c) South East      d) North West
5. Tamil Nadu accounts for \_\_\_\_\_ of the total area of the country.  
a) 4%      b) 5%      c) 3%      d) 2%

### II) Match the following.

- |                          |                          |
|--------------------------|--------------------------|
| 1. State bird            | Tholkappiyam             |
| 2. State Tree            | 234                      |
| 3. Assembly constitution | Palm tree                |
| 4. Tamil Grammar         | North West of Tamil Nadu |
| 5. Karnataka             | Emerald Dove             |
|                          | 12                       |
|                          | Peacock                  |

**III) Answer in brief.**

1. Write down the boundaries of Tamil Nadu ?
2. Name the local bodies of Tamil Nadu ?
3. Mention the Latitudinal and Longitudinal extent of Tamil Nadu ?
4. Name the water bodies bordering Tamil Nadu.
5. Name any four districts that lie on the western margin of Tamil Nadu.
6. Name the coastal districts of Tamil Nadu.

**IV) Answer in a paragraph.**

1. Describe the geographical location of Tamil Nadu.
2. Give an account on the History of Tamil Nadu.

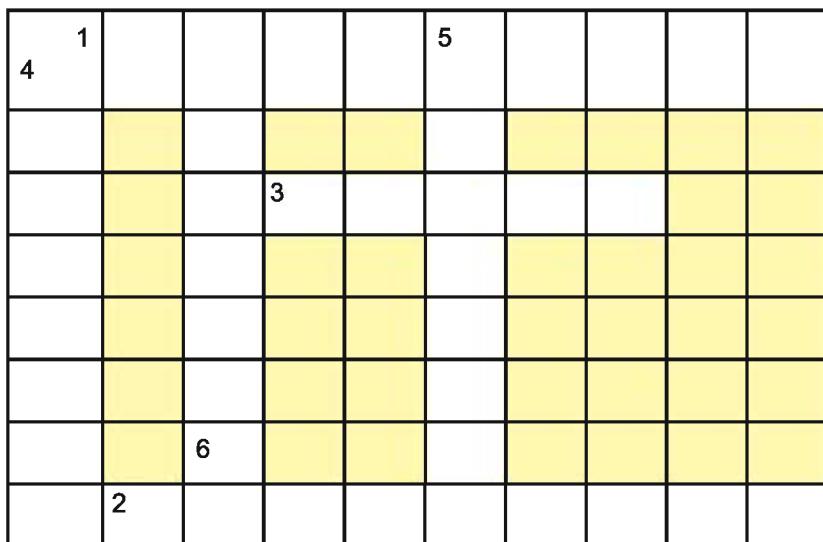
**V) Mark the following on given map of Tamil Nadu.**

On the outline map of Tamil Nadu, mark the following.

1. Kanyakumari
2. Indian Ocean
3. Bay of Bengal
4. Chennai
5. Puducherry
6. Erode
7. Pudukkottai

## FORMATIVE ASSESSMENT

### I. Crossword Puzzle



**Left to Right**

1. District famous for Chariot
2. Rice bowl of Tamil Nadu
3. District known for Iron-ore
4. District of Lord Ranganathar (top to bottom)
5. District famous for Fort (top to bottom)
6. Place famous for Jasmine Aroma (bottom to top)

### II. Life Skill

Prepare a Bio-data card under the following heading

- 1) Tamil Nadu
- 2) Local District
1. Name
2. Address / Area
3. Administrative Qualification
4. Assets / Resources
  - a) Relief features

- b) Water bodies
  - c) Lakes
5. Character / Climate
  6. Credit / Rainfall
  7. Family Members
    - a) Population
    - b) Vegetation
    - c) Wild life
  8. Industries
    - a) Primary
    - b) Secondary
    - c) Tertiary
  9. Transport
  10. Recreation / Tourist spots

### III Map Skill

1. Differentiate the coastal and Inland district of Tamil Nadu by choosing two colours.
2. Make the districts bordering your districts in all four directions and differentiate with colours.

### IV. Project:

Find out the Twelve Corporations of Tamil Nadu and write a report for any one of them.

## 2. PHYSIOGRAPHY OF TAMIL NADU

Tamil Nadu has a unique physiography. The hills of the Eastern and Western Ghats surround Tamil Nadu to the Northwest and West, the Bay of Bengal is found to the East and the Indian Ocean to the South. In general, the physiography of Tamil Nadu is a high land which has uneroded, western ghats on the west and low lying coastal and river plains on the east.

### Physiography of Tamil Nadu

Geographically Tamil Nadu may be divided into four physical divisions

- 1) The Hilly region (Western Ghats and Eastern Ghats).
- 2) The Plateau.
- 3) The Plain and
- 4) The Coastline.

### The Hilly regions of Tamil Nadu

The Western Ghats enters the state through the Nilgiris District and runs up to Kanyakumari district. The Western hilly region is much more complex than the Eastern Ghats. Its average height is from 1000 m to 1500m. The Western Ghats has mountain peaks namely **Doddabetta (2637 m)** and **Mukuruthi (2540 m)**. In the north west of Western Ghats lies the Nilgiri highland region at an height of above 2500 m. In this region, there are few peaks found at a height ranging from 1800 m to 2400 m. The highest peak of Tamil Nadu is Doddabetta. Ooty, Queen of hill station is situated in Nilgiris. The Western Ghats and Eastern Ghats meet at the **Nilgiri hills**. From the Nilgris of Tamil Nadu and Anaimalai hills of Kerala, an offshoot runs at a height of 1500 m to 2000 m in the east. These are called **Palani hills**. To the south of the

Palani hills there are two other ranges namely, **Varshanadu** and **Andipatti** hills running parallel to the Cardamom hills. Though the Western Ghats is a continuous range, it has a gap of 25 km at Palghat. To the south of Palghat gap, hills such as Andipatti, Elamalai and Agathiya malai are found. Kambam valley is between Thekkadi hills, Varshanadu hills and Kodaikanal hills. This Valley is considered as the green valley of Tamil Nadu. The gap in between Varshanadu hills and Agathiya malai is called the **Shenkottai pass**.

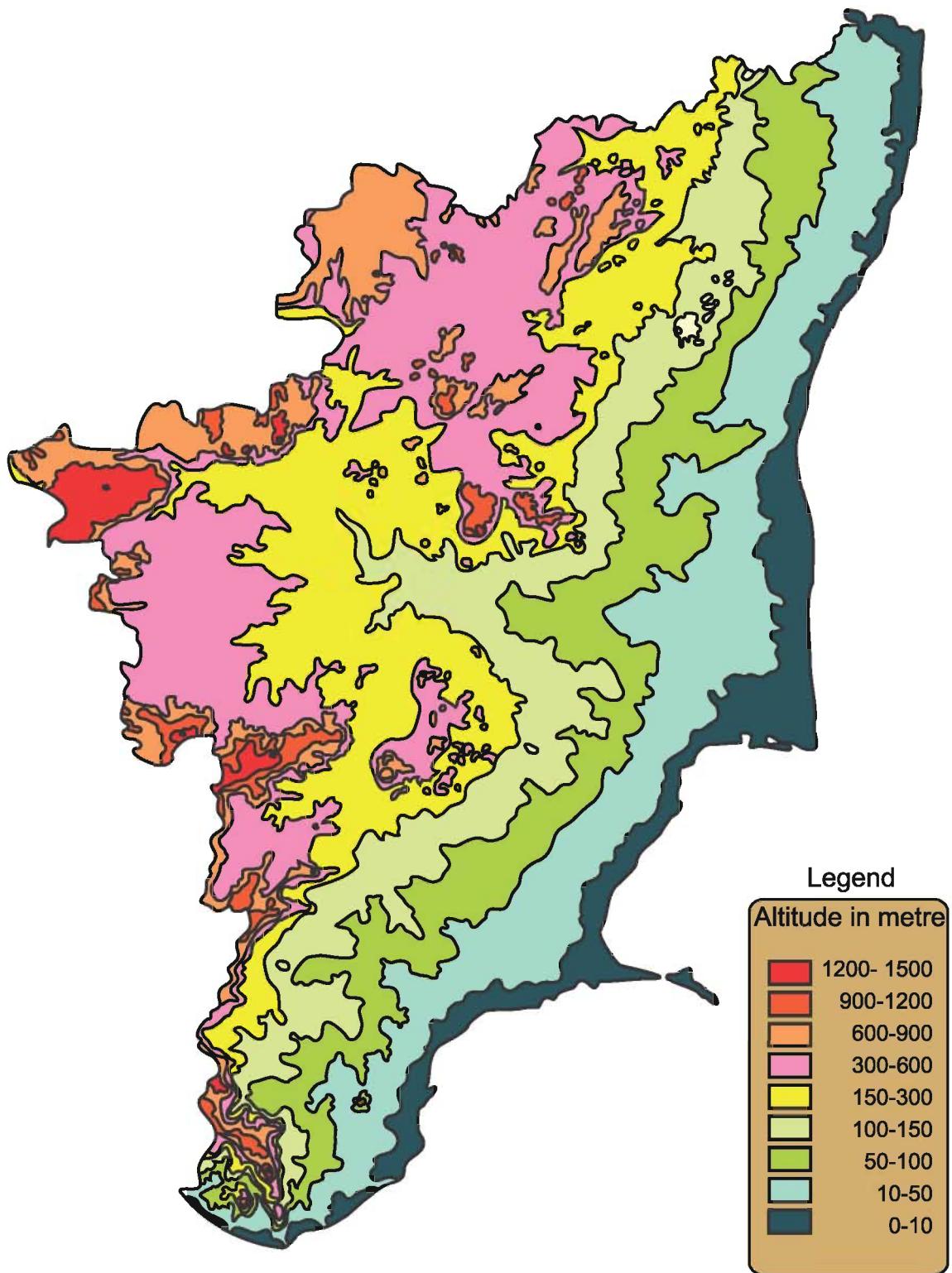
The Tamil Nadu hills separating, the plains and the plateaus have two well marked passes, namely, the **Attur pass** in the south and the **Chengam pass** in the north. This pass links the Cuddalore and Villupuram district in the plain with the Salem district on the plateau. The Palakkad gap and Shenkottai gap are the only breaks in the long chain of hills that border Tamil Nadu on the west.



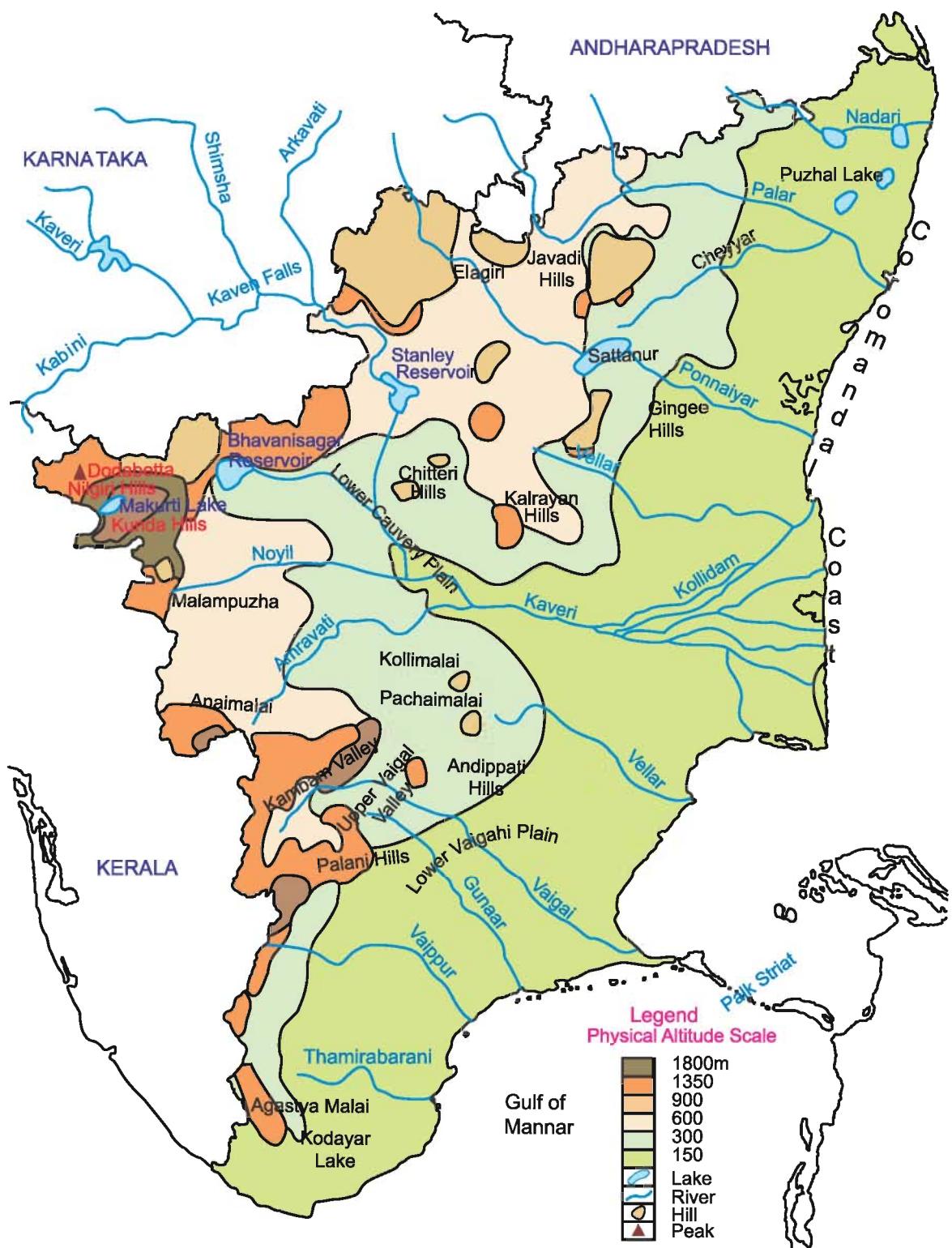
Western Ghats

The Eastern Ghats are not continuous when compared to the Western Ghats. They are dissected into isolated hill ranges extending from northeast to southwest through the districts of Vellore, Dharmapuri and Erode. The average elevation ranges from 1100 m to 1600 m. These hillocks are called by

**Tamil Nadu**  
**Land forms with different altitudes**



## Tamil Nadu Physiography



different names in different areas, such as;

- 1) Javadi Hills and Elagiri Hills in Vellore District;
- 2) Shervarayan in Salem District;
- 3) Kalvarayan in Villupuram District;
- 4) Pachaimalai in Thiruchirapalli District;
- 5) Kolli hills in Namakkal District;
- 6) Chitteri hills are in both Dharmapuri and Salem Districts;
- 7) Gingee hills in Villupuram District;

The highest hills of Eastern Ghats – Shervarayan (1,500 – 1,600 m).

The highest hills of Western Ghats- Anaimalai (2,700 m)

### Plateaus of Tamil Nadu

The Eastern and Western Ghats meet at the Nilgiris plateau. Four km from this plateau, it slopes gently downwards to about 1,800 m towards Coimbatore. It extends from the Nilgiris to Dharmapuri plateau or Baramahal plateau and lies to the west of Shervaroy uplands. This plateau is found with extreme abruptness on all sides. The Baramahal plateau in Dharamapuri district is at an elevation of 300 to 700 m which merges with the Mysore plateau in the west. The elevation of the plateau increases from east (120 m) to west (300 to 450 m). Plateaus of Tamil Nadu can be grouped into two as Coimbatore plateau and Madurai plateau. In between the plateaus isolated hills are also seen. One such isolated hill is Chennimalai of Erode district.

### Plains of Tamil Nadu

Plains of Tamil Nadu can be classified into two as coastal plains and

rivers plains. The coastal plains of Tamil Nadu extend to a length of 1000 km from Pulicat lake in the North to Kanyakumari in the South and have an average height of 50 metres. The notable beaches found here are the Marina and Rameshwaram beach.

### Marina Beach

Marina beach is the second longest beach in the world. It extends upto a distance of 13 km and it is one of the major tourist attractions of Chennai.



Marina Beach

### Rameswaram Beach

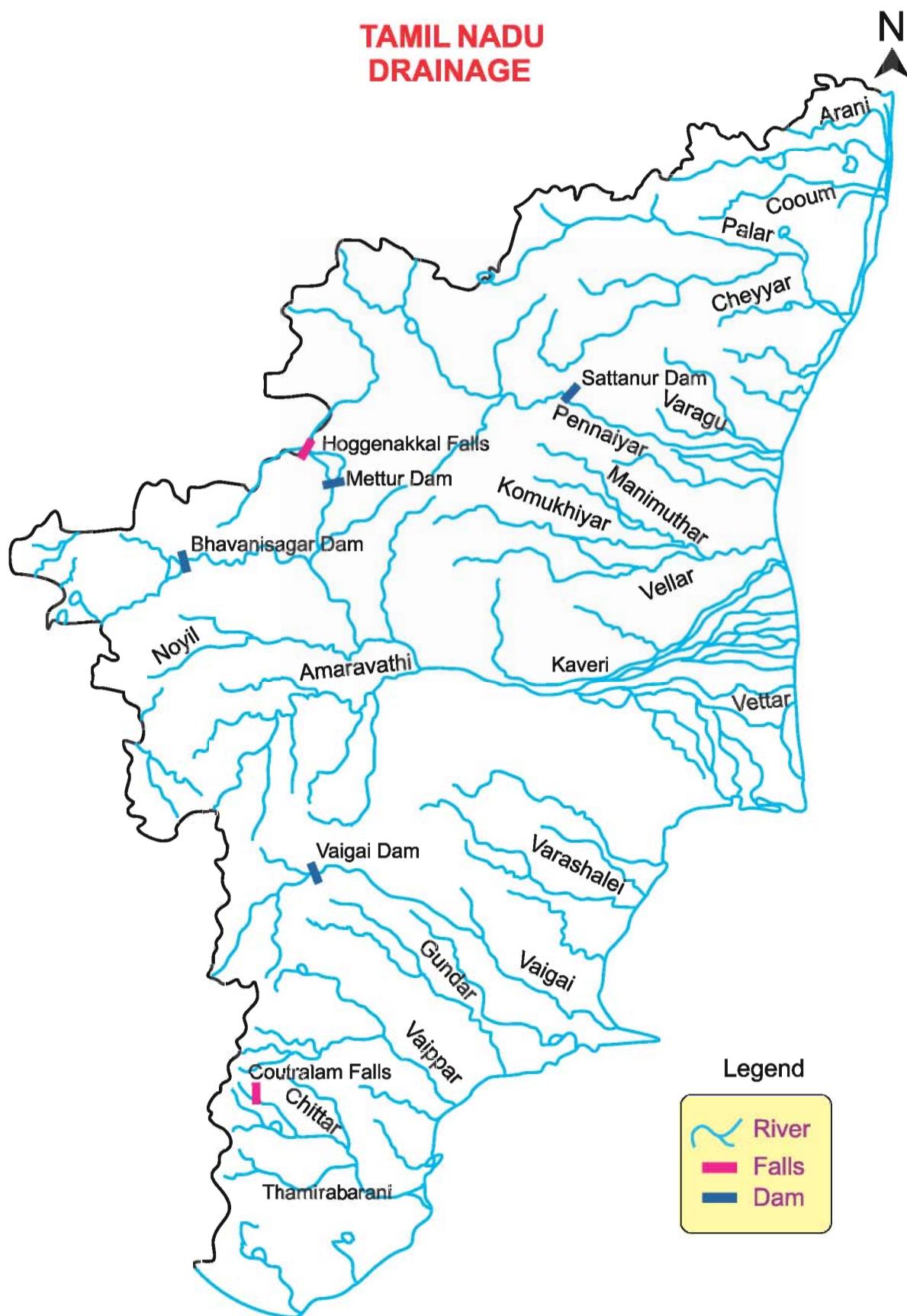
The beach of Rameswaram is famous for its beautiful coastal features. The sea waves rise to a maximum height of only 3 cm and the view looks like a very big river.



Beach in Rameswaram

The coastal plains of Thiruvallur, Kancheepuram, Cuddalore and Villupuram are together known as the **Cholamandalam plains**.

## TAMIL NADU DRAINAGE



The river plains in Tamil Nadu are formed by the rivers Palar, Cheyyar, Pennar and Vellar in the north; Kaveri and its tributaries in the central region, Vaigai, Vaippar and Thamirabarani in the south.

### Rivers of Tamil Nadu

The Northern rivers of Tamil Nadu are Araniyar, Kotralaiyar, Palar, Cheyyar, Kedilam, Manimuthar and Thenpennar. Cheyyar and Agaram are two tributaries of Palar. The main river of the state is Kaveri which originates in Kodagu district of Karnataka. Kaveri and its tributaries in its lower course drain the districts of Nagapattinam, Thanjavur, Thiruvarur and Thirucharapalli. The Kaveri, the Kollidam and the Vellar jointly drain central part of the Tamil Nadu. Srirangam is located between Kaveri and its tributary Kollidam.

In the Kaveri delta, the distributaries such as Kollidam, Manniyar, Vennar, Vettar, Arasalar, Nattar, Mudikondan, Kudamuruti and Veera Cholanar have formed a alluvial plain in a quadrangle shape. Kaveri along with its tributaries, Bhavani, Noyyal, Moyar and Amaravathi, is the most important source of canal irrigation. Towards the south of Tamilnadu, there are few rivers like Vaigai (Madurai), Vaippar (Virudhunagar), Thamirabarani (Thirunelveli), Gundar (Thoothukudi, Ramanathapuram), Chittar (Thirunelveli) and Kothaiyar (Kanyakumari). Most of the soils of the plains of Tamil Nadu are alluvial, formed by these rivers flowing east. In the southwest of Tamil Nadu is the Suruliyar river that drains a part of Madurai district.

### EXERCISE

#### I) Choose the correct answer.

1. \_\_\_\_\_ hill is located in Eastern ghats.  
a) Nilgiri      b) Kalvarayan hills    c) Cardamom hills    d) Palani hills
2. \_\_\_\_\_ is the highest peak in Tamil Nadu.  
a) Anaimudi    b) Doddabetta        c) Kodagu            d) Brahmagiri
3. The river Chittar is an important tributary of \_\_\_\_\_ river.  
a) Kaveri      b) Thamirabarani    c) Vaigai        d) Palar
4. The longest river flowing in Tamil Nadu is \_\_\_\_\_.  
a) Tamirabarani    b) Vaigai      c) Palar        d) Kaveri
5. The Noyyal and the Amaravathi are tributaries of \_\_\_\_\_.  
a) Vaigai      b) Kaveri      c) Palar        d) Periyar

**II) Match the following.**

- |                  |                        |
|------------------|------------------------|
| 1. Eastern Ghats | Madurai                |
| 2. Western Ghats | Karnataka              |
| 3. Kaveri river  | Nilgiris               |
| 4. Ooty          | Shervarayan            |
| 5. Vaigai        | Coimbatore             |
|                  | Queen of hills station |
|                  | Chennai                |

**III) Answer in brief.**

1. Name the important rivers of Tamil Nadu.
2. What are the major physical divisions of Tamil Nadu ?
3. Mention the important hills in the Northern districts of Tamil Nadu.
4. Write a note on Marina Beach.
5. Distinguish between Eastern Ghats and Western Ghats.

**IV) Answer in a paragraph.**

1. Describe the plateau region of Tamil Nadu .
2. Write an account on the rivers of Tamil Nadu.

**V) Mark the following on a given map of Tamil Nadu.**

On the outline map of Tamil Nadu, mark and label the following.

- |                      |                 |                       |
|----------------------|-----------------|-----------------------|
| 1) Kaveri river      | 2) Doddabetta   | 3) Coimbatore Plateau |
| 4) Coromandal coast  | 5) Vaigai river | 6) Agastya Malai      |
| 7) Nilgiri hills     | 8) Kollidam     | 9) Elagiri hills      |
| 10) Kalvarayan hills |                 |                       |

## **FORMATIVE ASSESSMENT**

**I. Word Jumble:**

a) G S A H E P N F A H T K O

The gap in between Varshanadu hills and Agathiya hills.

b) M C A L T O A U R

A famous waterfall in Chittar

c) M A W R A E R S M A

Coast without waves

d) E S H R A Y N A V R A

Eastern Ghats in Salem

e) G N R S A I M A R

Island between Kaveri and Kollidam

**II. Group Activity**

Collect information and discuss about the existing environment of the water resources in your district.

**III. Creative Skill**

Share your experience at a hill station in Tamil Nadu.

**IV. Project**

Prepare a Project on the role of Government and people participation in coastal protection zone.

### 3. CLIMATE OF TAMIL NADU

Physiography, nearness to sea and geographical location determine the overall climatic conditions of any region.

**Weather** refers to the state of the atmosphere over an area at any particular point of time.

**Climate** refers to the average weather conditions and variations over a large area in a long period of time (more than thirty years).

The major climatic elements are: temperature, pressure, wind, humidity, clouds and precipitation.

Tamil Nadu has **tropical climate**. Two factors namely, the apparent position of the Sun and the monsoonal rain bearing winds influence the climatic conditions of Tamil Nadu. The vertical rays of the Sun fall on the state twice in a year.

Though Tamil Nadu lies in the tropical region, the local weather conditions such as temperature,

humidity, clouds and wind direction along with the wind speed, change the climatic conditions to a greater extent. This is the region of climatic variation that exhibits the influence of the coastal and the interior locations.

The temperature of the state starts increasing in the second week of February and gradually increases in the months of March to June. The hottest part of the summer season is known as **Agni Nakshatram** (Star of Fire) or **Kathiri veyyil**. The decrease of temperature is from the second week of June to the first week of October. The month of October is the season for the retreating or northeast monsoon. From then, the temperature starts to decrease up to the month of February. In Tamil Nadu, May is the hottest and January is the coldest month. Though this is the general situation, the overall climatic condition varies among mountainous regions, plateaus, coastal and interior plains. The following table explains it clearly.

Table: Region-wise seasonal average temperature

S.No.	Geographical Locations	Weather recording stations	Temperature in Celsius		
			Summer season	Winter season	Rainy season
1	Coastal regions	Chennai	40° C	22° C	25° C
2	Interior Plains	Vellore	42° C	21° C	22° C
3	Inland regions	Thiruchirappalli	42° C	20° C	23° C
4	Hilly regions	Kodaikanal	11° C	6° C	14° C
5	Plateau	Coimbatore	32° C	26° C	21° C

The relative humidity in the state is found to be higher in winter when compared to summer. The average humidity of the air is about 68 % in the month of May, whereas it is 82 % in January. The rate of evaporation is

higher during the summer than in the winter. The state possesses thick rain bearing clouds in the months of October, November and December.

**Table: Major seasons of Tamil Nadu**

Seasons	Tamil Name	Tamil Month
Summer (April to August)	Illavenil Muduvenil	Chitirai, Vaikasi Aani, Aadi
Rainy (August to December)	Khar season Khulir	Avani, Puratasi Iypasi, Karthigai
Winter (December to April)	Mun Pani Pin pani	Markhazhi, Thai Masi and Panguni

### **The rainy seasons of the state may be grouped into three**

- 1) South West Monsoon
- 2) North East Monsoon
- 3) Cyclonic Rainfall

#### **Southwest Monsoon**

The southwest monsoon occurs between June and September. The districts that are benefitted by this season are the Nilgiris, Kanyakumari, western parts of Coimbatore, Dharmapuri and Salem. As the South-west monsoon starts its downpour of rain in the Western Ghats, the western parts of Tamil Nadu receive about 150 cm of rainfall, on an average. Most of the Eastern and Central parts of Tamil Nadu become rainshadow region in this season. This occurs due to the southwesterly direction of monsoonal winds in this season. In general the amount of rainfall of south west monsoon decreases from west to east. The Nilgiris district receives about 70 % of its annual rainfall followed by the Salem and Erode districts.

Kanyakumari district also receives sufficient amount of rainfall from this season.

#### **Do you know?**

The word monsoon is derived from the Arabic word 'mausim' which literally means season. Monsoon refers to the seasonal reversal in the wind direction between seasons.

#### **Northeast Monsoon**

The Northeast Monsoon season occurs between October and December. The coastal and interior plains of Tamil Nadu are highly benefitted by this rainy season. Normally, the Northeast monsoon rain is associated with cyclonic formation. In this season, the amount of rainfall decreases from east to west. Except Kanyakumari, all other interior south and western parts of Tamil Nadu receive less rainfall. Coastal districts such as Chennai, Cuddalore, Thiruvallur,

Kancheepuram, Villupuram, Nagapattinam, Thiruvarur and Thirunelvelli districts receive about 150 to 250 cm of rainfall. Trichirapalli, Salem and Erode receives about 100 to 150 cm of rainfall.

### Cyclonic Rainfall

November is the month of cyclonic rainfall. The low pressure formations in the southern part of the Bay of Bengal intensifies and forms the cyclonic rainfall. An equal amount of rainfall is received from both the Northeast Monsoon and the Cyclonic rainfall in the coastal districts of Tamil Nadu.

On the basis of annual rainfall received, the districts of Tamil Nadu can be grouped into 5 rainfall regions. From the table given below it is clear that the coastal districts along with Nilgris falls under the very heavy rainfall region with an annual rainfall of more than 1400 mm. Among the districts, Kanyakumari is fortunate enough to receive rain from all the rainy seasons. Very low amount of annual rainfall is received by the Coimbatore and Tiruppur districts.

**Table: Season wise percentage of annual rainfall**

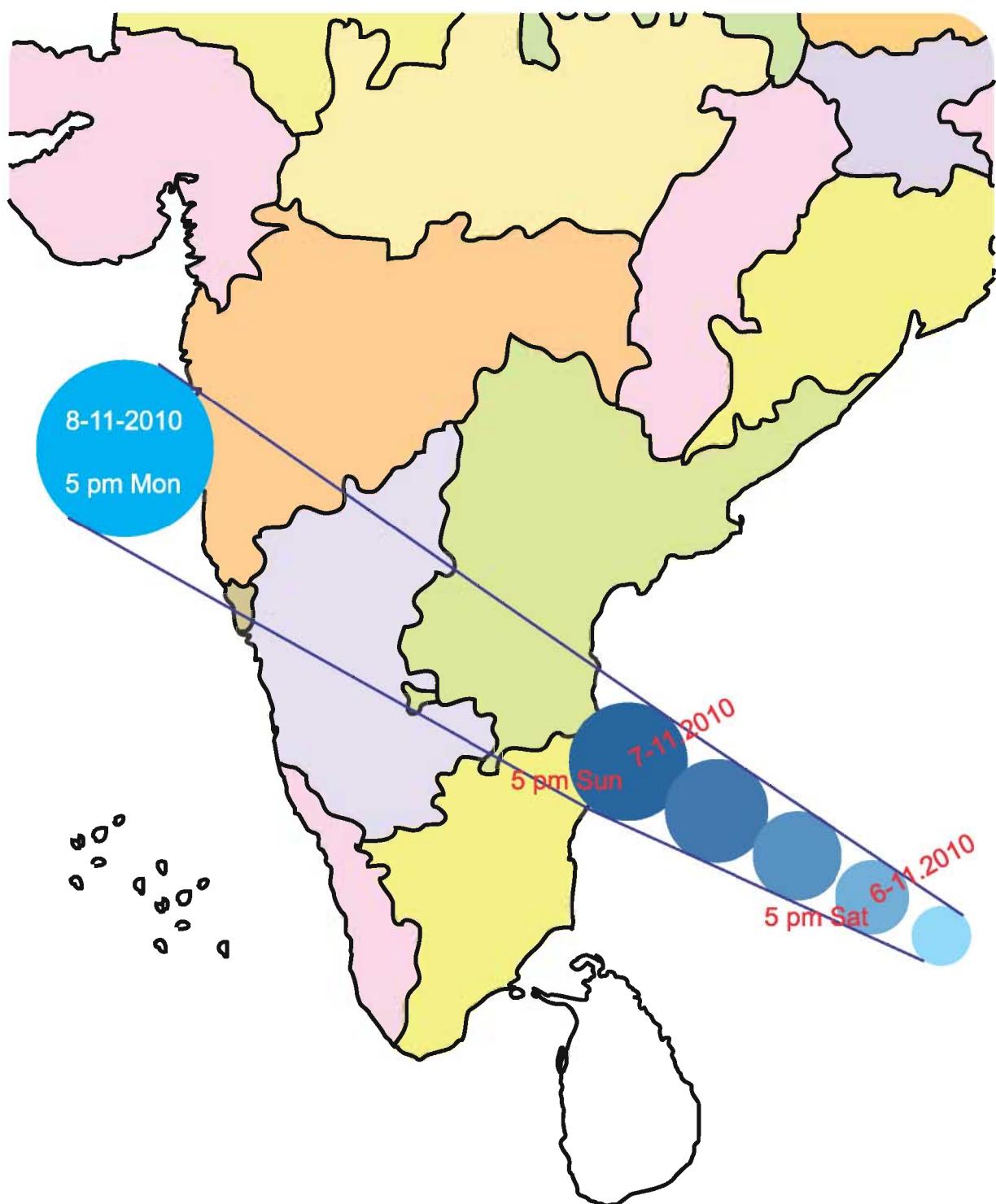
Sl.No	Seasons	Annual Rainfall (%)
1)	South West Monsoon	22
2)	North East Monsoon	57
3)	Cyclonic Rainfall	21

**Table: Rainfall Regions of Tamil Nadu Distribution of rainfall (2007-2008)**

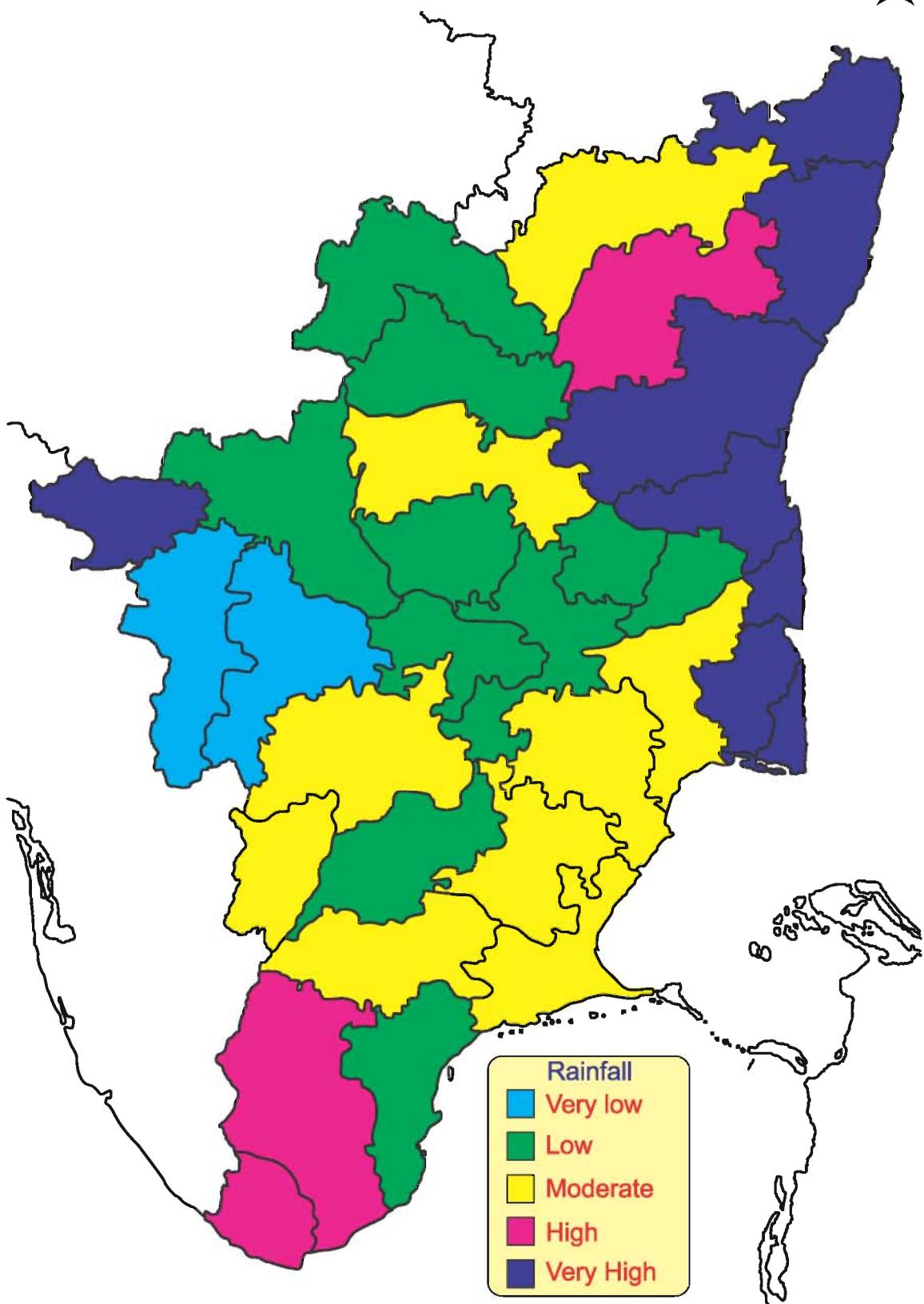
Sl. No	Distribution of Rainfall	Amount of Rainfall	District
1	Very Low rainfall	Below 800 mm	Coimbatore ,Tiruppur.
2	Low rainfall	From 800 mm to 1000 mm	Namakkal, Karur, Thuthukudi, Erode, Dharmapuri, Madurai, Thiruchirappalli, Perambalur, Krishnagiri.
3	Moderate rainfall	From 1000 mm to 1200 mm	Pudukkottai, Virudhunagar, Sivagangai, Thanjavur, Salem, Ramanathapuram, Dindigul, Theni, Vellore.
4	High rainfall	From 1200 mm to 1400 mm	Thirunelveli, Thiruvannamalai, Kanyakumari
5	Very High rainfall	Above 1400 mm	Kancheepuram, Chennai, Villupuram, Thiruvallur, Thiruvarur, Cuddalore, Nagapattinam, Nilgiris.

## Cyclonic Track of Jal (6-8th, Nov 2010)

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▲



**TAMIL NADU  
DISTRICT-WISE ANNUAL RAINFALL(2007-2008)**



## Natural Vegetation

Vegetation that grows naturally without the effort of human beings is called **Natural vegetation**. Its growth depends upon the temperature, rainfall and type of soils.

According to the National Forest Policy, a region should have 33% of its land under forest. Unfortunately, Tamil Nadu has only 17% of its land under forest. In the state, forests are confined to the Western Ghats and the Hilly regions. Among the districts, the Nilgiris possesses the highest percentage of area under forest followed by Theni, Dharmapuri and Kanyakumari districts. In the coastal regions, the dry weather and poor soil allows only casuarina tree to grow. Heavy rainfall regions show prominence of tropical evergreen forests. Javadi hills are noted for their fruit bearing trees and sandal wood.

## Distribution of Forests

The distribution of forests among different districts of the state is very uneven. Concentration of forests is mostly on the hills of the western districts and in the Javadi group of hills in Vellore district. Dense forests are also seen in Salem district. More than half of the area in the Nilgiris is under forests. Other districts hold 1 to 5 % of area under forests. Thanjavur being an alluvial plain is suitable for agriculture and it has less than 1 % of forest cover.

The forests of Tamil Nadu have different types of trees. Most of the trees in the state shed their leaves in the dry season. Tamil Nadu has large areas of sandal wood plantations, about 5,88,000 hectares. Hard wood trees are available in the forests of Coimbatore, Nilgiris and Kanyakumari.

Trees that are used as fuel are found in Madurai, Coimbatore and

Thirunelveli districts. Kanyakumari district has rubber plantations. In the Nilgiris, camphor and eucalyptus trees are grown under afforestation. In the foothills of the Western Ghats and parts of Thirunelveli and Virudhunagar districts, there are trees that are used for making matchsticks. The trees such as peepal, blue apples, jack fruit and gooseberries grow all over the state.

## Types of Forests

The Natural Vegetation can be broadly divided into five different types. They are:

- Tropical evergreen forests;
- Tropical deciduous forests;
- Thorny shrub forests;
- Mangrove forests and
- Hill forests.

## Tropical evergreen forests

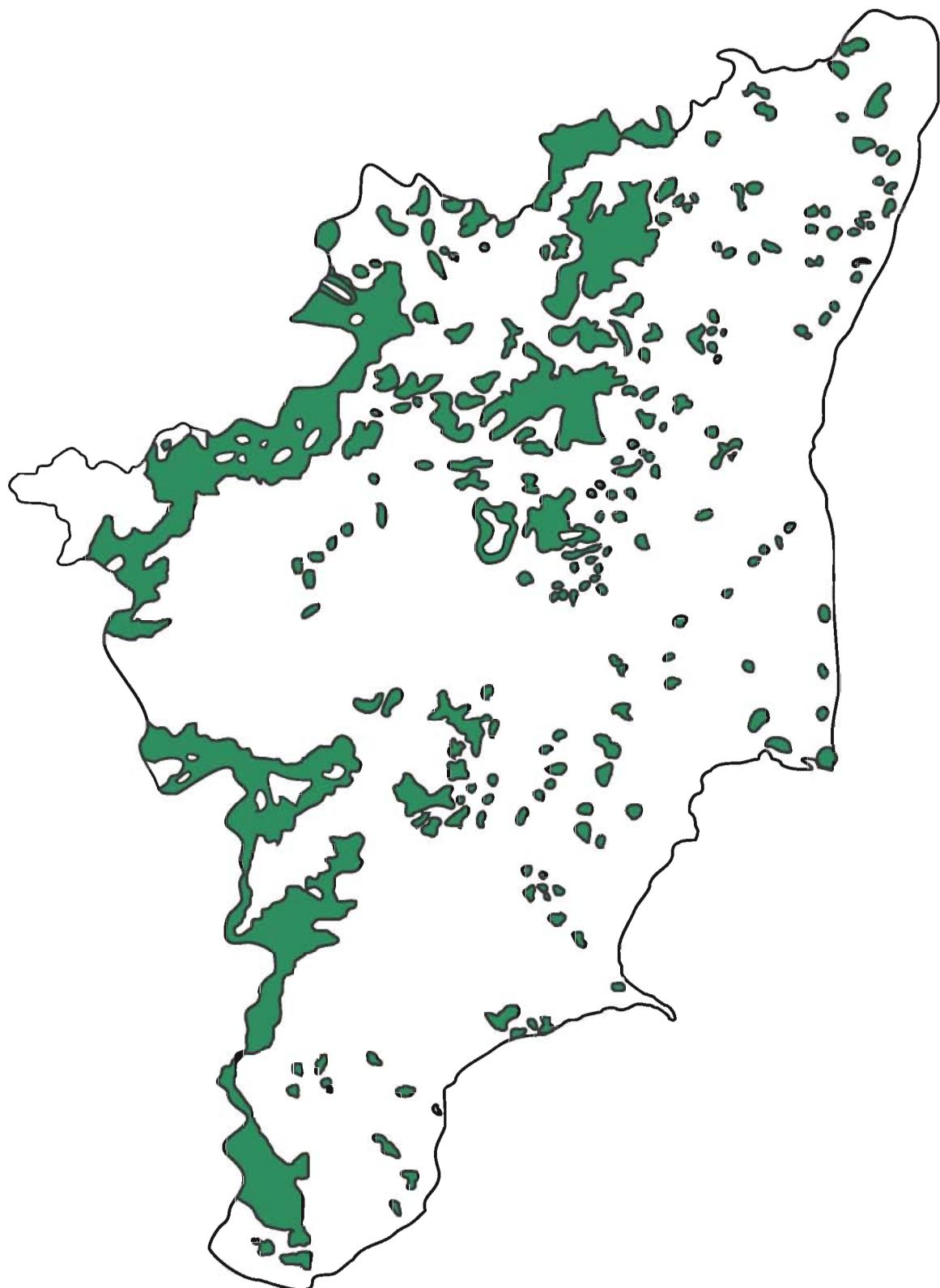
As the name implies these forests are evergreen and they never shed their leaves in a particular season. Since the leaves are present always, they are known as the **evergreen forests**. Tropical evergreen forests are distributed in the regions of heavy rainfall(above 200 cm annual rainfall). These forests are found along the slopes of the Nilgiris and Anamalai hills and the coastal areas of Tamil Nadu. The hard wood trees like **ebony**, **teak**, **rosewood** and **ironwood** are also found here. They grow to a height of 60 m.

## Tropical deciduous forests

These forests are found in the areas having rainfall ranging between 100 and 200 cm per year. They are found on the eastern slopes of the Western Ghats. These are also called as **monsoon forests**. The trees of these forests shed their leaves to avoid the loss of moisture during dry season.

**Tamil Nadu  
Areas under Forest**

N



Trees of different varieties such as, tall and short, soft and hard woods are found in these forests. Some of them are **sal**, **sandal wood**, **teak**, **bamboo** and **paddock**.

### Thorny shrub forests

Thorny shrub forests are found in the areas where there are long dry periods and low rainfall. This type of vegetation includes low, widely scattered trees and bushes. They are highly adaptive to dry conditions, with deep roots, thick stems and fleshy leaves.

### Mangrove forests

Mangroves are found in the tropical and sub-tropical tidal areas, which have a high degree of salinity. Mangrove trees grow along the estuaries and back waters. In Tamil Nadu, Pitchavaram, Kodikkarai and Vedaranyam, have mangrove or tidal forests. Pitchavaram has the largest swamp forest cover in the state. It is near the city of Chidambaram in Cuddalore district submerged under the back waters of the Bay of Bengal. Here, thickly wooded islands of mangroves are found covering an area of about 1,214 hectares. These forests also contain tropical evergreen trees and shrubs, belonging to the genus **Rhizophora**. In Pitchavaram



Mangrove forest in Pitchavaram

mangrove forests are found in 25 km<sup>2</sup> and Kodikkarai the forests cover about 17 km<sup>2</sup>.

### Hill forests

These forests are found along the hill slopes where the rainfall is heavy. In the hills of Anamalai and Niligris, different varieties of flora such as trees, shrubs, climbers and creepers are found, according to altitude.

### Forest Product

The forest products of Tamil Nadu may be divided into two: major and minor products. Major products include timber and fuel wood. Timber is used for many purposes namely:

- ▶ Building construction;
- ▶ Making for furniture;
- ▶ Boat building;
- ▶ Plywood;
- ▶ Hard wood;
- ▶ Matches;
- ▶ Pulp;
- ▶ Paper industries;
- ▶ Packing boxes;
- ▶ Wooden toys;
- ▶ Pencils; and
- ▶ Wood carving.

The minor products are bamboo, canes, leaves, grasses, essential oils, medicinal plants, resins, gums, tanning materials, spices, dyes, beeswax, honey, turpentine and lac. A large number of these products are used as raw materials for cottage industries while some serve as valuable articles of export.

## EXERCISE

### I) Choose the correct answer.

1. Tamil Nadu has \_\_\_\_\_ climate.  
a) Tropical      b) temperate      c) Polar      d) Arctic
2. Tropical cyclones occur during the month of \_\_\_\_\_.  
a) November      b) January      c) December      d) April
3. Teak and ebony belong to \_\_\_\_\_.  
a) Tropical evergreen forest      b) Tropical deciduous forest  
c) Mangrove forest      d) Hill forest
4. Tamil Nadu receives \_\_\_\_\_ rainfall during South west monsoon season.  
a) Very high      b) Low      c) Moderate      d) High
5. Northeast monsoon winds blow during \_\_\_\_\_ months.  
a) June to September      b) October to November  
c) December to February      d) March to May
6. Mangrove forests are found in \_\_\_\_\_.  
a) Vedaranyam      b) Coimbatore      c) Pudukkottai      d) Nilgiris
7. The trees of \_\_\_\_\_ forest shed their leaves during dry season.  
a) Tidal      b) Deciduous      c) Evergreen      d) Mangrove

### II) Match the following.

- |                     |                      |
|---------------------|----------------------|
| 1. Evergreen forest | Forest product       |
| 2. Monsoon forest   | March to June        |
| 3. Hot season       | December to February |
| 4. Cold season      | Rosewood             |
| 5. Timber           | Shed the leaves      |
|                     | Sundari Trees        |
|                     | Bamboo               |

### III) Answer in brief.

1. List down the Geographical factors that influence the climate of Tamil Nadu.
2. Name the seasons of Tamil Nadu.
3. Define monsoon?
4. Distinguish between South West and North East monsoon.
5. Distinguish between Evergreen and Monsoon forest.
6. East coast of Tamil Nadu does not receive much rainfall during South West monsoon—Give reasons.
7. Write a short note on cyclonic rainfall.
8. Name few forest products of Tamil Nadu.

**IV) Answer in a paragraph.**

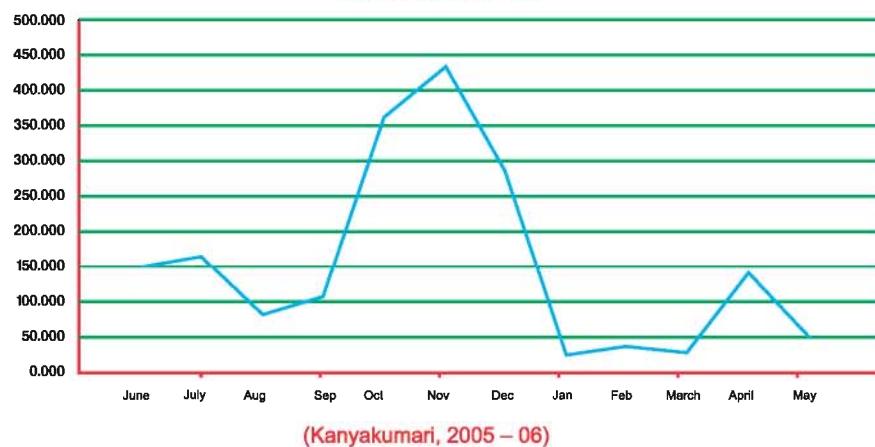
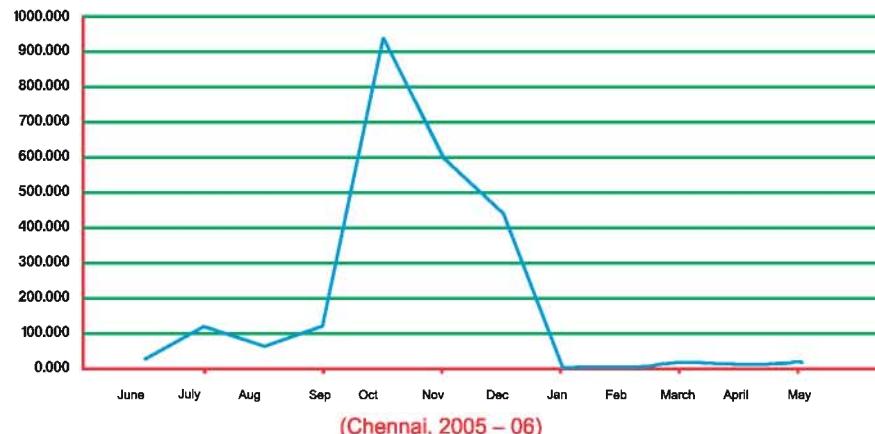
1. Describe the different kinds of forests of Tamil Nadu.
2. Give an account of the Rainy seasons of Tamil Nadu.
3. Write about the rainfall regions of Tamil Nadu.

**V) Mark the following on a given map of Tamil Nadu.**

1. Direction of Arabian sea branch of monsoons.
2. Direction of Retreating monsoons.
3. Areas of Evergreen forests.
4. District that receives of low rainfall.
5. District that receives of heavy rainfall.

## FORMATIVE ASSESSMENT

### I. Reasoning Skill



Fill in the table by reading the graph and compare the rainfall and find the reason for the difference

Districts	Month of rainfall		Season wise Rainfall			Hot Weather Season
	Highest	Least	South West Monsoon	North East Monsoon	Winter	
Chennai						
Kanyakumari						

## **II. Life Skill**

Prepare a table with the clues given for your village / town / city and discuss the results.

1. The month having highest temperature.
2. The month having lowest temperature.
3. The month having highest Rainfall.
4. The month having lowest Rainfall.
5. Month of pleasant weather.
6. Month which you felt suffocation.
7. Month with high wind speed.
8. Month with low wind speed.
9. Month in which most of the trees shed their leaves.
10. Month in which you see dew drops./ Mist (fog)

## **III. Collect Picture**

Find out the local name and biological name for these flora and fauna found in any one district of Tamil Nadu. Collect pictures and paste them in your scrap book.

## **IV. Word Search**

C	A	S	U	A	R	I	N	A	N	N
O	S	D	F	G	H	J	K	L	M	M
I	R	A	M	U	K	A	Y	N	A	K
M	A	U	S	I	M	F	A	A	B	B
B	B	N	M	L	P	Z	U	I	V	V
A	S	R	Y	U	O	Q	Y	O	C	C
T	A	T	B	N	Z	W	T	L	X	X
O	X	Y	L	Z	O	E	R	P	Z	Z
R	H	Y	Z	O	P	H	O	R	A	A
E	Q	W	E	R	T	Y	U	I	O	O

- a) Trees that grow in poor soil.
- b) District which receives rain for three seasons.
- c) Family name of trees grown in Mangrove forest.
- d) District which have least rainfall.
- e) Equal word for monsoon in Arabic language.

## 4. RESOURCES OF TAMIL NADU

### Resources

The term 'resources' refers to the natural wealth available on the earth surface for the welfare of mankind. The surrounding environment contains many natural elements like rocks and minerals on and under the surface of the earth. Water is available in the form of lakes, rivers and seas. Living organisms like plants and animals are also present. These resources can be utilized for the betterment of a country's economy. Resources may be assessed on the basis of factors such as:

1. Types of resources; and
2. Characteristics of resources.

### Let us do

List five resources you use in your home and five you use in your classroom.

Resources have three main characteristics: utility, quantity (often in terms of availability), and consumption

### Natural resources

Natural resources are essential for our survival, to satisfy human wants and needs. It may be classified in different ways.

On the basis of origin, resources may be divided into two: **Biotic** and **Abiotic**.

### Biotic Resources

Biotic resources are those obtained from the biosphere. Forests and their products, animals, birds and their products, fish and other marine organisms are examples of the biotic resources. Minerals such as coal and petroleum are also included in this

category because they are formed from the decayed organic matter.

### Abiotic Resources

Abiotic resources comprise of non-living things. Examples are land, water, air and minerals such as gold, iron, copper and silver.

On the basis of availability, resources are classified into two groups as **Renewable** and **Non-renewable resources**.

### Renewable resources

Renewable resources are those which can be replenished or reproduced without getting depleted or exhausted. Examples of these resources are light, heat and energy from the sun; wind energy; water from lakes, rivers and seas and the soils from the earth's crust.

### Non-renewable resources

Non-renewable resources are those which are formed over very long geological periods and are certain to be exhausted in course of time. Example: Coal, oil and other minerals.

Resources are finally divided on the basis of their origin. These include:

- Land resources;
- Soil resources;
- Mineral resources; and
- Water resources.

### Land Resources

Land is a basic resource as it satisfies the day-to-day requirements of human beings and animals that are obtained from the land. Human beings obtain their basic necessities of food by cultivating the land. Land is also used

for a variety of purposes. It is mainly used for construction activities of houses, industries, roads and railway lines. Apart from this land is also under forests and grasslands. Forest provide valuable timber while grasslands provide fodder for animals. As far as the land resources of Tamil Nadu is concerned, its land resources are classified into 9 land use types and are presented in the diagram given below. Among the districts of Tamil Nadu, Erode holds the largest share(10 %) of forests, followed by Krishnagiri (9.6 %), Dharmapuri(7.7 %), Thiruvannamalai (7.2%) and Vellore (7.1%).

Barren lands are more in the districts of Villupuram, Theni and Salem. Ninety per cent of the land in Chennai is utilized for non-agricultural uses such as residential and industrial uses. Non-agricultural land use is also predominantly found in the districts of Thiruvallur, Kancheepuram, Villupuram and Pudukottai. Area under current fallow is more in Coimbatore and Erode districts whereas Thirunelveli district has more area under other fallow lands.

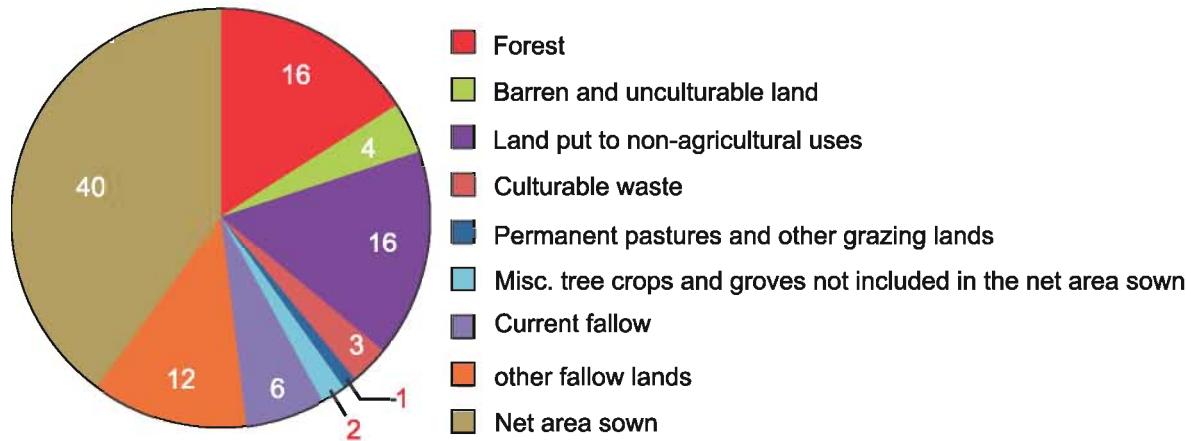


Table :Land use categories for Tamil Nadu

S.No	Category	Area	%
1	Forest	21,10,703	16.2
2	Barren and unculturable land	5,03,255	3.9
3	Land put to non-agricultural uses	21,38,679	16.4
4	Culturable waste	3,68,661	2.8
5	Permanent pastures and other grazing lands	1,10,309	0.8
6	Misc. tree crops and groves not included in the net area sown	2,74,351	2.1
7	Current fallow	7,58,840	5.8
8	Other fallow lands	15,18,008	11.7
9	Net area sown	52,43,839	40.3
Geographical area		1,30,26,645	100.0

### Let us do

Talk to an elderly person in your family or neighbourhood and collect information about changes in the land use over the years, in the place where you live.

## Soil Resources

Soil is the loose material which forms the upper most layer of the earth, consisting mainly of very small particles. It is an essential element for the development of agriculture, as it provides essential minerals or nutrients

for the growth of vegetation. Soil forming processes are controlled by the factors such as parent rock, climate, relief, time factor, flora, fauna and micro organisms present in the soil (Fig: a and b).

Figure a: Process of soil formation

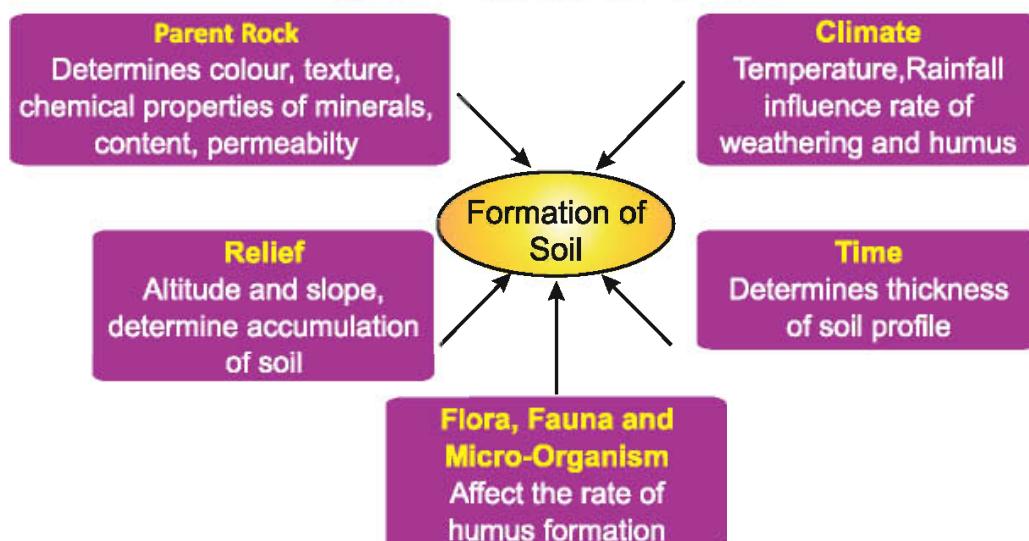
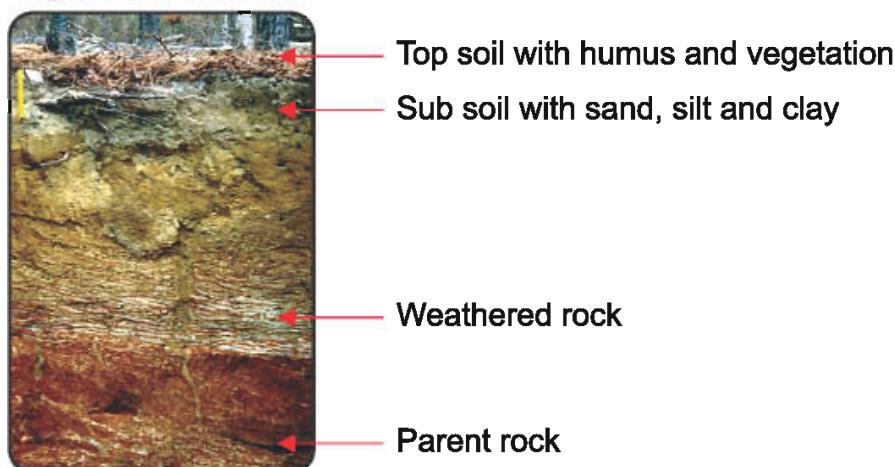


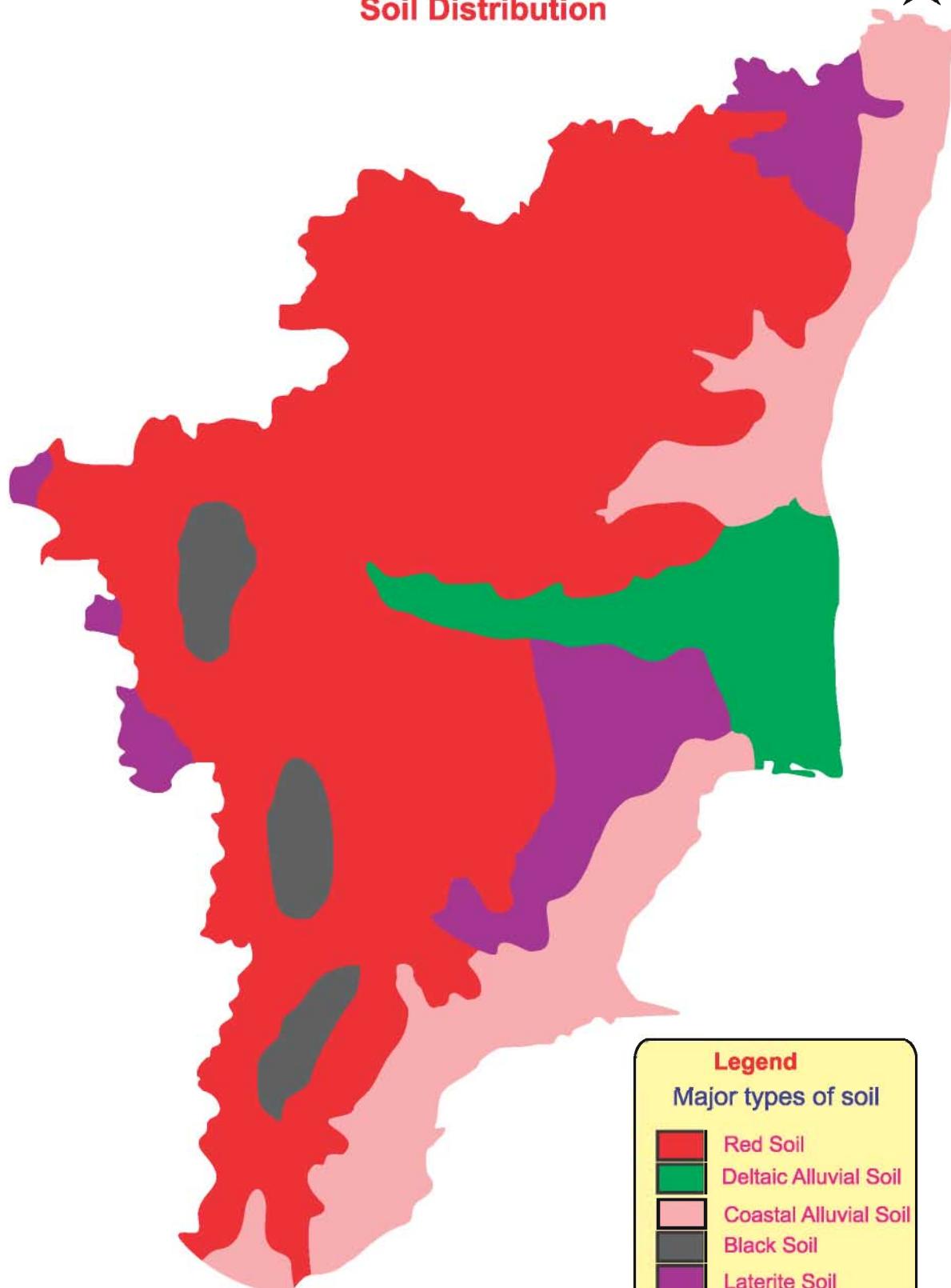
Figure b: Soil profile



### Do you know?

It takes hundreds of years to make just one centimetre of Soil.

## Tamil Nadu Soil Distribution



## Soils of Tamil Nadu

The soils of Tamil Nadu may be grouped into five types. They are classified according to their formation, size and colour. Their occurrence in the districts of Tamil Nadu is given below

Table: Types of soils in Tamil Nadu and their distribution

Sl. No	SOIL	DISTRICT
1	Alluvial soils	Thanjavur, Thiruvarur and Nagapattinam, Villupuram, Cuddalore, Thirunelveli and Kanyakumari.
2	Regur or the black soils	Coimbatore, Madurai, Virudhunagar, Thuthukudi and Tirunelveli.
3	Red Loams	Sivagangai, Ramanathapuram.
4	Laterite soils	Kancheepuram, Thiruvallur, Thanjavur, hill tops of western ghats and eastern ghats.
5	Saline soils	Predominantly in Vedaranyam, Coromandal coast and for about 10 km in all the coastal districts of Tamil Nadu.

### Activity

In Tamil Nadu soils could be either alluvial, black, red, laterite or saline. Collect a handful of different types of soil and observe. How are they different? Write down.

## Forest Resources

Tamil Nadu's wealth of flora and fauna lies in the hilly and forest regions. Some of its major wildlife sanctuaries like Mudumalai and Anaimalai (Indira Gandhi Wild life sanctuary) are situated on the hills of the Western Ghats, which have habitats for elephants, tigers, bison and a variety of monkeys and deer. Among the 3,000 and more plant species found in Tamil Nadu, majority of them are found in the mixed deciduous forests. One of the most noteworthy flowers is the Kurinji of Kodaikanal hills which blooms once in 12 years. The state has recognised it with special status. Cinchona, a forest product, from which quinine-a drug for treating malaria is extracted. Eucalyptus which

grows abundantly in the Nilgiris is also used as medicine for curing cold and as pain reliever.

Medicinal herbs are commonly found on the Palani hills and Courtallam. Palmyrah trees are grown abundantly in Thirunelveli district, as subsidiary activity to agriculture. Its products are used as raw materials for several cottage industries. Exotic varieties of sandalwood are grown in Javadhi hills of Vellore district. The forest areas of Tiruvannamalai and Tirunelveli districts of the state are being regenerated and protected by the State Forest Department. These forests not only provide for the large economy of the state but also to the local livelihood.

### Do you know ?

'Vanamahotsava' is celebrated in October every year to highlight the importance of wild life.

World Wildlife Day    October 4

World Forest Day    March 21

World Water Day    March 22

### Water Resources

Water resources comprising of surface water (river and lakes), ground water, marine and coastal waters, support all living things including human beings. Basically, man requires safe protected water supply for drinking, cooking, washing and bathing. In the agricultural sector, the growth of plants and yield of crops are directly related to the quality and quantity of water available. Underground water is also used for the purpose of irrigation and other utilities. All industries require water either for processing or for other utilities.

Table: Water resources in Tamil Nadu

Water Sources	Numbers
Rivers	17
Lakes	15
Tanks	40319
Ponds	21205
Canals	2395
Reservoirs	71
Wells	1908695

### Do you know ?

Rainwater harvesting is the process of collecting rainwater from roof tops and directing it to an appropriate location where it is stored for ground-water recharge. On an average, one spell of rain for two hours is enough to recharge 8,000 litres of water.

### Animal Resources

Apart from foodgrains meat, poultry and dairy products are also considered as dietary components. Animals which are domesticated yield wool, fur and skin that form the basic raw materials for specific clothing, shoes and other products. The animal resources contribute a lot to the development of the economy where they are reared commercially.

Table: Livestock in Tamil Nadu

Livestock	No of animals
Cattle	91,41,043
Buffaloes	16,50,343
Sheep	55,93,485
Goat	81,77,420

### Glossary

#### National Park

A natural area designated to protect the ecological balance of one or more ecosystems for the present and the future generations is referred to as a National Park.

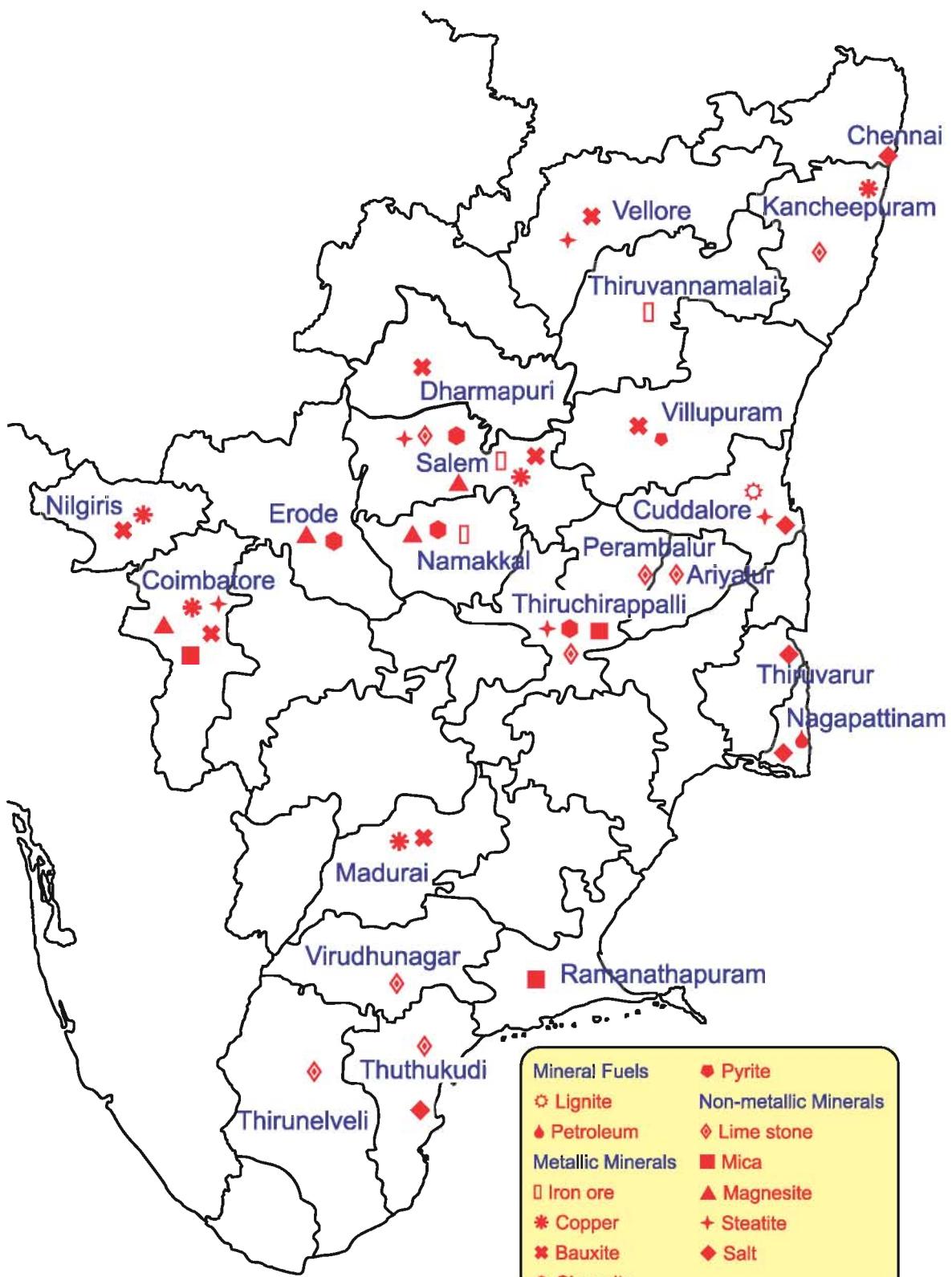
### Mineral Resources

A mineral is a substance or compound of organic or inorganic origin found on the earth's crust. Every mineral has a definite composition and distinct physical characteristics. Most of the minerals are crystalline in nature and occur widely in rocks. Rocks contain one or more minerals. Natural forms of minerals are called ores and minerals are processed from ores.

### Do you know?

The salt used in cooking and graphite in your lead pencil is a mineral.

## Tamil Nadu Minerals



The major mineral resources of Tamil Nadu include Lignite, Vermiculite, Garnet, Zircon, Graphite, Ilmenite, Rutile, Monazite and Magnesite.

### Classification of Minerals

Minerals are classified into three

categories. They are

1. Metallic Minerals;
2. Non-Metallic Minerals; and
3. Mineral Fuels.

**Table: Metallic Minerals of Tamil Nadu**

MINERALS	DISTRICT
Iron ore	Salem, Namakkal and Thiruvannamalai
Copper	Salem, Nilgiris, Coimbatore, Madurai
Bauxite	Salem, Nilgiris, Coimbatore, Vellore, Dhamapuri, Madurai and Vilupuram
Chromite	Salem, Namakkal, Thiruchirappalli and Erode
Pyrite	Villupuram

**Table: Non-Metallic Minerals of Tamil Nadu**

MINERALS	DISTRICT
Lime stone	Virudhunagar, Thuthukudi, Tirunelveli, Thiruchirappalli, Kanchipuram and Salem
Mica	Thiruchirappalli, Coimbatore and Ramanathapuram
Magnesite	Salem, Namakkal, Coimbatore and Erode
Steatite	Vellore, Cuddalore, Coimbatore, Salem and Thiruchirapalli
Salt	Chennai, Thuthukudi, Cuddalore, Nagapattinam and Thiruvarur

**Table: Mineral Fuels of Tamil Nadu**

MINERALS	DISTRICT
Petroleum	Thiruvarur (Panamgudi), Narimanam (Kaveri Delta Region)
Lignite	Neyveli

### Activity

With the help of an atlas, mark the distribution of iron, copper, bauxite, gold and lignite on an outline map of Tamil Nadu.

## Energy Resources

Resources from which energy can be obtained for heating and lighting are called energy resources.

The energy resources can be divided into two types. They are:

1. Conventional Power Resources; and
2. Non-conventional Power Resources.

### Conventional Power Resources

Conventional source of energy are those which have been traditionally used by mankind for a long time. It usually includes fossil fuels like coal, natural gas, oil as well as nuclear power.

#### Types

The three major conventional energy sources are:

1. Thermal Power Resources;
2. Hydel Power Resources; and
3. Atomic Power Resources.

## Thermal Power Resources

Power is generated from nonrenewable energy sources such as coal, oil, and Natural gas, is known as thermal power.



Thermal Power Station-Neyveli

Thermal power is produced by heating the water. The steam thus formed spins the turbine to produce electricity.

Table: Thermal power plants of Tamil Nadu

Name of the Plant	District	Types of Fuel	Capacity in MW
Neyveli Lignite Corporation	Cuddalore	Coal	2490
North Chennai Thermal Power Unit-I	Thiruvallur	Coal	1200
Thuthukudi Thermal Power Plant	Thuthukudi	Coal	1000
Mettur Thermal Power Station	Salem	Coal	600

### Hydropower Energy

Hydro power has been with humanity for a long time. Energy in a rushing river, is captured through a wheel as mechanical energy. Originally, these water wheels powered grain mills, spinning a grindstone directly. On the whole Tamil Nadu



Hydropower station-Solaiyar

**Table: Hydropower plants of Tamil Nadu**

S.No.	HYDRO POWER PLANT	RIVERS	MW
1	Kundah I to V	Bhavani	500
2	Mettur Tunnel	Kaveri	840
3	Aliyar	Aliyar	60
4	Kodayar I and II	Kodayar	100
5	Sholaiyar I and II	Sholayar	95
6	Kadamparai	Kadamparai	400
7	Lower Mettur	Kaveri	120
8	Papanasam Hydro Electric Power	Papanasam	32
9	Pykara	Pykara	150
Total			2297

produces about 2,297 Mega Watts of hydro electric power by 2010 year.

### Atomic Power Station

Atomic energy is the energy produced from the fusion of atoms. It results from a nuclear reaction, a process in which two nuclei or nuclear particles collide, to produce electrical energy by nuclear reactors.



**Atomic Power Station- Kalpakkam**

The first Atomic Power Station of Tamil Nadu is located at **Kalpakkam** about 80 km south of Chennai. It has a comprehensive nuclear power production, fuel reprocessing, and waste treatment facility that includes plutonium fuel fabrication for fast breeder reactors (FBRs). It is also India's first fully indigenously constructed nuclear power station. It

has two units which produce about 500MW of energy.

Another Nuclear Power Station is in Kudankulam of Thirunelveli district. It produces about 1000 MW electricity.

### Non-conventional Power Resources

Non-conventional Power Resources are known as renewable resources. Sun is the biggest source of non-conventional energy. Energy is in the form of photons. India receives abundant sunlight for about 250-300 days in a year. Conversion of solar energy to electric energy and thermal energy takes place mainly by photovoltaic cells and through solar thermal pathways. The non-conventional energy resources are:

- Solar Energy
- Wind Energy
- Tidal wave Energy
- Geo-thermal Energy
- Bio-fuel Energy
- Energy from baggasse

Excluding tidal wave energy and geothermal energy, all other types have been harnessed in Tamil Nadu and their rate of utilization is discussed below.

### Solar Energy

Solar power is generated from sunlight. This can be used as direct power with photovoltaic (PV) cells, or indirect with concentrating solar power (CSP). Sun's energy is focused to boil water which is then used to generate power.



**Generation of Solar Power**

Dindigul, Krishnagiri, Dharmapuri are the districts which extract energy from solar power units.

### Wind Energy

Wind power is the conversion of wind energy into a useful form of energy. It is generated using wind turbines to make electricity for wind mills and wind pumps for pumping water or drainage and used to propel ships.



**Wind Farm-Aralvaimozhi**

### Advantages and Disadvantages of Wind Energy

Advantages	Disadvantages
Non-polluting source	Noise pollution
Low cost of production	Wind mills are very costly to setup
Safe and clean	Disturbs radio and T.V. reception.
Inexhaustible	Diffused source, so gets wasted

The total amount of wind energy produced is about 5,208 MW per year. The following table gives the regions of wind energy production and their generating capacity.

**Table: Location and capacity of Wind Farms in Tamil Nadu**

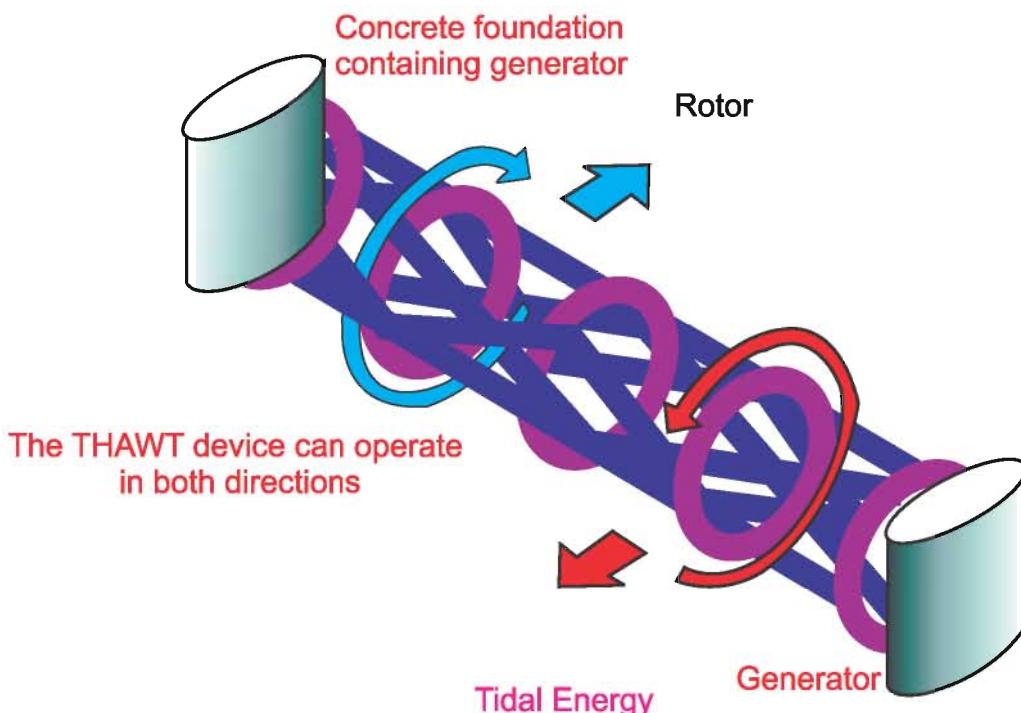
Sl. No	LOCATION	CAPACITY MW
1	Aralvaimozhi Pass (Muppandal area) Kanyakumari/ Thirunelveli Districts.	1,658
2	Shenkottai Pass (Kayathar area) Thirunelveli, Thoothukudi Districts.	1,105
3	Palghat Pass (Kethanur area) Coimbatore.	1,995
4	Coastal area near Chennai and Rameswaram in Ramanathapuram District and other areas (Theni, Palani areas).	450
<b>Total</b>		<b>5,208</b>

## Tidal Wave Energy

Energy generated from tides is called tidal energy. Tidal energy can be harnessed by building dams at narrow openings of the sea. During high tide the energy of the tides is used to turn the turbines installed in the dam to produce electricity.

## Advantages and Disadvantages of Wind Energy

Advantages	Disadvantages
Non-polluting	Destroys wildlife habitats
Inexhaustible	Difficult to harness.



### Do you know?

The first tidal energy station was built in France.

Advantages of Tidal Energy	Disadvantages of Tidal Energy
Clean, eco-friendly and always available. Cheap compared to other energy sources.	Located far away from cities and so costly to transport electricity. Can be generated only during windy days.

## Geo-thermal Energy

Geo-thermal power utilizes the heat in the interior of the earth for generation of power. In areas where volcanoes exist, the rocks in contact with molten magma are quite hot.

When rain water seeps into these rocks, it gets converted into steam and gushes out as a geyser. Hot springs may also occur in such areas. The steam generated can be used to generate power on a small scale.

## Bio-fuel Energy

Bio-fuels are a wide range of fuels. The term covers solid biomass, liquid fuels and various biogases. Currently, 13 plants with a capacity of 130 MW are operating in Tamil Nadu.



**Table: Bio-fuel Plants in Tamil Nadu**

S.No.	District	NO. OF PLANTS
1	Sivakasi	2
2	Pudukottai	2
3	Tiruvanamallai	1
4	Dindigul	1
5	Theni	1
6	Thanjavur	1
7	Madurai	1
8	Virudunagar	1
9	Thiruvallur	1
10	Kanchipuram	1
11	Krishnagiri	1

## Bio-fuel Energy

## Energy From Sugarcane Bagasse

Residual cane fibre (bagasse) is burned as fuel. In Tamil Nadu there are about 18 sugar mills producing energy of nearly 411 MW from bagasse. Table given below lists the sugar mill locations with their energy producing capacity



## TAMIL NADU ENERGY DEVELOPMENT

**Table: List of Sugar Mills with Co-generation Plants in Tamil Nadu**

S.No.	SUGAR MILLS	DISTRICT	CAPACITY MW
1	MRK Co-operative Sugar Mills Ltd	Cuddalore	7.50
2	Cheyyar Co-operative Sugar Mills	Thiruvannamalai	7.50
3	Dharani Sugars & Chemicals Ltd	Thirunelveli	15.00
4	Rajashree Sugars & Chemicals Ltd	Theni	12.00
5	Kothari Sugars & Chemicals Ltd	Theni	12.00
6	Terry Energy Ltd	Cuddalore	28.42
7	S.V. Sugar Mills Ltd	Kancheepuram	45.00
8	Subramania Siva Co-operative Mills Ltd	Dharmapuri	5.00
9	Terry Energy Ltd	Thanjavur	18.68
10	EID Parry India Ltd	Cuddalore	30.00
11	Sakthi Sugar Mills	Sivaganga	5.500
12	Arunachalam Sugar Mills Ltd	Thiruvannamalai	19.00
13	Bannari Amman Sugars Ltd	Erode	20.00

14	Auro Energy Ltd	Nagaipattinam	16.00
15	Sri Ambika Sugar Mills	Cuddalore	40.00
16	Sakthi Sugar Mills Pvt.	Erode	32.00
17	Rajashree Sugars Chemicals Ltd.	Villupuram	22.00
18	EID Parry India Ltd.	Pudukkottai	18.00
19	Kothari sugars and Chemicals	Ariyalur	22.00

### Activity

Find the process of energy production in a Co-generation plant located in your area by visiting it.

### EXERCISE

#### I) Choose the correct answer.

1. Which one of the following is not a factor of soil formation.  
a) Time      b) Soil texture      c) Organic matter      d) Inorganic matter
2. Biotic resources are those obtained from the \_\_\_\_\_.  
a) Time      b) Biosphere      c) Water      d) Wind
3. \_\_\_\_\_ determines thickness of soil profile  
a) Climate      b) Time      c) Relief      d) Wind
4. Medicinal herbs are commonly found on the \_\_\_\_\_ hills  
a) Palani hills      b) Agasthya hills      c) Anaimudi      d) Chennimalai
5. Which one of the following is a leading producer of Lignite  
a) Villupuram      b) Neyveli      c) Chennai      d) Erode
6. Which one of the following is a producer of Iron ore  
a) Salem      b) Thiruchirapalli      c) Coimbatore      d) Chennai

#### II) Match the following.

- |                                 |            |
|---------------------------------|------------|
| 1. Mettur Thermal power station | Dharmapuri |
| 2. Wind energy                  | Medicine   |
| 3. Saline Soils                 | Villupuram |
| 4. Cinchona                     | 5,208 MW   |
| 5. Solar power units            | Vedaranyam |
|                                 | Chennai    |
|                                 | Salem      |

**III) Answer in brief.**

1. Define Resources.
2. Define soil.
3. Which are the factors that determine formation of soil?
4. Define rain water harvesting.
5. What is National park?
6. Name the Hydel power plants of Tamil Nadu.
7. Distinguish between Conventional and Non-Conventional sources of energy
8. What are the advantages and Disadvantages of wind energy?
9. Soil is non-renewable resources - Explain.

**IV) Answer in a paragraph.**

1. Explain the different types of soil found in Tamil Nadu.
2. What are the uses of forest?
3. Give an account of the mineral resources in Tamilnadu.
4. Give an account of Thermal power Resources in Tamilnadu.

**V) Mark the following on a given map of Tamil Nadu.**

Mark the areas mining:

1. Iron
2. Copper
3. Bauxite
4. Lignite

## FORMATIVE ASSESSMENT

**I. Word Search**

C	U	D	D	A	L	O	R	E	N	G	G
O	M	V	K	T	G	I	S	Y	V	J	H
I	L	A	G	R	I	C	A	U	R	P	N
M	A	R	U	P	U	L	L	I	V	T	O
B	V	E	L	L	O	R	E	T	N	R	O
A	Y	P	A	H	S	W	M	D	R	G	P
T	H	I	R	U	N	E	L	V	E	L	I
O	H	R	V	S	Y	P	R	K	O	T	V
R	A	T	R	T	Q	S	B	C	K	J	W
E	C	N	A	R	F	D	V	R	S	L	N
K	A	L	P	A	K	K	A	M	I	O	T

- a) Lignite is mined in the district
- b) First Atomic power station of Tamil Nadu
- c) The district of Kudankulam
- d) First tidal energy station in the world
- e) Leading Pyrite producing district
- f) District of Mettur Thermal power plant

**II. Life Skill**

Find the land use categories for your district and draw Bar / Pie diagram ([tn.maps.tn.nic.in/district.php](http://tn.maps.tn.nic.in/district.php))

**III. Models**

Prepare a working model for wind energy and know its dynamics

**IV. Debate**

In present situation debate about the significance of conventional and non-conventional source of energy.

**V. Map Skill**

Find out the Correlation between the presence of minerals and physical features using maps.

## 5. TAMIL NADU - AGRICULTURE

Agriculture is the prime and traditional occupation for the people of Tamil Nadu. The practice of growing plants on a large scale for food and other purposes is known as agriculture. Agriculture includes not only cultivation of crops, but also rearing of animals, birds, forestry, fisheries, and other related activities.

### Activity

Find proper word for each of the following.

Cattle rearing

Rearing of birds

Rearing of silkworms

Rearing of honeybees

Growing fruits

Growing flowers

Growing grapes

(sericulture, apiculture, animal husbandry, orchard farming, viticulture, floriculture, poultry)

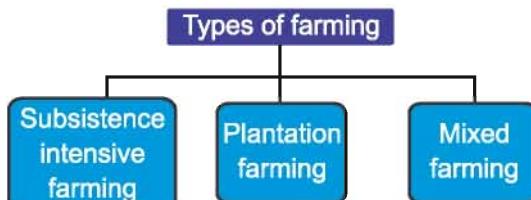
### Activity

Can you redefine agriculture using the terms learnt in previous activity.

About 56 % of the people of Tamil Nadu are farmers. Agricultural sector supplies food and fodder to the people and cattle, respectively. It is the source of raw material for many of the industries.

### Types of Farming

The methods of growing crops vary from region to region and can be classified as follows:



### Subsistence intensive farming

Farming that is carried on small land holdings that produce food crops for local consumption and not for external trade is known as **subsistence intensive farming**. Most farmers in Tamil Nadu practice subsistence intensive farming. With the availability of water for cultivation, farming methods are classified into three types, namely:

- 1) Wetfarming;
- 2) Dry farming (*maanavari*); and
- 3) Irrigation farming.

<b>Wet farming</b>	<b>Dry farming</b>
<ul style="list-style-type: none"><li>● Farming where water supply is available throughout the year both rainfall and irrigation is known as wet farming</li><li>● Crops cultivated are rice and sugarcane.</li><li>● Most river basins of Tamil Nadu practice this type of farming.</li></ul>	<ul style="list-style-type: none"><li>● Farming carried out only during rainy season without irrigation is known as dry farming.</li><li>● Crops cultivated are ragi and other millets.</li><li>● Drier regions of Vellore, Thiruvannamalai, Ramanathapuram and Thirunelveli practice this type of farming.</li></ul>

## Irrigation farming

Irrigation farming is the practice of growing crops with supply of water through various sources of irrigation like wells, lakes, and canals. Rice, cotton and sugarcane are grown with irrigation farming in most part of Tamil Nadu.

Most of the farmers in Tamil Nadu practice subsistence intensive and irrigation farming. As the water requirement for each crop varies, irrigation plays a major role in the agricultural development of Tamil Nadu.

## Plantation farming

Plantation farming is yet another type of farming where crops are grown on large farms or estates. Plants like Tea, coffee, rubber and pepper are grown as plantation crops on the hill slopes of Tamil Nadu.

## Mixed farming

Mixed farming is one wherein land is allotted for more than one activity along with agriculture. The farmer grows two or three varieties of crops along with cattle rearing, poultry and fishing on a large land holding. This method is profitable to the farmer as it provides regular and continuous income. This type of farming is prevalent in the Kaveri delta.

## Market gardening

Market gardening includes horticulture and floriculture, (growing fruits, vegetables and flowers) in large scale for supply to the urban markets and also for export purposes. Districts such as Madurai, Nilgiris, Thiruvallur and Kancheepuram practice this type of farming.

## Cropping seasons of Tamil Nadu

Farmers select particular crops to be cultivated in a season, to suit soil

and availability of water in that season. Thus most farmers in Tamil Nadu cultivate crops in three different seasons as given below:

## Sornavari (Kharif season) (Chithirai pattam)

*Sornavarai* is otherwise known as Kharif season. The seeds are sown during May and harvested in October. As the month of May coincides with the Tamil month, *Chithirai* it is also known as *Chithiraipattam*.

## Samba (Summer season) (Adipattam)

*Samba* is otherwise known as summer season. The seeds are sown in the month of July which coincides with the month Tamil month of *Aadi* and harvested in January. This season is referred to as *Adipattam* in Tamil Nadu.

## Navarai (Winter Season-Rabi) (Karthigai pattam)

The seeds are sown in the month of November and harvested in March. This season is known as *Karthigai pattam* in Tamil Nadu as the Tamil month Karthikai coincides with the month of November.

### Activity

List the dominant type of farming followed in your district and the reasons behind them.

Name the crops grown in your area and their growing seasons?

## Factors influencing agriculture

The factors influencing agriculture may be classified as physical, social and economic factors.

○ Physical factors include soils, temperature, rainfall, humidity, climate and slope of land.

○ The Social factors include traditional knowledge, belief and myths of farmers, farm size and holdings and farmer's acceptance towards innovation.

○ Economic factors are market, loan assistance, Government subsidy and incentives.

### Activity

Choose the suitable crops for specific types of soils.

Soil	Crop
Red soil	
Alluvial Soil	
Laterite Soil	
Black soil	
(paddy, sugarcane, rubber, cotton)	

### Activity

List the names of crops that you have identified and correlate them with the climate of the region.

- 1)
- 2)
- 3)

### Sources of Irrigation in Tamil Nadu

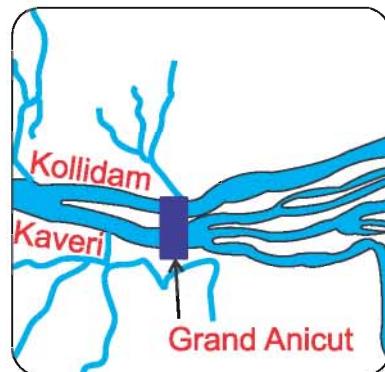
The main sources of irrigation are canals, tanks and wells.

Canals are man-made channels of water taken from a perennial river, dam or lake to supply water to the agricultural fields. Canal irrigation is the most prominent type in the basins of Kaveri and Tamiravaruni. 27 % of irrigated land in Tamil Nadu cultivates crops using canal irrigation.

### Important canals of Tamil Nadu

Arrakkottai canal, Thadapalli canal and Kalingarayan canal are

some of the noteworthy canals on river Bhavani a tributary of River Kaveri. Canals taken from Mettur dam provide irrigation for about 2.7 lakh hectares. The Grand Anicut built across the river Kaveri near Trichirappalli, diverts the water to the entire delta region through canals.



Grand Anicut on River Kaveri

River Thamiravaruni and its tributaries serve Tirunelveli district with many canals. River Tamiravaruni has nine anicuts from which the following channels, named as north and south Kodaimel Alagain canal; Nathiyunni canal, Kannadian canal, Kodagan canal, Palayan canal, Tirunelveli canal and Marudhur canal. Apart from this, Pachaiyar has nine anaicuts and Chittar has seventeen anaicuts.

### Do you Know?

Canals used for irrigation have the oldest records of two millennia in Tamil Nadu. Kallanai, built around First century, by Karikalan is still in use and considered to be the oldest water-regulatory structure in the world.

The state of Tamil Nadu is pioneer in linking rivers of the state as recommended by Ministry of Water Resources.

## Tanks

Lakes are natural water bodies. Lakes are converted into tanks by strengthening their bunds to store water for irrigation. Tank maintenance and management is a common practice associated with temples. There are about 40,319 tanks in Tamil Nadu which accounts for 19 % of the irrigated area. Tanks are concentrated in the districts of Kanchipuram, Vellore, Thiruvannamalai, Pudukkottai, Ramanathapuram and Tirunelveli. At present, Ramanathapuram has the maximum number of tanks. Tanks have to be desilted regularly for better storage and supply of water. In Tamil Nadu, tanks are classified as follows; They are system tanks and non-system tanks. System tanks are linked to river/canal system of the state, with water filled through supply channels. The non-system tanks, on the other hand, are dependent on rainfall of that region. Tanks are maintained by either PWD or Panchayat.

## Do you know ?

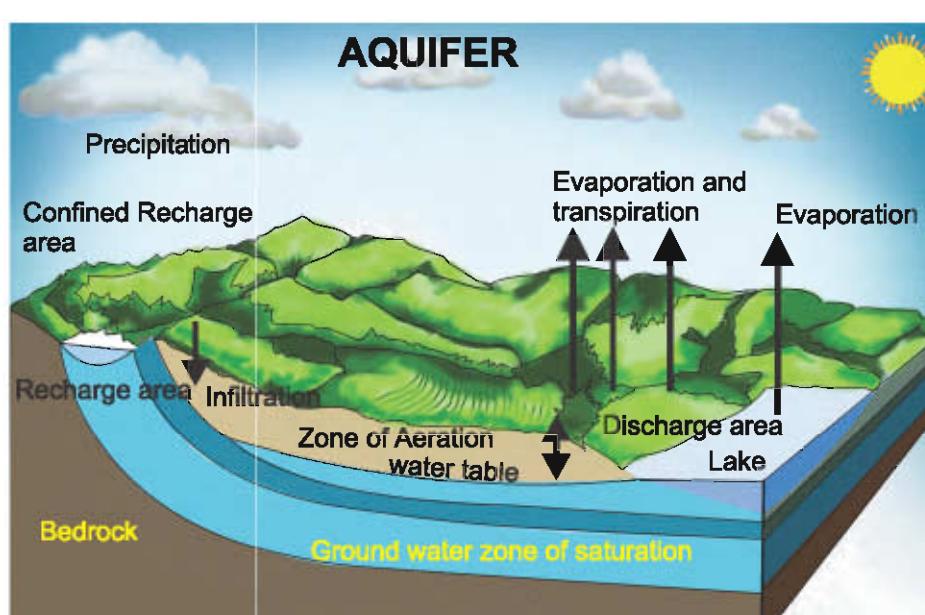
Kancheepuram is known as the land of 'thousand lakes'

Some important lakes of Tamil Nadu are found in Red Hills, Chembarambakkam, Veeranam, Madhurandhagam, Kolavai, Ambattur, Ooty and Kodaikanal.

## Well

Well irrigation is most predominant irrigation system in Tamil Nadu which utilizes groundwater. Well irrigation covers 52 % of irrigated area in the state. Wells may be classified as surface wells and tube wells.

Surface wells are also known as open wells and are dug to reach the water table lying within a few metres from the surface. Tube wells explore the aquifers of great depth with the help of electric motors. There are 1,62,11,391 surface wells and 2,87,304 tube wells in Tamil Nadu that are used for the purpose of irrigation.

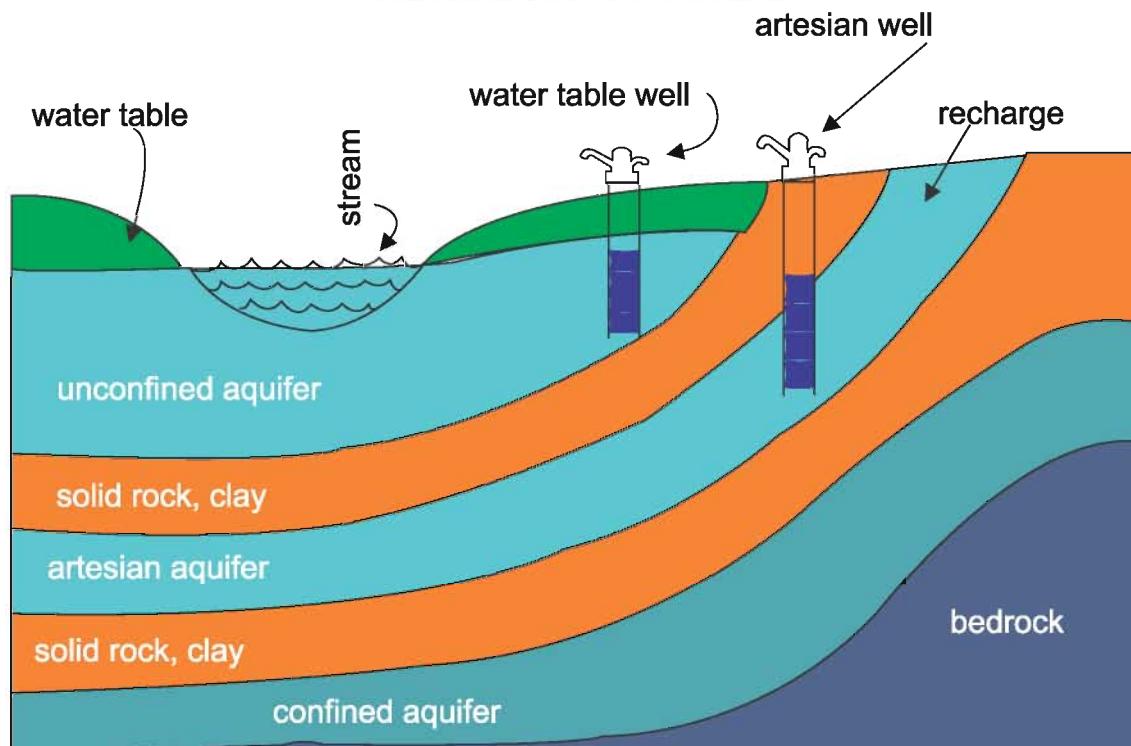


**Aquifers** are underground rock layers which store water and allow water to pass through them.

In Tamil Nadu a high potential artesian aquifer occurs in the Cuddalore, Chidambaram and Viruthachalam area. This aquifer named as Neyveli aquifer, pumps out water regularly from lignite mining area for irrigation and domestic supply.

There is a considerable amount of spring irrigation in the Kaveri and Vaigai beds. Irrigation from these springs is practised in a few places of Erode district.

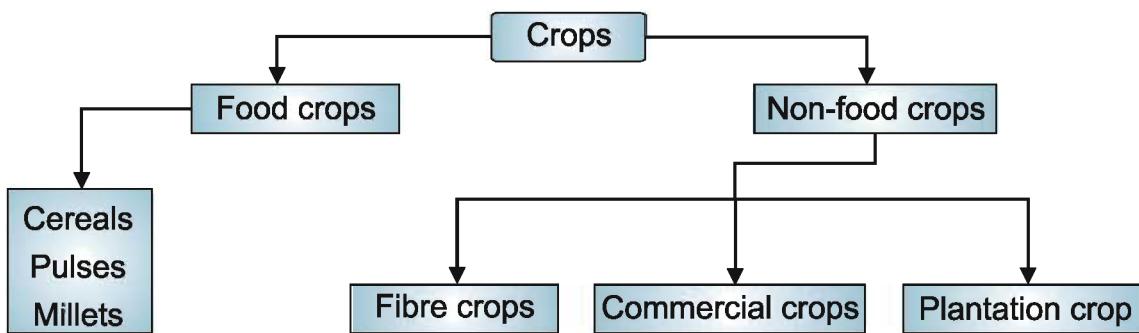
### Aquifers at different depth



### Activity

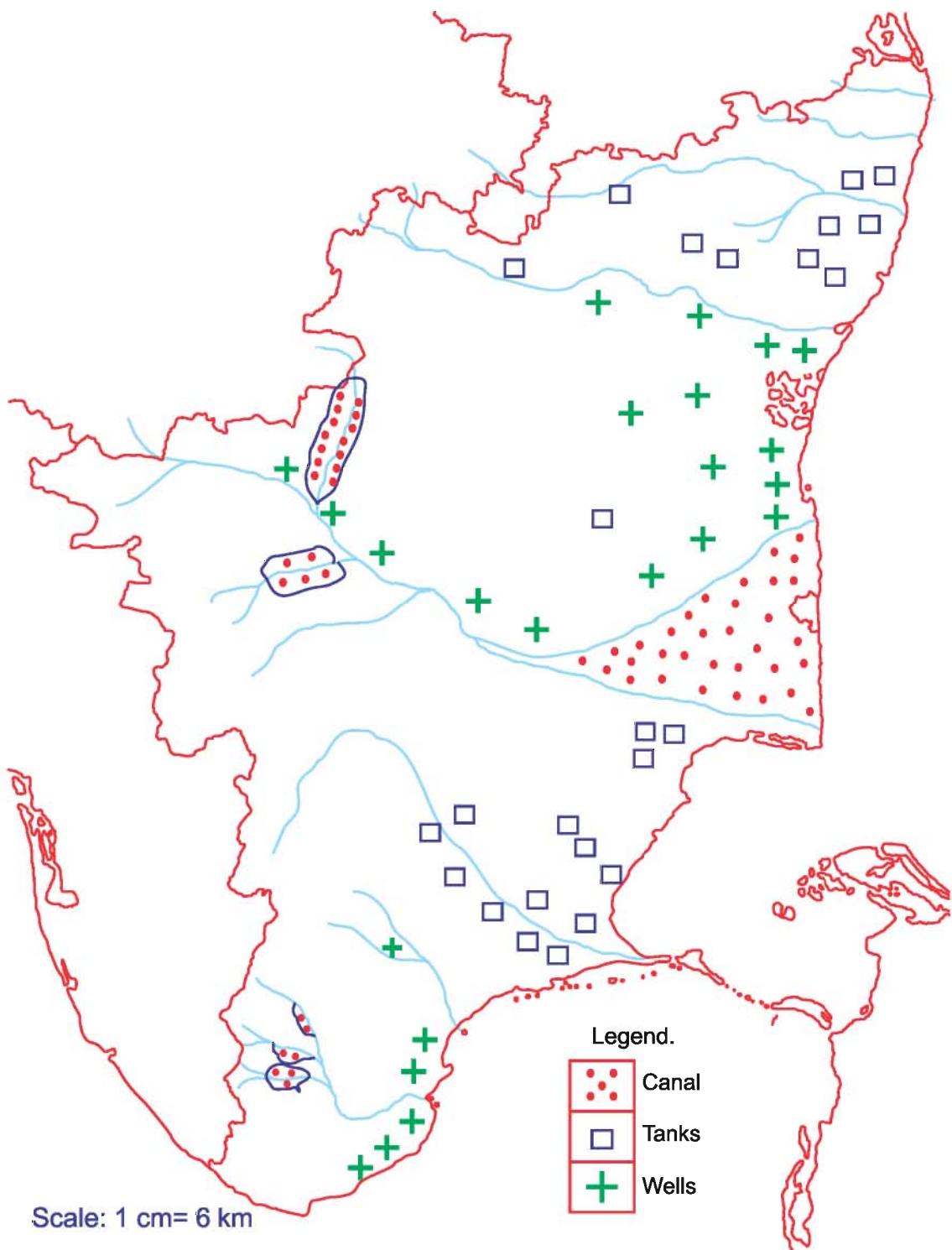
Find out the source of irrigation in your area

### Major Crops of Tamil Nadu

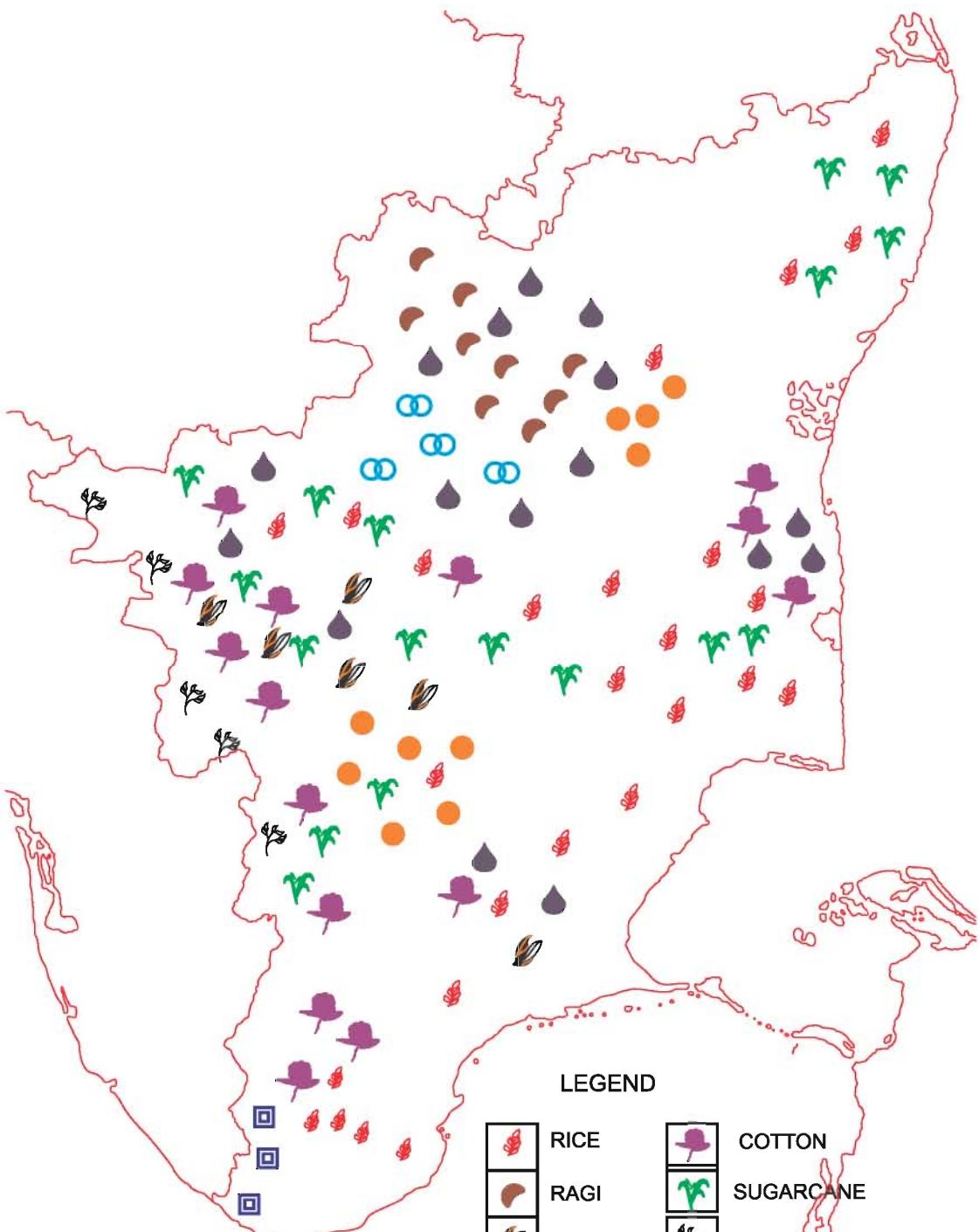


## TAMIL NADU SOURCES OF IRRIGATION

N  
▲



## TAMIL NADU MAJOR CROPS



Scale: 1 cm = 6 km

## Distribution of crops in Tamil Nadu

Each crop requires specific climatic conditions for its growth. Tamil Nadu lies entirely in the tropical zone and therefore almost all tropical crops are grown here.

### Food crops

Food crops include cereals, pulses, and millets. Among the food crops (cereals), paddy is the prime crop cultivated in all the districts of Tamil Nadu. Rice (Paddy) requires level land, high temperature and continuous supply of water for its growth. Ponni, and *Kichadi Samba*, are major varieties of paddy grown in Tamil Nadu. Jaya, IR 50 are high yielding varieties grown in Tamil Nadu. Among the districts, Thanjavur, Thiruvarur and Nagapattinam have maximum acreage as well as production of rice.

Thus Kaveri delta (especially the undivided Thanjavur district) is known

as the Granary of south India. Normally Paddy is grown in Thanjavur district in four seasons during one agricultural year.

### Activity

Find out the reason why rice can be grown in all three cropping seasons of Tamil Nadu whereas it is not possible in north India?

### Do you know?

Tamil Nadu Rice research institute is in Aduthurai. TNRH 174, developed by the Tamil Nadu Agriculture University's, Tiruvarur Rice Research Institute has recorded the highest yield of 4,500 kg per acre.

Pulses that are grown in Tamil Nadu include bengal gram, red gram, green gram, black gram and horse gram.

Coimbatore leads in the production of Bengal gram, whereas Vellore and

Table: Millets of Tamil Nadu

Name of the millet	Leading districts
Cholam	Coimbatore, Dindigul and Thiruchirappalli
Cumbu	Villupuram and Thoothukudi
Ragi	Krishnagiri, Dharmapuri and Salem
Maize	Salem, Perambalur and Dindigul
Korra (thinai)	Salem and Namakkal

Table: Tamilnadu-Principal food crops – area and production 2007-2008 (in percentage)

Crops	Percentage of area	Percentage of Production
Paddy	57.8	76.6
Other food crops	22.6	20.6
Pulses	19.6	2.8
Total	100	100

Source: Department of Economics and Statistics, Chennai 6

Krishnagiri produce red gram. The districts of Thiruvarur, Nagapattinam and Toothuthukudi stand first in production of green gram. Nagapatinam, Thiruvarur and Cuddalore are noted for black gram production. Horse gram cultivation is widely seen in Krishnagiri and Dharmapuri districts.

### Activity

Find out the reason why pulses are grown after harvesting rice.

Millets are dry crops cultivated in areas having high temperature and less rainfall.

### Non-food crops

#### Fibre crops

Fibre crops include cotton and jute. Cotton thrives well in black soil and it is the major fibre crop of Tamil Nadu cultivated on large scale in the districts of Coimbatore, Thirunelveli Cuddalore and Villupuram. Mcu4, Mcu5, LRA5166 are the major varieties of cotton cultivated in the state.

#### Commercial crops

Commercial crops include all those crops that are cultivated by the farmers to sell and not for their own consumption. Sugarcane, tobacco, oilseeds and spices like chillies, turmeric and coriander are examples of commercial crops.

Sugarcane is the dominant commercial crop cultivated in Tamil Nadu. It is a nine-month crop which requires fertile soil, high temperature, and stagnant water till the time of flowering. Coimbatore, Karur, Villupuram, Thiruvallur and Cuddalore district show predominance of this crop. Tobacco is yet another commercial crop of Tamil Nadu which is widely grown in Dindigul, Theni and

Madurai district. Groundnuts, sunflower, safflower (Kusumbavrai), castor and linseed are the major oilseeds cultivated in Tamil Nadu.

### Plantation crops

Tea, coffee, rubber, pepper and cashew are the main plantation crops of Tamil Nadu. Tamil Nadu ranks second in area and production of tea next to Assam. Tea estates are seen to be concentrated on the hill slopes of the Nilgris and Coimbatore districts. Tamil Nadu stands second in area and production of coffee next to Karnataka. Coffee is grown in the Western Ghats as well as Eastern Ghats. Hill slopes of the Nilgiris, Theni, Madurai and Salem are the major regions of coffee cultivation. Andipatti, Sirumalai and Shervaroy hills also grow coffee. Rubber is grown in Kanyakumari district. Pepper is confined to the warm and wet slopes of Kanyakumari and Thirunelveli district of Tamil Nadu. Cashew are extensively cultivated in Cuddalore district.

### Horticulture

Cultivating fruits and vegetables on large scale is a recent trend in Tamil Nadu. Fruits like mangoes, jackfruits, banana, guava and grapes are widely grown in groves. Krishnagiri leads in mango production, Coimbatore and Erode are known for banana production and Theni for grapes. Dharmapuri leads the other districts in acreage for horticulture. It also specializes in floriculture.

### Animal husbandry

Rearing animals for the production of milk, meat and hide is known as Animal husbandry. Tamil Nadu Cooperative Milk Producers' Federation (Aavin) produces milk and

dairy products for the state. The federation handles 26.1 million litres of milk per day, processes and supplies milk for the whole state through 7,662 societies. The milk production was 55.86 million tons during 2007-08. Per capita milk consumption is 233g/day.

The poultry hub of Tamil Nadu is Namakkal, Erode, Coimbatore and Salem. Tamil Nadu produced 8394 million eggs during the year 2007-08. Per capita availability is 128 eggs/year.

### Fisheries

Tamil Nadu ranks fourth in fishing among the states of India. Long coastline of 1,076km the broad continental shelf favour coastal fishing in Tamil Nadu.



Inland fishing

The coastline has 591 fishing villages which are spread over thirteen districts of the state. Pearl fishing is predominant in Gulf of Mannar region. Thuthukudi is the leading port in fish export. Two more major fishing harbours are Chennai, and Chinnamuttom in Kanyakumari district and four minor harbours are at Pazhayar, Valinokkam, Colachael and Nagapattinam. Thiruvarur, Nagapattinam, Thanjavur and Ramanathapuram districts together contribute 40 % of marine fish

MARINE FISHING	INLAND FISHING
Fishing carried out in the Oceans and Seas.	Fishing carried out in Lakes, rivers, Ponds, estuaries, backwaters and swamps.
Large Mechanized boats are used for fish catching.	Catamaran (small wooden boats) Diesel Boats and floating net cages are used.
Fish varieties are Sharks, Flying Fish, Cownsh, Cat, Fish, Silver bellies and Carbs	Fish varieties are Catla, Rogue, mirlkal, eel and calabaashu

production in the state.

The estimated marine fish production for the year 2007-08 was 393,266 tonnes (Source: Commissioner of fisheries, Chennai-6).

The state has 370 hectares of inland water, 63,000 hectares of estuaries, backwaters and swamps. Oysters and prawns are cultured in organized nurseries at Ennore and Pulicat lake for export. The estimated inland fish production for the year 2007-08 was 164,504 tonnes. Vellore district ranks first among the districts with 10 % of inland fish production of the state. Cuddalore, Sivagangai and Virudhunagar stands second with 9 % of inland fish catch.

Tamil Nadu Fisheries Department has introduced several programmes for the betterment of fishing.

- 1) Aqua culture in farm ponds and irrigation tanks.
- 2) Fish seed bank
- 3) Fish seed rearing in cages
- 4) Ornamental fish culture and

5) Fish Farmers Development Agency at Karaikal encourages farmers with a slogan “to grow fish and grow with fish”.

### Agricultural Development

Before Independence, agriculture in Tamil Nadu followed traditional method of cultivation. After Independence, there has been a steady development in all aspects of agriculture. Irrigation facilities were improved with the proper implementation of Five Year Plans in the state. Green revolution in terms of hybrid varieties and application of chemical fertilizers increased the production to a greater extent. Abolition of zamindari system, land tenuring, consolidation of farms, introduction of the land ceiling act and co-operative farming were the new agricultural reforms introduced after Independence. Recently, globalization has influenced the agricultural production positively in Tamil Nadu.

### Changing trends in agriculture

The traditional methods of agriculture is slowly being replaced by scientific and technical methods. As a result of this the merits of the traditional methods have vanished.

The Agriculture University in Coimbatore and the M.S. Swaminathan Research foundation are trying to fuse the traditional with the modern methods so as obtain maximum produce in the long run.

Some of the measures adopted are

- Micro - irrigation
- Integrated pest control management (IPM)
- Growing blue Algae and Azolla
- Precision farming through Remote sensing, Geographical Information system and Global positioning system.

### Do you know?

Increase in organic matter will increase the water holding capacity of the soil. This will support the microbial activity and hasten the nutrient absorption capacity of roots.

### Efforts Taken by Government to Improve Agriculture

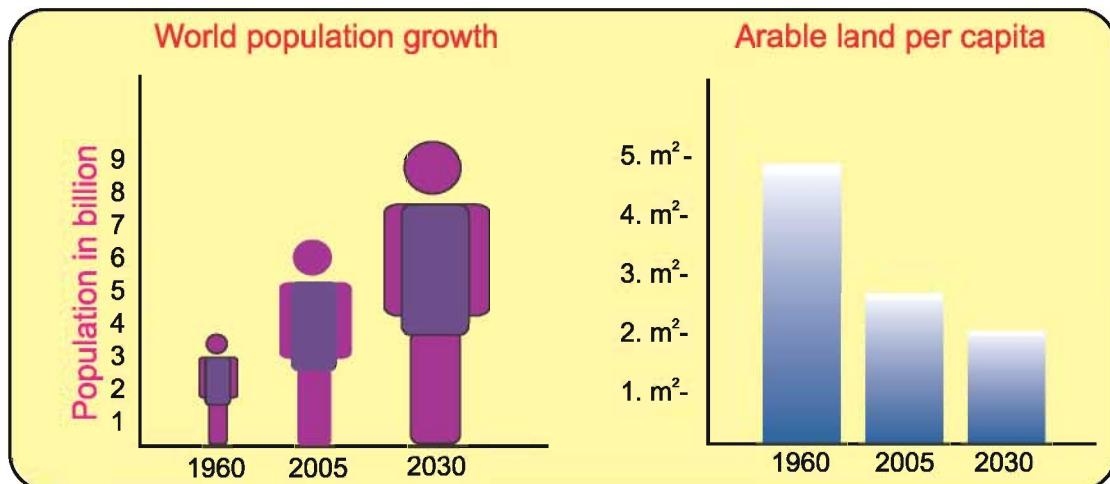
- The Government supplies quality and certified seeds to the farmers.
- Organic matter and micro nutrients are supplied at subsidised rate.
- Free electricity is provided to small and marginal farmers for about 6 to 8 hours a day.
- Government fixes the prices for agricultural products to safeguard farmers from financial crisis.
- Farmers' Market (*uzhavar santhai*) enhances the farmers ability to get better share of prices and at the same time consumers to get agricultural produce at affordable prices.
- Crop insurance scheme has been introduced.
- Government has set up Agricultural Export Zones in Nilgiris and Krishnagiri.

### Activity

Look at the picture given below and compare the size of arable land and growing population given and discuss with your friends about:

- Why should we retain arable land?(cultivable land)
- How could we retain arable land?
- What will happen to food security if we do not maintain the balance between food production and Population increase?

◎Conduct a painting competition to express your views regarding this issue.



## EXERCISE

### I) Choose the correct answer.

1. Tea, coffee, rubber, pepper and cashew are \_\_\_\_\_ crops.  
a) Food      b) Fibre      c) Plantation      d) non-food
2. Agriculture is the \_\_\_\_\_ and traditional occupation of Tamil Nadu.  
a) Primary      b) Secondary      c) Tertiary      d) service
3. \_\_\_\_\_ type of farming is known as Maanaavari in Tamil Nadu  
a) wet farming      b) dry farming  
c) Irrigation farming      d) precision farming
4. \_\_\_\_\_ type of irrigation is most predominant irrigation system in Tamil Nadu  
a) Well      b) Tank      c) Canal      d) Tube well
5. Tamil Nadu Rice Research institute is in  
a) Aduthurai      b) Cuddalore      c) Neyveli      d) Chennai

### II) Match the following.

- |                         |                        |
|-------------------------|------------------------|
| 1. Rearing of birds     | Apiculture             |
| 2. Rearing of silkworms | Poultry                |
| 3. Rearing of honeybees | Leading port in export |
| 4. Growing fruits       | Sericulture            |
| 5. Thuthukudi           | Horticulture           |
|                         | Animal Husbandry       |
|                         | Viticulture            |

### **III) Answer in brief.**

1. What do you mean by subsistence intensive farming?
2. Write short notes on: a) mixed farming b) Plantation farming and c) market gardening.
3. Name the factors influencing agriculture.
4. Bring out the significance of Kallanai in Tamil Nadu.
5. Distinguish between wet farming and dry farming.
6. Distinguish between marine fishing and inland fishing.

### **IV) Answer in a paragraph.**

1. Describe the cropping seasons of Tamil Nadu.
2. Write a paragraph about Inland fishing.
3. Write about the changing trends in agriculture in Tamil Nadu.
4. Mention the efforts taken by the government in improving agriculture in the state.

### **V) Mark the following on a given map of Tamil Nadu.**

1. Granary of South India.
2. A region for cotton cultivation .
3. A region for growing tea.
4. A region for sugarcane cultivation.

### **FORMATIVE ASSESSMENT**

#### **I. Group Activity**

Prepare a chart and make models of the different types of agriculture practices discussed in the lesson. State the advantages and disadvantages of each.

#### **II. Reasoning skills**

1. Compare and contrast the traditional and modern methods of cultivation of any one of crop grown in Tamil Nadu.
2. Find out the methods of irrigation used by the farmers in Tamil Nadu.

#### **III. Map Skill**

Mark the following in Tamil Nadu map with suitable colour and symbols.

1. District that cultivates paddy on all the three agricultural seasons .
2. Region that has artesian basin
3. Region famous for Poultry
4. Major and minor fishing Ports
5. District that grows rubber

# CIVICS

## How are we governed ?

The founding fathers of the Indian constitution, by giving due recognition to the vastness and plural character of our nation, have provided a federal arrangement for her governance; yet they avoided the term 'federal', instead termed the central organization as Union of states. As in any federal system, we, the Indians have two sets of constitutionally constituted government, i.e, Union Government and the state government, and two sets of legislature, ie, Union Parliament and the state legislature. However there is only one set of judicial courts under the authority of the Supreme Court. Powers and responsibilities of these two sets of governing institution are clearly defined in the constitution, through three lists of power, (1 ) Union list (2)state list and (3)concurrent list. To understand the system of governance in India, one should know the systems of governance both at union level and at state level

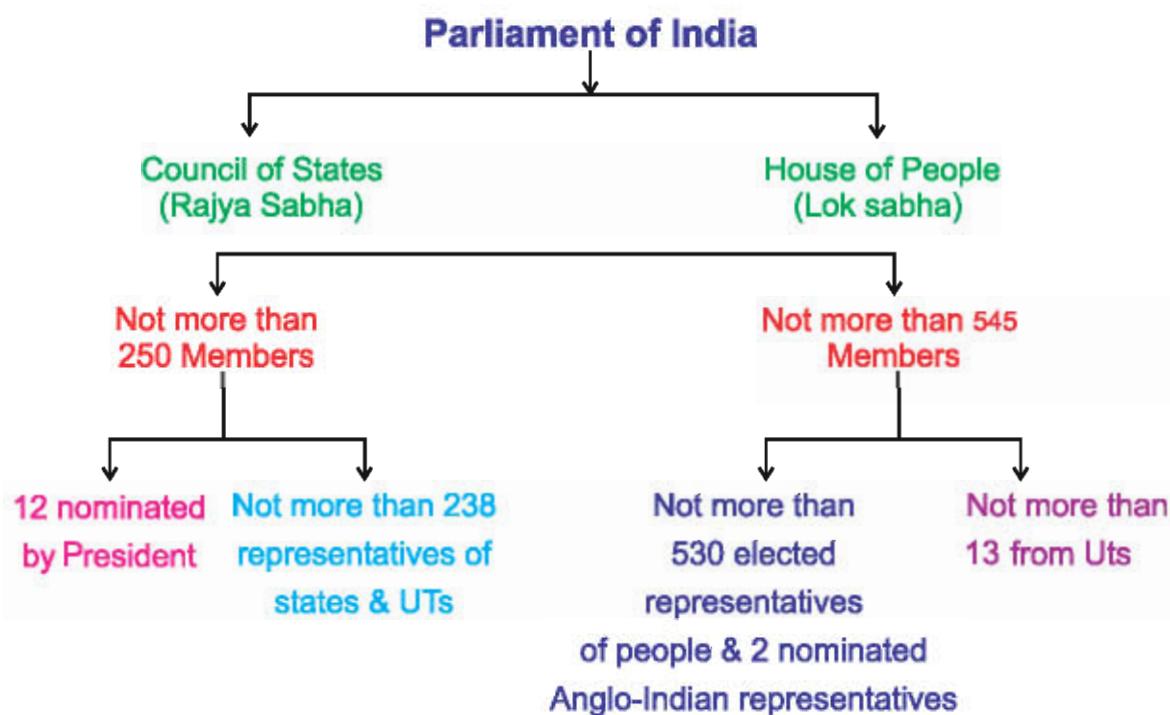
# 1. THE UNION GOVERNMENT



The Constitution of India provides for a parliamentary form of Government under an elected President. It has three wings; the legislature, the executive and the judiciary.

## Union Legislature

The Parliament represents the union Legislature which consists of two Houses, the Upper House called Council of States or **Rajya Sabha** and the lower House called House of People or **Lok Sabha**.



## LOK SABHA (House of People)

The Lok Sabha is the important house of the Indian parliament and contains elected representatives of the people. The Lok Sabha as of today has **543 elected members**. Out of these, **530 members** are elected from the states and **13 members** from the Union Territories. The President generally nominates two members belonging to the **Anglo-Indian** community. At present, the Lok Sabha consists of **545 members**.



Lok Sabha

## QUALIFICATION

A person seeking election to the Lok Sabha must possess the following qualifications.

- ⇒ He / She must be a **citizen of India**.
- ⇒ He / She must not be **less than 25 years of age**.
- ⇒ He / she must not **hold any office of profit** under the Union or State Government.
- ⇒ He/she should have his/her name in the electoral roll in any part of the country.

- ⇒ He / she must be **mentally sound and financially solvent**.

## THE TERM OF THE HOUSE

Normally the Lok Sabha enjoys a term of **five years** from the date of its first session. The term of the House can be dissolved by the President on certain occasions, on the recommendation of the Prime Minister or when the President is convinced of the uncertainty of any group enjoying necessary majority in the House.

## ELECTION TO THE LOK SABHA

The Members of the Lok Sabha are directly elected by the people of the constituencies created on the basis of population. The **Election Commission** of India arranges, supervises and conducts elections to the Lok Sabha. For the sake of elections to Lok Sabha the entire nation is divided into number of constituencies which are formed more or less on the basis of the population.

**"Universal Adult Franchise"** is followed while electing the members of the Lok Sabha. All Indian citizens **above 18 years of age** who are registered as voters will vote for their representatives. This house as directly elected, enjoys more financial powers than the other House (Rajya Sabha) (e.g.) **Money Bills** can be introduced only in the Lok Sabha. Council of Ministers are collectively and individually responsible to Lok Sabha.

The Lok Sabha is presided over by the '**Speaker**' who is elected by its members. In the absence of the Speaker the **Deputy Speaker** elected by the members of the house presides over the session.



Speaker of Lok Sabha  
Smt. Sumitra Mahajan

### RAJYA SABHA (COUNCIL OF STATES)

The Council of States or Rajya Sabha consists of **250 members** out of which **238 represent** the states and the Union Territories, elected by the method of indirect election. The **12 nominated members** shall be chosen by the President from amongst persons having 'special knowledge or practical experience in the field of literature, science, art and social service.



Rajya Sabha

### QUALIFICATION

A person seeking membership of the Rajya Sabha must possess the following qualifications.

- ⇒ He/she must be a citizen of India
- ⇒ He/she must not be less than 30 years of Age.
- ⇒ He/she should have his/her name in the electoral roll in any part of the country.
- ⇒ He/She must not be the member of the Lok Sabha or any other legislature.
- ⇒ He/She must be a person with sound mind and financially solvent.
- ⇒ He/she must not hold any office of profit under any government.

### TERM OF THE HOUSE

The Rajya Sabha is a permanent house and is not subject to dissolution. The members of the Rajya Sabha are elected for a term of six years. One third of the members of Rajya Sabha retire every two years. The Vice President of India is the Ex-officio Chairperson of the Rajya Sabha. The Deputy Chairperson of the Rajya Sabha is elected by the members of Rajya Sabha.

### ELECTION TO THE RAJYA SABHA

The members of Rajya Sabha are elected by the elected members of the **"State Legislative Assemblies"** in accordance with the system of proportional representation by means of the single transferable vote. This process of election is called "Indirect election" as they are not elected by the people directly.

#### Do you know?

The first woman Speaker of the Lok Sabha: Smt. Meira Kumar

Name the present Chairperson and Vice Chairperson of Rajya Sabha.

## POWERS AND FUNCTIONS OF PARLIAMENT

As the Parliament consists of two houses, Rajya Sabha and Lok Sabha, it is termed as bicameral legislature. The main function of the Indian Parliament is to make the laws for good governance of the country. The laws are made for the sake of peace, security and progress of the nation as a whole. It has absolute control over the finances of the nation. It passes the Union budget and decides on the taxes. The Parliament has the responsibility to distribute the funds to the various government departments.

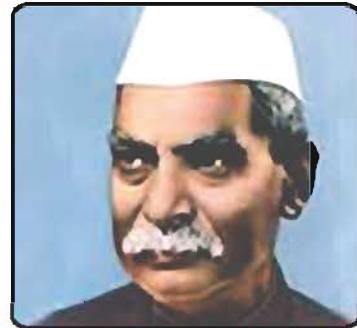
The Parliament also has the power to amend any provision of the Indian Constitution by following specified procedures. The President of India, Judges of Courts and other highest constitutional authorities can be tried on grave charges and be removed from their offices by the parliament and this provision for parliamentary trial and removal of persons is known as 'the impeachment powers'. The approval of the Parliament is required to continue with the emergency promulgated by the President.

## UNION EXECUTIVE

The Union executive consists of the President, Prime Minister and his Council of Ministers. The President is the highest executive authority of the state. The executive powers of the President are entrusted to a team of ministers headed by the Prime Minister. The party or the coalition of parties, which enjoys a majority in the Lok Sabha is to select its leader, who will be appointed as the Prime Minister by the President.

## PRESIDENT OF INDIA

According to the Indian Constitution, the President of India is the Head of the Indian Republic or the State.



First President of India Dr. Rajendra Prasad

The President is also the Constitutional head of the Union Legislature and Union Executive. He/she is also responsible for constituting of the Judiciary. According to Article 53 of the constitution the executive power of the Union shall be vested in the President which shall be exercised by him directly or through officers subordinate to him in accordance with the Constitution.



President of India Shri. Pranab Mukherjee

## QUALIFICATIONS OF THE PRESIDENT

- ⇒ He / she should be a citizen of India.
- ⇒ He / she must have completed the age of 35 years.
- ⇒ He / she must be eligible for election as a member of the Lok Sabha.
- ⇒ He / she must not hold any office of profit in the union, state or Local government.

The President cannot be a member of Parliament or of a State Legislature; if she/he is a member of any legislature, her/his seat will be deemed to have been vacated on the date she/he assumes the office of President.

### ELECTION OF THE PRESIDENT

The President is elected by an electoral college in accordance with the system of proportional representation by means of single transferable vote. The electoral college consists of the elected members of both houses of parliament and the elected members of the states and elected members of Union Territories.

The President of India can be removed from his office before the expiry of his normal terms through the process of Impeachment (Art-61). He can also relinquish his office prematurely by tendering a resignation to the Vice President. The President is elected for a term of five years and can be re-elected.

### ELECTORAL COLLEGE FOR PRESIDENTIAL ELECTION

- Elected members of Lok Sabha
- Elected members of Rajya Sabha
- Elected members of all State Legislative Assemblies/Elected members of the Union Territories.

### POWERS OF THE PRESIDENT

1. Executive Powers
2. Legislative Powers
3. Financial Powers
4. Judicial Powers
5. Military Powers
6. Emergency Powers

### EXECUTIVE POWERS

The entire administration of India is carried on in the name of the President. Laws passed by the Parliament are promulgated with his assent. The President appoints the Prime Minister and other members of Council of Ministers, the Chief Justice the Judges of Supreme Court and High Courts, Heads of the Election Commission, the Attorney General, Chair Person and members of UPSC, Heads of armed forces etc. The President is the **Supreme Commander** of the armed forces.

### LEGISLATIVE POWERS

The legislative powers of the President include summoning and proroguing both Houses of Parliament and dissolving the Lok Sabha, opening and addressing Combined sessions of the Parliament.

All bills passed by the Parliament become "**Laws of Acts**" only after getting assent of the President. Money Bills cannot be introduced in the Parliament without his / her approval.

The 12 nominated members shall be chosen by the President from amongst persons having 'special knowledge or practical experience in the field of literature, science, art and social service.

### JUDICIAL POWERS

The President is not answerable to any court of law for exercise of his/her power (however he/she can be subjected to impeachment by the Parliament). He/she can pardon or remit or suspend a sentence of punishment given by the court martial or a sentence of death passed by a court.

## FINANCIAL POWERS

The Constitution empowers the President to have control over the finances of the state. No money bill can be introduced in the Parliament without the assent of the President. "Annual" Budget of the Central Government is presented before the Lok Sabha by the Union Finance Minister only with the permission of the President. The Contingency Fund of India is at the disposal of the President. He can make advances out of it to meet unforeseen expenditure before the same is approved of the Parliament.

## EMERGENCY POWERS

There are three kinds of emergency powers of the president

### National Emergency

The President is given the power to make a proclamation of Emergency on the ground of threat to the security of India, by war, external aggression or during armed rebellion(Article 352).

### State Emergency

In case of failure of Constitutional machinery in States, the President is empowered to make proclamation, that the Government of a state cannot be carried on in accordance with the provision of the constitution (Art. 356).

### Financial Emergency

The President is empowered to declare that a situation has arisen whereby "the financial stability or credit of India or of any part thereof is threatened" (Art.360).

## VICE – PRESIDENT

Article 63 of the Constitution provides for a Vice - President. The Vice - President shall be elected by the members of electoral college consists of members of both Houses of Parliament. This office has been

created to maintain the political continuity of the State; the Vice-President exercises the executive power of the Union as and when the President is unable to do so due to sickness or when the post of President becomes vacant due to resignation, death, or removal etc.



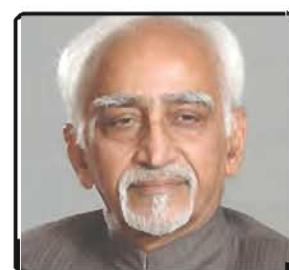
First Vice-President of India

Dr. S. Radha Krishnan

The qualifications stipulated for the post of president of India are also applicable to the post of the Vice President.

The term of office of the Vice-President is five years. His / her office may terminate earlier than the fixed term either by resignation death or by removal. He is eligible for re - election.

The Vice-President of India occupies the second highest office in the Country. No specific functions are attached to the office of the Vice-President as such. The normal function of the Vice-President is to act as the ex-officio Chair person of the Council of States. But if there occurs any vacancy in the Office of the President by reason of his / her death, resignation, removal or otherwise, the Vice President acts as the President until a new President is elected.



Vice-President of India

Shri. Mohammad Hamid Ansari

## PRIME MINISTER

The post of Prime Minister first originated in England and is borrowed from there by the makers of our constitution. In fact the Prime Minister of India as his counter part in Britain is the *de facto* executive head of the nation. According to the constitution of India, the leader of the Majority party or Majority group in the Lok Sabha is to be appointed as the Prime Minister by the President of India.



First Prime Minister of India  
Shri.Jawaharlal Nehru

The Prime Minister nominates members to his Council of Ministers including his/her cabinet. Thus the Prime Minister becomes and functions as the head of the Council of ministers.

The Prime Minister allocates port folios to other ministers and monitors their functions. The Cabinet under the leadership of the Prime minister is the



Prime Minister of India  
Shri. Narendra Modi

policy making body which formulates the policies and programmes of the state.

He / she is the Chief spokesperson of the Government. Thus the prime minister becomes the political leader of the government. He/she is the Chairperson of all highest central commissions like the Planning commission (Niti Aayog) the finance commission and National integration Council.

## COUNCIL OF MINISTERS

The number of members of the council of Ministers are not specified in the constitution. The ministers are classified under three ranks (i)Cabinet Ministers (ii)Ministers of State (iii)Deputy Ministers.

### 1. Cabinet Ministers

They constitute a policy making body of the government known as the Cabinet. It is a collective body in which decisions are taken either by consensus or by majority. Normally the cabinet ministers are assigned important port folios such as Finance, Home, External Affairs and Railways.

### 2. Ministers of State

They are also in charge of ministries or departments but they do not participate in the meetings of the cabinet unless invited to do so.

### 3. Deputy Ministers

They assist either the Ministers of Cabinet or State in the performance of the duties entrusted to them.

## THE JUDICIARY

Our constitution provides for the establishment of an independent and integrated judiciary with "Supreme Court" as the highest court in the



Supreme Court, New Delhi

country. Our judiciary is independent of the Legislative and Executive wings of the Union and State Government. An integrated judiciary means a single judicial hierarchy for the whole country.

The judiciary plays an important role in protecting the rights and freedom of the citizens. It plays an important role in analyzing and interpreting the provisions of laws and the constitution.

### **Composition of the Supreme Court**

At the Commencement of the Constitution in 1950 our Supreme Court consisted of 8 judges including the Chief Justice. At present, the Supreme Court consists of 31 Judges including the Chief Justice

### **Appointment of Judges of the Supreme Court**

The Chief Justice of India is appointed by the President of India. The other Judges are appointed by the President in consultation with the Collegium with Chief Justice as Head.

### **Qualifications of Supreme Court Judges**

1. He / She must be a citizen of India.
2. He / She should have worked as a Judge of a High Court for at least 5 years.

3. He / She should have worked as an advocate of a High Court for atleast 10 years.

The Chief Justice and other judges of the Supreme Court hold the office upto the age of 65 years. The judges of the Supreme Court can resign before their term by giving their resignation in writing to the President. The Parliament also has power to remove the Judges by invoking impeachment provisions.

The Supreme Court has its permanent seat in "**New Delhi**" (Capital of India). It may also sit in any other place in India which may be decided by the Chief Justice of India with the approval of the President of India.

### **Powers and Functions of the Supreme Court**

#### **A. Judicial Functions**

The Supreme Court is the "**Guardian of the Constitution**". The two main judicial functions of the Supreme Court are "**Original Jurisdiction**" and "**Appellate Jurisdiction**".

#### **Original Jurisdiction**

The cases which are brought directly in the first instance to the Supreme Court come under original jurisdiction. These may be (a) dispute between the Government of India and one or more states of (b) Dispute between two or more state(c)the cases involving fundamental rights (dispute over the enforcement) come under the jurisdiction of the Supreme Court. The writs issued by the Supreme Court for the enforcement of the fundamental rights are,

(1) Habeas corpus, (2) Mandamus, (3) Prohibition, (4) Certiorari, (5) quo Warranto.

The Supreme court as well as the State High Courts can issue the above mentioned “**5 writs**” under “**Right to Constitutional Remedies**” to protect the Fundamental Rights guaranteed to the people (citizens) by the Constitution. That is why the Supreme Court is called the “Guardian of the Constitution”.

#### **1) Writ of Habeas Corpus:**

Safeguards people from illegal arrests.

#### **2) Mandamus**

It protects the petitioner who requires legal help to get his work done by respective public authorities.

#### **3) Prohibition**

It prohibits a subordinate court from acting beyond its jurisdiction.

#### **4) Certiorari**

It quashes an order issued by a subordinate court by overstepping its jurisdiction.

#### **5) Quo Warranto**

It prevents usurpation of a public office.

#### **Appellate Jurisdiction**

As regards the Appellate Jurisdiction, the Supreme Court hears appeals against the decisions of the High Court in “Civil, Criminal and Constitutional” cases with a certificate from the High Court that it is fit to appeal in the Supreme Court.

#### **Administrative Functions**

There is a chain of courts of different types for providing justice to the aggrieved. At present there are 24 High Courts. (some High courts look after cases from more than one state). Below the high courts there are the subordinate courts of different

categories. But all the courts in India are administered and controlled by the Supreme Court.

Recently for giving speedy and cheaper justice especially for the poor people Lok Adalats (people's courts) have been established.

Consequent to the “Legal Services Authorities Act of 1987” Lok Adalats came in to existence. These are organized at different levels for quick disposal of pending cases. One should try to settle his/her case through a Lok Adalat to save time, energy and money. Except criminal cases, all other categories of cases can be settled by these courts.

If you want to know more about these courts, the advertisements in the local news papers are of great help. Even in Tamil Nadu, these courts have settled many of the cases. Such courts are known as fast track courts.

The President can seek advice of the Supreme Court on important questions of law or fact.

#### **Judicial Review**

The power of the judiciary to declare a law as unconstitutional is known as “Judicial Review”. By “Judicial Review”, the Supreme Court can declare a law null and void when it is found against the Constitution. Thus it checks the arbitrary power of the executive and the legislature. Hence, the Supreme Court is rightly known as the “Guardian of the Constitution”.

#### **Discuss**

Is integrated and independent judiciary essential in India? If so why?

### Do you know?

The Supreme Court cannot interfere in the judgments declared by the Military Tribunals. No appeal can be taken from Military Tribunals to Supreme Court.

### High Court

As per the article 214 of the constitution, there shall be a High Court in each state. There may be a common High Court for two or more states or union territory, if it is sanctioned by a law of the Parliament. All other courts in the state are supervised by the High Court. The appeals from the High Courts are tried in the Supreme Court of India.

The state High Court consists of a Chief Justice and other judges. They are all appointed by the president of India. The number of judges differ from time to time as it is not fixed.

### Activity

What are the different courts functioning under the jurisdiction of the high court in the state?

### Appointment of the Chief Justice and other Judges

The President appoints the Chief Justice of a High Court in consultation with the Chief Justice of India, and the Governor of the concerned state. The chief justice of the high court is also consulted by the President in the appointment of other judges. Generally, a senior most judge will be appointed as the Chief Justice.

### Qualification for the judges

- i) He/she must be a citizen of India.
- ii) Must have at least "ten" years experience as judge of a court in any territory of India.  
or
- iii) Must have at least "ten" years experience as an Advocate in one or more High Courts in India.

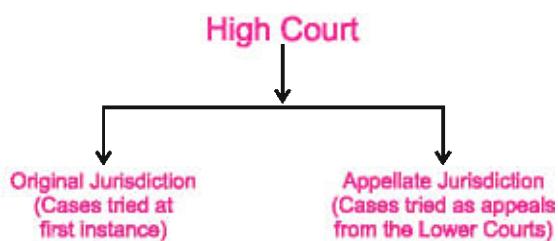
Originally the age of retirement of the judges was fixed at 60. By the 15<sup>th</sup> Amendment to the Constitution in 1963 the age of retirement of the judges was raised to 62.

### Powers and functions of the High Court

The High Court has two types of jurisdictions namely Original Jurisdiction and Appellate Jurisdiction.

### Original Jurisdiction

The original Jurisdiction of the High Court is restricted. Under article 226 of the Constitution, the State High Court is empowered to issue writs and orders in the enforcement of fundamental rights and also other purposes. The original



High Court, Madras

jurisdiction extends to the matter of admiralty, matrimonial (marriage and divorce), company law and contempt of court.

The High Court like Supreme Court can issue writs in the nature of Habeas Corpus, Mandamus, Prohibition, Quo Warranto and Certiorari for the enforcement of Fundamental Rights. – Article 226.

### Appellate Jurisdiction

Under Appellate Jurisdiction, the High Court is empowered to try both "Civil and Criminal" cases. The High Court also hear cases involving interpretation of the Constitution or law.

In performing its judicial functions, the High Court enjoys full power and freedom to act within its jurisdiction.

#### Find Out:

What are the courts below the High Court in a state?

#### Do you know?

In civil cases, a first appeal or a second appeal from lower courts are entertained by the High Court.

In criminal cases, the High Court tries the cases as an appeal against the judgement of a sessions judge or an additional sessions judge.

### Administrative powers

There is a hierarchy of courts and judicial officers in the state. The High Court supervises the working of all subordinate courts. The other courts have to follow the rules and regulations framed by the high court. The High Court inspects the files of the lower courts. It can transfer the cases from one court to another. It may even call for returns from the subordinate courts.

### Power of judicial review

Like the Supreme Court, the High Court also has the power of "judicial review". If any law goes against the Constitution, the High Court can declare such law null and void (ineffective). Thus it checks the arbitrary power of the executive and the legislature.

There is a bench of Chennai High Court functioning in Madurai.

Even though all the three wings are independent organs, they cannot go beyond their limit in administration. If any one organ violates the Constitution or misuses its power, the other organ will check its power and safeguard the people from being affected by it. This is called system of "Checks and Balances". Thus it is clearly seen that the "Executive, Legislature and Judiciary" enjoy freedom in their respective spheres of activities. Similarly the judiciary safeguards the federal arrangement by preventing both the central government and state government from encroaching in to the rights of each other.

#### Know:

Besides the law courts what are the other courts prevalent in the State?

## EXERCISE

### I) Choose the correct answer.

1. The parliament of India consists of
  - a) one house
  - b) two houses
  - c) three houses
  - d) none
2. Prime Minister is appointed by
  - a) Lok Sabha
  - b) Council of Ministers
  - c) Rajya Sabha
  - d) The President
3. Lok Sabha has \_\_\_\_\_ elected members.
  - a) 530
  - b) 238
  - c) 543
  - d) 250
4. Members of Lok Sabha are elected by
  - a) Indirect election
  - b) Direct election
  - c) Speaker
  - d) Prime minister
5. The upper house is known as
  - a) Rajya Sabha
  - b) Lok Sabha
  - c) Cabinet
  - d) Parliament
6. The head of the Indian Republic and Union is \_\_\_\_\_
  - a) Speaker
  - b) Vice President
  - c) President
  - d) Supreme Court Judge
7. Money bills cannot be introduced without the approval of \_\_\_\_\_
  - a) Parliament
  - b) Prime Minister
  - c) President
  - d) Attorney General
8. The Union Finance Minister presents the Annual Budget before \_\_\_\_\_
  - a) The Parliament
  - b) The Lok Sabha
  - c) Rajya Sabha
  - d) Prime minister
9. The Article of the constitution provides for a Vice President \_\_\_\_\_
  - a) Article 53
  - b) Article 356
  - c) Article 360
  - d) Article 63
10. The Present President of India is \_\_\_\_\_
  - a) Shri. K.R.Narayanan
  - b) Shri. Pranab Mukherjee
  - c) Smt. Pratiba Devisingh Patil
  - d) Dr. Abdul Kalam
11. Supreme Court Judge is appointed by \_\_\_\_\_
  - a) Cabinet Minister
  - b) Members of the Parliament
  - c) Prime Minister
  - d) President

12. Number of Judges in Supreme Court \_\_\_\_\_  
a) 31      b) 15      c) 9      d) 12
13. Supreme Court Judges retire at the age of \_\_\_\_\_  
a) 62      b) 65      c) 58      d) 60
14. Lok Adalat was introduced in \_\_\_\_\_  
a) 1950      b) 1987      c) 1984      d) 2000
15. Head quarters of Supreme Court is in \_\_\_\_\_  
a) Chennai      b) Mumbai      c) Kolkata      d) New Delhi

**II) Answer briefly.**

1. What are the qualifications to become a member of the Rajya Sabha?
2. How is the Prime Minister elected?
3. What is a bicameral legislature?
4. Explain the term the 'Lok Sabha'.
5. What is the Electoral college?
6. Who are all appointed by the President ?
7. When is the emergency power declared ?
8. How is the Vice President elected ?
9. What are the qualifications of the Supreme Court Judge ?
10. What is the original jurisdiction ?
11. What is Judicial review?
12. Write the functions of the High Court Judge.
13. Explain the power of the Appellate.

**III) Answer in a paragraph.**

1. What are the powers and functions of the Parliament?
2. Explain the Council of Ministers
3. Explain the power of the President
4. What are the functions of the Vice President ?
5. Explain the power and functions of the Supreme Court
6. Explain the role of the High Court Judges.

## **FORMATIVE ASSESSMENT**

1. Prepare a chart with pictures to show the Prime Ministers of India from 1947 to 2013.
2. Make a list of ten powers and responsibilities of the Government under
  - a) The Union list
  - b) The state list
  - c) The concurrent list
3. Draw mind type to show the duties of the President and Prime Minister of India.
4. Collect news clipping and stick in your scrap book on the laws or Acts currently being debated upon in the legislature.
5. Prepare a class constitution outline the rights and duties of the student in your class.
6. Draw a line diagram to show the structure of the Parliament of India.

# ECONOMICS

## 1. DEMAND AND SUPPLY

Economics plays a vital role in every man's day to day life. Economic terms, like demand and supply are important terms used in every day life.

We often speak about demand. What does it mean? It is just a desire. But in economics it is not merely a desire, it is the desire backed by purchasing power in terms of money. It is known as effective demand in economics. In other words, demand is the desire to purchase and ability to pay for a good.

We explain effective demand by a statement of demand.

- 1.What is demanded?
- 2.When is it demanded?
- 3.Where is it demanded?
- 4.At what price is it demanded?

A statement that answers the above questions is called demand. Ex: Last week Ram bought two dozens of hand kerchiefs at a price of ₹ 50 per dozen at Trichy.

Find out answers for the above questions from the given statement.

### Activity

Form some statements of demand for your favourite goods.

So demand comes from the people who buy goods. They are called consumers. They demand both perishable goods like fish, durable goods like chair. The demand for all the goods depend on price. So price is the determinant of demand. Other determinates of demand are

- 1.Taste and preference of the consumers.
- 2.Price of substitutes
- 3.Number of Consumers
- 4.Expectation of future price rise
- 5.Income Distribution
- 6.Climate and Weather

### Activity

Tea is the substitute for coffee. Write some ten products and their substitutes.

### SUPPLY

Supply come from producers. Supply means the amount offered for sale at a given price.

- Statement of supply
- 1.What is supplied?
  - 2.When is it supplied?
  - 3.Where is it supplied?
  - 4.At what price is it supplied?

The answers to these questions can be derived from the following statement of supply Ex: Raju sold 2 Kg of mangoes yesterday at T-nagar at a price of ₹ 50 per Kg.

### Activity

Constitute some more supply statements to understand the concept properly.

Like demand supply also depends on price. But there are also other factors that influence supply. They are

1. Production technology.
2. Prices of factors of production.
3. Prices of other products.

4. No. of producers.
5. Future price expectations.
6. Taxes and subsidies.
7. Non-economic factors like natural calamities, war, epidemics etc.

### Activity

Mention some Taxes of Central and State Governments.

- 1.
- 2.
- 3.

### Law of demand and Law of Supply

We have seen that price is the main determinant of demand. How does it influence the demand? This relationship is explained by the law of demand.

**Law of demand:** If price rises the demand falls, if price falls demand rises. This shows that there is an indirect relationship between price and demand.

**Alfred Marshall's Law of demand:** "The greater the amount to be sold, the smaller must be the price at which it is offered. In other words the amount demanded increases with a fall in price and diminishes with a rise in price".

The following demand schedule shows the inverse or indirect relationship between price and demand.

Price (In Rs)	Demand (in Kg)
25	1
20	2
15	3
10	4
5	5

The above demand schedule shows the different quantities demanded at different prices by an individual consumer.

When the price of mangoes is ₹ 25 per Kg, the consumer demands 1 Kg. When the price falls from ₹ 25 to ₹ 20, ₹ 15, ₹ 10, ₹ 5 the consumer increases the demand from 1 to 2, 3, 4 and 5 Kgs respectively. This shows that with a fall in price the demand increases. It indicates the indirect relationship between price and demand.

### Activity

With the help of your draw a demand schedule of some commonly used products.

**Exemptions to the law of demand:** This law is not applicable to necessary goods like, rice, luxury goods like gold, diamond. In these cases when the price rises demand also rises and when the price falls demand also falls.

### Activity

List out the necessities, comforts and luxuries and find out the price and demand relationship by conducting a random sample survey.

### Law of supply

As a main determinant of supply the price influences the supply. This law explains the relationship between price and supply.

**Law of supply:**

As the price of a commodity rises the quantity supplied is extended and as the price of the commodity falls the quantity supplied is contracted. This is called the law of supply.

In other words there is a direct relationship between the price of the commodity and the quantity supplied.

The quantity offered for sale is directly proportional to its price. If the price increases the quantity offered for sale also increases and if the price falls the quantity offered for sale also falls.

Price (In Rs)	Supply (in Kilos)
10	1
20	2
30	3
40	4
50	5
60	6

From the above table it is clear that 1 Kg of wheat is supplied to the market when the price is ₹ 10 per Kg of wheat. When the price of wheat increases to ₹ 20 the supply of wheat rises to 2Kg. From ₹ 20 the price rises to ₹ 30, ₹ 40, ₹ 50 and ₹ 60 per Kg the supply of wheat also rises to 3Kg, 4Kg, 5Kg and 6Kg respectively. It is simple to observe that as the price of wheat increases the quantity supplied also increases.

#### Activity

Make supply schedules for some products of your choice.

### EXERCISE

#### I) Choose the Correct answer.

1. There exists an indirect relationship between
  - a) Price and demand
  - b) Price and supply
  - c) Price and income
  - d) Price and Tax.
2. Law of demand is only applicable to
  - a) Necessities
  - b) Comforts
  - c) Luxuries
  - d) Very low priced goods.
3. One of the determinants of demand is
  - a) Taste and preference
  - b) Production technology
  - c) No of producers
  - d) Price of factors of production

#### II) Write short notes on.

1. Alfred Marshal's Law of demand
2. Law of supply.
3. List out the determinants of supply.

#### III) Write in a paragraph.

1. With the help of a table explain the law of demand.

'I can, I did'

## Student's Activity Record

**Subject:**