



GOVERNMENT OF TAMIL NADU

SOCIAL SCIENCE

IX-STANDARD

**Untouchability
Inhuman - Crime**

Department of School Education

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CHAPTER

Page. No.

HISTORY

- | | |
|--|----|
| 1. Ancient Civilizations | 1 |
| 2. Intellectual Awakening of 6th Century B.C | 19 |
| 3. Mediaeval Age | 28 |
| 4. Beginning of Modern Age | 40 |
| 5. The Industrial Revolution | 54 |
| 6. The French Revolution (1789) | 61 |
| 7. Cultural Heritage of Tamil Nadu | 70 |

GEOGRAPHY

- | | |
|---|-----|
| 1. Tamil Nadu | 77 |
| 2. Physiography of Tamil Nadu | 82 |
| 3. Climate of Tamil Nadu | 89 |
| 4. Resources of Tamil Nadu | 99 |
| 5. Tamil Nadu - Agriculture | 114 |
| 6. Tamil Nadu - Manufacturing Industries | 127 |
| 7. Tamil Nadu - Transport and Communications | 138 |
| 8. Tamil Nadu - Trade | 149 |
| 9. Tamil Nadu - Population | 153 |
| 10. Environmental Issues | 160 |
| 11. Conservation of Resources and Sustainable Development | 169 |

Sl.No

CHAPTER

Page. No.

CIVICS

- | | | |
|----|--|-----|
| 1. | The Union Government | 179 |
| 2. | The State Government | 192 |
| 3. | Rights and Duties of Citizens | 199 |
| 4. | Contemporary Social Issues of Tamil Nadu | 204 |

ECONOMICS

- | | | |
|----|-------------------|-----|
| 1. | Demand and Supply | 215 |
| 2. | Equilibrium Price | 218 |

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 implements 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** 3500 to 1500 BC.
2. The **Tigris – Euphrates civilization of Mesopotamia**, the modern Iraq (3500 BC to 1000 BC)
3. The **Nile Valley Civilization in Egypt** (4000 – 525 BC)
4. The **Hwang –Ho** or the **Yellow River civilization in China** (3000-500 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.

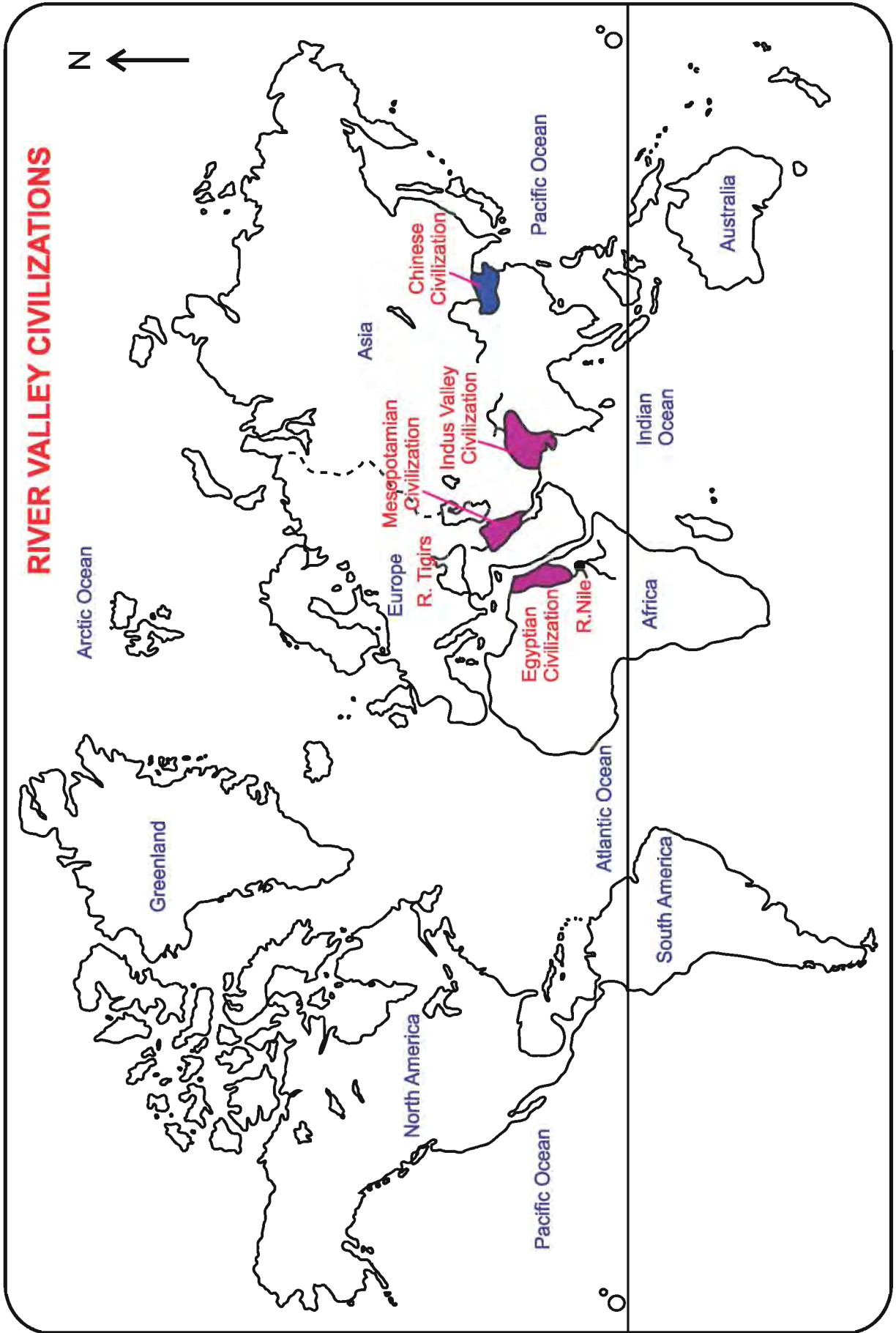
Political Condition

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 **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 ‘**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.

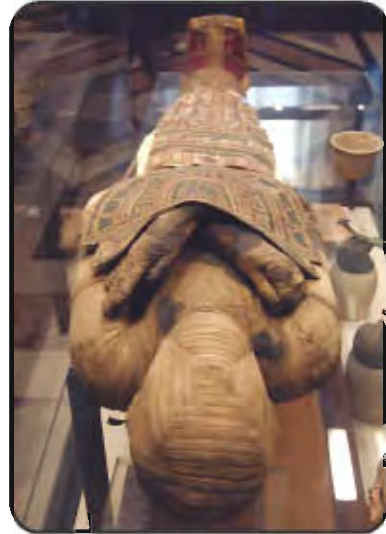
Contribution of Egyptian Civilization Religion

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 himself against wars.

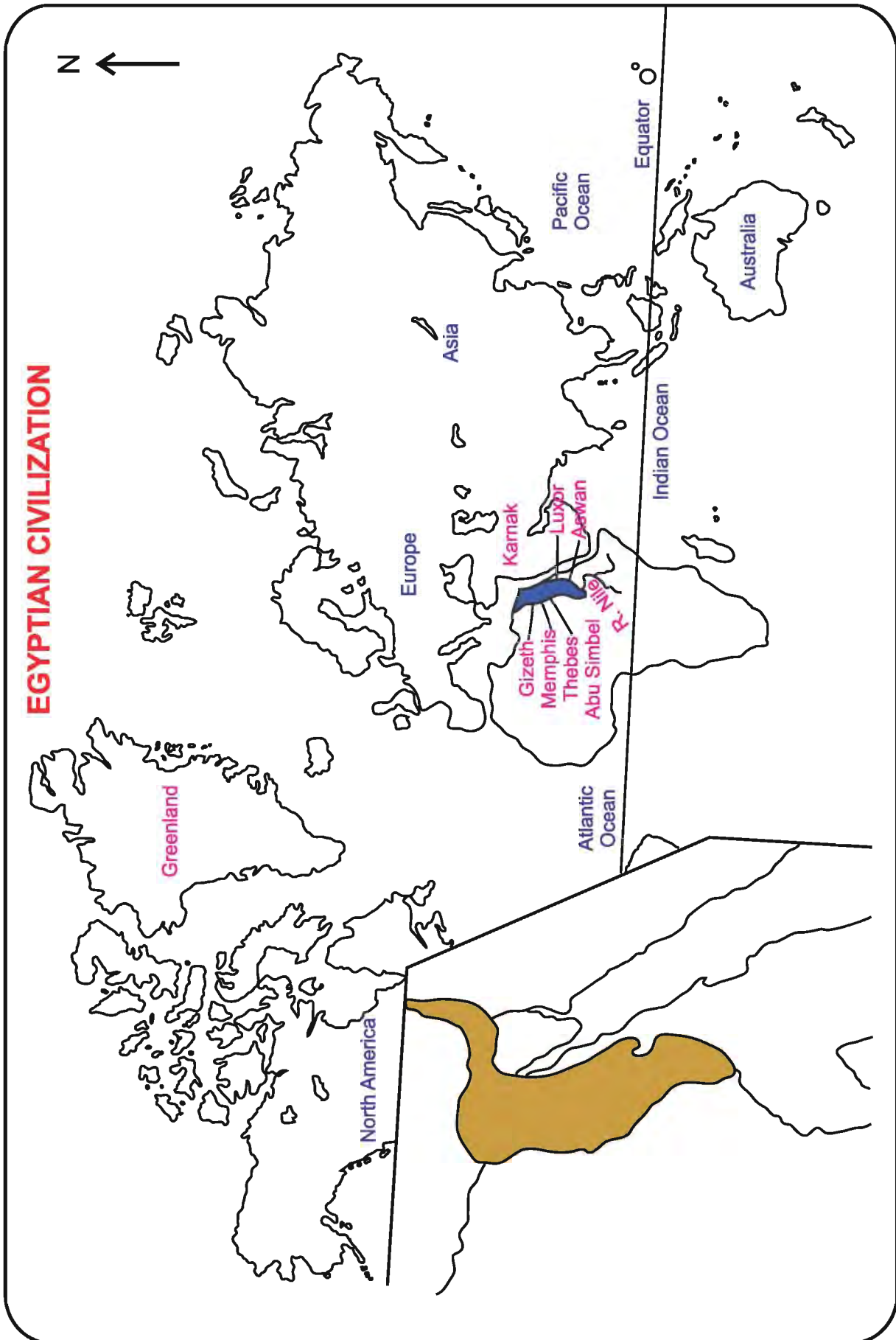
Art and Architecture

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

The most attractive part of the temple of Karnak is its column hall with the length of 170 feet and breadth of 138 feet.

Writing

The ancient writing of Egypt was known as **Hieroglyphics**. Hieroglyphic a Greek word, meant **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 literatures are 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 solar calendar. They calculated the days between floods in Nile and fixed 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.

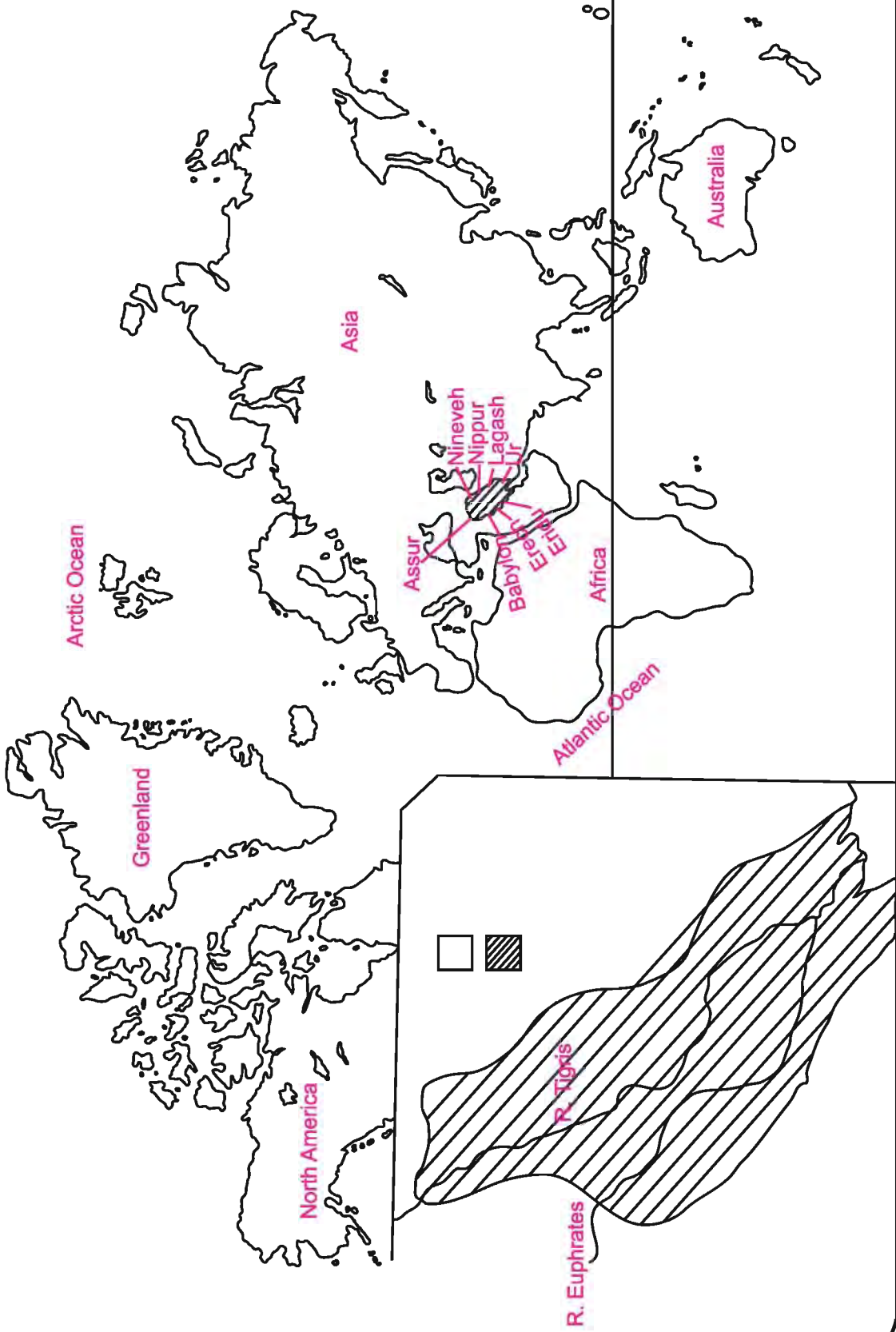
Trade and Commerce

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 Nubia 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.

The Sumerian Civilization of Mesopotamia

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 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, Saragon I.

Bab-llu was made the capital of Amorite by king SUMMUABU, and their city became popular 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. One of the most famous of these is the Epic of Gilgamesh.



Cuneiform Script

Science and Astronomy

The science, especially astronomy and medicine had 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 x 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 Sexagesimal 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

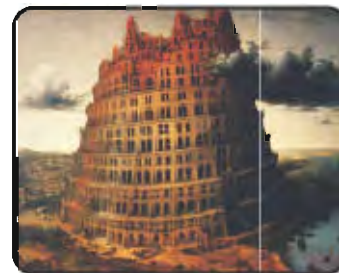


Hammurabi Code

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 Law giver". 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 Amorities on a piece of stone at the top of which was a scene representing Hammurabi receiving the laws from 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 called the Yellow river because it brings the yellow alluvial soil on both sides. 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. As the annual floods in Hwang-Ho causes much destruction to people, their possessions and agriculture, It is known as the '**sorrow of China**'. The geography and topography of China had made its 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 as 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 2nd century A.D they invented the paper. Silk pieces were also used for writing. Ink was invented in 5th 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 compass, the gun powder and paper currency.



Water Mill

An anatomical study of human bodies was popular. In mathematics they introduced 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.

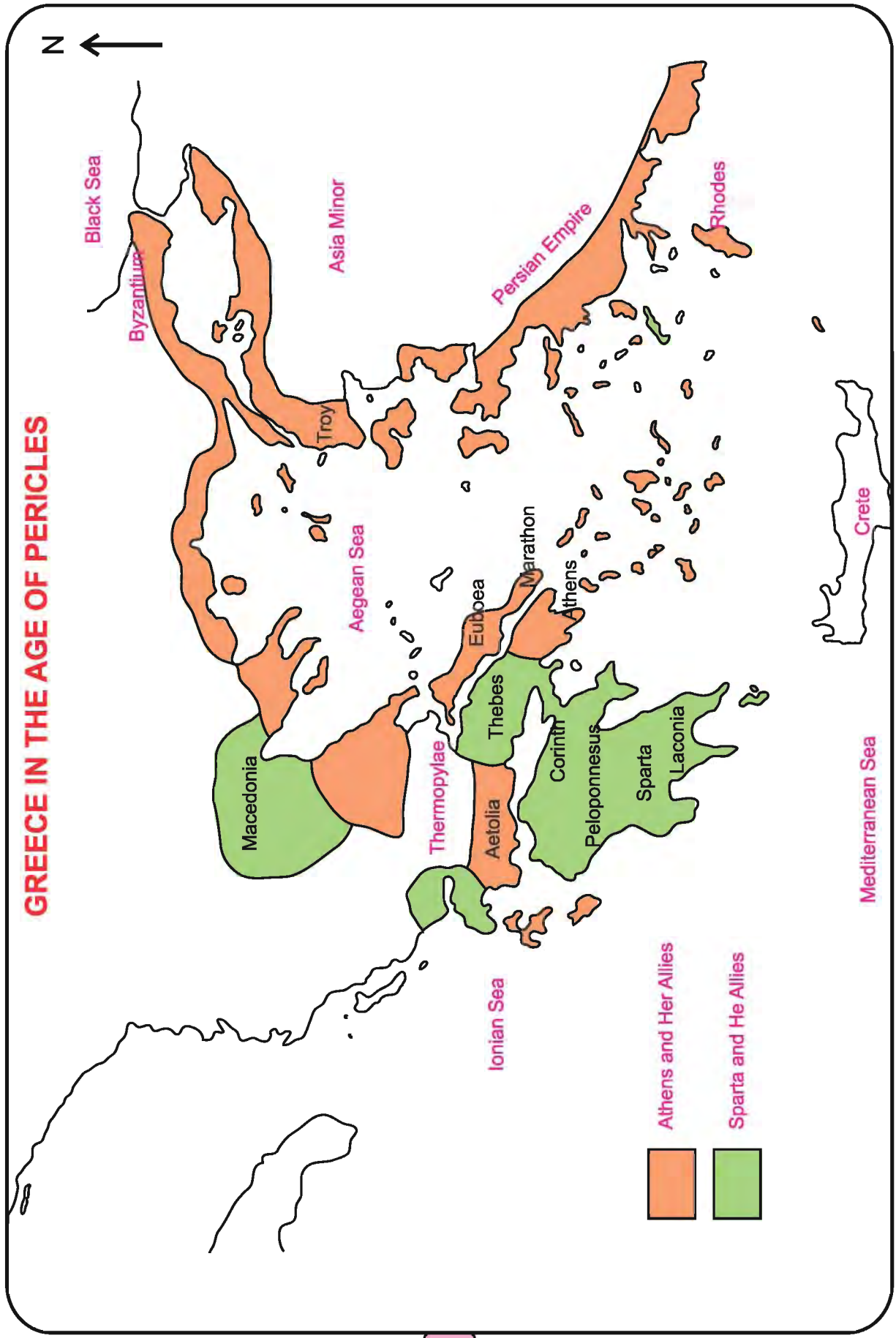
Civilization of Europe

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

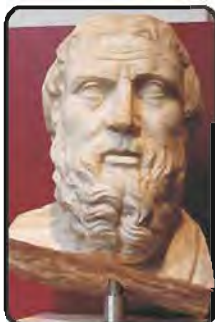
GREECE IN THE AGE OF PERICLES



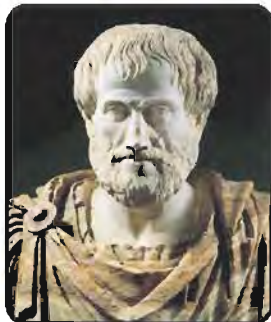
had its own government and rulers. Democratic Governments were set up. The city states often quarrelled among themselves. In the end there emerged, two powerful city states of Sparta and Athens. The Athenian democracy reached its zenith during the rule of Pericles. Ultimately the wars and conquests of 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 2nd 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 more to 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 the student of Socrates. He wrote the book "The Republic". Aristotle was a philosopher and a scientist, and he was the teacher of Alexander. 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 as 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. Since 776BC, they

used to conduct Olympiad festival in every four years, this Olympiad festival is the inspiration for the International Olympics of modern times. The



Myron

achievement of 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.

The Roman Civilization

The Apennine peninsula in the middle of the Mediterranean region had been 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 Remus. By 6th 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 "Plebeians". After a protracted struggle, the plebeians too gained representations in the senate. The administrative powers were in the hands of three elected consuls. The plebeians 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 in possessing slaves and accumulating wealth, resulting 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 Octavianus 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. His age is called "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. Rome once expanded in 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 high position in the state. Roman conquests and its affluence, made the rich to 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 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

MESOPOTAMIAN CIVILIZATION

Situated in the valley of two rivers, the Euphrates and the Tigris.

J.H Breasted described the area as the "fertile crescent".

Different groups like the Sumerians, the Amorites, the Assyrians and the Chaldeans ruled.

The form of writing was cunie form.

Epic of Gilgamesh was famous. The code of Hammurabi is the first written code of laws to history.

They were polytheistic in the religion. They worshipped Entil, Shamash, Ishtar, Venus, Marduk, Saturn etc.,

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 contributions in the field of Astronomy, Medicine and Geometry were noteworthy. The Ziggurat served as an observatory. The Astronomers Nabu and Kidinnu were famous.

EGYPTIAN CIVILIZATION

Situated in the valley of Nile.

Described as the "Gift of Nile" or the "Daughter of the Nile".

Monarchs called as Pharaohs ruled.

The form of writing was Hieroglyphics.

Egyptians were first to make paper from a plant called papyrus.

They were worshippers of Nature, Ra, Osiris, iris and Horus was their god and goddesses. They embalmed dead body known as Mummy was famous.

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 contribution in the field of mathematics was very much 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 have mastered 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 with _____ river.
a) Nile b) Euphrates c) yellow d) Sind

II) Match the following.

- | | |
|----------------------|--------------|
| 1. Pyramids | Hilly region |
| 2. Great wall | Babylone |
| 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) How did the Egyptian king was called ?
 - c) How did the Egyptians preserve the dead bodies ?
 - d) What is a Pyramid ?
- 2) Chinese civilization.
 - a) which was known as the sorrow of china?
 - b) Name the great philosophers in 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 the burial customs of the Egyptians ?
- 3) Write a note on the ancient Greek Philosophy.?
- 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) What are the Several forms of techniques adopted by the Romans ?

VI) a) Mark the following places on the outline map of the world.

- 1) Egypt, China, Babylon, Assiriya, Greece, Rome
- 2) Prepare an album to show the development of the human race.

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 Brahmanic 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 inactive. 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 as **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

The Persians, prior to the advent of Zoroaster were having such 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



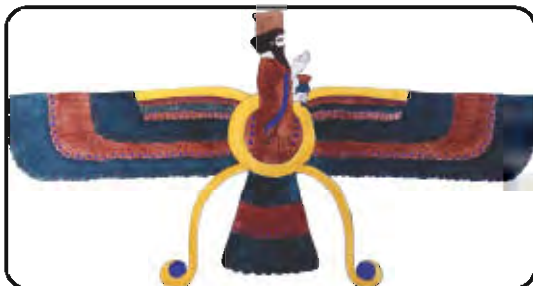
Zoroaster

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 with the superstitions, barbaric religious cults, polytheism and moral degeneration in Iran. He was pained to see that his people paid 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 (Devas) 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 in 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 preservation. 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 round 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 in by Zoroastrianism, made it to gain economic and political strength. Very 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 6th century B.C. satisfied the need of the time by introducing the most necessary changes. They recognised the realities 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 23rd and 24th Thirthankaras are considered to be historical figures.

The 23rd 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 24th 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 Kevala jnana (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 any 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 possess and
5. To practice celibacy (Brahmcharaya).

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, Silappadhikaram, 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 contributed many beautiful temples at Kanchi, Sittannvasal 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 49th 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 Kapilvastu, 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 Anatmavada (No Atma) and Anitya Vada (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 of 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 Brahmans 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 their people from clannish considerations and made them to 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

1) Choose the correct answer.

- 1) Which period has witnessed a great intellectual awakening in the World _____.
a) 5th Century b) 6th century c) 7th century d) 8th century
- 2) How many years the Philosophy of Confucius molded and dominated in Chinese mind.
a) 1000 years b) 2000 years c) 3000 years d) 4000 years
- 3) Who was the founder of Zoroastrianism _____.
a) Zoroaster b) Buddha c) Mahavira d) Confucius
- 4) Who was the 23rd Thirthankara _____.
a) Rishaba b) Parsavanath c) Mahavira d) Buddha
- 5) In which place Buddha got enlightenment _____.
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 |
| | Mazda |
| | Conqueror of senses |

III) Answer all the questions given under each captions.

1) Zoroastrianism.

- Who founded Zoroastrianism ?
- Which was the wise sprit of Zoroastrianism ?
- What type of worship represented the monotheistic basis of Zoroastrianism?
- What was the name of the Holy scripture of the parsees.

2) Jainism.

- How many Thirthankaras were in Jainism ?
- Who was the earliest Thirthankara ?
- What was the name of the last Thirthankara ?
- Who preached the four disciplines to his disciples ?

3) Mahavira.

- What was the original name of Mahavira ?
- Where was he born ?
- What is meant by Jina?
- How many years he wandered and severe penance?

4) Buddha.

- Who founded the Buddhism ?
- What was his original name ?
- Where did he give his first sermon ?
- Where he got his Enlightenment?

IV) Answer in brief.

- 1) Why did Intellectual awakening start in the 6th century B.C.?
- 2) Write a short note on Mazda ?
- 3) What was the four discipline preached by Mahavira to his disciples ?
- 4) Write about Pitakas .
- 5) In which council the Sangha divided into two ?

V) Answer in a Paragraph.

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

3. MEDIAEVAL AGE

The Mediaeval Europe

The period from 600 AD onwards till 1500 AD is known as the Mediaeval 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 Mediaeval Age and from 1000 AD to 1500 AD the Later Mediaeval Age. The beginning of the mediaeval age is marked by the fall of the Roman empire. The early mediaeval period has been termed as the "Dark Age", because chaos and degeneration became 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, Mediaeval 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 1400AD. The Romans proved themselves 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 800A.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 14th century, Europe's political map had undergone many changes with many

rulers having sway 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 the final deadline was drawn in A.D. 476, Rome did produce successful pilots in the storm in the persons of 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 a 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.

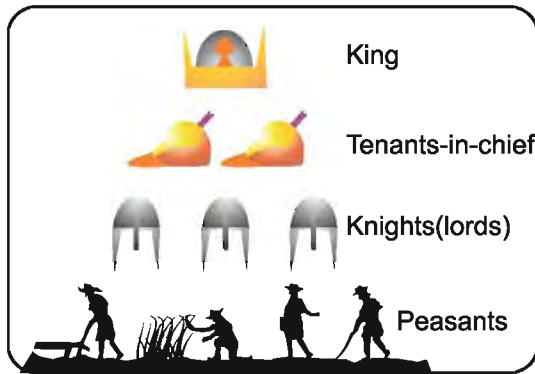
Barbarian Invasions

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 system 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 12th Century onwards, and as a political force from the 13th 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

The Christianity got political support under the Roman Emperors from the days of Constantine. By the 6th 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

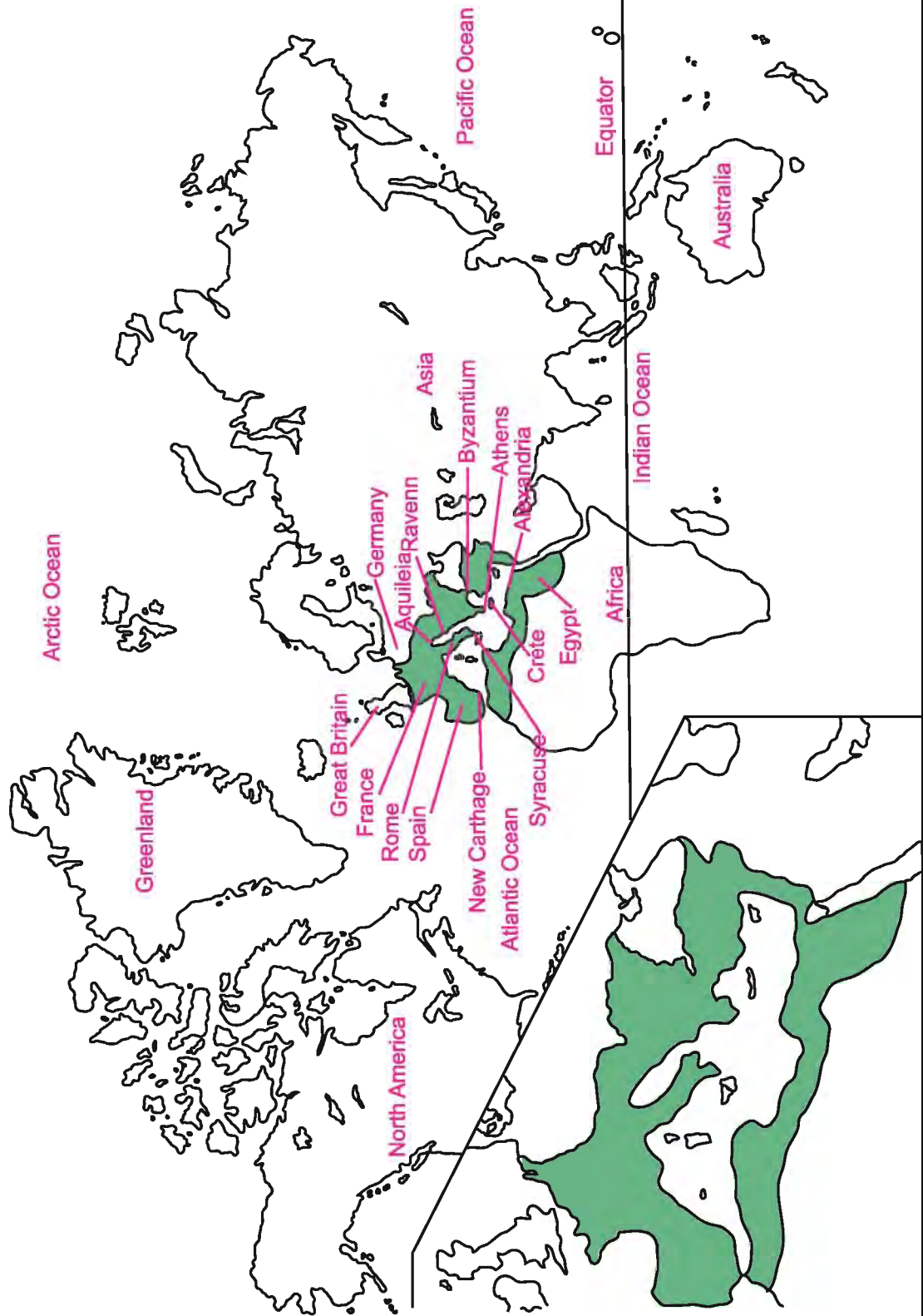
In the social life, people became God fearing, began to help the poor, the needy and the deserving. The sense of morality and character as well as dignity developed. Beautiful churches were developed. Religious dogmas and hymns became the themes of literature. In the eyes of the papacy, all the high 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 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.

Medlaeval Towns and Universlties

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 Bologna was famous for the learning of law. Arabic and Hebrew were taught in 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 12th century.

Rise of Islam

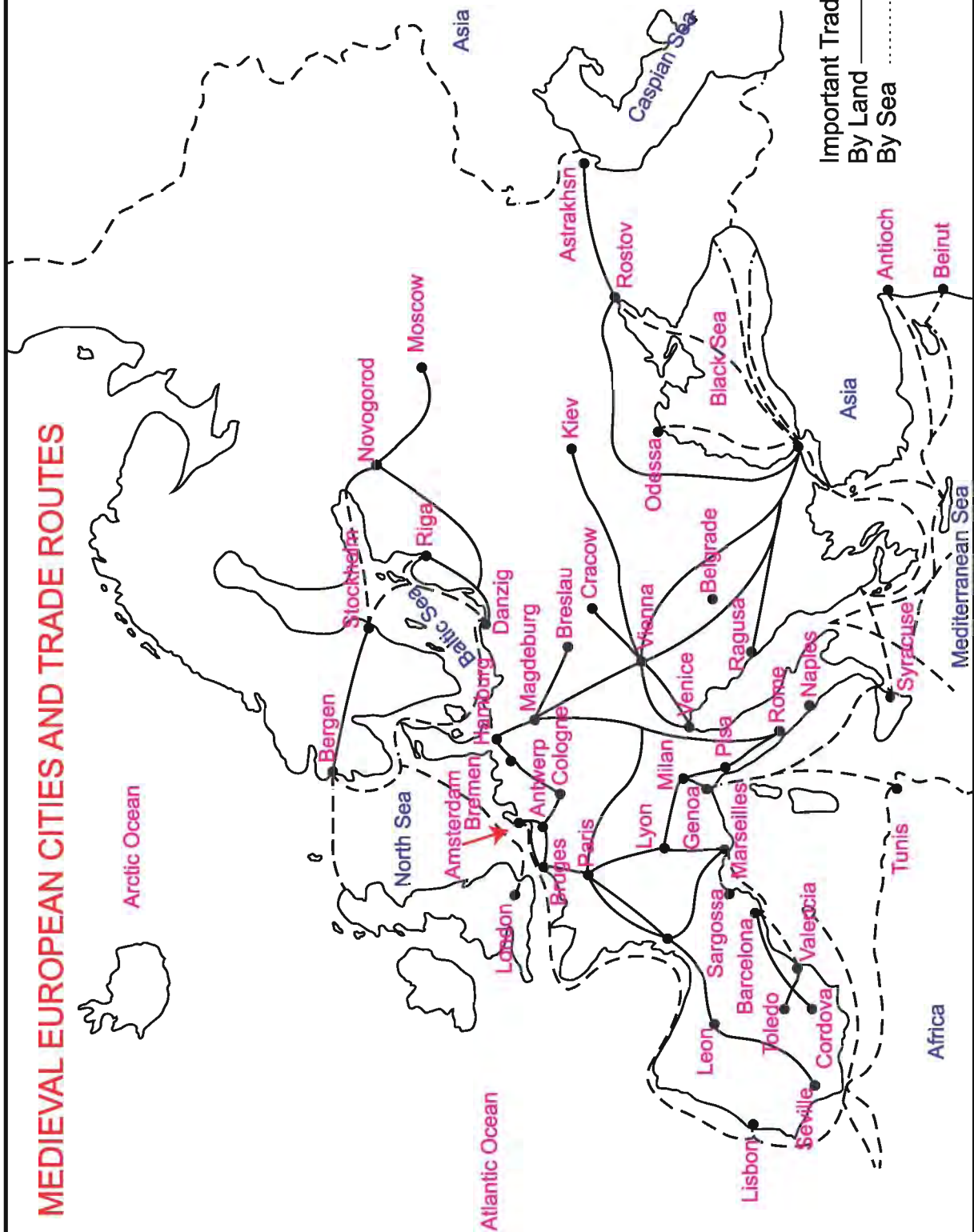
During the middle ages, Arabia, a vast desert land in south west Asia, became the birth place of Islam. Islam is one of the most important world religions. It united the various warring tribes.



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)

Crusades were Holy wars of the Christians of Western Europe against the Turks, the Muslims 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 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.

First Crusade (1096–99)

The first crusade was purely a French-dominated expedition. However the three important crowned heads of Germany (Henry IV), England (William II) and France (Philip I) did not participate in this crusade.



Jerusalem

The first crusade started in 1096.AD. After many hardships the Christians reached Jerusalem. A Christian state was established under Godfery of Bouillon. This new kingdom

had dependent states of Tripoli, Edessa and Antioch. The Christians remained in possession of occupied territories for about 80 years.

Second Crusade (1147 – 1148)

The Muslims could not be contained for long. Zangi, a Muslim chieftain of Mosul, put an end to the independent existence of Edessa. The news of the loss of Edessa provoked the Christian world for a concerted action. St. Bernard of Clairvaux was the author of the second crusade. Concord III of Germany along with the French king Louis VII organized the second crusade. Both of them were defeated separately in Asia Minor by the Turks, thus ending the crusade in failure.

Third Crusade (1189 – 1192)

The Third crusade was the most spectacular of all the crusades. The Kings of Europe, Fredrick Barbarossa of Germany, Philip Augustus of France and Richard the Lion Heart of England participated in the crusade. There was unfortunately divided counsel on the nature of the campaigns to be executed and it seriously affected the tone and morale of the forces. Frederick Barbarossa set out in 1189. Philip and Richard I started in 1190. The depleted



Richard I

forces of Frederick along with other crusaders were engaged in besieging Acre in the same year. Philip landed early in Acre. Richard captured Cyprus in 1191 and arrived at Acre in the same year. Philip returned to France on the pretext of his illness. Richard I defeated Saladin in the battle of Arsuf. It was this battle which earned for Richard the title of "Lion-Heart". This Crusade saw the generosity and chivalry of the Saracen Saladin in permitting the pilgrims to visit the city of Jerusalem. The third crusade was a partial success. A new military order called Teutonic knights was founded during the Third Crusade.

Fourth Crusade (1202 – 1204)

This Crusade was a complete failure. It became clear that the Christians had lost their religious spirit. This Crusade started in 1202 and lasted for about 2 years. The sack of Constantinople began in 1204. The Latin empire by Baldwin of Plunders was inaugurated and lasted till 1261. In this fourth crusade, the army of the Cross was mismanaged.

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 Slav 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 Popes 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 16th 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 found the religion of _____.
a) Christians b) Hinduism c) Islam d) Sikhism
- 4) The title of Lion heart was given to _____.
a) Philip b) Richard c) Fredrick d) Nicholas
- 5) Holy Land of Christian is _____.
a) Mecca b) Italy c) Vatican d) Jerusalem

II) Match the following.

- | | |
|----------------|-----------------|
| 1) Constantine | Tribes |
| 2) 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 is Manor?
- 3) What are the coastal towns and trade centers ?
- 4) How did the king get military service in the time of war ?
- 5) Who were the leaders of the children's crusade ?
- 6) Mention some of the universities of medieval Europe ?
- 7) What was the aim of the crusades ?
- 8) Who was the authority of the Church ?

IV) Answer all the questions given under each heading.

1) Feudalism.

- a) From which word "feudalism" is derived ?
- b) Who were the Feudal Lords?
- c) How 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 met ?
- d) How many crusades had 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 cities in Arabia ?
- d) What did Islam religion stress ?

V) Answer in a paragraph.

- 1) Describe the barbarian invasion.
- 2) Write the causes for the downfall of the Roman Empire.
- 3) Explain the rise of Islam in Europe.
- 4) Explain the results of the crusades.

VI) 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

Mark the following countries.

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

4. BEGINNING OF MODERN AGE

Introduction

The transition from mediaeval "Dark Age" to Modern Age is caused and marked by certain new trends and the developments such as Renaissance, Humanism, Spirit of Enquiry, Geographical Discoveries and Reformation.

The ancient period in European history came to an end in 476 A.D. with the collapse of the mighty Roman Empire. The barbarians who pulled down the empire had no taste for the pursuit of classical languages and fine arts. The neglect of learning immersed Europe in ignorance and darkness. "beauty is a snare, pleasure a sin, the world a fleeting show, man sullen and lost, death the only certainty; ignorance is acceptable to God as a proof of faith and submission; abstinence and modification are the only safe rules of life". They were the fixed, ideas of the ascetic mediaeval church. But at the beginning of the 16th century, a renewed interest in the study of Greek and Latin brought about the age of reason. The Renaissance marked a reaction against established conventions. A spirit of enquiry developed. People began to doubt, question and challenge instead of blindly believing anything that was taught by the church. This spirit of enquiry stimulated the progress of science, architecture, sculpture, painting, literature, geography, religion etc.

Renaissance

Renaissance means revival or rebirth, the age of reason marks the revival of classical Greek and Roman spirit.

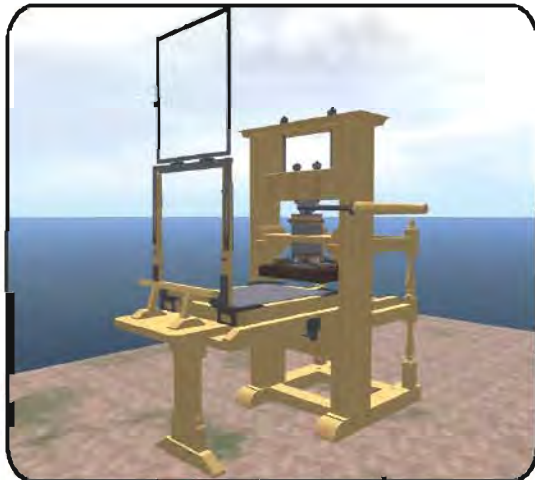
Renaissance signifies, "emancipation and expression". On the intellectual side, it marks the revival of literature and art, on the political side it marks the death of the universal authority of Pope, the emergence and the consolidation of well organized nation states. Socially it marks the spirit of individualism and the recognition of man as individual in society. Ecclesiastically, it marks the crumbling up of the idea of the universal church and emergence of the national churches, "Renaissance" means "rebirth" of classical spirit on several fields of human activities.

Renaissance in Italy

Italy, "the school of Europe", was the birth place of the Renaissance; feudalism failed to take deep roots in Italian soil, in the middle ages. The nobles and the church controlled the activities of the people. In due course, the death knell to feudalism was sounded by the crusades, which was associated with the invention of gun powder and the growth of nation states and towns in power and independence. Northern Italy was in a position to patronize art and literature. Moreover, Italy was the seat of an ancient civilization which reminded the people of "the grandeur that was Rome". The Renaissance scholars wrote in the vernacular languages which appealed to the masses. The absence of a strong centralized monarchy in Italy provided excellent opportunities for intellectual outbursts. Renaissance as a movement began in the 14th century with the publication of the "Divine comedy" by the greatest Italian poet Dante and reached its culmination in the next century.

The Renaissance movement comes under two broad divisions, namely humanistic phase or the revival of classical learning and literature, and the regulation of classical art. The first great pioneer in this line was Petrarch. He collected the classical manuscripts written by Plato, Cicero and others. He gave a new life to the ancient classics. Boccaccio, the disciple of Petrarch, followed the footsteps of his master.

The humanistic movement was accelerated by the capture of Constantinople by the Turks in 1453 A.D. The invention of the printing press



Printing press

helped in the production of cheap books. It considerably helped the cause of humanism.

Renaissance also left its mark on the artistic side. The barbarians destroyed most of the remnants of culture of ancient Greece and Rome in the middle ages, the Church controlled all the cultural activities of the people. Art was influenced by the church. The works of art were created mainly with the object of perpetuating religion. Renaissance created a spirit of devotion towards the Greek art and literature in the hearts of the people

Gradually Romanist spirit began to find expressions in the arts, even in religious subjects. Leonardo da Vinci was a versatile genius, a writer, scientist, inventor, engineer, architect and painter. As a result, architecture, sculpture, painting, music and other fine arts progressed tremendously though the influence of Christianity was very much visible on the arts of this time.



Last Supper

Michael Angelo, Leonardo da Vinci, Raphael and Titian were the great painters of the time. The remarkable painting of Michael Angelo is the "last judgment".



Mono Lisa

Leonardo da Vinci's famous paintings are "Mona Lisa" and "Last supper", Raphael was famous for his paintings of "Madonnas". Titian was noted for his mastery of colour. Peter

Brueghal the Elder's genre paintings depicted scenes from robust peasant lives.



Madonnas

Sculpture

The sculptors produced works of greater beauty and greater originality. In architecture, the architects turned to classical models.



St.Peters Cathetral



Michelangelo's Architecture

The best specimen of the architecture of the period was St.Peter's cathedral at Rome. Michaelangelo's "Moses" is a remarkable sculptural expression of the time.

Music

Music also made tremendous progress in the fourteenth century. People began to take much interest in the instrumental music instead of vocal. Various changes occurred in the system of music. Like other arts, Italy led the path in music. Music was liberated from the monopolistic cultures of the church. New song forms and new musical instruments helped the emergence of secular music.

Rise of Humanism

A shift from God centred and Church centred literary activities to human centred literary trends is known as humanism. The spirit of Humanism was found in ancient Greek and Roman literature. But in the medieval age owing to the influence of church the spirit of spiritualism, escapism and worship of God became quite popular and people began to think more of the other world than this one. Owing to the influence of renaissance, people began to take interest in ancient Greek and Roman literature. Now they began to take interest in expression of humanism and their interest in the medieval culture and civilization diminished.

Originator of Humanism

In the modern period Petrarch is supposed to be the originator of humanism. Dante and other authors and supporters of humanism were the followers of Petrarch. The contemporary ruler of Florence, Lorenzo de Medici was the great patron

of scholars. He provided shelter to various authors of humanism.



Leonardo da Vinci

The humanism spread from Italy to other countries of Europe. Micheal Angelo, Machiavelli, Leonardo da Vinci, Dontallo Botticelli, Robbia, Ficino were some significant writers of humanism Andrew Vesalius, a doctor to Emperor Charles wrote "Seven Books on the structure of the Human Body" Leonardo da Vinci drew a sketch of the future airship.



Andrew Vesalius

Human happiness and progress were the core objectives of the ancient

Graeco Roman literature. The church controlled medieval society encouraged and patronized only such literature which were agreeable to the interests of the church. Life was portrayed as devoid of any worth, pursuit of happiness was treated as a sin. Pessimistic spiritualism found expression in all church sponsored literature. The rediscovery of the Graeco Roman spirit of humanism inspired a new human - centred literary trend in Europe.

Science

The Renaissance spirit affected the field of science also. Friar Roger Bacon, the father of modern sciences, was the greatest medieval exponent of observation and experiment. His writings developed a critical and scientific sprit. Notable contributions were made in astronomy, mathematics, chemistry, physics and medicine. Copernicus discovered that the earth moves round the sun. Galileo perfected the telescope.



Galileo's Telescope.

Both contributed to the heliocentric theory. Newton discovered the "law of gravitation". Kepler laid the foundation, of mathematical astronomy.



Kepler

It was also an age which witnessed the invention of printing. Far-reaching results were achieved in geographical discoveries. Columbus, Vasco-da-gama and Magellan were the greatest figures in this field. The invention of mariner's compass (is china) was of immense help to the sailors, especially in their voyages to the south of Equator.

Results of the Renaissance

1. The study of classical languages developed a spirit of enquiry in the minds of the people. Instead of blindly believing what was written by others, they began to doubt, question and argue which enabled them to arrive at the truth. The quest for truth brought about profound changes in science, art, politics, religion and literature.
2. Renaissance created a passion for reason in the minds of the people.
3. The Renaissance kindled the creative talents of the people and slowly paved the way for many inventions and discoveries.

4. Before the Renaissance the ruins of Greece and Rome had no fascination for the people. But after the Renaissance the people evinced keen interest on the ruins. Thus the science of archaeology came into existence.

5. The reasoning spirit opened new opportunities for the people to find out loopholes in religious beliefs. The invention of the printing press helped to publish books on a large scale.

6. The new inventions, discoveries and writings of eminent men completely changed the outlook of the people towards the state. It developed a spirit of nationalism and individualism. It resulted in the emergence of nation states such as England, France, Holland, Portugal and Spain.

7. The study of the old classics which ran counter to Christian ideals greatly weakened the church and revived the spirit of humanism.

8. The study of history became more scientific. The Renaissance resulted in "Humanism" noted for its sympathetic and devoted approach to mankind.



Erasmus

The Greek and Latin classics were humane in nature. The protagonists of this culture were called "Humanists",

and their subjects "Humanities".

"Humanism, whose seed was sown by Petrarch in the fourteenth century and whose fruit was plucked by Erasmus in the sixteenth, still lives in higher education through out Europe and America".

Reformation

The term 'reformation' refers to the religious reform movement in the Catholic Church which led to the rise of a new section of Christians called as Protestants. These Protestants broke away from the Roman Catholic Church in order to form new churches on nationalist lines. Though reformation was a religious movement it was an outcome of the socio, economic and political conditions that prevailed in the sixteenth century.

During the mediaeval period the Church had developed a powerful hierarchy led by the Pope (Bishop of Rome) and assisted by cardinals, archbishops, bishops and priests. Every Christian had to perform seven sacraments in his life time with the assistance of the priests of the church. Hence the church had acquired absolute authority to control the personal lives of Christians. The church exploited this authority by all means.

Religious appointments were sold and those who purchased the positions charged high fees for the services they rendered. The new learning promoted by the Renaissance and growth of capitalist tendencies influenced some of the clergymen. The popes and higher clergy lived like princes. They indulged in corrupt practices to amass wealth. They lived a life of opulence, immorality, running gambling houses and keeping mistresses.

Dispensations which exempted people from certain laws of the church such as with regard to marriage and imposition of penance were sold.

Moreover any opinion or doctrine contrary to the church dogma was considered heretical. Such heretics were burnt at stakes. For example John Huss was burnt at the stake in 1415.A.D.

The growing nationalist sentiment also worked against the church. Powerful dynasties were emerging in Spain, France and in various parts of Europe which resisted the overlords of Rome. The church collected various taxes and a large portion of this was sent to Rome, the head quarters of the Catholic Church. Christians of various countries like Germany, England, and Netherlands etc. disliked this practice. The rulers of various countries resented the control of the church on their royal authority, and the church lands being exempted from royal taxes.

The immediate cause of the Lutheran revolt was the issue of 'sale of indulgences', A magnificent church known as St.Peter's church was being built by the Pope. A lot of money was



Martin Luther

required for the building of that church. The Pope ordered the subordinate churches to raise funds for the construction of that church. Johann Tetzel, a Dominican friar, in order to raise funds, sold indulgences for the remission of the penalty for the sins in the purgatory. The quantum of remission would be in proportion to the amount of money spent for the purchase of 'indulgences'. Such vulgar salesmanship of the clergy shocked Pious clergy like Martin Luther who raised a banner of revolt against the corrupt practices of the Roman Catholic Church.

In 1517, Martin Luther nailed his protest against the indulgences in the form of 95 theses to the door of the Wittenberg church in Saxony. His protest theses were translated, copied, and circulated widely in printed form. In 1520 Luther published three pamphlets i.e. 1) AN ADDRESS TO THE NOBILITY OF THE GERMAN NATION.

2) ON THE BABYLONIAN CAPTIVITY OF THE CHURCH AND 3. THE FREEDOM OF THE CHRISTIANMAN.

In his writings Luther questioned



Pope Leo X

the authority and relevance of the Pope and church councils.

Pope Leo X, through a papal bull (papal order in sealed cover) threatened Luther with excommunication if he failed to recant. But Luther encouraged by the support of the German people and princes, defied the authority of the Pope and burnt in public the papal bull and some books of canon law. This "burning of the books" symbolized the 'declaration of independence' of the German principalities from the control of the Roman Pope.



Charles V

Charles V, the Holy Roman Emperor, summoned Luther to an imperial Diet (Assembly) at WORMS, and asked Luther to recant.

Supported and protected by German princes led by Frederick of Saxony, Luther refused to retrace his step. Lutheranism refused to accept the mediatory role of the Roman Church, reduced the sacraments from seven to three (i.e. baptism, marriage and communion) condemned monasticism (and the clergymen were to marry) and adopted native German language for religious and secular

purposes. The German princes and nobles also took possession of the church lands. In 1529 the Lutheran princes defied an imperial edict-asking them to suppress Lutheranism - made a formal 'protest' that "they would remain loyal to the God rather than to the Emperor". Hence the Lutherans were called 'protestants'.



Ulrich Zwingli

Ulrich Zwingli in Zurich (Switzerland) and a French clergy John Calvin. Who fled to Switzerland similarly raised 'protests' against the papal order and more or less toed the lines of Martin Luther. All of them wanted the church to be restored to its early purity and simplicity, In England the Tudor king Henry VIII quarreled with the Pope Clement VII, on the question of securing papal sanction for his divorce with Catherine and marriage with Anne Boleyn. He pressurized the English church to break away from Rome in 1533. In the succeeding year the 'Act of supremacy' of the parliament made the English king the supreme head of Anglican Church. Thus a clerical protest against Roman Catholic Church resulted in the emergence of non - Latin national states and non-Catholic Christian sects in Europe.

Counter Reformation

The triumphant progress of Protestantism was viewed with great concern and fear by the Roman Catholic Church. The aim of the counter – reformation was primarily to restore the Church to a condition of pristine purity and sublime holiness. The church stood in dire need of protection from within and without. Before things went out of control, it took drastic measures to arrest the onward march of Protestantism. It also committed itself to the purification of the Church. This movement for reform within the church and the steps taken by it to arrest the growth of Protestantism came to be known as Counter-Reformation.

Society of Jesus

Ignatius Loyola and the Society of Jesus (1491 – 1556)

Ignatius Loyola, a Spanish nobleman, was born in 1491. He became a soldier and served Emperor Charles V by fighting the French. He was wounded in a battle, and during the period of treatment he had strange religious experiences. He underwent a great transformation after studying the



Ignatius Loyola

works relating to the lives of Jesus Christ and other saints. He founded a religious order known as the Society of Jesus with papal consent and enrolled sixty members (Jesuits) who were subjected to more religious discipline and training. Each member had to undergo Loyola's spiritual exercises and in 1540 the Pope sanctioned increase in the strength of Jesuit members. The Jesuits, who swore to lead a life of poverty, chastity and "service to god and Christianity", spread themselves throughout the European continent and worked tirelessly with great zeal as missionaries. They spread the message of Christ, and opened schools everywhere. The Jesuits were the agents in propagating the counter-reformation. The Jesuits in their missionary activities achieved remarkable success. The Jesuits did yeomen service for the cause of Catholicism.

The Council of Trent

The Council of Trent (1545 – 63) aimed at reforming the Catholic church. Though it failed to bring about unity in Christendom, it gave a clear definition to catholic doctrines; the council marked the triumph of populism. After the Council of Trent, the Pope was recognized as the supreme arbiter in religious matters as far as Catholicism was concerned. Evil and unworthy priests were to be removed. Celibacy was enforced. The service-book of the church was completely renewed and the Bible was revised.

The inquisition

In order to root out heresy, the church-court-'inquisition'-meted out brutal punishments to people who wavered in their allegiance to the

Catholic faith. The Spanish inquisition was founded during the time of Ferdinand and Isabella. Torture was used to extract confession.

The Church also prepared an 'Index' of hierarchical books and passages and such hierarchical writings were prohibited for the believers.

Geographical Discoveries

The Age of Renaissance had removed all the mediaeval ideas from the mind of the people and it fostered a spirit of adventure among the people of Europe to explore unknown distant lands in various parts of the world.

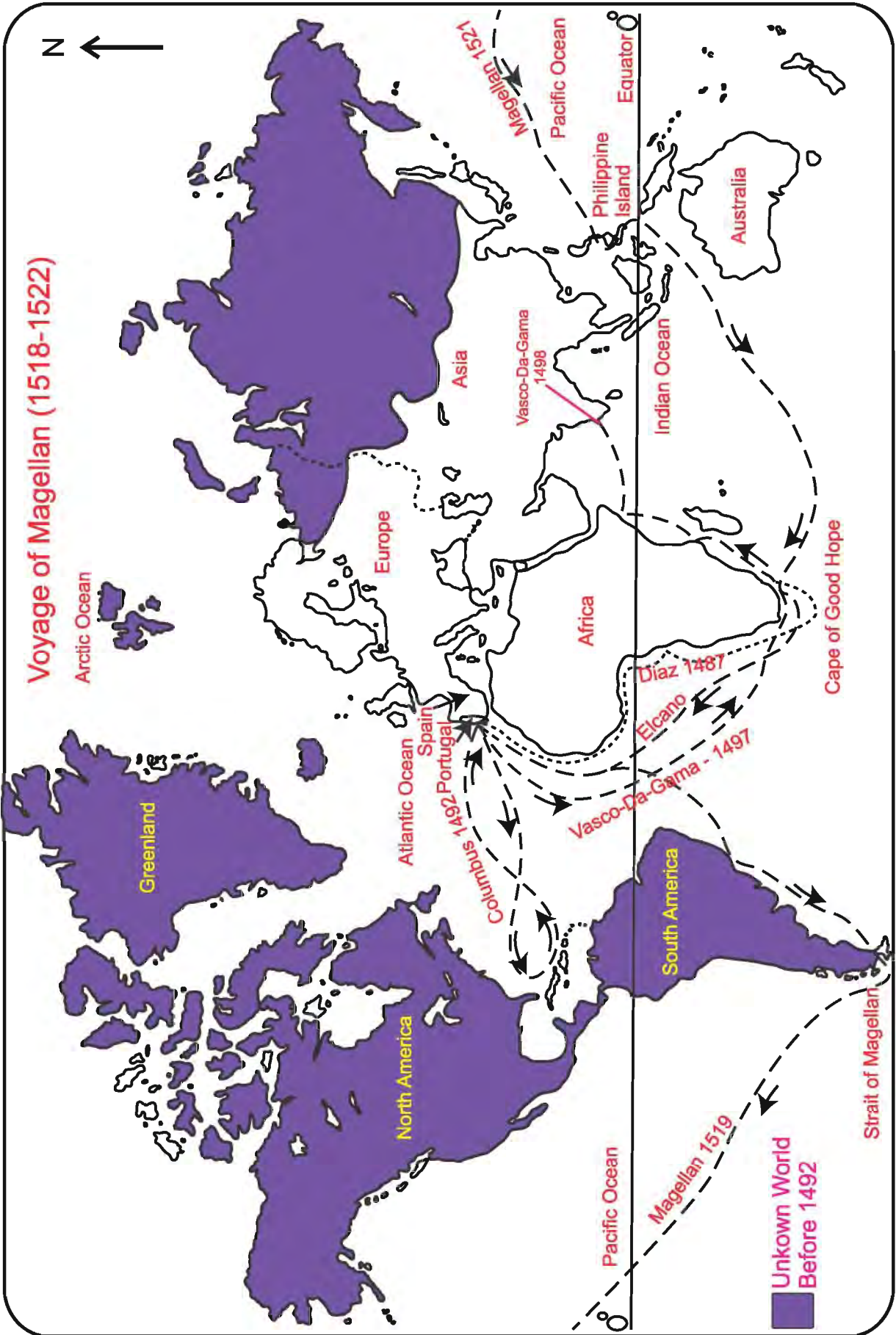
Knowledge about Earth

During this period the scientists discovered that the earth is spherical in shape. So the sailors concluded that they might return to the same point from where they began their journey. It encouraged them for voyages.

In the beginning of the modern era the scientific inventions contributed a lot. Among all these inventions, the invention of Mariner's compass was the most significant one. It is an instrument meant for knowing the directions. Its needle always points towards north. It saves the people at sea especially to



15th century ship



the south of Equator from being lost and people dared travel to distant places due to correct knowledge of geographical directions.

In the 15th century after occupation of Canary Islands, the Portuguese began to make efforts to explore the western side of Africa. The Portuguese Prince Henry made great efforts in this direction, hence known as Henry the Navigator (1394-1460). He started a school for navigators and encouraged extensive exploration. The sailors were taught how to make use of the Mariner's Compass and astrolabe. His sailors undertook many voyages along the coast line of West Africa. They discovered Azores and Madeira Islands and went as far as Sudan and Senegal.

After the fall of Constantinople in 1453 to the Ottoman Turks, it had become impossible to travel to Asia from Europe. It endangered the spice trade of the Europeans; Until then the Arabs were the intermediaries in spice trade. Hence the Europeans had to search new sea routes in order to reach Asia and to amass wealth as much as possible. They sought royal patronage to undertake long voyages to find out new routes to India and Cathay (China)

The geographical imagination of Europe was enormously stimulated by the Mongol conquests. The desire for foreign travel and commerce was greatly encouraged by the crusaders. The overland journey of a small party of Venetians, of which Marco polo's travel to Cathay (China) by the end of the thirteenth century was a bold undertaking.

Remarkable discoveries were made during the second half of the 15th century. Bartholomew Diaz a

Portuguese, reached the southern most tip of Africa, which came to be called the 'Cape of Good Hope'. In 1497, Vasco da gama, a Portuguese explorer, sailed across the Indian Ocean and reached Kerala's coastal town of Calicut in 1498. His discovery of new sea route to India was a remarkable achievement.



Vasco da gama

Christopher Columbus, was an Italian but his voyages were financed by the Queen of Spain. He was the first to sail across Atlantic Ocean in 1472, with three ships--The Santa Maria, the



Columbus

Nina and the Pinta with 88 crew members. He reached America on 11th October 1492 after great difficulties. This was the most significant discovery of Columbus and it came to be known as 'The New World'.

Fernando Cortez, a Spanish adventurer made an expedition to explore the coast of Central America and discovered Mexico, Peru surrendered to Pizarro in 1530. Both Mexico and Peru caused a steady stream of gold and silver to flow across the Atlantic to Spain.

Ferdinand Magellan, a Portuguese in the service of Spain, reached and named the Pacific Ocean.

Amerigo Vespucci, Italian adventurer, made four voyages to the region visited by Columbus. He gave a detailed description about the land and its people.

Martin Wald Muller, a German cartographer was drawing a map of the world and he named the New World as America after Amerigo Vespucci.

Both Portugal and Spain, for the commercial prosperity and imperialism divided the world between them with the help of Pope. Africa, Asia and Brazil were given to Portugal and Spain established the control over parts of Northern and Southern America and Spaniards poured there in great numbers, in search of gold and silver. Spain amassed a lot of wealth. It lured the other countries of Europe to establish their colonies in the New world. France, England and Holland were prominent among them. Therefore, all the countries began to fight among themselves for territories in American Continent.

EXERCISE

1) Choose the correct answer.

- 1) Which was the birth place of Renaissance?
a) Italy b) Germany c) England d) Austria
- 2) Who was responsible for Reformation?
a) John Huss b) Martin Luther King c) Zwingli d) Calvin
- 3) In which year Constantinople was captured by the Turks?
a) 1452 A.D. b) 1553 A.D. c) 1453 A.D. d) 1353A.D.
- 4) Who painted the famous painting 'Mono Lisa'?
a) Micheal Angelo b) Raphael
c) Titian d) Leonarda da vinci
- 5) Who founded a religious order society of Jesus?
a) Martin Luther b) Charles-V
c) Ulrich Zwingli d) Ignatius Loyala

6) in which year Vasco da Gama reached Calicut?

- a) 1498 b)1497 c)1496 d)1499

II) Match the following.

- | | |
|----------------------|--------------------------|
| 1) Dante | Father of modern science |
| 2) Michael Angelo | New scientific invention |
| 3) Friar Roger Bacon | America |
| 4) Mariner's Compass | Last Judgment |
| 5) Amerigo Vespucci | Divine comedy |
| | Last supper |
| | New sea route |

III) Write Short Answers.

- 1) What are the two broad divisions in the Renaissance movement?
- 2) Write a short note on Paintings.
- 3) What was the important scientific invention during Renaissance period?
- 4) Define – Renaissance.
- 5) Write a note on indulgence.
- 6) The council of Trent – Define.
- 7) Give an account on Henry the Navigator.
- 8) What were the effects of new voyages?

IV) Answer all the questions given under each caption.

1) Renaissance in Italy

- a) Which is the school of Europe ?
- b) Who was the first great Pioneer of classical art?
- c) Who was the doctor of Charles V, wrote seven books?
- d) Who was noted for his mastery of colour?

2) Reformation

- a) What was the immediate cause of the Lutheran revolt?
- b) Who were called 'Protestants'?
- c) What were the Sacraments reduced from seven to three?
- d) Who was Johann Tetzel?

3) Society of Jesus

- a) Who founded the society of Jesus ?
- b) In which year it was founded?
- c) How many members (Jesuits)enrolled in the society of Jesus?
- d) Who were the agents in propagating the counter Reformation?

4) New discoveries

- a) Who named Cape of Good Hope ?
- b) What was the name of Christopher Columbus discovery ?
- c) What were the name of the Christopher Columbus's three ships ?
- d) Which Portuguese explorer named Pacific ocean?

V) Answer in a Paragraph.

- 1) write a paragraph on Humanism during the Renaissance period.
- 2) What were the Results of the Renaissance?
- 3) What was the services of Martin Luther against corrupt practice of the Roman Catholic Church?
- 4) Write a note on ' The inquisition' and 'Index'.
- 5) What were the causes for the Geographical discoveries ?

5. THE INDUSTRIAL REVOLUTION

The Industrial Revolution which took place in England fundamentally changed the industrial, commercial, political and social life of the western world. **The term Industrial revolution refers to the shift from an agrarian, handicraft, labour intensive economy into one dominated by machine manufacturers, factories and a free flow of capital.** The capitalist procured raw materials and supplied artisans and craftsmen who manufactured products in their houses. New inventions were taking place in different areas, which gave birth to machines. The term Industrial Revolution is used to express the change which was responsible for the adoption of system of making things on large scale in factories. The machines changed the entire method of production. The revolution was completely economic in nature. There was no violence, no bloodshed, it was a peaceful process of industrial transformation. The French writer **Blanqui** first coined the term Industrial Revolution.

Factors responsible for Industrial Revolution

In the 18th century many innovations in agricultural methods and organizations had brought a reaching changes. The traditional patterns of farming were breaking up. Agriculture became more and more capitalist enterprise. Peasants freed from manorial obligations joined the ranks of entrepreneurs and tenants. The demand for English goods went on increasing. The expansion of commerce was the result of the discoveries of new lands and new sea routes. The population in European

countries expanded rapidly for several factors. More efficient agriculture and better food distribution reduced malnutrition which meant more births. The progress of science revolutionised the method of production. These conditions and many natural advances were favourable for the beginning of an Industrial Revolution.

The widespread production of rural handicrafts provided the foundation for the rapid expansion of trade. This expansion resulted a search for new markets. The capitalists encouraged the scientists to invent machines. Further the European countries exploited the colonies and their exploitation gave birth to capitalism. The capitalists wanted production of more goods in order to gain more profits and for this they required factories. With the help of newly invented machines the people produced goods on large scale. These factors helped the fast industrial changes in Europe. Before Renaissance scientific knowledge was not put into practice. But now there was awakening all around.

England in the 18th century was in a most favourable position for an Industrial Revolution. It had become the leading maritime and colonial power of the world. Her colonial and naval supremacy provided incentive for the development of the industry as the colonies provided raw materials as well as markets. Britain also possessed many natural advantages, her coastal line and climate promoted trends towards industrialisation. The role played by private enterprises in England's economic development was

extraordinary and unique. The engines of industrial revolution made England so rich and powerful. Many Protestant artisans of Spain and France migrated to England due to religious persecutions. The English government provided them shelter and monetary help and in return made full use of their skills. It gave impetus to industries in England.

Scientific Inventions and Technological Developments Revolution In the Textile Industry

The industrial revolution brought a change from handicrafts to machine manufacture and from human or animal power to other forms of energy such as steam. The cotton textile industry was the first to gain momentum from the outburst of inventions. **John Kay's** (1733) "Flying Shuttle" speeded up the process of weaving and thus increased the demand for thread. **James Hargreaves's** "Water Frame" and **Crompton's** "Spinning Mule" (1779) supplied the demand for thread. **Cartwright's** "power loom" (1785) improved weaving methods. **Whitney's** "cotton gin" (1793) made a large and cheap supply of raw cotton for spinning. **Elias Howe** invented the "sewing machine" (1846).

Invention In Powers

The most important invention of the Industrial Revolution was the steam engine. **James watt** studied Newcomen's steam engine and invented a new steam engine in 1769. Steam replaced horse and water power in the textile industry. **George Stephenson** invented steam locomotive engine in 1825. In 1830 the first passenger railway between Manchester and Liverpool was operated. The steam printing press in

1814 decreased the cost of printed materials. Later on **Faraday** invented the dynamo.



George Stephenson



James Watt

'An Improver of the Steam Engines'

Abraham Derby made experiments in the substitution of coke from charcoal for smelting iron ore. In 1760, **John Smeaton** improved the "Derby process" by the addition of water power. **Humphrey Davy** invented the miner's safety lamp which enabled the miners to do the work with safety. In 1784 **Henry Cort** introduced the puddling process for the purification of pig iron. In 1856, **Bessemer** invented a

new method of making steel. From this time onward coal and iron went hand in hand with steam as foundation of industrialisation.

Revolution in Transport

Changes in mining, metallurgy speeded changes in other industries especially transportation and communication. **John Metcalfe and John McAdam** made tremendous improvements in road making. McAdam devised the method of making pucca roads, which were called "macadamised" roads. **John Brindley** constructed a network of canals and important towns like Birmingham, London, Liverpool, Manchester, etc., were soon linked by canals.



Steam Engine

Revolution in the means of Communication

'**Sir Rowland Hill**' invented the "penny post system" by which the business people were able to carry on their correspondence with customers and clients from far and near. **Morse** invented the method of sending messages through telegraph wires. In 1835 the first electric telegraph came into existence.



Electric Telegraph

Revolution in Agriculture

The revolution in agriculture had started before the industrial revolution. New farm machinery included the steel plough and harrow for breaking the ground, the mechanical drill for seeding and horse drawn cultivator to replace the hoe. There were also machines for reaping and threshing. The practice of crop rotation was adopted to maintain soil fertility. **Clover** is one of the plants which add fertility to the soil. Land owners in England began to enlarge their farms. The strips that lay scattered about the village were so consolidated that they could hold all their lands in one piece thereby increasing the production.

Effects of Industrial Revolution Social Effects

The Industrial Revolution left a deep impact on all sides of the European life. The changes in agricultural production, business organisation and technology had revolutionary effects in society and politics. People were drawn from the country side into cities, it gave rise to a number of industrial towns. The overcrowded towns lacked the barest sanitary amenities. Air pollution, water and noise pollution affected the health of people. The Industrialists found more profitable to employ women and

children in their factories. Mass underemployment became one of the greatest social problems. It also destroyed the old division of the society and created two distinct classes, the 'capitalists' and the 'labours'. The division of people into 'haves' (rich) and "have not's" (poor) became pronounced. As industries developed in many of the European countries, they were forced to set up their colonies in other continents to get direct raw materials and to sell their goods. This search for colonies led to colonial imperialism.

Political Effects

The emergence of big towns necessitated parliamentary reforms. A number of parliamentary reforms were introduced. The factory acts were passed in 1819, 1833 and 1847 to improve the conditions of labourers and to give them protection from the exploitation of capitalists. In 1825 trade unions were organised to fight for their rights. It also gave rise to ideas of rationalism and internationalism through means of communication and transport. This also gave rise to the demand for democratic government on economic basis i.e. socialism.

Economic Effects

The Industrial Revolution changed the economic face of England which became the most advanced country in the world. It developed its trade relations which increased the national income. Cottage industries could not compete with the factories and they met their natural death in course of time. The establishment of factories established many new industrial towns like Manchester, Lancashire, Birmingham and Sheffield. The birth of new classes Capitalist and Labour

made the poor poorer and the entire capital of the country went to the coffers of the capitalist. It was therefore as someone said "The Industrial Revolution made the rich richer and the poor poorer".

New Idealism

The Industrial Revolution gave birth to many political terminologies which are frequently used. Capitalism was born out of mass production of goods which led the owners of the big industries amassing wealth. The large scale factories began to develop mercantile capital, this was the beginning of capitalism.

Socialism

The slogan of socialism was raised by the labour classes against capitalism. The motive behind socialism is that there should be just distribution of wealth and the gap between the rich and the poor. Nobody should starve and everybody's need must be met. Industrialisation sharpened the distinction between the middle class and the labouring class. Socialistic demands were meant to narrow this gap. Robert Owen was the first person to coin the word "socialism".



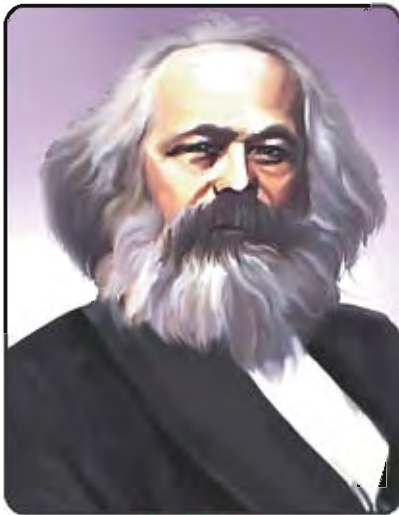
Robert Owen

Inventions during the Industrial Revolution

INDUSTRY	NAME	INVENTIONS	YEAR
1.TEXTILE	John Kay	Flying Shuttle	1733
	James Hargreaves	Spinning Frame	1767
	Richard Arkwright	Water Frame	1769
	Samuel Crompton	Spinning Mule	1779
	Edmund Cartwright	Power Loom	1785
	Eli Whitney	Cotton Gin	1792
	Elias Howe	Sewing machine	1846
	2.STEAM	Thomas Newcomen	First steam engine
James Watt		Redesigned Newcomen's steam engine.	
		First Iron ship	1790
George Stephenson		First Locomotive called Rocket	1825
		First Railway	1825
Robert Fulton		Steam Boat called Clermont	1807
Robert Stephenson		Flying Rocket	1829
	Steam printing Press	1814	
	Faraday	Dynamo	
3.Iron and Steel	Abraham Derby	Substitution of coal from charcoal	
	John Smeaton	Improved Derby Process	1760
	Humphrey Davis	Safety lamp	1816
	Henry Cort	Pudding process for purification of iron	1784
	Bersemmer	Method of making Steel	1856
4.Transport	John Metcalfe	Road making	
	John McAdam	Macadamised Roads	
	John Brindley	Networking Of Canals	
5.Communication	Sir Rowland Hill	Penny Post system	
	Samuel Morse	Sending messages through telegraph wires. First electric telegraph	1835
	Cyrus W field	Trans Atlantic under Sea Cable Connectivity	

Marxism

Marxism is a theory developed by **Karl Marx** who is a socialist of Germany. His theory is based on the assumption that production and physical forces have an intimate relationship, and the surplus value of products should go in favour of the working class. The industrial revolution gave birth to Marxism and philosophies which are sufficiently advanced these days.



Karl Marx

Theory of Laissez-Faire

It was a result of Industrial Revolution that the theory of Laissez-Faire or "free trade" came to the forefront. By this theory capitalist

and traders pleaded that the state had no right to interfere in the affairs of the factories and trade.

Defects of The Industrial Revolution

Due to Industrial Revolution man became the slave of the machines. The owners of the factories ruthlessly exploited their employees. The hour of work in the factory varied between fourteen to sixteen hours a day. The women and children were employed at low wages and also required to work on dangerous machines, it also created serious problem of under employment. The people began to live unnatural life.

The Industrial Revolution had both good and as well as evil effects. But it is undoubtedly clear that these effects were far reaching. **Davies** says, "The Industrial Revolution was not however an unmixed blessing. The domestic system of industry which it brought to an end was in many respects more conducive to the happiness of the workers." It bestowed great material benefits to mankind. In brief the Industrial revolution has made the modern world what it is today.

EXERCISE

1) Choose the correct answer.

1. During Industrial Revolution Production became _____.
a) faster b) slower c) very slow d) no change
2. _____ is the birth place of the Industrial Revolution.
a) USA b) France c) England d) Germany
3. Great Britain is an _____.
a) Peninsula b) Island c) Desert d) Mountain

4. Cotton gin was invented by _____.
- a) James Hargreaves b) Eli Whitney
 c) Samuel Crompton d) Elias Howe
5. In _____ the First Passenger Railway was operated
- a) 1830 b) 1850 c) 1779 d) 1900

II) Match the following.

- | | |
|------------------|------------------|
| 1. John Kay | Road |
| 2. James Watt | Dynamo |
| 3. Faraday | Flying Shuttle |
| 4. MC Adam | Spinning |
| 5. Humphrey Davy | New Steam Engine |
| | Safety Lamp |
| | Cotton Gin |

III) Answer all the questions given under each caption.

1. Textile Industry

- a) What was the first Momentum from the outburst of Invention?
 b) By whom flying shuttle was invented?
 c) Who invented sewing Machine?
 d) When was cotton Gin invented?

2. Invention in Powers

- a) Who invented a new Steam Engine in 1769?
 b) By whom safety lamp was invented?
 c) What did Bersemer invented in 1856?
 d) Who introduced the Pudding process for the purification of pig iron?

IV) Answer Briefly.

1. What is meant by 'Industrial Revolution'?
2. What were the results of the expansion of Commerce?
3. Write a note on Revolution in Agriculture
4. What is the motive behind socialism?
5. Who is Karl Marx? What was his Theory?

V) Answer in Detail.

1. What were the Causes for the Industrial Revolution?
2. What were the effects of the Industrial Revolution?
3. Mention some Important scientific Inventions were made during Industrial Revolution.

6. THE FRENCH REVOLUTION (1789)

"When France catches cold entire Europe sneezes"

Monarchical absolutism received a death blow at the end of the 18th century from the French Revolution of 1789. This was a revolt against absolute monarchy and class privileges. It has rightly been said that the dominant forces at work in the social and political history of Europe in 19th century were the ideas or principles inherited from the French Revolution. These are mainly three—"Equality, Popular Sovereignty and Nationality". It is an irony that the French Revolution ultimately led to the despotism of Napoleon Bonaparte.

Causes for the French Revolution Ancient Regime

The absolute monarchy in France became weak and unpopular during the reign of Louis XV and Louis XVI. They were weak, incompetent and devoted to extravagance. The unhealthy interferences from queens especially Marie Antoinette created confusions and disorder. Bulk of the state's revenue was spent on the extravagance of the court. The ministers and officials were corrupt and dishonest. The state suffered seriously from this mal administration.



Louis XVI



Queen Marie Antoinette

Absolutism

The French system of absolute monarchy was rooted in the "Divine Right Theory of Kingship". The church supported this theory. Under this system, the people had no avenue to express their grievances and to secure redressed. The only traditional representative body flourished earlier was the "States General". It was a tricameral body consisting of a chamber for clergy, another for nobility and the third one for the commoners. This was only an advisory body but that too was not convened since 1614. Another body known as parliament was entrusted with the responsibility of registering king's edicts. But that parliament too was sidelined by the court. Hence, there was no forum through which king could gain acquaintance with people's issues

Economic Reasons

Feudalism was decaying. The nobles who owned large tracts of lands practiced absentee land lordism. They left their lands under the care of petty officials and settled in the capital, so as

to gain proximity with the king. Their officials mismanaged the lands and exploited the peasants. The nobility were exempted from many taxes and compulsory labour. At the same time, they collected exorbitant dues from the peasants and held tight control over their produce. They could even award punishments to the disobedient peasants. Similarly, 1/3 of lands in France were held by clergy. They too enjoyed exemptions from most of the taxes. At the same time they used to collect Tithes and other dues from the people. The peasants were thus exploited by the state, nobility and clergy.

The burden of most taxes fell on the peasants. They were coerced to render free manual labour to the state, nobility and clergy. Dissent was punished with the repressive measures. The French colonies at that time were not prosperous enough to support the French government and the traditional industries could not make any progress. There were poverty, and starvation deaths every where.

The Catholic church enjoyed absolute sway over the French Society. It registered births and deaths, regulated marriages, controlled education and determined the moral standards. The church became owner of vast tracts of land, and enjoyed exemptions from taxes, military service and manual labour. They joined with the king and nobility against the interests of poorer sections of society. Corruption and moral degradation made the church unpopular.

The burden of wars

Since the days of Louis XIV, France was involved in incessant

warfare with other European nations. The seven years war and Austrian war of succession had emptied the French treasury. At the same time, France did not gain anything from these wars. These expensive wars led to financial crisis in France.

Role of Philosophers

The French Revolution was inspired by the thought and writings of the eminent philosophers of the day. Of them Voltaire, an internationally famous writer raised his voice against superstitions and church. He was honoured by king Fredrick the Great of Prussia for his writings. Rousseau repudiated the "Divine Right theory of Kingship" through his "Social Contract" Theory. His social contract (book) became the Bible of the Revolution. He emphasized that people's will was the basis of the state and man was entitled to "Liberty. Equality and Fraternity". Montesquieu held absolutism responsible for the miseries of the people. He suggested the English model of separation of powers as a constitutional remedy for a welfare government in his book, "The spirit of Laws". There were a group of thinkers known as physiocrats who suggested economic remedies. Such ideas influenced and inspired the leaders of the French Revolution.



Rousseau



Montesquieu

Immediate cause

The drought and famine prior to 1789 worsened the conditions and that resulted in the outbreak of "bread riots". The court especially the Queen Marie Antoinette was insensitive to the people's plight and provoked it further by their indiscrete remarks. At the same time, the French volunteers who took part in the American war of independence returned to France with a new zeal. They were inspired by the American success and their experiments with "Republican system". They joined with the rioting people and strengthened the ranks of the revolutionaries.

Convening of States General

The French king could not bring out fiscal reforms due to resistance from his court. He was in need of more revenues. In order to secure people's consent for more levies, he decided to revive the "states general" after 175 years. This states general consisted of three divisions one representing the nobility and the second representing clergy and the third representing the people.

Course of the Revolution(1789-1799)

Once the states general was convened by Louis XVI the House of the people urged the king to combine all the three Estates representatives in one chamber. They also wanted to rename the combine Estates General as "National Assembly" and demanded the repeal of all special rights and privileges granted to the nobles and clergy. Though the Third Estate (House of Commons) had more members than the I Estate (Clergy) and the II Estate Nobles, the voting system was not favorable to the III Estate. The system of "One vote for One Estate" have been practiced until then.

Voting System

I Estate	II Estate	III Estate
I vote	I vote	I vote

Always the first 2 estates got majority over the 3rd estate, $(1+1) = 2$ against 1.

Tennis Court Oath

The king did not permit them (the third estate) in the old hall on the pretext that it was undergoing repairs. So, they assembled in a nearby "Tennis Court". After a few nobles and clergy joined them, they declared themselves as the National Assembly. They took a pledge that they would not disperse till they made a new Constitution to limit the powers of the king. This was called the famous "Tennis Court Oath".

The king was clear that he could not get financial sanction from the people. He secretly planned to dissolve the National Assembly. The angry people came to know about this and broke up in open revolt against the king and monarchy.



"Tennis Court Oath".

Storming of Bastille

The unruly mob in Paris stormed a medieval fortress – “Prison of Bastille” on July 14, 1789 which was a symbol of “royal despotism”. When the Swiss guards tried to prevent their entry, the unruly mob chopped off their heads, entered the prison and released the prisoners. Then they celebrated the day as the “Day of Liberty” for the whole nation.

The “Siege of Bastille” was a significant incident in the course of the French Revolution. The royal power was weakened. Then the revolutionaries established their own government called the “Paris Commune”.

Hungry women of Paris marched to the royal palace of Versailles and demanded bread. When there was no proper response, the mob entered the

palace and ransacked it. They forced the king, queen and their children to live in Paris.

National Assembly

In the meanwhile, the National Assembly was summoned and the famous “Declaration of the Rights of Man and the Citizen” was drafted on 12th August 1789. It is a very important document like that of the “Magna Carta or Glorious Charter” of England (1215 A.D.) and the “Bill of Rights” passed by the British Parliament in 1689 A.D.

Civil Constitution of the Clergy

The National Assembly began to draft the New Constitution for France in 1791. It reduced the powers of the king. Hereafter, laws were to be made by the Legislative Assembly. Religious toleration was assured. The church property was nationalized. Henceforth, the church officials were to be



"Siege of Bastille"

appointed by the government. The salaries of the higher church officials were reduced and that of the lower order slightly increased. The civil constitution of the clergy hurt the feelings of devout catholics since it transferred the control of the church from the "Pope to the hands of the State". The Pope condemned the civil constitution. The Assembly insisted all church officials to take an oath of loyalty to the state. So the clergy split into two groups namely juring and non-juring clergy. The state supported the former and devout catholics the latter. This resulted in the confrontation between the church and the state.

The king (devout catholic) was unhappy over the civil constitution. But he was forced to sign the new constitution.

King's flight to Varennes

In June 1791, King Louis XVI attempted to flee the country with his

family but was caught at the border town of "Varennes". He was imprisoned and finally tried for treason, found guilty and executed before the public on January 21, 1793 by a cruel device called "**Guillotine**". Later Marie Antoinette and other royal followers were also guillotined. Again anarchy prevailed in France.



Guillotine



Guillotine



Guillotine

Guillotine was an instrument for beheading, consisting of a heavy blade dropped between two grooved uprights. It was named after J.I. Guillotine, who advocated it.

Reign of Terror

The National Convention which met in September 1792 began to draft a new constitution. It abolished monarchy and declared France a "Republic" on September 21, 1792. It established a Committee of Public Safety which was headed by the extremist leaders like Danton and Robespierre. These leaders enjoyed unlimited authority. Their period in France from September 1792 to July

1794 came to be called "Reign of Terror". Thousands of nobles and innocent men who had supported monarchy were guillotined. This led to the downfall of the revolutionaries. The "reign of terror" came to an end with the execution of Robespierre on the guillotine in 1794.



Robespierre

The Directory

The moderate elements in the National Convention framed a new constitution for France in 1795. A "Directory" of five persons advised by a legislative body of two chambers ruled for five years from 1795 to 1799. They also failed to give a good administration for France. When there was royalist uprising in Paris against the new constitution troops were ordered to crush it. Thus the French Revolution came to an end.

Napoleon Bonaparte

A Corsican youth named "Napoleon Bonaparte" took charge of the command. After a "Whiff of grape – shot, he dispersed the unruly mob and captured power for himself. This young officer who was called the "Child of French Revolution" or "Product of

French Revolution" ruled France efficiently from 1799–1815. He reorganized the system of administration and gave France political stability after a chaotic period of revolution till his defeat at "Waterloo" in 1815.



Napoleon Bonaparte

Results of the French Revolution

The French Revolution of 1789 brought about far reaching changes. It inaugurated a new era in the history of mankind. The significant results of the French Revolution are listed below.

- 1) It abolished absolute monarchy and established a constitutional monarchy.
- 2) It destroyed feudalism and liberated the serfs.
- 3) The nobles and the church lost their property and their lands were distributed to the poor peasants.
- 4) Separation of the state and church in 1794 was brought about, and the concepts of secular government and secular legal system were introduced.
- 5) Slavery was abolished in the French colonies also.

6) The education system was built on secular foundations.

7) It created national feelings and unity among the French people which was admired and followed later by the people of many countries in their struggles for freedom(e.g.India).

8) The French Revolution created a spirit of nationalism in Italy and Germany to achieve their unification against the foreign powers in the 19th century

9)The French Revolution spread the ideas of "Liberty, Equality and Fraternity not only in Europe, but also in many other countries of the world.

10) It proved to be the fore runner for the coming up of a new democratic and social order in Europe and elsewhere.

11) It gave to the world an efficient administrator Napoleon Bonaparte.

12) The out break of the French Revolution came like Manna from Heaven.

Do you know it

The Eiffle Tower was built for the International Exhibition of Paris of 1889 commemorating the centenary year of French Revolution of 1789.



Eiffle Tower

Do You Know

Until the French Revolution “The French People were more a Christian than a Citizen”.

Abraham Lincoln of U.S.A. and Mahatma Gandhi, the “Father of our Nation” were very much inspired by the ideas of French Revolution

EXERCISE

I) Choose the correct answer.

- 1) The French Revolution took place in the year _____.
a) 1749 b) 1759 c) 1779 d) 1789
- 2) “States General” was the Parliament of _____.
a) England b) France c) Russia d) Italy
- 3) “Social Contract” was written by _____.
a) Voltaire b) Rousseau c) Montesquieu d) Danton
- 4) During the French Revolution the king of France was _____.
a) Louis XIII b) Louis XIV c) Louis XV d) Louis XIV
- 5) The _____ was the symbol of “Royal Despotism” in France
a) Prison of Versailles b) Prison of Bastille
c) Prison of Berlin d) Prison of Varennes
- 6) The “Reign of Terror” came to an end in _____.
a) 1790 b) 1791 c) 1792 d) 1794
- 7) _____ was called the “Child of the French Revolution”
a) Louis XVI b) Robespierre
c) Voltaire d) Napoleon Bonaparte

II) Match the following.

- | | |
|-----------------------|-----------------------|
| 1) The spirit of laws | Sep. 1792 – July 1794 |
| 2) Second Estate | Voltaire |
| 3) Third Estate | Waterloo |
| 4) Reign of Terror | Rousseau |
| 5) Directory | Montesquieu |
| 6) Napoleon Bonaparte | Nobles |
| | Commoners |
| | 1795 – 1799 |

III) Answer briefly.

- 1) Write a note on “Three Estates” of France.
- 2) Give an brief account on the famous “Tennis Court Oath” ?
- 3) Write a note on – “Declaration of Rights of man and citizen”.
- 4) Write any two results of the French Revolution.
- 5) Explain the role of Napoleon Bonaparte.

IV) Answer all the questions given under each caption.

1) Absolutism.

- a) What was the French system of absolute Monarchy depended ?
- b) Who supported this theory ?
- c) What was the “States General” ?
- d) When was it convened lastly before the Revolution ?

2) Storming of Bastille.

- a) When was the prison of Bastille stormed ?
- b) Which was the symbol of Royal despotism ?
- c) Which day was celebrated as the “ Day of Liberty” for the whole nation ?
- d) Which was the significant incident in the course of the French Revolution ?

3) Reign of Terror

- a) When did the National convention met ?
- b) What was its declartion ?
- c) Who headed the “committee of public safety ?
- d)What was the period of “Reign of Terror in France ?

V) Answer in a paragraph.

- 1) What were the economic causes for the French Revolution ?
- 2) Describe the role of Philosophers in the French Revolution .
- 3) What were the results of the French Revolution ?

7. Cultural Heritage of Tamil Nadu

In the Pre-Vedic India a Dravidian Civilization flourished with its nucleus in Indus Valley. Later with the coming of Aryans the nucleus was shifted to Peninsular India. The Tamil Language and culture are oldest surviving ones in the Dravidian family of civilizations. In the ancient Pali and Sanskrit literature the words Dramila and Dravida meant both Tamil and the Southern regions and distinguished these from Sanskritised northern region (Aryavarttha).

The Tamil language and literature are noted for their antiquity. The Sangam poets like Mamulanar belonged to the age of Nandas and Mauryas i.e. 4th century B.C. Thus the present Tamil language has a continuous history of atleast 2500 years. Because of it's antiquity, versatility and it's distinct qualities Tamil language is bestowed with classical status. Unlike Sanskrit but similar to Chinese Tamil has become the oldest surviving popular language of the Indian subcontinent and eldest of the Dravidian languages of South India.

The political history of Tamil Nadu from 500 B.C to 1300 A.D is divided into three phases (1) The Sangam age (2) Kalabhra age (3) Age of Tamil empires.

During the Sangam age the political control of Tamil Nadu was divided between the crowned monarchs and petty chieftains. The Veliers were the petty chieftains ruling over hilly tracts e.g. Aay of Podiyil hills, Adhiyaman of Kudhirai hills, Paari of Parambu hills. The fertile plains of river valleys were ruled by three crowned monarchs i.e. the Chera, Chola, and

Pandya. The petty chieftains and crowned monarchs patronized scholars and poets. Some of the kings themselves were excellent poets e.g. Ariyapadai Kadantha Nedunchezhan. The rulers were engaged in wars among themselves and with others like Sinhalese, Kadambas, Yavanas and Ariyas. Chera Senguttavan, Karikala Cholan, Ariyapadaikadantha Neduncheziyan were a few of the prominent monarchs of the Sangam age.

The Kalabhras uprooted the Tamil Kingdoms in the second phase (3rd Century A.D.–6th Century A.D). However the Tamil literacy activities continued during their regime too. A Jain monk named Vajranandhi established a Dravida Sangha at Madurai. Achyuta Vikrantha was the most popular Kalabhra ruler who ruled from Uraiyur.

The Kalabhras were replaced by the Pallavas of Kanchi in North Tamil Nadu and the Pandiyas of Madurai in South Tamil Nadu. The Pallavas were Simha Vishnu, Mahendravarman I and Narashimavarman I built a powerful empire by overcoming the challenges from Chalukyas, Rashtrakudas and Gangas. They became patrons of Saivism and Vaishnavism and built temples for Vaishnavite and saivite deities. In the South a Pandiyas political unity patronised the Bakthi movement.

By the end of 9th century Vijayalaya and Aditya Chola of Tanjore revived the Chola power. Parantaka I, Rajaraja I and Rajendra Chola transformed Chola kingdom in to an empire. They subdued

the Vengi Chalukyas, Pandyas, Chera and conquered the Sinhala kingdom. Rajendra sent expeditions to Bengal and Kadaram. The Cholas were ardent saivites who built many magnificent temples for Siva, of them Brahadéeswarar temple, Gangaikondacholapuram and Darasuram are noteworthy.

Extensive trade contacts were established with far off countries like Sri Vijaya and China. By the end of 13th century the revival of Pandyas at madurai and the emergence of Hoysalas of Dwarsamudra led to the decline and fall of the Chola empire.

Administrative System

The Sangam age had monarchical governments with an absolute monarch as the head, who had no checks on his authority. However the king was amenable to the advice of wise men of his court. The King's court known as Avai, Naalavai, Manram etc consisted of ministers, generals, high officials, chief queen, heir apparent (Komahan) and junior princes (Ilango). The king had no standing army. Compulsory military service was imposed during times of war. The royal army was categorised into four wings (a) Infantry (b) Cavalry (c) War elephant and (d) Chariots. Naval expeditions were also undertaken by Sangam kings e.g. Chera Senguttavan against Kadamba pirates and Karikala Chola against Sinhalese. Mandalam, Kottam, Ur were the administrative subdivisions. The village administration was carried on by assembly of elders. There was a regular system of revenue administration. Besides the loot from the wars excise, tolls, duties on salt, periodical gifts and tributes contributed to the revenues of the king. The kings especially the Pandyas and Cholas

encouraged extension of agriculture by deforestation, embankment of rivers and encouraging agrarian settlement in newly conquered regions.

During the phase of empires, the king's powers and responsibilities increased manifold. The number of ministers and officials increased. A powerful standing army including naval units was developed. A complex system of provincial administration emerged. The empire was divided into Mandalams and Mandalams into Nadus and Nadus into Kottams. Each Kottam consisted of a number of Perurs (large towns) Urs (villages) Nagarams (market towns) and Pattinams (coastal Towns). Autonomous local bodies like 'ur' or 'urar' for villages and Nattar for Nadus looked after the local administration.

The Villages endowed to the Brahmins (Brahmadeyam) were governed by the assemblies of local Brahmins. These Mahasabhas enjoyed complete freedom from external interference and exempted from regular taxes. The Chola age is known as the Golden age of the Mahasabhas. Forced labour was imposed for public works and even for building temples. Innumerable tanks, canals and reservoirs were created to increase food production.

Society

The 'Porulathikaram' in Tolkappiam describes the social conditions of the Sangam Tamils. The birth based caste and varna systems were absent among the Tamils. Instead, the land based Tinai divisions were mentioned. The Tamil land was topographically divided into (a) Kurinji – hills and hilly region (b) Mullai – the Pastoral Slopes (c) Marudham – the

fertile cultivable plains (d) Neidal – the coastal or littoral region and (e) Paalai – the desert region.

The population was accordingly classified as

- i) Kuravar or Vedar of Kurinji
- ii) Idayar of Mullai
- iii) Uzhavar of Marudham
- iv) Minavar or Parathavar of Neidal
- v) Kallar of Paalai.

In the royal towns of Marudham region the people were classified as Arasar (princes) Anthanar (wisemen) , Vanikar (traders) and Vellalar (agriculturists) Panar (bards), Viraliyar (dancers), Kuyavar (potters), Umanar (salt merchants), Vannar (washermen), weavers and other handicrafts-men, poets and teachers were also mentioned. Names of women poets were found revealing the access of education to women. Love marriages were approved Chastity was considered the meritorious quality of women. There were very few instances of sati being committed by widow of royal families.

The 'Caste' system received royal recognition during the time of the Pallavas. The Brahmins were now given the highest status in the society. They emerged as religious leaders, political and social advisors and ultimate authority in legal issues. They were given land grants and tax concessions. All other castes were treated as Sudras. Untouchability became a menacing factor, these landless tillers were deprived of education, offices and access to temples. In the last phase of the Chola empire there emerged two groupings of castes; Valangai and Edangai which

led to Social tensions and regular clashes.

However it should be noted that Sangam ethical literature like Naladiyar and Thirukkural did not approve of caste. Sangam Tamils stressed more on ethical conduct than on faith and rituals. During the age of Tamil empires, the Bhakthi movement, the Nayanmars and Alwars accommodated the Vedar, Putayar and Parayar as Bhakthas, yet they did not argue for their access to education, offices and temples.

Sangam literature

The Sangam literature, composed by poets belonging to different social segments including women, was secular in character and did not claim divinity. The Sangam literature includes Tolkappiam, (a grammar work) Ettuthogai, Pathupattu, Pathinen Keezh Kanakku and the two great epics Silapadhikaram and Manimegalai. War and love are glorified in Ettuthogai and Pathupattu however most of the Pathinen Keezh Kanakku works were on morals. The 18 Minor works, 5 major epics (Silapadhikaram, Manimekalai, Kundalakesi, Valayapathi and Seevaga sinthamani) and 5 minor (Neelakesi, Sulamani, Udayana Kumara Kaviyam, Yasodhara Kaviyam and Nagakumara Kaviyam) epics and grammatical works (Pingala Nigandu and Yapperumkalam) were produced during the Kalabra period. During the age of empires, Bhakti literature became abundant. Thevaram, Thiruvacakam, Divya Prabandham, Periapuranam Kambaramayanam propogated Saivism and Vaishnavism. Muvarula, Kalingathuparani, Nandikalambakam, Nannul and

veeracholiam are some of the noteworthy secular works. Tamil studies were supported by the chola grants (Pulavara Mutrool)

Though Sanskrit was the official language during Pallava period and sanskrit studies received royal patronage only few notable Sanskrit works were produced, for example, Mattavilasaprasasanam, kirtarjunyam, Avanti Sundari Katha and Kavyadarsam. However Sanskrit succeeded in being accepted as the language of religious rituals of the temples. Sanskrit learning of the Brahmins were supported by tax free land grants (Bhatta Vritti and Veda Vritti)

Religion

The religious practices during Sangam age were Tinai based. The people were liberal in their religious outlook and religion did not dominate socio political activities. Hero stones were worshipped, Seyon, Mayon, Vendan, Varunan, Valiyon and Kotravai were popular deities. Ganesa cult was absent. Singing and dancing (Kuravai and veriyattu) were associated with worship, offerings of flowers, grains and animals were made to deities. The Vedic yagnas of Brahmins attracted a few kings but had not become popular with the people. Jainism, Buddhism and Ajivikaism made inroads into Tamil society during Sangam age and became very popular during Kalabhra period.

Bhakti movement gained momentum during the Pallava period. Nayanmars and Alvars carried on intensive propaganda against Jains & Buddhists. Siva, Thirumal and their consorts became important deities in the later phase of the Chola period

Murugan cult became popular. The Brahmins replaced local priests in temples and there sanskrit became the religious language. The Jains and Buddhists temples were either demolished or converted into Saivite or Vaishnavite temples. The Chola period witnessed the saivite, vaishnavite clashes. Thillai Govindarajan idol was removed from Chidambaram temple, and the Vaishnavite Ramanuja was forced to seek asylum in Karnataka.

Virasaivism and Sri Vaishnavism raised their voice against social segregation. The Tamil Siddhars put a rational and powerful argument against caste discriminations, temple system, superstitions and rituals.



Ramanuja

Art and Architecture

The Sangam Tamils had their own system of music, dance and drama (Pann, Aadal and Koothu). The Panar and Viraliyar were professional



Five rahtas

musicians and dancers. String instruments (Yaazh) wind instruments (Kuzhal) and drums (Muzhauu) were used in such performances. Festivals and worships were also associated with dance and music (Kuravai, Veriyattu) The Pallava inscription at Kudumianmalai refers to a great musician Rudracharya.



Brihadeeswarar Temple-Tanjore

The Devaram and Divya Prabandams were set in Ragas. The Puranic themes were enacted in the form of koothu or gaathas. The Devadasis or temple servants were excellent dancers.



**Vaikuntha Perumal Temple
-Kancheepuram**

In the field of architecture the Sangam age did not produce enduring structures with the advent of the Pallavas a new style in art and architecture appeared in Tamilnadu. At first Mandapams were excavated out of

rocks with excellent sculptural representations (Mahisasura Mandapam, varaha mandapam). Then single rocks were converted into ratha like temples(monolithic rathas at Mahabalipuram). They built structural temples by filling up stone`slabs. (Shore temple, Kailasanather temple and Vaikuntha perumal temple). These temples were noted for their Vimanas. The imperial Cholas developed this style further, elaborate campuses, protective walls, pillared halls, huge towers and multi shrines marked the Chola temple architecture. Tanjore Brihadeeswaram, Gangai Konda cholapuram and Darasuram are outstanding specimens of Chola architecture. All these temples have excellent sculptural representations. The Sittannavasal caves Kailasanather temple and Brihadeeswarar temple have the best specimens of paintings. The Chola bronze images of Nataraja, Siva, Vishnu and other deities have earned global acclaim.

The Tamil had developed their own system of mathematics time calculation, astronomy, and medicinal systems.

The Sangam literature refers to "Enn" Kanakku Nazhigai Yamam Kaatham and Kol. They also refer to seasons as Elavenil, Elaiudir etc. References to native medicines like Elathi, Tirikadukam, Siru pancha Mulam etc reveal Tamil's versatile achievements. Kaniyans were both astronomers and astrologers. The Tamil Siddhas produced excellent treaties on Siddha system of medicine and these treaties elaborate diagnosis, treatment by herbs and chemicals and also provide pharmacological details.

To conclude with, it can be said that the Tamils had excelled in many fields

of human activity and philosophically they emphasised on a universal outlook. Their theism did not give too much room for superstitions. Like the Buddhists and Jains, the Tamils opined, that good or bad, nothing comes from

others and held the view that man is the maker of his own destiny. The legacy of Tamils is a glorious chapter in Indian history.

EXERCISE

I) Choose the correct answer.

- 1) Tamil language has a continuous history of atleast _____ years.
a) 3500 b) 2500 c) 1500 d) 400
- 2) The Kalabhras were replaced by the _____ at kanchi in north Tamil nadu
a) Cheras b) Cholas c) Pandyas d) Pallavas
- 3) The Pallava inscription at _____ refers to a great musician Rudracharya.
a) Kudimian malai b) Utheramerur
c) Mamandur d) Mahendravadi
- 4) The pallava gave importance to _____
a) Tamil b) Telugu c) Sanskrit d) Malayalam
- 5) _____ describes the social condition of the sangam Tamils
a) Manimegalai b) Tholkappiam c) Pathupattu d) Ettuthogai

II) Match the following.

- | | |
|-------------|----------------|
| 1) Pattinam | drama |
| 2) Panar | musician |
| 3) Koothu | coastal region |
| 4) Viraliar | Forest region |
| 5) Mullai | hilly region |
| | dance |
| | Plains |

III) Answer all the questions given under each caption.

- 1) Sangam literature
 - a) Name the two great epics of the Sangam literature ?
 - b) How many major epics are there in Sangam literature ?
 - c) What are the Tamil works that mention the war and love ?
 - d) Write a note on Bhakti literature

2) Sangam society

- a) Who were the people of Kurinji region ?
- b) How was the cultural regions called ?
- c) Which book throws light on the social condition of the Sangam Tamils ?
- d) What are the five Thinais ?

IV) Answer briefly.

- 1) Write a note on Tamil language
- 2) Name the important temples during the Chola Period.
- 3) What were the revenues of the kingdoms?
- 4) Write a note on Kalabharas.
- 5) What is the Siddha system of medicine ?
- 6) Write a note on Sangam Music.

V) Answer in a paragraph.

- 1) Explain the administrative system of the sangam age.
- 2) Write a note on the cultural contribution of the cholas.

VI) On the outline map of South India mark the shade the the Chera , Chola,Pandya and Pallava kingdoms.

VII) Collect the pictures of the famous south Indian Temples.

GEOGRAPHY

1. TAMIL NADU

Tamil Nadu, a state in southern India, is bordered by the states of Pondicherry, Kerala, Karnataka and Andhra Pradesh. The state, lying on the southern tip of the Indian peninsula, is surrounded by the Bay of Bengal on the east, Indian Ocean on the south, Kerala and Karnataka on the West, and Andhra Pradesh on 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 the Indian Union and a leading producer of both agricultural and industrial products.

The state extends latitudinally between 8°05' North and 13°09' North and longitudinally between 76°15' East and 80°20' East. The state of Tamil Nadu is a triangular landmass at the southeastern end of the main continent. 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 state 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 names 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)	Thuthukudi
29)	Triuppur
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

Lok Sabha	39
Assembly Constituencies	234
District	32
City Corporation	10
Municipalities	152
Town Panchayats	611
Village Panchayats	12618

Activity

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

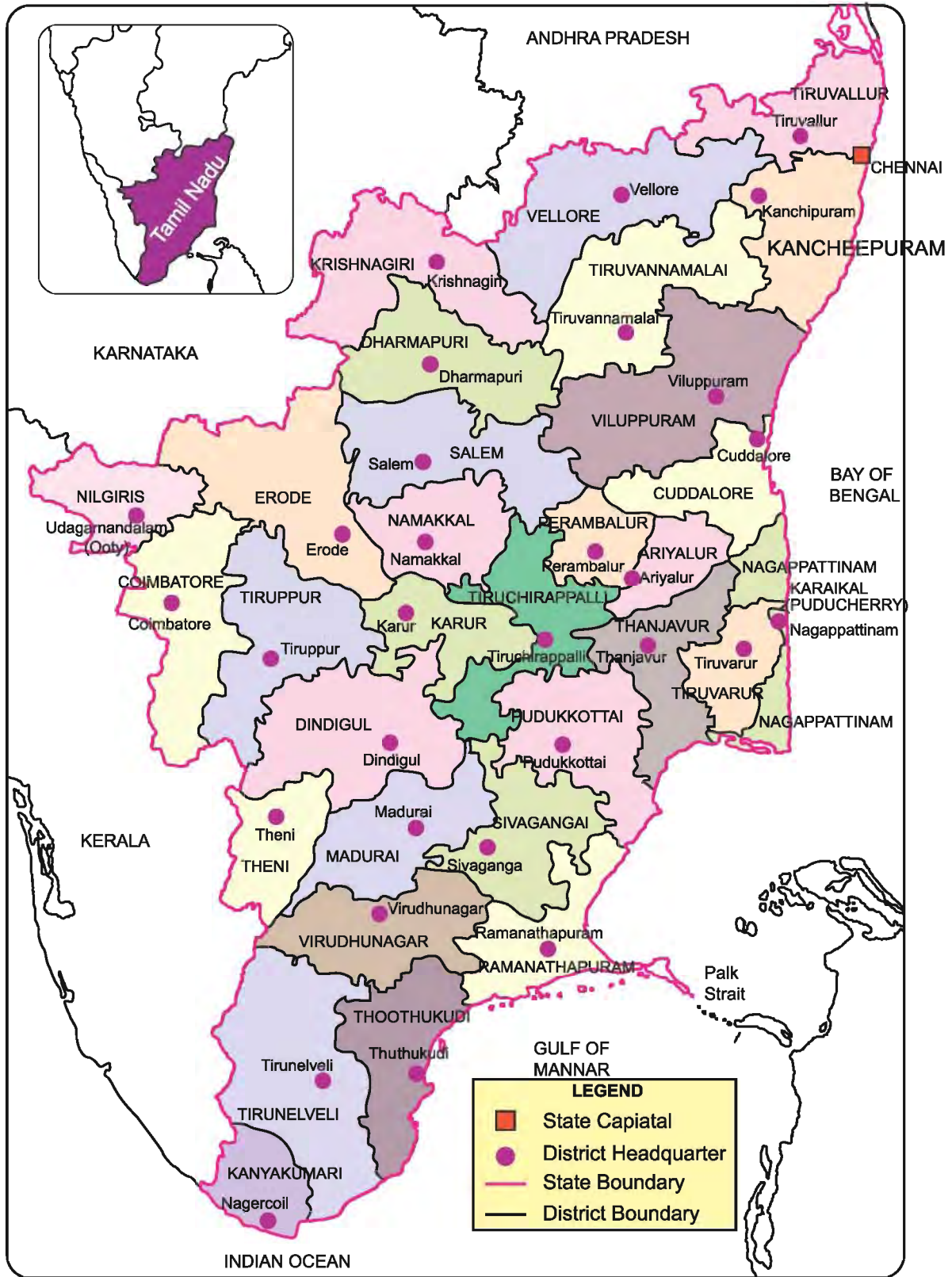
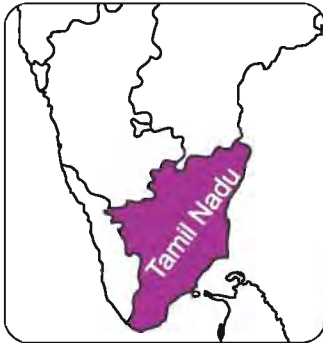
History of Tamil Nadu

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

so. Though the state is a home of Dravidian culture, It also acquired Aryan culture by 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 and the intermediary one was at Kapadapuram and 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



LEGEND

- State Capital
- District Headquarter
- State Boundary
- District Boundary

Tiruvalluvar, the author of much renowned "Thirukural" does not mention his religion, land, or the audience for his work. He is often portrayed as a holy saint of Tamil Nadu.

As Thirukural contains universally acceptable ideas and thoughts, it is regarded as the world's renowned piece of literature. Tamil which obtained the semmozhi status is the eighth one of its kind.

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 | 152 |
| 2. State Tree | 234 |
| 3. Assembly constitution | Palm tree |
| 4. Municipalities | West of Tamil Nadu |
| 5. Karnataka | Emerald Dove |
| | 10 |
| | 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 oceans 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 salient features 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. Puduchery
6. Erode
7. Pudukkottai

2. PHYSIOGRAPHY OF TAMIL NADU

Tamil Nadu has a unique physiography. To the west and the northwest it is bounded by hills of both Western and Eastern Ghats. In the east it is bounded by Bay of Bengal and in the south by the Indian Ocean. 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 Tamilnadu

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 Kanniyakumari 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 (2620 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. 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 Palaghat. To the south of Palaghat 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 **Shenkottah gap**.

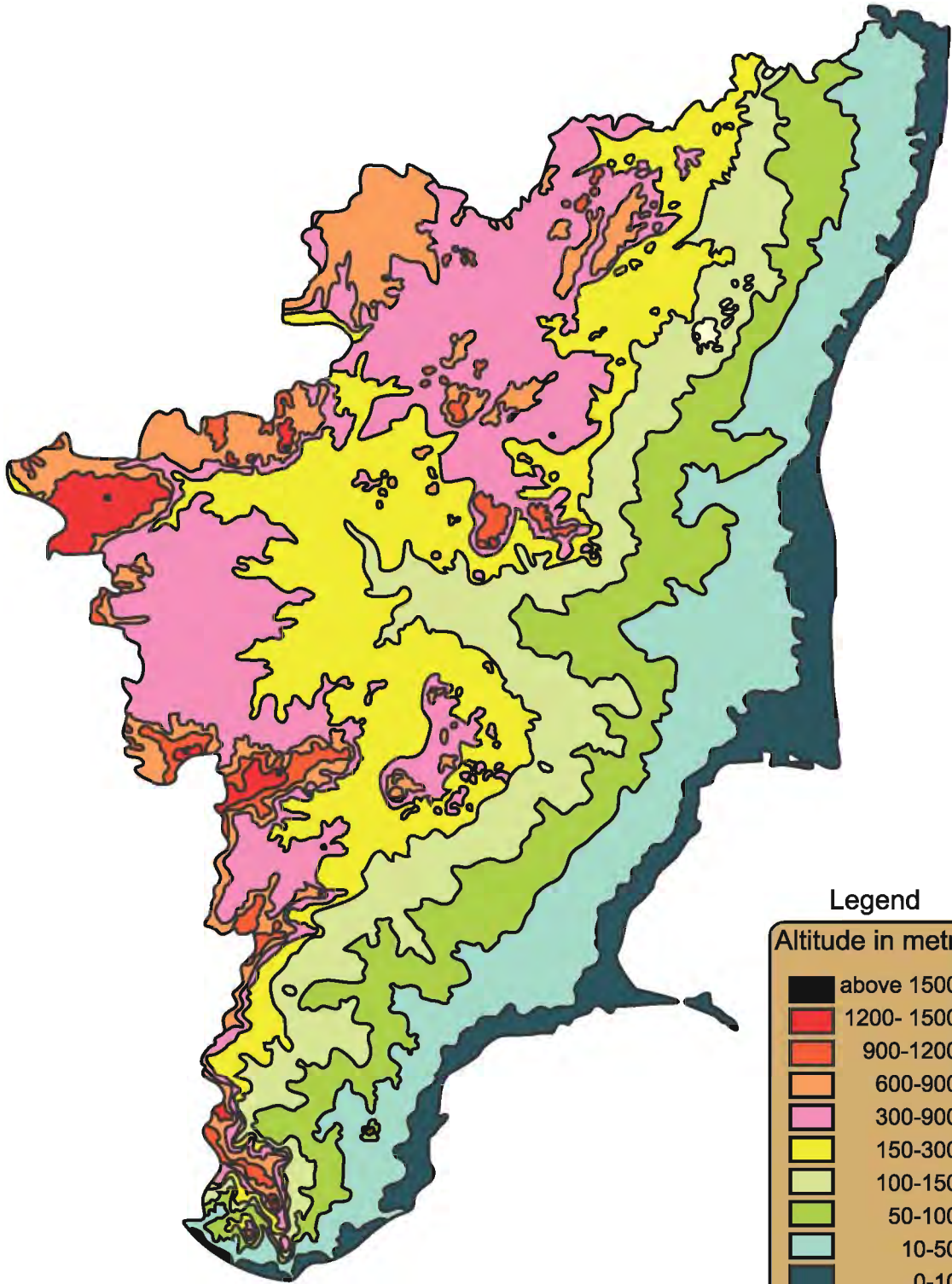
The Tamil Nadu hills separating, the plains and the plateaus have two well marked passes, namely, the **Attur pass** in the south and the **Chengam pass** in the north. This pass links the Cuddalore and Villupuram district in the plain with the Salem district on the plateau. The Palakkad gap and Shencottah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



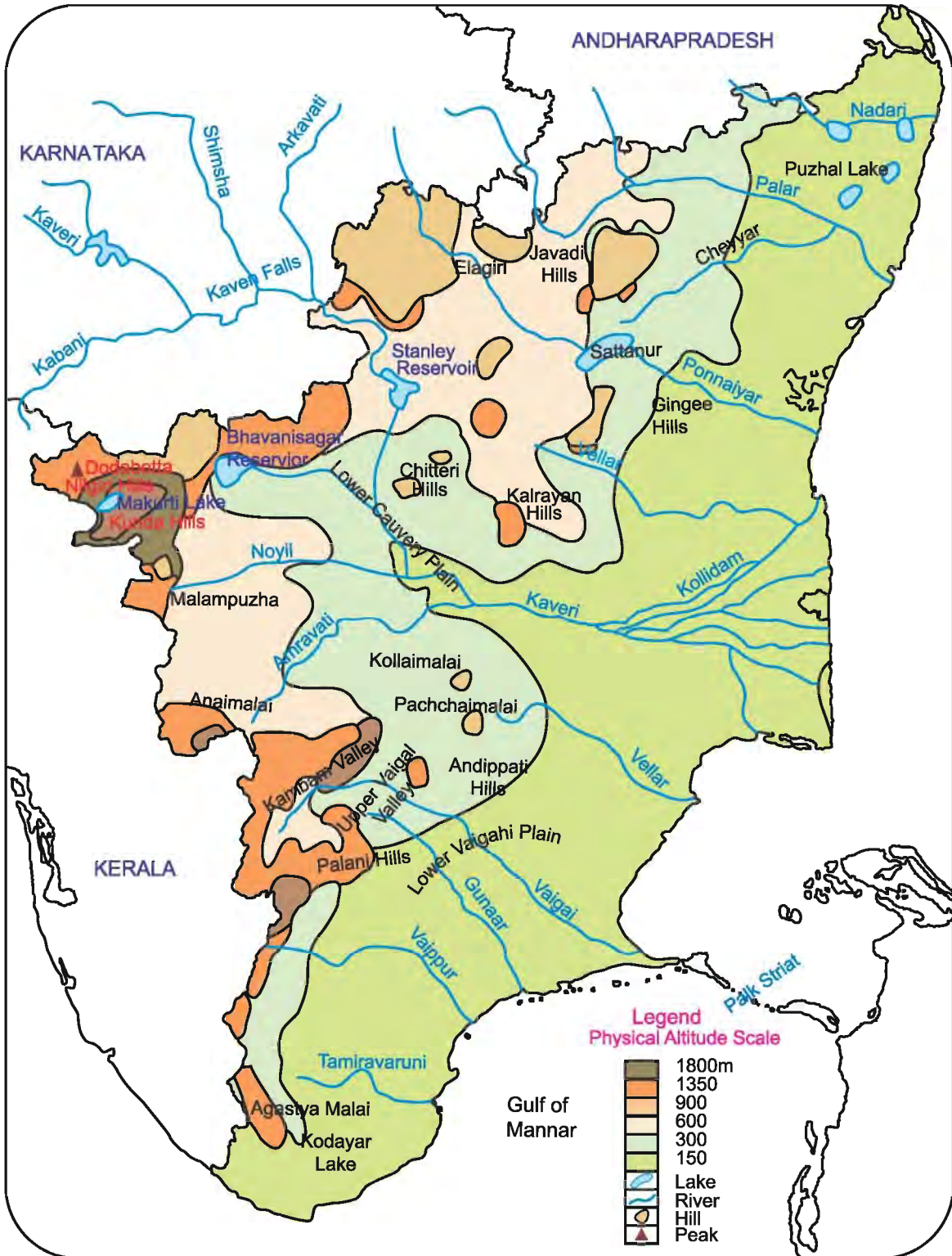
Western Ghats

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 Altitudinal levels



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 Namakal District;
- 6) Chitteri hills are in both Dharmapuri and Salem Districts;
- 7) Gingee hills in Thiruvannamalai 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 Niligiris 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 Bramahal plateau and lies to the west of Shervaroy uplands. This plateau is found with extreme abruptness on all sides. The Bramahal plateau in Dharmapuri 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 hills are 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 from Pulicat lake in the north to Kanyakumai in the south, to a length of 1,000 km at an average elevation of 50 mt. The notable beaches found here are the Marina beach and the Rameshwaram beach.

Marina Beach

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



Marina Beach

Rameswaram Beach

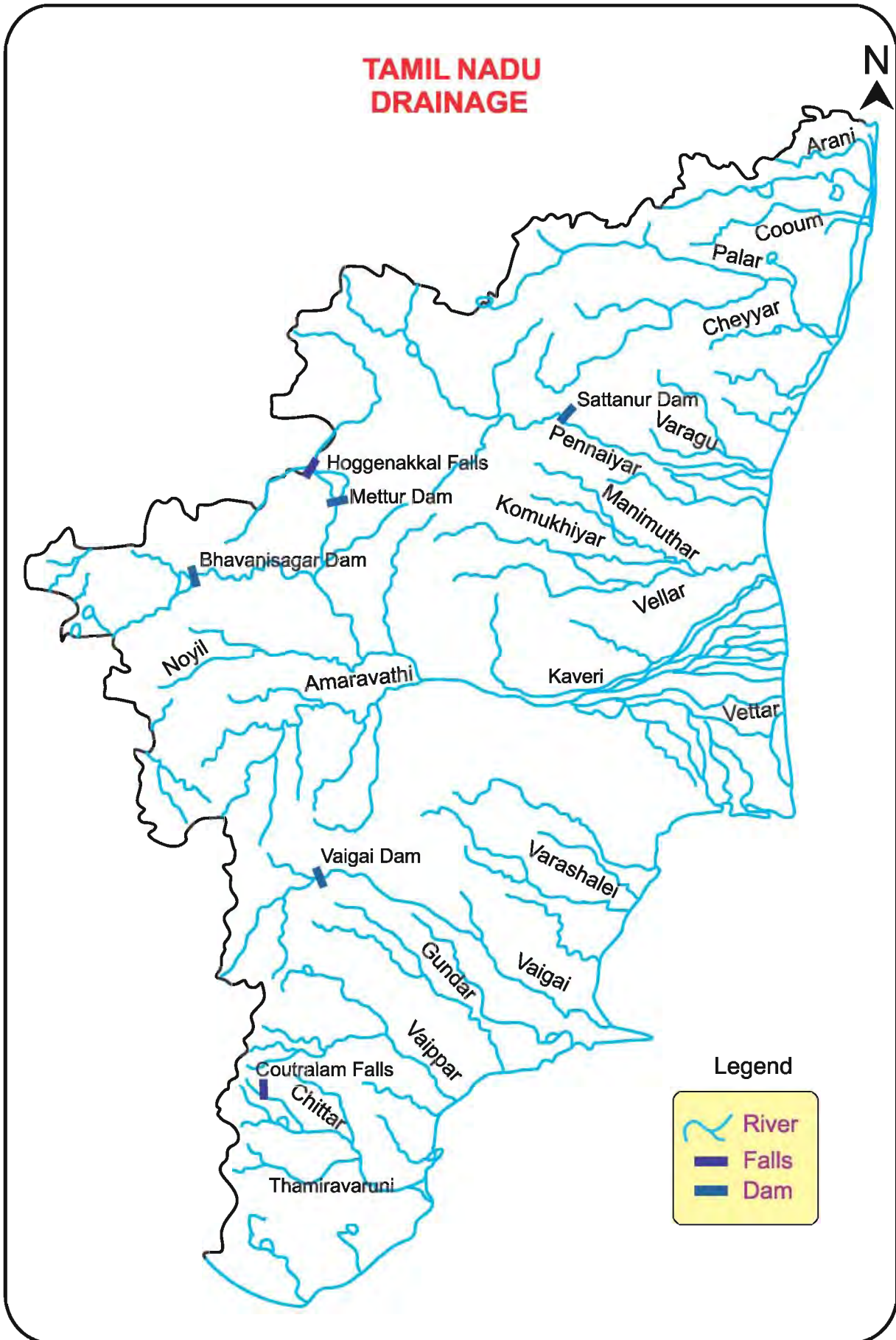
The beach of Rameswaram is famous for its beautiful coastal features. The sea waves rise to a maximum height of only 3 cm and the view looks like a very big river.



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 Thamiravaruni in the south.

Rivers of Tamil Nadu

The Northern rivers of Tamil Nadu are Araniyar, Korattalaiyar, Palar, Cheyyar, Kedilam, Manimuthar and Thenpennar. Among the rivers the Palar and Pennaiyar flow from head waters of Kolar Plateau towards the east. 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. The head of the Kaveri delta is near the island of Srirangam. Kollidam branches

off from Kaveri at Grand Anaicut (Kallanai).

In the Kaveri delta, the distributaries such as Kollidam, Manniyar, Vennar, Vettar, Arasalar, Nattar, Mudikondinar, 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), Tamiravaruni (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.

- _____ hill is located in Eastern ghats.
a) Nilgiri b) kalrayan hills c) Cardamom hills d) Palani hills
- _____ is the highest peak in Tamil Nadu.
a) Anaimudi b) Doddabetta c) Mukuruthi d) Brahmagiri
- The river Chittaru is an important tributary of _____ river.
a) Kaveri b) Tamiravaruni c) Vaigai d) Palar
- The longest river flowing in Tamil Nadu is _____.
a) Tamiravaruni b) Vaigai c) Palar d) Kaveri
- 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. Kodaikanal | 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 short notes 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 river Kaveri.

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) Coromandal coast |
| 4) Vaigai river | 5) Agastya Malai | 6) Niligiri hills |
| 7) Kollidam | 8) Elagiri | 9) Kalrayan hills |

3. CLIMATE OF TAMIL NADU

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

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

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

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 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 inland locations.

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.

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 high in winter season than in summer season. 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

more during the summer season than in the winter season. 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	Chitirai, Vaikasi
	Muduvēnil	Aani, Aadi
Rainy (August to December)	Khar season	Avani, Puratasi
	Khulir	Iypasi, Karthigai
Winter (December to April)	Mun Pani	Markhazhi, Thai
	Pin pani	Masi and Panguni

The rainy seasons of the state may be grouped into three

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

Southwest Monsoon

The southwest monsoon occurs between June and September. The district that are benefitted by this season are the Niligris, 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 for 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 Nilgriris 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, Northeast monsoonal rain is highly associated with the cyclonic formation. In this season, the amount of rainfall decreases from east to west. Excepting Kanyakumari, all other interior south and western parts of Tamil Nadu receive lesser rainfall. Coastal districts such as Chennai, Cuddalore, Thiruvallur,

Kancheepuram, Villupuram, Nagapattinam, Thiruvarur and Thirunelveli 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, the cyclonic rainfall along the coastal districts of Tamil Nadu. An equal portion of rainfall is received from both the Northeast Monsoon and the Cyclonic rainfall in the coastal districts of Tamil Nadu.

Low pressure formation and cyclonic track

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 district.

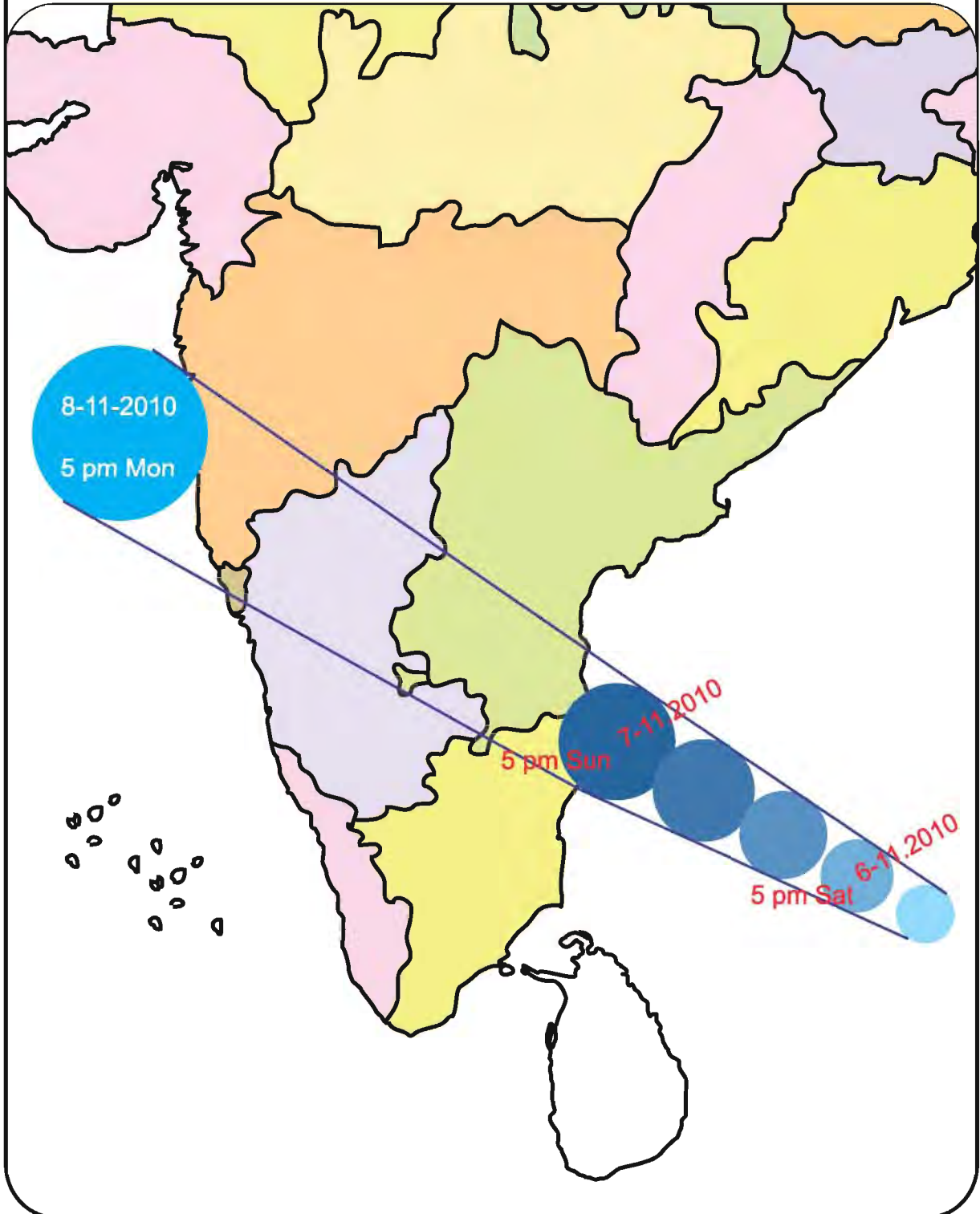
Table: Season wise percentage of annual rainfall

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

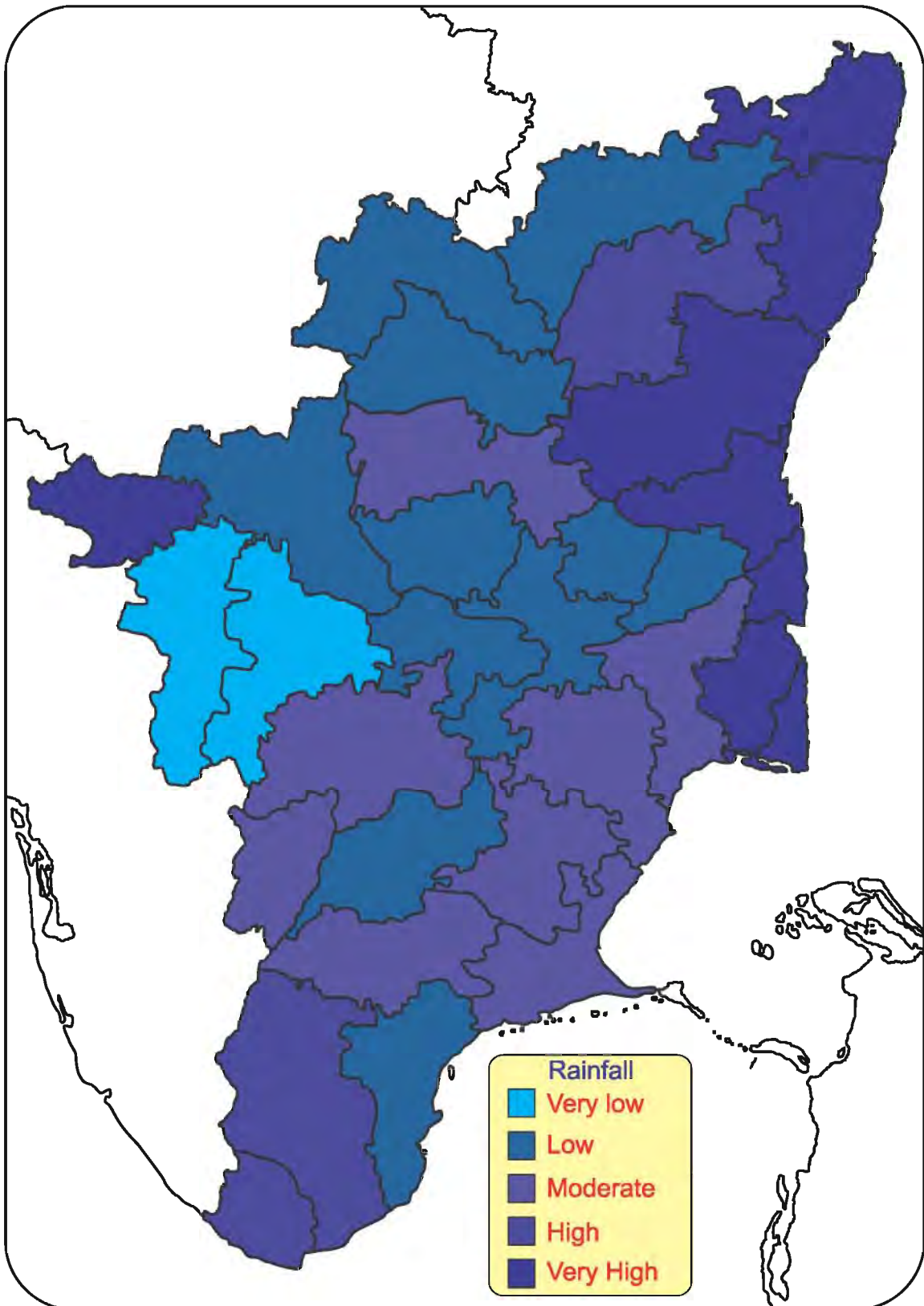
Table: Rainfall Regions of Tamil Nadu Distribution of rainfall (2007-2008)

Sl. No	Distribution of Rainfall	Amount of Rainfall	District
1	Very Low rainfall	Below 800 mm	Coimbatore
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, Nilgriris.

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



**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, forest 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 the alluvial plain is suitable for agriculture which 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.

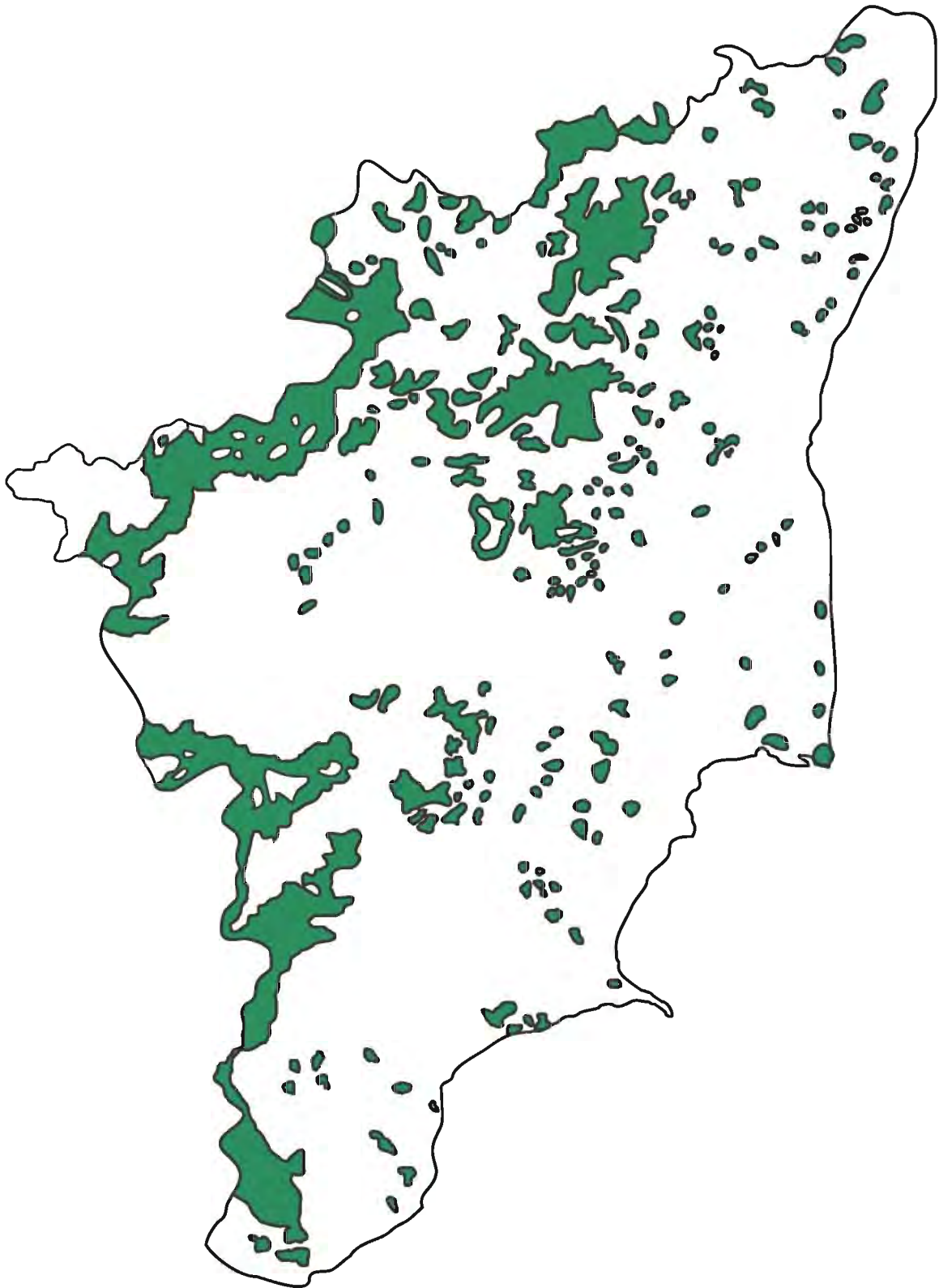
Tropical evergreen forests

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 called 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**



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 low 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 Rhyzophora. In Pitchavaram



Mangrove forest in Pitchavaram

mangrove forests are found in 25 km² and Kodikkarai the forests cover about 17 km².

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, beewax, 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) Temperature 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) Pudukottai 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 reason.
7. Give 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 natural vegetation of Tamil Nadu.
2. Account 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.

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.

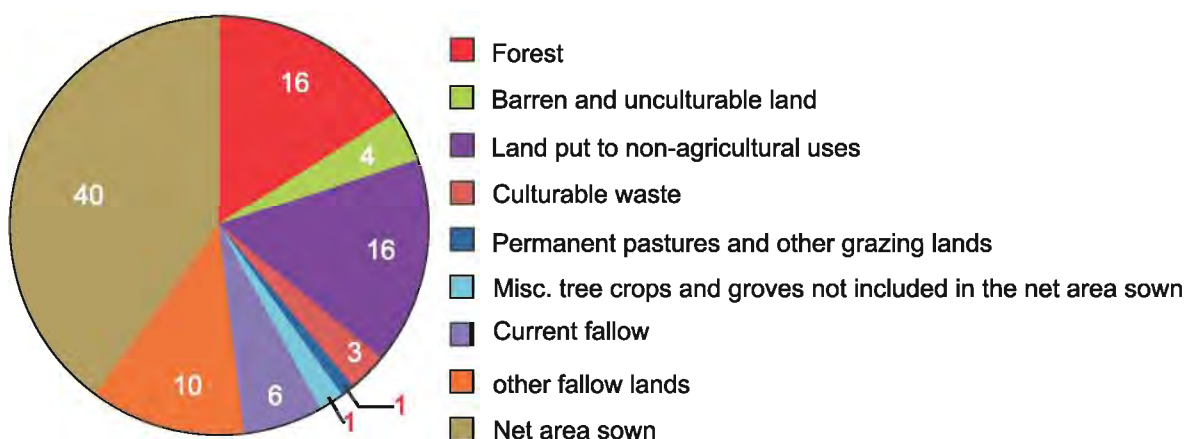


Table :Land use categories for Tamil Nadu

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 neighborhood 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

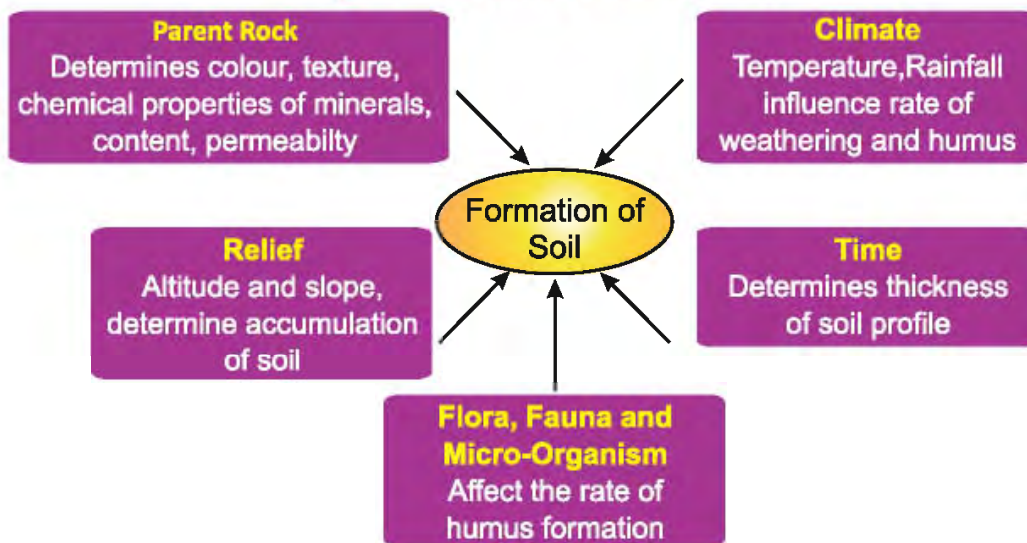
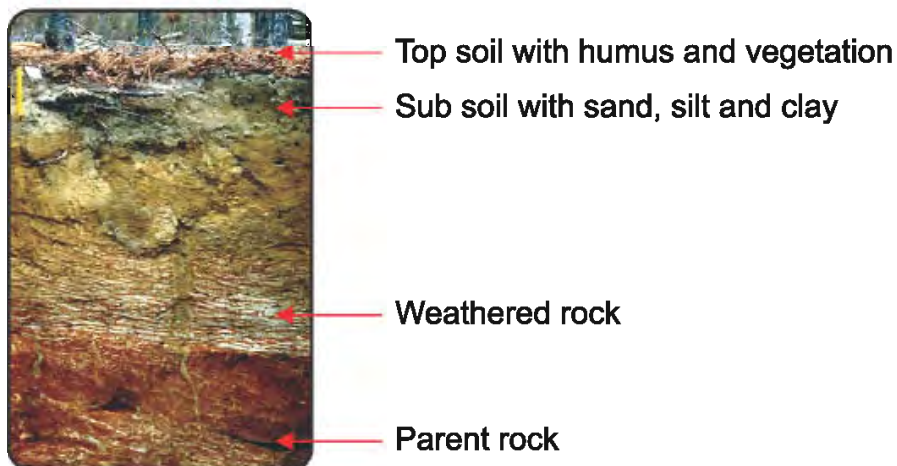


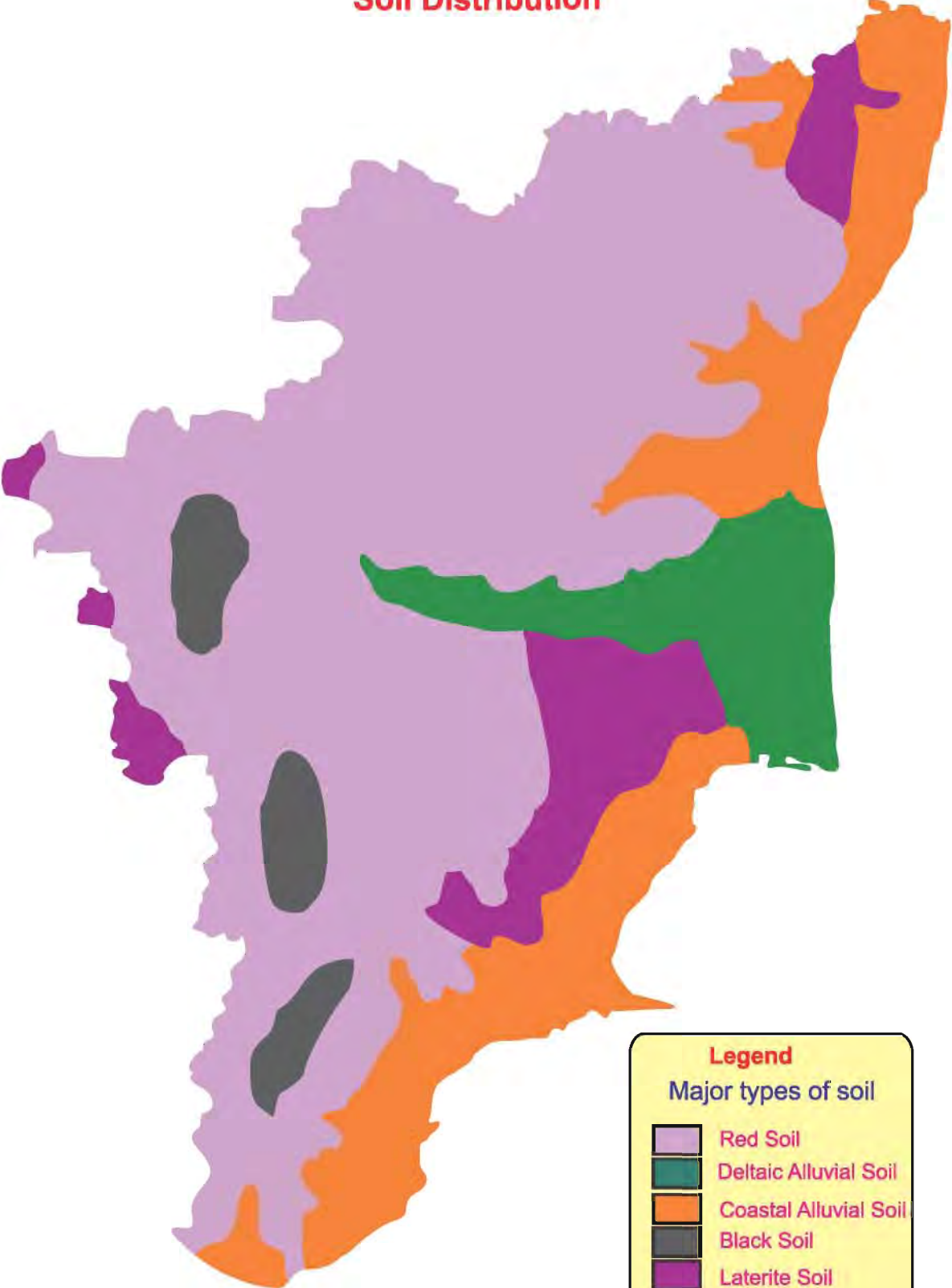
Figure b: Soil profile



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, bisons 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.

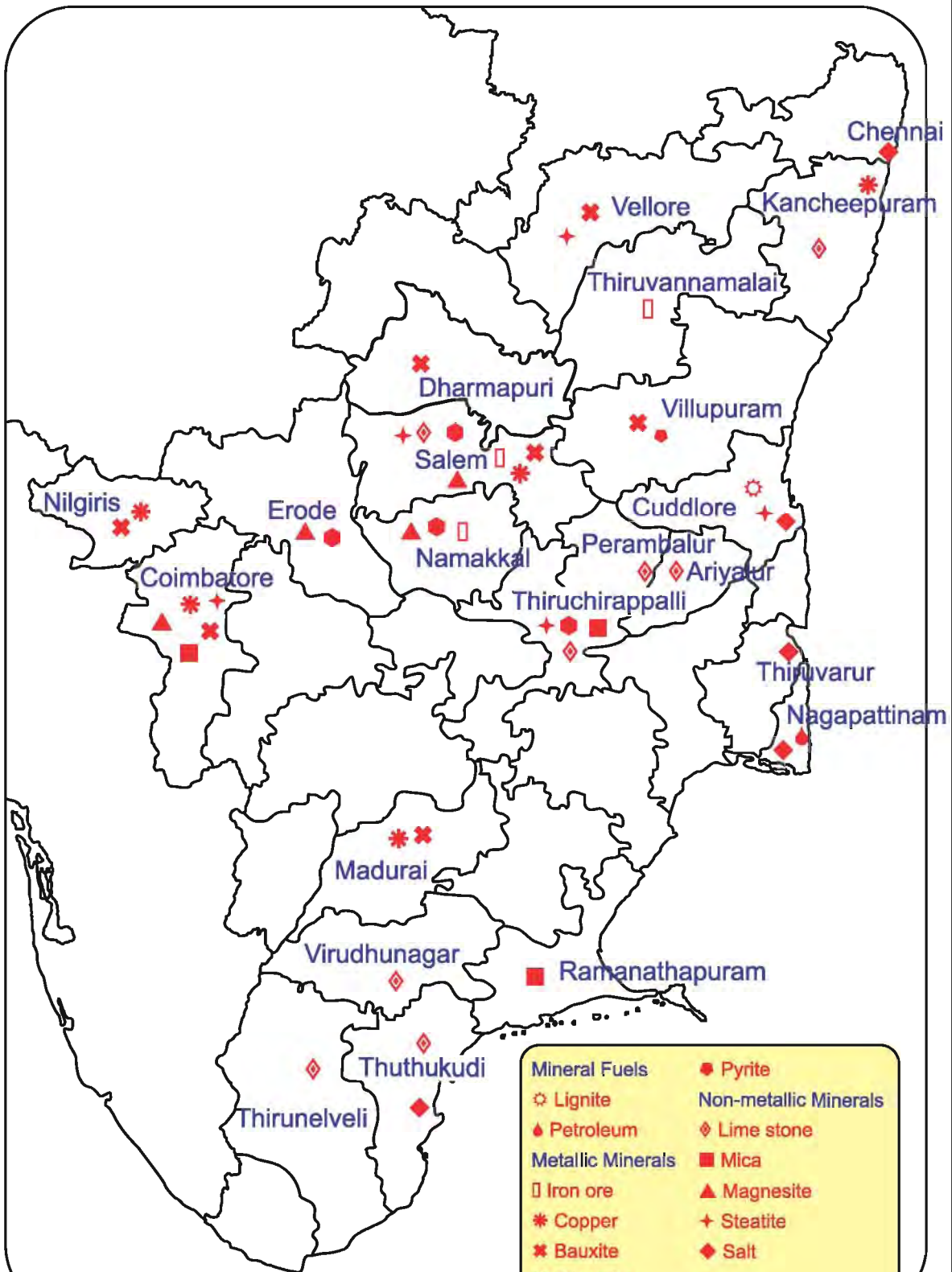
Mineral Resources

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.

categories. They are

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

Classification of Minerals

Minerals are classified into three

Table: Metallic Minerals of Tamil Nadu

MINERALS	DISTRICT
Iron ore	Salem, Namakkal and Thiruvannamalai
Copper	Salem, Nilgiris, Coimbatore, Madurai and Mamandur
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, Thirunelveli, Thiruchirappalli, Kanchipuram and Salem
Mica	Thiruchirappalli, Coimbatore and Ramanathapuram
Magnesite	Salem, Namakkal, Coimbatore and Erode
Steatite	Vellore, Cuddalore, Coimbatore, Salem and Thiruchirappalli
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 humankind 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	Place	Types of Fuel	Capacity in MW
Neyveli Lignite Corporation	Cuddalore District	Coal	2490
North Chennai Thermal Power Unit-I	Thiruvallur District	Coal	1200
Thuthukudi Thermal Power Plant	Thuthukudi	Coal	1000
Mettur Thermal Power Station	Salem District	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 currently under construction in Kudankulam of Thirunelveli district. This station has four reactors which are expected to produce about 1,000 MW from each reactor.

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; and
- 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

Dindugul, 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

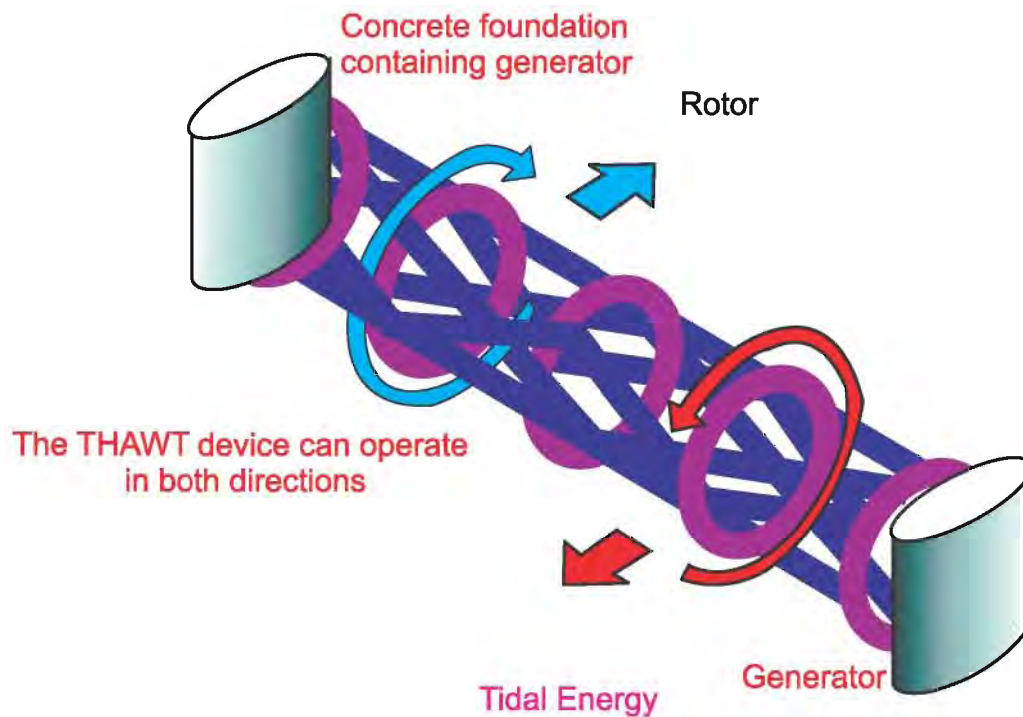
Sl. No	LOCATION	CAPACITY MW
(i)	Aralvaimozhi Pass (Muppandal area) Kanyakumari/Thirunelveli Districts.	1,658
(ii)	Sengottah Pass (Kayathar area) Thirunelveli, Thuthukudi Districts.	1,105
(iii)	Palghat Pass (Kethanur area) Coimbatore.	1,995
(iv)	Coastal area near Chennai and Rameswaram in Ramanathapuram District and other areas (Theni, Palani areas).	450
Total		5,208

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.	Located far away from cities and so costly to transport electricity.
Cheap compared to other energy sources.	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.



Bio-fuel Energy

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

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.	Pudukottai	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.

- Which one of the following is not a factor of soil formation.
a) Time b) Soil texture c) Organic matter d) Inorganic matter
- Biotic resources are those obtained from the _____.
a) Time b) Biosphere c) Water d) Wind
- _____ determines thickness of soil profile
a) Climate b) Time c) Relief d) Wind
- Medicinal herbs are commonly found in _____ hills
a) Palani hills b) Agathiar c) Anaimudi d) Chennimalai
- Which one of the following is a leading producer of Lignite
a) Villupuram b) Neyveli c) Chennai d) Erode
- Which one of the following is not 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 | 5,500 MW |
| 5. Solar power | Vedaranyam |
| | Chennai |
| | Perambalur |

III) Answer in brief.

1. Define Resources.
2. Define soil.
3. Which are the factors that determines 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. Gold
5. Lignite

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.

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.

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

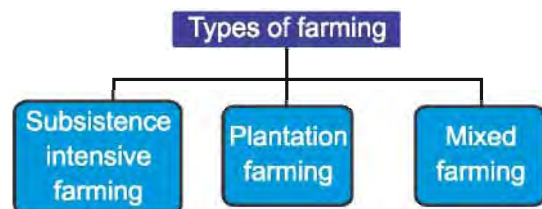
(sericulture, apiculture, animal husbandry, orchard farming, viticulture, floriculture, poultry)

Activity

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

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

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

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 water requirement for each crop varies and irrigation plays a major role in 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 kind of farming is much prevalent in the Kaveri delta region.

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) (Chitthirai 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, *Chitthirai* it is also known as *Chitthirai pattam*.

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 *Karthigai* 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

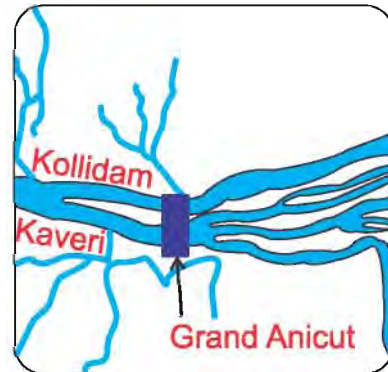
The main sources of irrigation are canals, tanks and wells.

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

Arrakankottai 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 Tamiravaruni and its tributaries serve Thirunelveli 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 anicuts and Chittar has seventeen anicuts.

Do you Know?

Canals used for irrigation have the oldest records of two millennia in Tamil Nadu. Kallanai, built around First century, by Karikalani 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 39,202 tanks in Tamil Nadu which accounts for 19 % of the irrigated area. Tanks are concentrated in the districts of Kancheepuram, Vellore, Thiruvannamalai, Pudukottai, Ramanathapuram and Thirunelveli. 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 ?

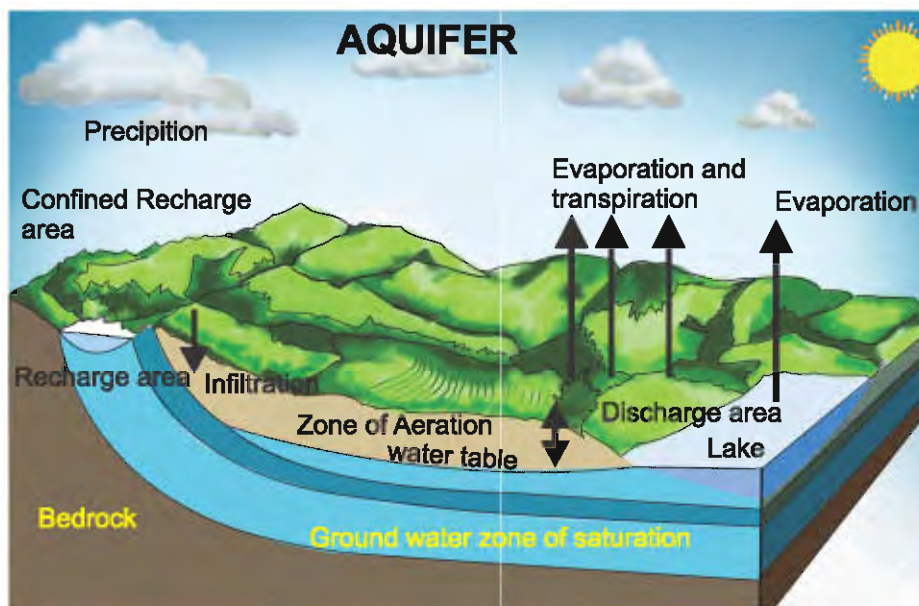
Kancheepuram is known as the land of 'thousand lakes'

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 1,6,21,391 surface wells and 2,87,304 tube wells in Tamil Nadu that are used for the purpose of irrigation.

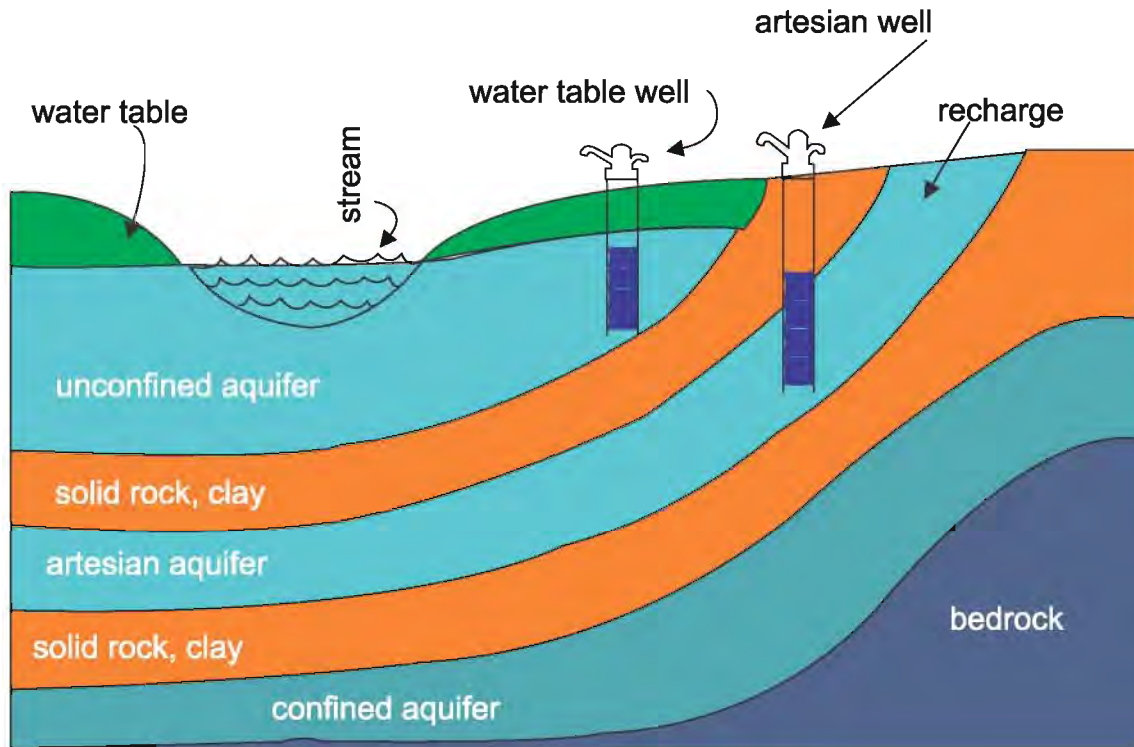


Aquifers are underground rock layers which store water and allow water to pass through them.

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.

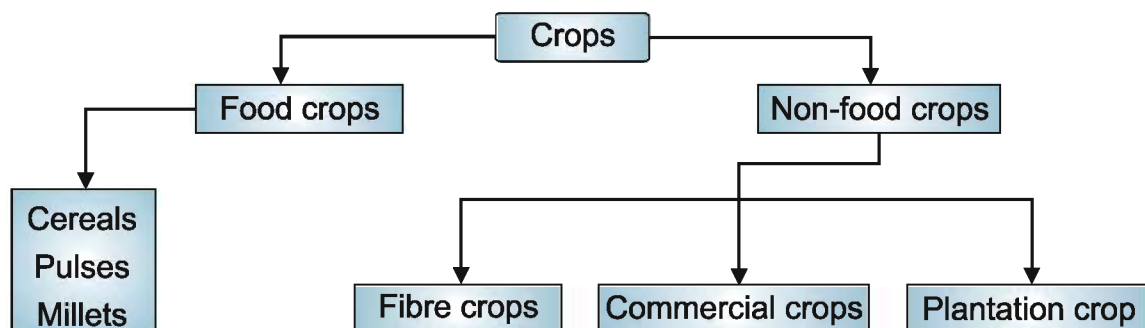
Aquifers at different depth



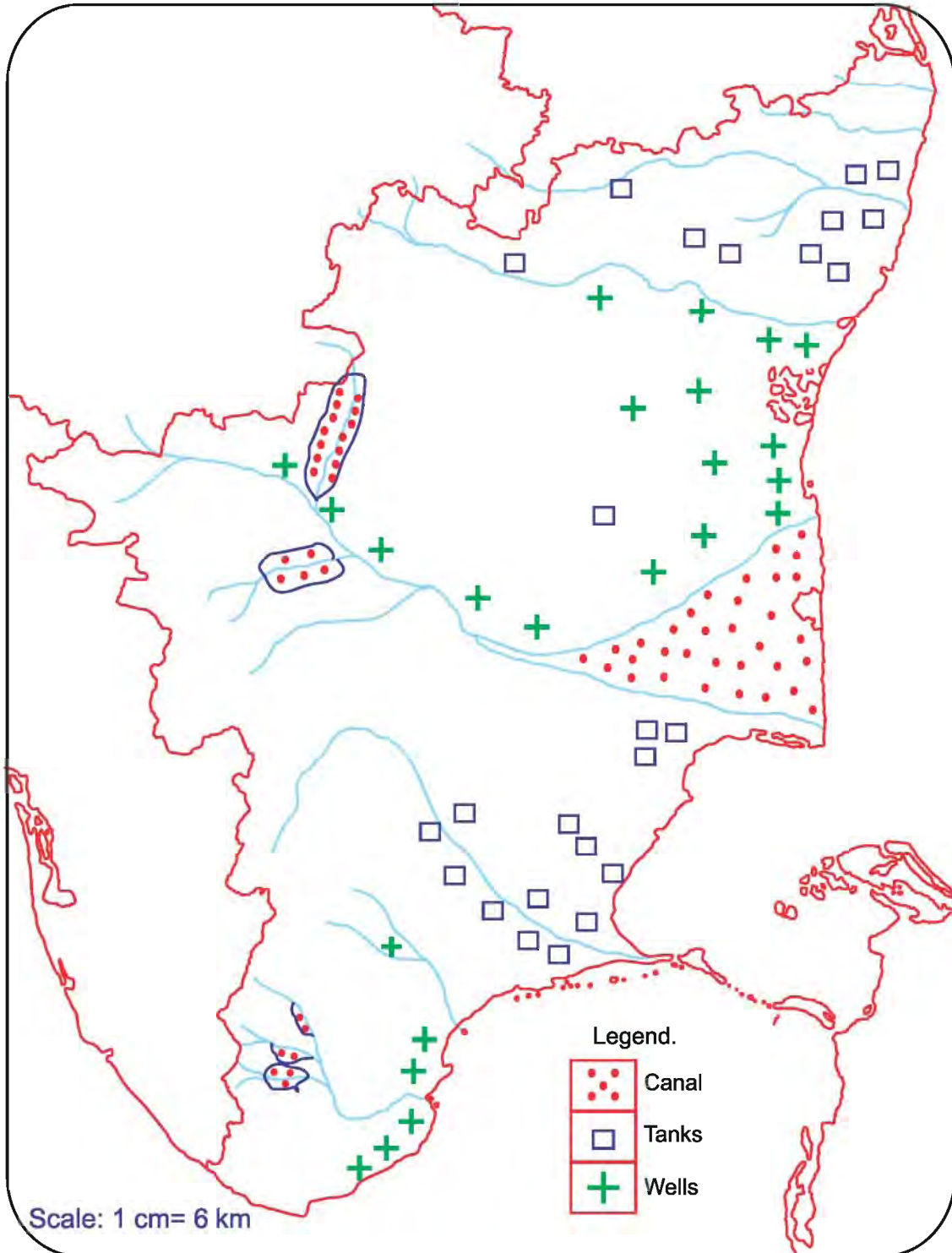
Activity

Find out the source of irrigation in your area

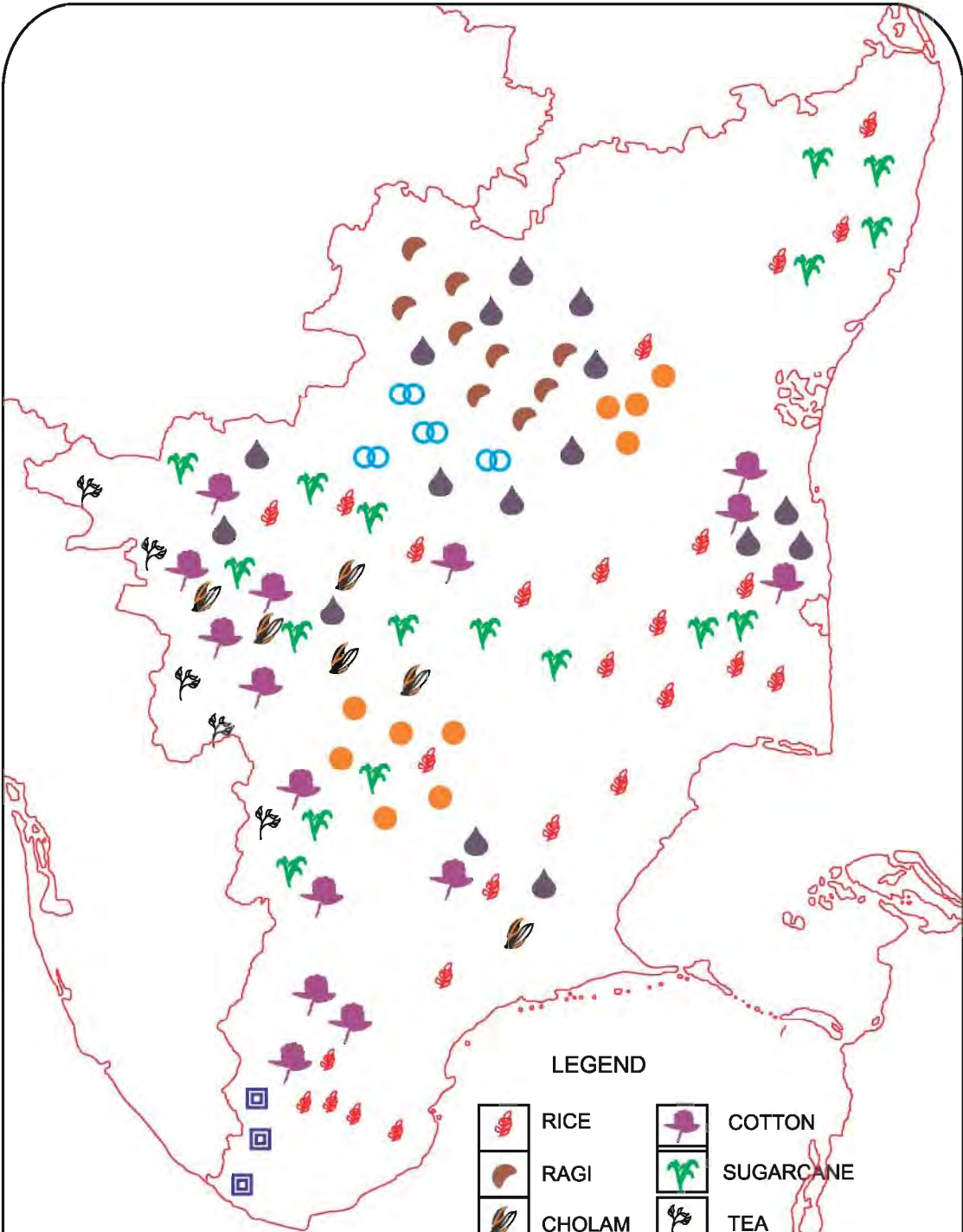
Major Crops of Tamil Nadu



TAMIL NADU SOURCES OF IRRIGATION



TAMIL NADU MAJOR CROPS



LEGEND

	RICE		COTTON
	RAGI		SUGARCANE
	CHOLAM		TEA
	PULSES		COFFEE
	OIL SEEDS		RUBBER

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. Thanjavuar, Thiruvvarur 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 being raised in Thanjavur district in four seasons for 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 Tiruvur Rice Research Station (TRRS), has recorded the highest yield of 4,500 kg per acre.

Pulses grown in Tamil Nadu are 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 Thuthukudi
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 in green gram. Nagapatinam, Thiruruvarur and Cuddalore are noted for black gram production. Horse gram cultivation is widely seen in Kirshnagiri 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 chilies', 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 Nilgiris 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 mangos, jackfruits, banana, guava and grapes are widely grown in groves. Krisnagiri 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 finshing 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 Chinnamutthom 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

Fishing carried out in the Oceans and Seas.

Large Mechanized boats are used for fish catching.

Fish varieties are Sharks, Flying Fish, Counc, Cat, Fish, Silver bellies and Carbs

INLAND FISHING

Fishing carried out in Lakes, rivers, Ponds, estuaries, backwaters and swamps.

Catamaran (small wooden boats) Diesel Boats and floating net cages are used.

Fish varieties are Catla, Rogue, mirkal, 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 3.70 hactares of inland water, 63,000 hactares of estuaries, backwaters and swamps. Oysters and prawns are cultured in organized nurseries at Ennore and Pulicut 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

Traditional method of agriculture is slowly being replaced by scientific and technical methods. While doing so, the merits of certain traditional methods are slowly vanishing which are to be valued and practised through training centres. Agricultural University in Coimbatore and M.S.Swaminathan Research foundation in Taramani, Chennai actively involved in fusing traditional with modern methods. This will ultimately produce sustainable agriculture in a long run. Few recent agricultural innovative trends are listed below:

- Micro-irrigation.
- Integrated pests 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

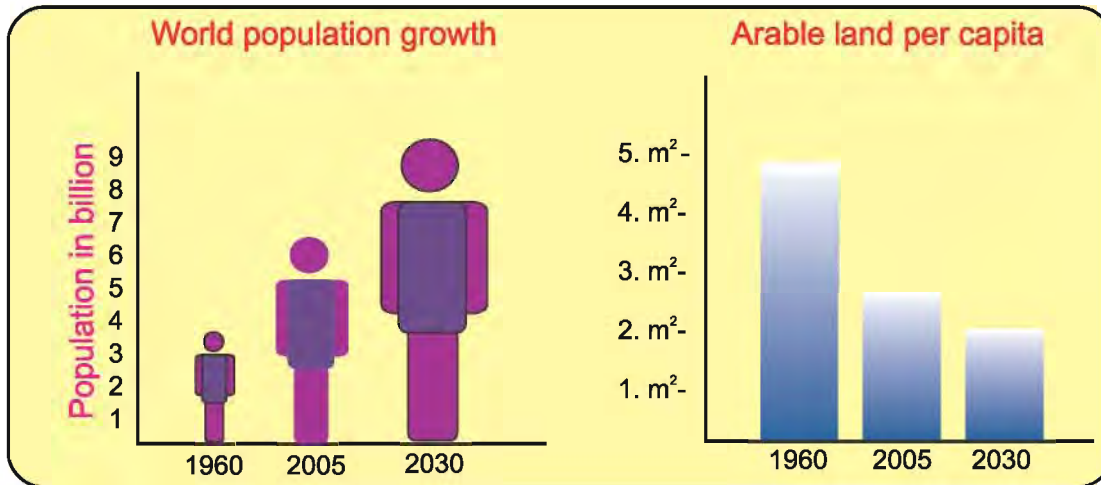
- The Government supplies quality and certified seeds to the farmers.
- Organic matter and micro nutrients are supplied at subsidised rate.
- Free electricity is provided to small and marginal farmers for about 6 to 8 hours a day.
- Government fixes the prices for agricultural products to safeguard farmers from financial crisis.
- Farmers’ Market (*uzhavar santhai*) enhances the farmers 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.

- Tea, coffee, rubber, pepper and cashew are _____ crops.
 - Food
 - Fibre
 - Plantation
 - non-food
- Agriculture is the _____ and traditional occupation
 - Primary
 - Secondary
 - Tertiary
 - service
- _____ type of farming is known as *Maanaavari* in Tamil Nadu
 - wet farming
 - dry farming
 - Irrigation farming
 - precision farming
- _____ type of irrigation is most predominant irrigation system in Tamil Nadu
 - Well
 - Tank
 - Canal
 - Tube well
- Tamil Nadu Rice Research institute is in
 - Aduthurai
 - Cuddalore
 - Neyveli
 - Chennai

II) Match the following.

- | | |
|-------------------------|-----------------------------|
| 1. Rearing of birds | Apiculture |
| 2. Rearing of silkworms | Poultry |
| 3. Rearing of honeybees | Leading port in fish 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 deep sea 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 Cashew cultivation.
5. A region for sugarcane cultivation.

6. TAMIL NADU - MANUFACTURING INDUSTRIES

Industry refers to the secondary type of occupation. It is the booming sector of Tamil Nadu. Tamil Nadu is ranked as third industrial state next to Maharashtra and Gujarat. The act of converting the raw materials into finished and usable products is known as **Manufacturing**. Single manufacturing unit is termed as a **Factory**. Multiple units of same kind, which are spread over a larger area are termed as **Industry**. Lakshmi Mills and Madura Coats are examples for industrial units. About 34 % of the state income comes from industrial sector.

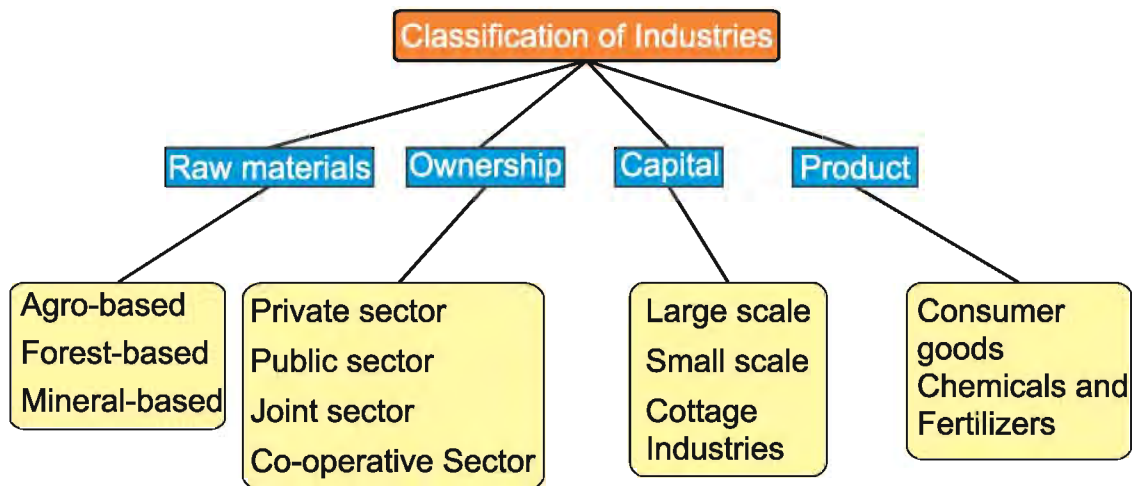
Activity

List the manufactured items you see in the classroom. For each item, try to find the raw materials used and try to classify and group the industries, accordingly (Blackboard, desk, chair, watch...).

Classification of Industries

Industries can be classified on the basis of:

- Raw materials;
- Ownership;
- Capital involved; and
- Product.



Classification of industries based on raw materials

Industry using agricultural products for manufacturing is termed as **Agro-based industry**. Cotton textiles, sugar industry and food processing industries are agro-based industries.

Industry that uses forest products as raw materials are known as **Forest-**

based industry. Example: Paper and Pulp industry, Honey and Sandalwood products.

Industry using minerals for production are called as **Mineral-based industry**. Iron and steel industry, ceramics industry and cement industry are some of the mineral-based industries.

Classification of industries based on ownership

Private industry is one which is owned by an individual or a group of people. TVS Motors is one of the notable private industries of Tamil Nadu.

All Government-owned industries come under the **Public sector**. Tamil Nadu Newsprint Paper Limited (TNPL) is state owned public sector industry.

Co-operative sector is one which is owned by a group of co-operative members who supply the raw materials for that industry. Most of the sugar factories in Tamil Nadu are in the co-operative sector.

When an industry is functioning under the partnership of two organizations it is said to be **Joint sector**. The nuclear power station at Kudangulam near Thirunelveli is a joint sector between Tamil Nadu Government and the Russian Government.

Classification of industries based on investment

The industry which has huge investment in terms of capital and infrastructure, along with huge labour and production are known as **large scale industries**. Iron and steel industry is an example for a large scale industry. A **medium-scale industry** is one that runs with investment of Rs 10 million (1–crore) to Rs 100 million (10–crore). A **small-scale industry** has been defined as the unit that has investment up to Rs.10 million (1–crore).

Small scale industrial units are those which are engaged in the manufacturing, processing or preservation of goods. Goods such as clothes, toys, furnitures, edible oils and leather goods are produced by small

scale industries.

Cottage industry is one wherein very little investment is involved. Family as a whole will work without any paid labourers. Locally available raw materials are used to produce the handicrafts. Volume of production and cost of production are low. Mats from grasses, (*Pattamadai mat*) toys from wood, Palm leave containers are unique examples of goods from cottage industries Tamil Nadu.

Classification of industries based on products

Consumer goods are those goods, which reach the consumers straight from the production unit. All perishable goods like food products and dairy products are examples of consumer goods.

Intermediate goods are products that are produced by another manufacturer. For instance, fabrics produced from cotton is an intermediate good. The clothing made from the fabric is a consumer good.

Basic goods are those goods which are produced on a large scale both for export and local consumption. For example: Iron and steel industry, chemicals, textiles.

Factors determining the location of Industries in Tamil Nadu

Location of industries in a particular place normally has many reasons for its localization. These reasons are the factors influencing the location of industries and are listed below:

- ▶ Raw materials;
- ▶ Energy;
- ▶ Capital;
- ▶ Labour;
- ▶ Transport and
- ▶ Market.

Activity

Name a major industry in your area? List the reasons for its location.

Natural resources like water, minerals and energy resources determine the location of an industry. Textile industry, leather industry, and paper industry require large quantities of water and so are located close to water sources. Industries like the cement industry, ceramic industry, and petro-chemical industry are located very near to the source of the raw materials. Aluminum industry, chemical industry and software industry highly rely on electricity and are located near the power stations or places with adequate supply of energy.

Distribution of Major Industries in Tamil Nadu

Major industries in Tamil Nadu are Textile industries, Sugar industries, Paper industries, Leather industries, Cement industries, Electrical equipments, Automobiles, Information Technology, Tourism industry and so on.

Textile Industry of Tamil Nadu

Tamil Nadu has major share in the Indian textile industry in terms of production and export of yarn, fabrics, knitwear and garments. Tamil Nadu contributes nearly 25% of India's share in the export of cotton, yarns and fabrics. Tropical climate, availability of raw materials, demand for cotton in market, power supply from numerous power projects and abundant cheap labour are favourable factors for widespread distribution of textile industries in Tamil Nadu.

Coimbatore, Pollachi, Udumalpettai, Thiruppur, Karamadai, Erode, Bhavani, Dindigul,

Thirumangalam, Madurai, Sankarnagar, Palayamkottai, Papanasam and Theni are important centres for textile industry. Maximum units are concentrated in and around Coimbatore region. For this reason, it is known as 'the Manchester of South India'

Districts of Coimbatore, Thiruppur and Erode contribute much for the state's economy; therefore, they are referred to as 'Textile Valley of Tamil Nadu'. Thiruppur alone contributes 70% of export of knitwear of Tamil Nadu. Erode specializes in garments and bedspreads. The city of Karur is known as 'Textile Capital of Tamil Nadu.'

Silk Textiles

Tamil Nadu occupies fourth place in silk textile production in our country. Kancheepuram silk is unique in its quality and is known for its traditional value all over the world. Arani, Rasipuram and Thirubuvanam are other silk centres of Tamil Nadu. Sericulture Training Institute in Hosur trains farmers to adopt sericulture along with farm work to accelerate rural industrialisation. Mettur, Madurai, and Ramanathapuram are specialized areas for manufacturing synthetic clothes.

Sugar Industry

Tamil Nadu produces about 10% of total sugar in India. Suitable climate and soil, for high yielding varieties, continuous irrigation facility, good transport, marketing facility and regularised co-operative sector are favourable factors for the widespread sugar mills in the state. A majority of distribution of sugar units in Tamil Nadu is functioning under the co-operative sector. At present Tamil Nadu has 42 Sugar Mills, out of which 16 are under

the co-operative sector, 3 owned by public sector and 23 as private mills.

Sugar factories are highly concentrated in Villupuram, Cuddalore, Vellore, Erode, Coimbatore Thiruvannamalai, Thiruchirappalli, Thanjavur and Madurai districts. Jaggery, kandasari, and sugar are products from the sugar industry. The by-product bagasse (the crushed stem of sugarcane after extracting juice) is used as a raw material for paper industry. Tamil Nadu government has initiated to set up new integrated sugar complexes with different options of co-generation such as distillery and ethanol production, tissue culture lab, soil testing lab, fuel energy and bio-composting. Names of such units are given in the table.

are manufactured and marketed locally as well as exported. Snacks items and biscuits are marketed in large scale. Tamilnadu with its long coastline offers opportunities for marine products based industry.

Paper industry

Tamilnadu stands second next to Andra Pradesh in paper production in our country. The state produces about 12% of paper in our country. Bamboo, grass, and Bagasse from sugarcane are raw materials for paper industry. Soda, soda ash, chlorine, sulphur, woodpulp, and plenty of water are other requirements for setting up of paper industries.

Table: Distribution of integrated sugar complexes

Name of Mills	Taluk	District
Kothari-Sathamangalam	Ariyalur	Ariyalur
Rajshree- Semmedu	Gingee	Villupuram
Dharani- Kalaianallur	Sankarapuram	
Sakthi-Modakurichi	Erode	Erode
Empee Sugars-Idaikal	Ambasamudram	Thirunelveli
Shree Ambika-Manjini	Attur	Salem
Dhanalakshmi Srinivasan-Udumbiyam	Veppanthattai	Perambalur
Bannariamman- Kolunthampattu	Thandarampattu	Thiruvannamalai

Activity

Find out the location of integrated sugar mills of the state, in your area and mark it in a map.

Food and Beverage Industry

Food and Beverage based industry flourish well in Tamilnadu. Mango pulp is processed and exported. Instant food varieties and ingredients for cooking

Pukkathurai in Kancheepuram district, Bhavanisagar, Pallipalayam, Pugalur, Paramathi, Vellore, Coimbatore, Udumalaipettai, Thoppampatti, Nillakkottai, and Cheranmadevi are centres of paper mills in Tamilnadu.

Tamilnadu Newsprint and Paper Limited (TNPL) was set up with aid of World Bank in 1979 in Kakithapuram

near Pugalur in Karur district. It is the largest producer of Bagasse based paper in the world with the annual consumption of bagasse to 1 million tonnes per annum. It caters to the need of newsprint papers throughout Tamil Nadu. It produces 600 tonnes of newsprint paper per day. Other than newsprint, papers for telephone directory, computers, offset printing papers, copier machines are also produced and marketed by the TNPL.

Leather industry

Tamil Nadu accounts for 70 % of national tanning factories and 60% export of India. Leather industry occupies an important place by its wide dispersal, sizeable employment and export potential. Leather industry depends on cattle wealth. It is concerned with the treatment of raw pelt of animals to make them suitable for the manufacture of various articles.

Do you know?

The pelt of large animals and cattles are know as 'hide' and those of smaller ones like sheep and goats are called 'skin'.

Tanning is a process of making leather, from the skins of animals, with the use of tannin, an acidic chemical compound. Tanning makes the skin become flexible, less water-soluble and more resistant to bacterial attack. Tannery is the term given to a place where these skins are processed.

If tanning is done with vegetative matter, it is known as vegetable tanning process. Vegetable tanned hide is flexible and is used for making furniture. If tanning is done with chemicals like chromium and fatty matter, it is known as mineral tanning process or wet blue process. Chrome tanning is faster than vegetable tanning

and its produces stretchable leather which is excellent material for making handbags and garments.



Tanning

Chennai, Vellore, Kancheepuram, Thiruvallur, Thiruchirapalli, Dindigul and Madurai districts have widespread centres for leather industry. Chennai, Vellore, Ambur, Ranipet, Vaniyambadi, Dindigul and Thiruchirappalli are the main centers' of leather industry.

Activity

List other leather products.

Cement industry

Tamil Nadu stands fourth in cement production. It accounts for 10 % of the country's cement production. Tamil Nadu Cements Corporation Limited (TANCEM) is wholly owned by the Government of Tamil Nadu and manufactures Ordinary Portland Cement (OPC) and Super Star Cement exceeding the requirements prescribed under the Indian standards.



Tancem-Ariyalur

Activity

Name few brands of cement produced in Tamilnadu like Chetnad cement, Dalmia cement.

The raw materials required for cement production are limestone, dolomite, gypsum, clay and coal. All of these are mined in Tamil Nadu. Major centres of cement industry are Sankari, Madukarai, Puliyur, Kunnam, Sendurai, Ariyalur, Dalmiapuram, Manamadurai, Thulukapatti, Allankulam, Sankarnagar and Thazhaiyuthu.

Automobile industry

Tamil Nadu earns 8% of its GDP from automobile industry. This industry contributes for about 21 % of passenger and cars, 33% of commercial vehicles produced in India. Chennai city is the base for 30% of India's automobile industry and 35% of its auto components. This industrial supremacy has given the name to Chennai as "**Detroit of Southern Asia**".

Activity

Find out the model of the vehicles and name the manufacturer of the vehicle.



Major global automobile companies

BMW, Ford, Renault-Nissan, Caterpillar, Hyundai, Mitsubishi Motors, and Michelin.

National automobile companies

Ashok Leyland, Bajaj, Hindustan Motors, TVS Motors, Royal Enfield, MRF, Apollo Tyres and Hero Honda, TAFE Tractors, Mahendra Tractors, Atlas bicycle, Hero bicycle.

Chemical industry

Chemical industry includes, production of chemicals, drugs, fertilizers, petrochemicals, soaps, detergents, cosmetics, medicines, synthetic rubber and plastics. Most of

the chemical industries are clustered at Chennai (Manali), Cuddalore, Panangudi (Nagapattinam) and Thuthukudi. The notable chemical industries of Tamil Nadu are SPIC (Southern Petrochemical Industries

Corporation Ltd) and Manali Petrochemicals Limited. SPIC is the largest producer of fertilizers in India and covers 12 states and caters to the customers through 4,000 outlets. It produces around 2 million tons of fertilizers annually.

Pfizer pharmaceutical company and Dow Chemicals are important chemical units which have research and development facility in Chennai.

Electrical and Electronics Industry

Electronics is a growing industry in Tamil Nadu. Many major global telecommunications like the Nokia, Flextronics, Motorola, Sony-Ericsson, Foxconn, Samsung, Cisco, Moser Baer and Dell have chosen Chennai as their South Asian manufacturing hub. Products manufactured include circuit boards and cellular phone handsets.

Bharat Heavy Electricals Limited located at Thiruchirappalli is one among the six large units of India. It produces boilers, generators, turbines used in the production of hydro-electricity.

Software Industry Infosys' campus at Mahindra World City near Chennai

Tamil Nadu is the second largest software exporter (by value) in India. It has the leading BPO sector in the country next to Karnataka. Major



Infosys-Chennai

national and global IT Companies such as Verizon, Hewlett-Packard, IBM, Accenture, Ramco Systems, Computer Sciences Corporation, Cognizant Technology Solutions, Tata Consultancy Services, Infosys, Wipro, HCL, Tech Mahindra, Polaris, Aricent, Mphasis Acme Technology Pvt Ltd., Covansys, Ford Information Technology, Xansa, iSoft, iNautix, Electronic Data Systems, Bally and many others have established their branches in Chennai.

India's largest IT Park is in Chennai, jointly constructed and maintained by Ascendas India Ltd, a Singapore-based company engaged in providing business space solutions, with Tamil Nadu Industrial Development Corporation (TIDCO).

Other notable industries of Tamil Nadu

Perambur Integral Coach Factory (ICF) is the largest in Asia to produce railway coaches in Tamil Nadu. **"Armoured Vehicles and Ammunition Depot of India" (Avadi)** is about 23 km northwest of Chennai. The Heavy Vehicles Factory produces battle tanks. Salem Steel Plant is a Public Sector company undertaken by the Government of India. Sivakasi is a big industrial centre in Virudhunagar district. It is world famous for its fireworks and safety match boxes. Sivakasi produces 90 % of India's fireworks. It is also known for offset printing. Sivakasi is known as **"Little Japan"**. Neyveli, apart from the production of thermal power, has a fertilizer unit and a ceramic unit attached to it. Thanjavur and Kumbakonam specialized in the production of bronze statues and musical instruments.

"Tamil Nadu is the first State in the country to develop a well-defined Biotechnology Policy and to set up an All Women Biotechnology Park.

Chennai is positioned in the second place after Mumbai for its vibrant and innovative film industry.

Tourism industry

Tourism is considered as an industry because of its enormous potential in creating employment to large number of people and for its substantial foreign exchange. Tamil Nadu's tourism industry is the second largest in India, with an annual growth rate of 16%. Presence of ancient monuments, pilgrim centres, hill stations, a variety of natural landscapes, long coastline, along with rich culture and heritage makes Tamil Nadu the best destination for tour lovers.



Recent attraction for Tourism

Tourism in Tamil Nadu is promoted by Tamil Nadu Tourism Development Corporation (TTDC), a Government of Tamil Nadu undertaking. Health/Medical tourism which is part of tourism industry is hosted by the leading health care centres in Chennai.

Do you Know?

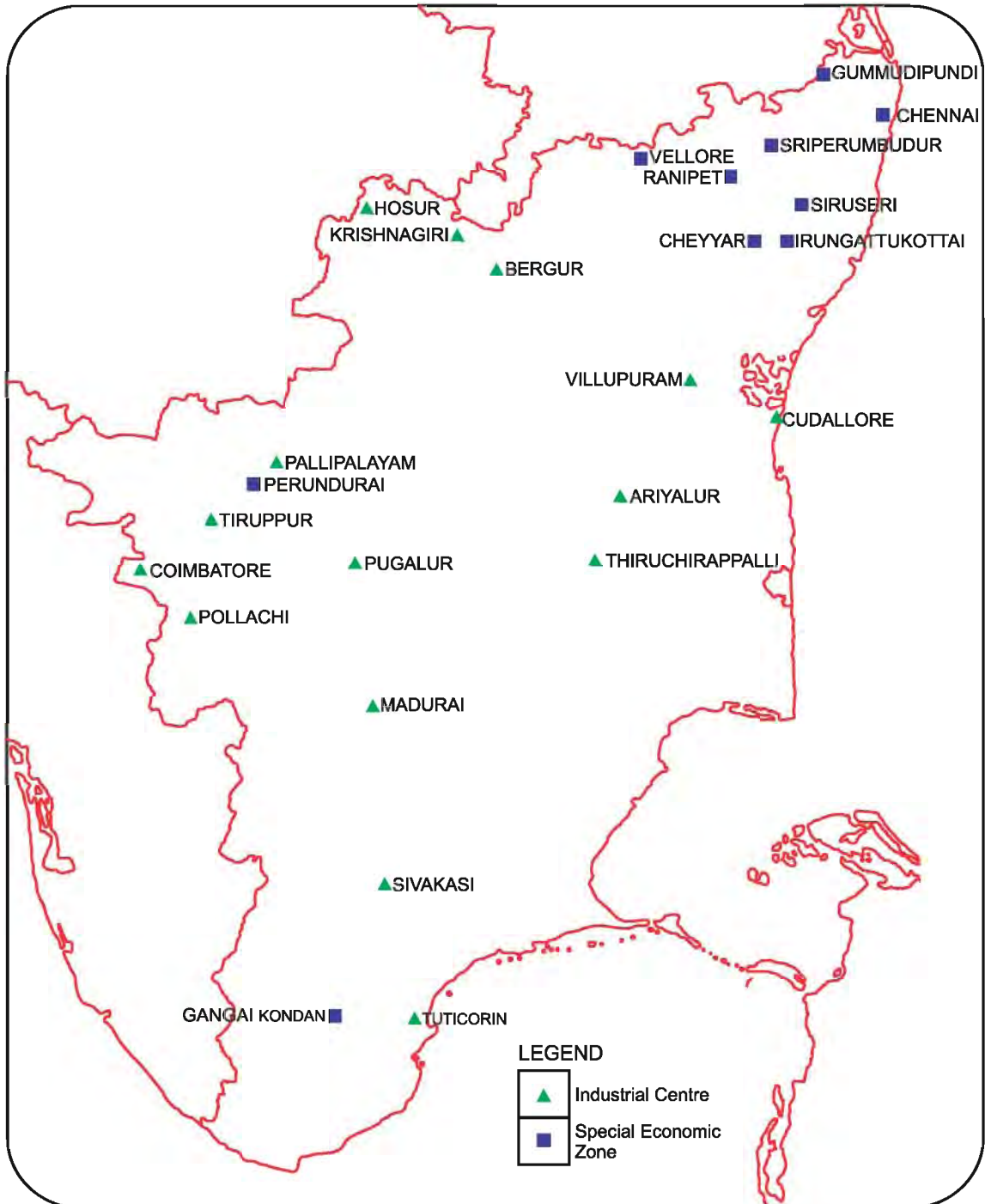
State Industries Promotion Corporation of Tamil Nadu (SIPCOT) Limited, a fully government owned

premier institution, established in the year 1972, has been a catalyst in the development of small, medium and large scale industries in Tamil Nadu.



In order to promote industrial base for export, the state government has setup special regions as Special Economic Zones (SEZ). These regions have ample facilities for manufacturing, capable of attracting foreign investors, and aim at promoting trade at the international level. Tamil Nadu has set up SEZ in the following places: Sriperumpudur Industrial Park, Irungattukottai Footwear SEZ and Oragadam Industrial Growth Centre in Kancheepuram district, Ranipet Leather Sector SEZ, Perundurai Engineering products SEZ, Cheyyar Automobile/Auto Ancillary SEZ, and Gangaikondan Transport Engineering Goods SEZ.

**TAMIL NADU
MAJOR INDUSTRIAL CENTRES AND SPECIAL ECONOMIC ZONES**



EXERCISE

I) Choose the correct answer.

1. Tamil Nadu Newsprint Paper Limited (TNPL) is _____ industry in Tamil Nadu.
a) Joint sector b) private sector
c) public sector d) Co-operative sector
2. The by-product Bagasse is used as a raw material for _____ industry
a) sugar b) paper
c) chemical d) Automobile industries
3. SPIC is the largest producer of _____ in India.
a) chemicals b) fertilizers c) petrol d) Fisheries
4. _____ is one wherein very little investment is involved.
a) Large scale industry b) smallscale industry
c) Cottage industry d) Medium Scale industries
5. _____ silk is unique in its quality and is known for its traditional value all over the world.
a) Kancheepuram b) Arani c) Salem d) Thirubuvanam

II) Match the following.

- | | |
|---------------|-------------------------------|
| 1. Chennai | The Manchester of south India |
| 2. Sivakasi | Detroit of Southern Asia |
| 3. Perambur | Textile Capital of Tamilnadu |
| 4. Karur | Little Japan |
| 5. Coimbatore | Integral Coach Factory |
| | Chemical Industries |
| | Special Economic Zone |

III) Answer in brief.

1. How are industries classified?
2. What are the factors determining the location of Industries in Tamil Nadu?
3. Name the products and by-products of sugar industry?
4. List down the raw materials for paper industry?
5. What do you mean by consumer goods?
6. Write a short note on Cottage industry.

7. Give reasons for the widespread distribution of textile industry in Tamil Nadu.
8. Distinguish between Factory and Industry.
9. Distinguish between agro-based industry and mineral based Industry.
10. Distinguish between vegetable tanning and mineral tanning.

IV) Answer in a paragraph.

1. Describe the Classification of industries based on ownership.
2. Give an account for the distribution of Textile industry in Tamil Nadu.
3. Write about the paper industry in Tamil Nadu.
4. Give an account of Sugar industry in Tamil Nadu.

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

1. All centres of Special Economic Zone in Tamil Nadu.
2. Mark one centre for each of the following.
 - Textiles industry
 - Sugar industry
 - Iron and Steel industry
 - cement industry

7. TAMIL NADU TRANSPORT AND COMMUNICATIONS

Transport and Communications play a vital role in the economic development of Tamil Nadu. Transport system helps with the easy movement of human beings and materials. It acts as the arteries and veins of national development. The transport system is of four types such as **Roadways, Railways, Waterways** and **Airways**.

Roadways

Of all the States of India, Tamil Nadu has a sound network of roads. All economic sectors of the State is interconnected and interlinked by roadways. The State Transport Corporations operate the public transport system along with private transport organizations. Compared to other States of India, Tamil Nadu State Transport Corporations operate bus services in a fullfledged, facilitating manner. Roadways may be classified into four types. They are:

- National Highways;
- State Highways;
- District roads; and
- Village Roads.

There are 24 National Highways covering a total distance of 4,500 km. The State is also a terminus for the Golden Quadrilateral Project. To meet the ever increasing demand from public, there are seven transport corporations functioning in the State. They are given below with their area of operation:

1. Metropolitan Transport Corporation-Chennai and sub urban areas-Chennai as head quarters
2. Tamil Nadu State Transport

Corporation-Villupuram(Cuddalore, Vellore, Tiruvannamalai, Kanchipuram, and Tiruvallur districts with Villupuram as head quarters).

3. Tamil Nadu State Transport Corporation-Kumbakonnam (Thanjavur, Thiruvarur, Nagapattinam, Karaikal (Pudhucherry) Thiruchirapalli, Karur, Perambalur, Sivagangai, Ramnad and Pudhukottai districts with Kumbakonam as head quarters).

4. Tamil Nadu State Transport Corporation-Salem (Salem, Dharmapuri, Namakkal and Krishnagiri districts with Salem as head quarters).

5. Tamil Nadu State Transport Corporation-Coimbatore (Coimbatore, Tirupur, Erode and the Nilgiris districts with Coimbatore as head quarters).

6. Tamil Nadu State Transport Corporation-Madurai (Madurai, Viridhunagar, Dindigul and Theni districts with Madurai as head quarters).

7. Tamil Nadu State Transport Corporation-Thirunelveli (Thirunelveli, Thuthukudi, Kanayakumari districts with Thirunelveli as head quarters).

Table: Length of roads in km

Length of roads	(in km.)
1) National Highways	4,500
2) State Highways	5,525
3) Corporation and Municipalities	17,161
4) Town Panchayat Roads	15,591
5) Village Panchayat Roads	63,538
6) Panchayat Union roads	32,791
7) Forest Roads	3,930

Apart from these the State has vehicular transport in the form of two and three wheeler vehicles which constitute about 83.9 %. The number of registered vehicle population in Tamil Nadu had increased to 10.064 million in 2007-08. There are 64 vehicular zones in the State. Among the Regional Transport Offices, Chennai is the largest one which has - 61 centres.

Activity

Answer the following on the road map of Tamil Nadu.

- 1) Find the districts through which NH 45 runs.
- 2) NH 208 passes through _____, _____, _____ centres.
- 3) Name two districts through which NH 68 runs
- 4) Which NH goes through your native district.?

Recent Developments in Road Transport

- Conversion of single lane of State Highways into double lane and multilane.

- The widening and improvement of road from Madhyakailash in Adyar to Siruseri on Old Mahabalipuram Road(OMR) for about 2 km was laid. This is referred as IT Expressway that serves as connectivity to all IT companies.

- The East Coast Road(ECR) that is built along the coast of the Bay of Bengal connects Chennai and Cuddalore via Pondicherry. It gives rise to spectacular scenic views with beaches and fishermen hamlets. Presently, the East Coast Road has been extended to Thuthukudi via Chidambaram, Nagapattinam and Ramanathapuram.

- Golden Quadrilateral Project of the National Highways Development that runs for about 1,232 km in Tamil Nadu has been completed.

- Most of the mofussil traffic have been diverted on to the bypass roads to avoid traffic congestion.

- CMBT (Chennai Mofussil Bus Terminus), which is the largest modern bus terminus in Asia, Koyambedu, Chennai has been established .

- Bridges and flyovers have been constructed in many districts of Tamil Nadu along the National Highways. Some of the notable ones may be found in Chennai City—Chennai Airport Flyover, Perambur Flyover, Anna Flyover and Kathipara junction flyover and in Vellore, Thindivanam and Ulundurpet to ease vehicular traffic congestion.

- Ring roads that encircle urban areas to divert vehicular traffic to avoid traffic passing through the centre has been implemented.

- SETC operates vivid type of buses, namely, semi-delux, super-delux, video coach, ultra-delux, volvo and air suspension buses within Tamil Nadu and adjacent States.

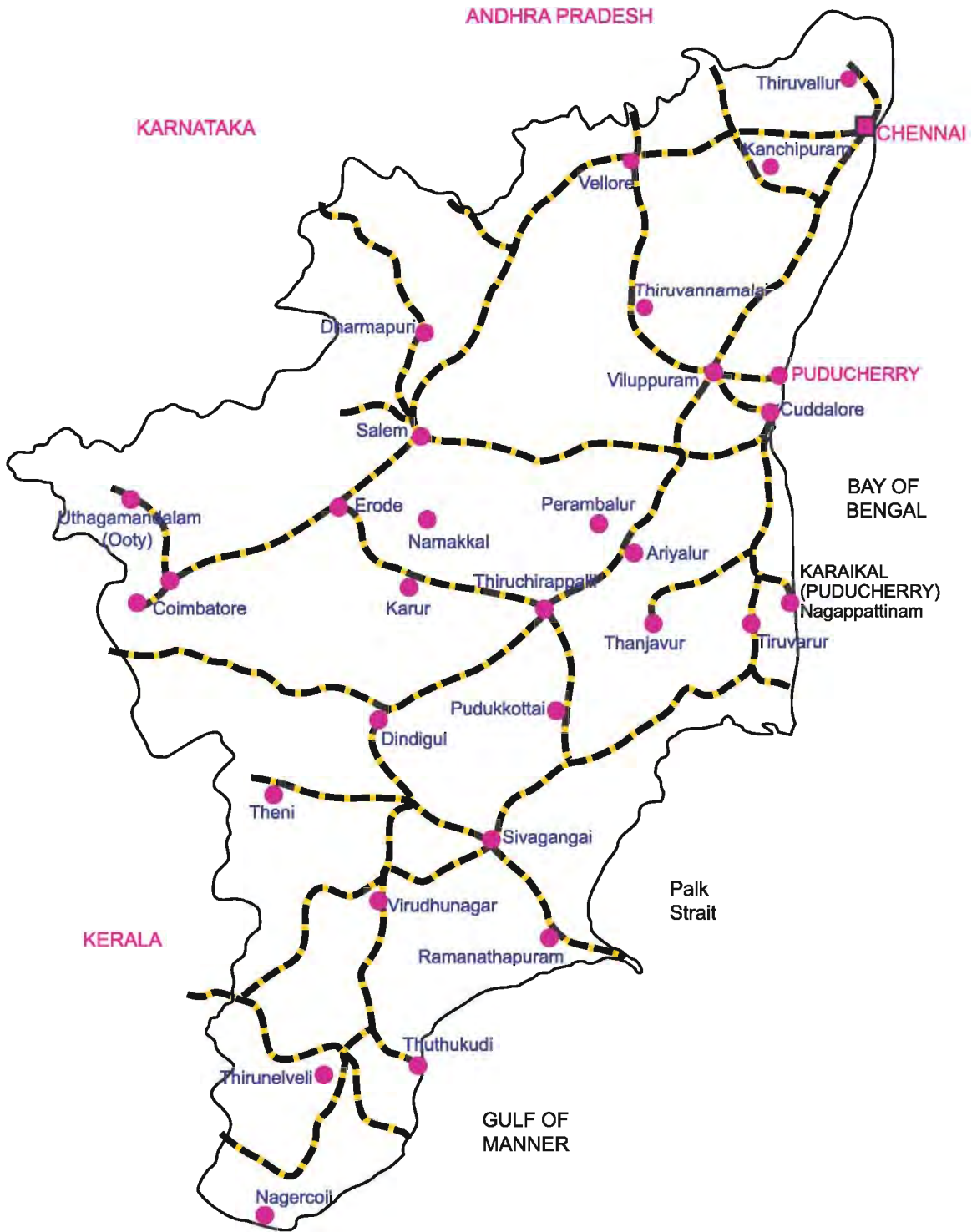
Railways

Tamil Nadu is well served with a good network of railways as part of the Southern Railways with headquarters at Chennai. Rail tracks are classified into:

- ▶ Broad guage;
- ▶ Metre gauge;
- ▶ Narrow gauge; and
- ▶ Suburban Railway.

In Tamil Nadu the total length of railway tracks is about 5,952 km and total number of railway stations is 5,32

Tamil Nadu Railways



to connect all the major cities of Tamil Nadu. The Southern Railways zones have been demarcated into six divisions, namely, Chennai, Madurai, Salem, Palakkad, Thiruvananthapuram and Tiruchirappalli. Main rail junctions in the State are:

Chennai, Erode, Coimbatore, Thirunelveli, Madurai, Thiruchirappalli and Salem.

Chennai has a well established suburban railway network, with three different lines connecting Chennai with Arakonam and Chengalpattu, MRTS Railway line connects Chennai Beach to Velachery.



Chennai Sub Urban Railway

ACTIVITY

Here, names of a few express trains are given. Find out the places connected by these trains. Find out whether they are weekly or daily trains.

- 1) From Chennai Central or Chennai Egmore Station to your native place.
- 2) Tamil Nadu Express
- 3) Chennai-Vijayawada Jan Sathabdi Express
- 4) Chennai-Hubli Express
- 5) Chennai-Howrah Mail
- 6) Chennai-Tuticorin Pearl City Express
- 7) Chennai-Guruvayur Express

Recent developments in railways

The metre gauge rails are being converted into broad gauges of which 26 % of the length had been electrified.

Gauge conversion project has also been taken up from Chennai Beach to Tambaram, Chengalpattu and other suburban areas

Waterways

Waterways are the cheapest means of transport. It may be divided into inland waterways and seaways. The State has 1,000 km of coastline. The three major ports of Tamil Nadu are Chennai, Thuthukudi and Ennore. They play a crucial role in the provision of infrastructural support in the State. Minor Ports are anchorage ports where cargo is transshipped from the vessel to the shore. Some of the minor ports are Cuddalore, Nagapattinam, Kolachal and Rameswaram.



Chennai Port Trust

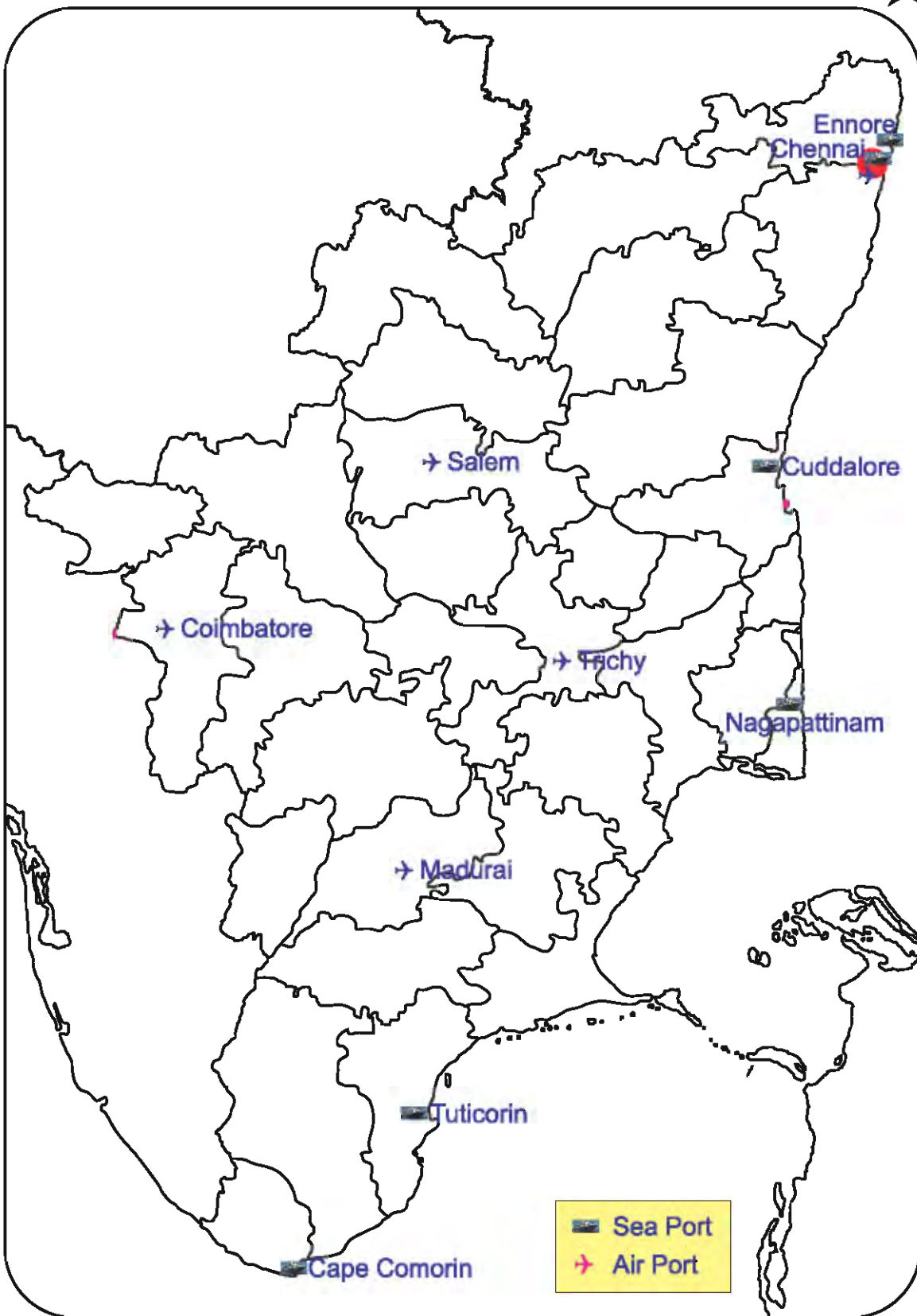
Cargo handled by major ports

	(in million tonnes)
1.Chennai	57.15
2.Tuticorin	21.62
3.Ennore	11.56

Projects Under Progress Sethusamudram Shipping Canal Project (SSCP)

It aims at creating a navigation channel from the Indian ocean to the Bay of Bengal through Gulf of Mannar,

Tamil Nadu Major Seaports and Airports



Adam's Bridge, Palk Bay and Palk Strait within the Indian Border. This project is of strategic importance as it connects the neighbouring continents and countries. It also acts as a catalyst for industrial development, spur trade and commerce, advance coastal shipping and generate employment.

Do you know?

- 1) Buckingham canal that once connected Marakkanam in Villupuram with Vijayawada in Andhra Pradesh has lost its importance.
- 2) Vedaranyam canal that connects Vedaranyam and Nagapattinam and has also lost its importance.

Airways

Airways is the fastest and costliest means of transport which carry passengers, freight and mail. They connect local, regional, national and international cities. Tamil Nadu has a major international airport, which is named as Anna International Airport. It

is connected with 19 countries by operating more than 169 direct flights every week. This is currently the third largest airport in India after Mumbai and Delhi.

Chennai has direct air services to Sri Lanka, Dubai, Germany, Indonesia, Malaysia, England, Maldives, Saudi Arabia and Singapore. Between Chennai and Coimbatore, the air services operated are passing through Salem which promotes industrial development of Salem and Mettur.

International Airports

1. Chennai
2. Coimbatore
3. Tiruchirapalli

Domestic Airports

1. Chennai (Kamarajar)
2. Madurai
3. Salem
4. Thuthukudi

Airports	Cargo handled (in tonnes)
1) Anna International(Chennai)	2,27,704
2) Kamarajar Domestic (Chennai)	42,905
3) Coimbatore	1,858
4) Madurai	375
5) Thiruchirappalli	238

Communications

The means through which ideas and information are exchanged are called "means of Communication". They are Personal Communication and Mass Communication Networks, Personal Communication includes Postal Services, Telegram, Telephone, Internets, E-mail and FAX.

Mass Communication Network is carried on by the Government agencies. They are:

Print Media (books, journals, magazines and newspapers) and

Electronic Media (radio, television, telecommunications, mobile phone, e-mails, e-Commerce and teleprinter.

Postal Network and Telegraph

Tamil Nadu has four postal districts, namely:

Zone/ Districts	Headquarters
Chennai	Chennai
Western	Coimbatore
Central	Thiruchirappalli
Southern	Madurai

The Postal Department allocated the Postal Index Number (PIN) to facilitate faster delivery of letters in the form of Air Mail Service, Railway Mail Service and Speed Post.

Postal PIN code of Chennai Nungambakkam is 600 034.

Find out the postal PIN code of your area.

Postal and Telegraph offices In Tamil Nadu

Number of Post Offices alone 12,115

Number of post and telegraph offices 3,504.

In India, the BSNL is a major service provider. Direct calls can be made across the country and the world with STD (Subscriber Trunk Dialing), PCO (Public Call office) and ISD



(International Subscriber Dialing) facilities respectively. Today, Tamil Nadu has:

Telephone exchanges— 2,408

Telephone subscribers—3,346,906

The private, basic telecom services are Bharati Infotel, TATA, Reliance, Airtel, Aircel, Vodafone, Uninor.



Telecommunications

Telecom growth has intimate relationship with the IT sector. The State has witnessed a boom in the number of PCOs and the landline segment. Rapid expansion in the telecom sector is accompanied by a simultaneous significant technological



changes. Cell phones are one such advancement in the field of technology. Even the internet could be accessed using cell phones. World is shrinking with increasing spread of the communication network. The following are the services provide by the BSNL:



BSNL

Connecting India

CELLULAR SUBSCRIBERS (CUMULATIVE IN LAKHS)

Year	Tamil Nadu	All India	Percentage share to All India
2002-03	6.15	126.88	4.85
2003-04	16.28	261.5	6.2
2004-05	33.53	410.2	8.17

The total number of cellular phones in use in Tamil Nadu: 3337087

Internet is provided to subscribers in the name of Data One Broadband.

Both postpaid and prepaid cell phone services are offered through public as well as private service providers.

All India Radio (AIR)

Indian radio broadcasting, which was started in 1927, acquired the name All India Radio(AIR) in 1936. AIR has 15 Radio Stations in Tamil Nadu. Private Broadcasters have set up FM Radio Stations and broadcast a variety of programme on education, agriculture and entertainment.

Doordharshan

It is one of the largest terrestrial networks in the world. All major live telecast of national and international programmes bring the viewers under one roof. It transmits educational programmes for Schools and Universities through "Edusat".

Private Channels of Doordarshan:

Kalaignar TV, Sun TV, Star TV, Raj TV, Star Vijay, Jaya TV, Vasanth TV, Makkal TV and several others.

Internet and Intranet

The present world is networked with the world wide web, known simply as the internet and Intranet. Of the two, internet plays an important role in the field of education and transfer of



knowledge. Internet can be accessed by each and every individual from any part of the world.

An Intranet is a private computer network. Intranets are websites that can only be accessed within a company through their internal network.

Satellite



It is the latest means of communication which has brought revolution in the communication all over the world. India's communication network is operated through two satellites, namely, Indian National

Satellite (INSAT) and Indian Remote Sensing Satellite (IRS). These two, apart from communications, assist in the prediction of meteorological events and natural resources management also.

Print Media

It is another powerful medium to convey information through various news agencies of India that are operating under the umbrella Press Trust of India, United News of India and Press Information Bureau.

Communication Technology and its advantages

It plays a vital part not only in personal life but also important role in business and education through satellites.

People can send and receive mails using e-mail to get information on job vacancies, admission to Universities and to obtain birth and death certificates.

Shopping via internet (e-commerce) is a trend now-a-days.

Telemedicines make possible people in remote areas getting correct treatment at appropriate times.



Global Village

Online payment of phone bills, electricity bills and online ticket booking can also be made

D-Mat form of shares for share broking and video conferencing using video chat through webcam are also done using internet.

Communications technology has so developed that even remote villages are connected to any part of the world, making the world a global village. GPRS (General Packet Radio Service) is a way of sending data through radio waves which is currently being used to transmit voice. GPS (Global Positioning System) looks like a mobile phone which captures signals from multiple satellites and provides information on the location of a place.

EXERCISE

1) Choose the correct answer.

- Postal and telegraph services belongs to _____ communication.
a) personal b) professional c) public d) private
- _____ acts as arteries and veins for national development
a) communication b) Transport system c) print media d) Remote sensing
- The East Coast Road is built along the coast of _____.
a) Arabian sea b) Bay of Bengal
c) Indian Ocean d) Andaman Sea

4. The largest terrestrial network in the world is _____.
- a) All India Radio b) Doordharshan c) edusat d) print media
5. Minor ports are known as _____ ports.
- a) Entrepot port b) Tidal port c) Anchorage port d) free port

II) Match the following.

- | | |
|-------------------------|------------------------|
| 1. Golden Quadrilateral | Minor port |
| 2. Cuddalore | Private telecom |
| 3. GPS | Print media |
| 4. Magazine | Location of place |
| 5. Uninor | National Highway |
| | Major Port |
| | Public Telecom Service |

III) Answer in brief.

1. Name the different types of roads found in Tamil Nadu.
2. Name some of the private telecom services.
3. Name the three major ports of Tamil Nadu.
4. What are the two types of communication? Give example.
5. What are minor Ports? Give example.
6. Name the major international airports of Tamil Nadu.
7. Expand STD.
8. Distinguish between internet and intranet.

IV) Give paragraph answer.

1. Account the advantages of communication technology?
2. What are the recent prospective development made in road transport?

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

1. Rail route from Chennai to Thuthukudi.
2. Roadways connecting Chennai to Thiruchirappalli.
3. Mark the Major Sea port.

Activities.

Prepare a project on development of communication from metal age to modern Age.

8. TAMIL NADU - TRADE

Trade is an important phenomenon that decides the economic growth of a country. The types of goods and services that a country exports and imports provide a mirror image of the economic structure. Trade may be defined as an exchange of goods and commodities either within the country or between the countries. In simple terms, buying and selling of commodities is called trade and it may be local, regional, national and international. The primitive method of trade was known as the **barter system** where goods were exchanged for goods. Later on, money was introduced as a medium of exchange in buying and selling of goods.



Exports refer to goods and services sold for foreign currency. A country which increases its export transactions is said to accumulate foreign exchange reserves.

Major Exports of Tamil Nadu

1. Textile goods
2. Drugs and pharmaceuticals
3. Chemicals
4. Leather and leather goods
5. Engineering goods
6. Ores and minerals



7. Software and electronics.

Imports are goods and services bought from overseas producers. Almost every country of the world will try to pay their imports through exports. Trade is not a mere exchange of goods; but it also includes exchange of services.

Major imports of Tamil Nadu

1. Mineral fuel and mineral oil
2. Electrical machinery equipment and spare parts.
3. Natural and cultured pearls
4. Iron and steel and articles of iron and steel
5. Organic chemicals
6. Plastics and articles
7. Vegetable fats and oil products

Trade is of two types: (1) Internal Trade and (2) International Trade.

Internal trade or domestic trade

Trade carried on within the domestic territory of a country is termed as internal trade. Roadways and railways play an important role in the internal trade. In this type of trade, the national currency is involved to carry on the trade.

International trade or external trade

Trade between two or more than two countries is termed as international trade. If the trade is between two countries, it is bilateral. There is also multi-lateral trade which occurs among more than two countries. Multinational currencies are used to carry on this type of trade. Ports and harbours play an important role in International trade.



Few International Currency

Trade in Tamil Nadu

As Tamil Nadu has well developed roadways and railways, domestic trade is efficiently handled between the districts of Tamil Nadu.

For marketing the commodities, in the state, there are several Market Committees and regulated markets, functioning in all the districts of Tamil Nadu. Market Committees are formed by the nominated members of the beneficiaries and the Chairperson for the committee is selected by the members. There are about 21 market Committees to handle the marketing of agricultural goods and to fix a genuine price for the commodity. At present there are about 303 **Agricultural Produce Marketing Centers (APMC)** distributed all over the districts of Tamil Nadu. The APMC is further classified

into Primary, Secondary marketing centers and non-regulated marketing centers (Agmarknet statistics 2010). The largest number of 34 Marketing centers are found in Erode district followed by Coimbatore and Thanjavur with 21 centers.

Uzhavar Sandhai scheme was initiated for direct selling of fruits & vegetables at a fair price by the farmers to the consumers without any intermediaries. First Uzhavar Sandhai was started at Madurai in 1999 and there are about 103 such Uzhavar Sandhais in the state. Every day on an average 1609 MT of fruits and vegetables worth of Rs. 191.77 lakhs are sold by 7526 farmers. 2,71, 685 consumers were benefitted through Uzhavar Sandhais during the year 2008-2009.

Market Complexes with storage facility are available all over the state.

Tamil Nadu Co-operative Silk Producers Federation, TANSILK an apex co-operative body, with Headquarters at Kancheepuram, purchases raw silk and supply them to Handloom Weavers Co-operative Societies and other weaving sectors.

Industrial Co-operatives, a wing of the Department of Industries and Commerce, Government of Tamil Nadu is arranging to market the products of rural artisans through Handicrafts Co-operative Societies. State Industries Promotion Corporation of Tamil Nadu (SIPCOT) focuses on developing, marketing and maintaining industrial complexes / parks within the state.

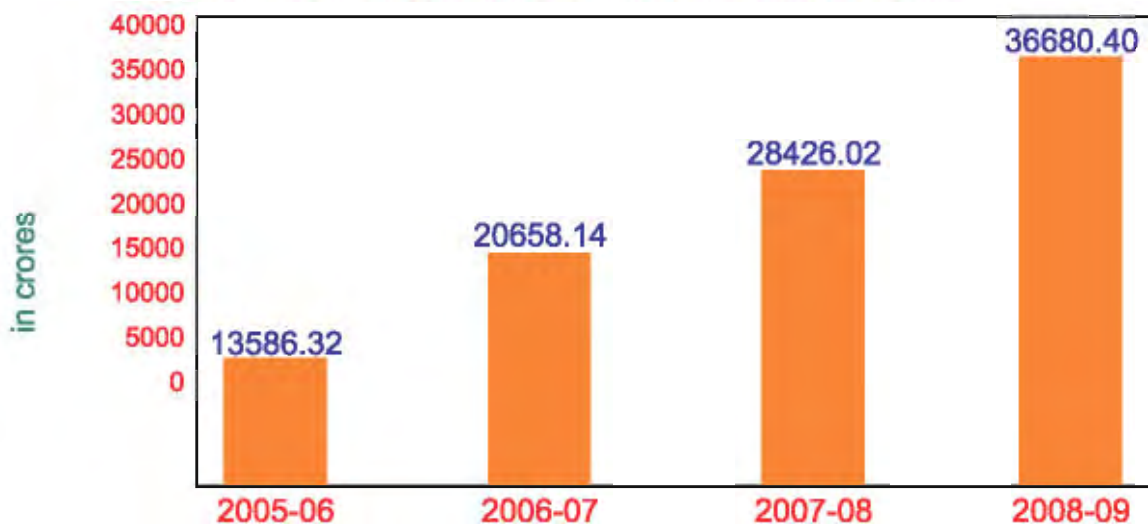
The export of Tamil Nadu has been increasing at a faster rate than the overall exports of the country. The drastic rise in Information Technology (IT) companies in Tamil Nadu has

promoted the value of software export in recent years. The following are the software products sent abroad.



Tidel Park- Chennai

Tamil Nadu–Major Exports 2005-2009 value in Rupees



YEAR EXPORTS (Rs.in million)

2007/08	284,260
2008/09	366,800

FOREIGN TRADE (Rs.in million)

Export

By sea	602,600
By air	74,990

Import

By sea	1,285,400
By air	304,950

Trade is called an engine of growth

1. It helps in the flow of commodities.
2. It generates dynamic change in the export front.
3. Trade increases technology transfer from one country to another.
4. It improves the welfare of the workers.
5. It helps to increase the total production of an country.

EXERCISE

I) Choose the correct word.

1. Primitive method of trade was known as _____ system.
a) value b) barter c) traditional d) Money
2. _____ decides the economic growth of a country.
a) Export b) Import c) Trade d) Transport
3. In Tamil Nadu domestic trade is effectively handled between _____.
a) States b) Districts c) Countries d) Cities
4. _____ district exports crackers.
a) Vellore b) Virudhunagar c) Villupuram d) Sivagangai

II) Match the following.

- | | |
|-------------------------|----------------|
| 1. Exports | Kancheepuram |
| 2. Imports | Thuthukudi |
| 3. Tidel Park | Market centres |
| 4. Tansilk | Madurai |
| 5. First Uzhvar Sandhai | Chennai |
| | Machinery |
| | Software |

III) Answer in brief.

1. Define Trade.
2. Name some of the imports of Tamil Nadu.
3. Distinguish between import and export.
4. Differentiate internal from international trade.

IV) Give paragraph answer.

1. Why is trade called an engine of growth?
2. Write a paragraph about Uzhvar Sandhai.

V) Activity.

1. Collect pictures of different country's currencies and calculate equivalent to Indian Rupees.
2. Visit a nearby supermarket and collect information on sources of their selling products and price.

9. TAMIL NADU - POPULATION

People of a country are the greatest assets for development. People living in an area together are known as population. The study of population is known as demography. People are considered as resources because of their ability to change available natural resources into value added products. Human potential, knowledge and energy are used for the betterment of individuals, the society and the nation. Every individual contributes to the nation's development. Therefore, the size of population and its individual capacity in terms of education, health and work force decides the pace of national development. For this reason, people of the country should be nurtured in proper manner to maintain the quality and quantity.

Population of Tamil Nadu

As per 2001 Census, Population of Tamil Nadu was about 62.4 million of which 31.4 million was males and 3.1 million was females. Tamil Nadu as a whole has 6.05 % of the total national population(India).

In India, the Census of India, a central governmental organisation, is engaged in collecting, tabulating and publishing all statistics related to population, once in ten years.

Demography indices

The **crude birth rate**—the annual number of live births per 1,000 people.

The **crude death rate**—the annual number of deaths per 1,000 people.

The **infant mortality rate**—the annual number of deaths of children

less than 1 year old per 1,000 live births.

The **sex ratio**—the number of females per 1,000 of males.

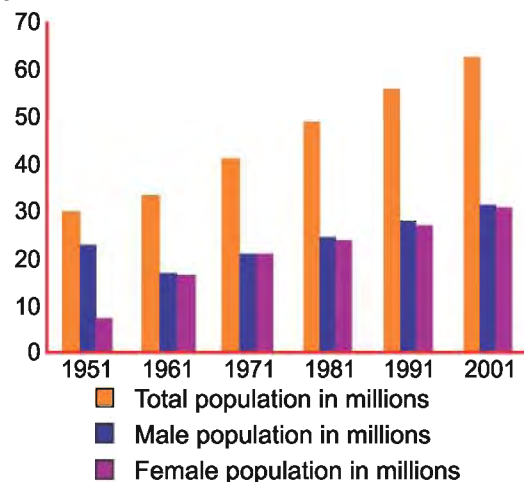
Life expectancy—the number of years an individual at a given age would be expected to live at present mortality levels.

The ratio between the number of children below age of five and the number of female at the reproductive age(15-45) calculated for every thousand persons is known as **Fertility Rate**. The Total Fertility Rate of the State is 1.7.

Birth and death rates for Tamil Nadu for the year 2006 is 16.2 and 7.5 per thousand population, respectively. Infant mortality rate has reached 37 to 1,000 live births by 2006.

Growth of population

From the bar diagram given, may be inferred that the population of Tamil Nadu has doubled over a period of 50 years from 1951 to 2001.



The difference between birth and death rates gives the natural increase of population of regions. When

expressed in percentage it is known as the growth rate. The annual growth rate is 1.1 %, which is lower than that of India.

When birth rate is continuously high, a nation has to provide education and health facilities for more number of children. Other environmental problems also increase with high population. Tamil Nadu has shown a considerable rate of reduction in growth rate in recent years.

Distribution of population

Chennai possesses the largest share of 6.96 % of the total population of Tamil Nadu. This is followed by Coimbatore, Vellore and Salem districts. Perambalur has the least population of 0.069 %.

Factors influencing the distribution of population

- Generally, plains with suitable climate support a huge population.

- Coastal plains with mild temperatures and good opportunities for economic activities support huge population.

- Job opportunities in large towns and cities attract both literates as well as illiterates.

- Dry regions generally support a small population.

- Mountainous regions with steep slopes and forest cover support a small population as well.

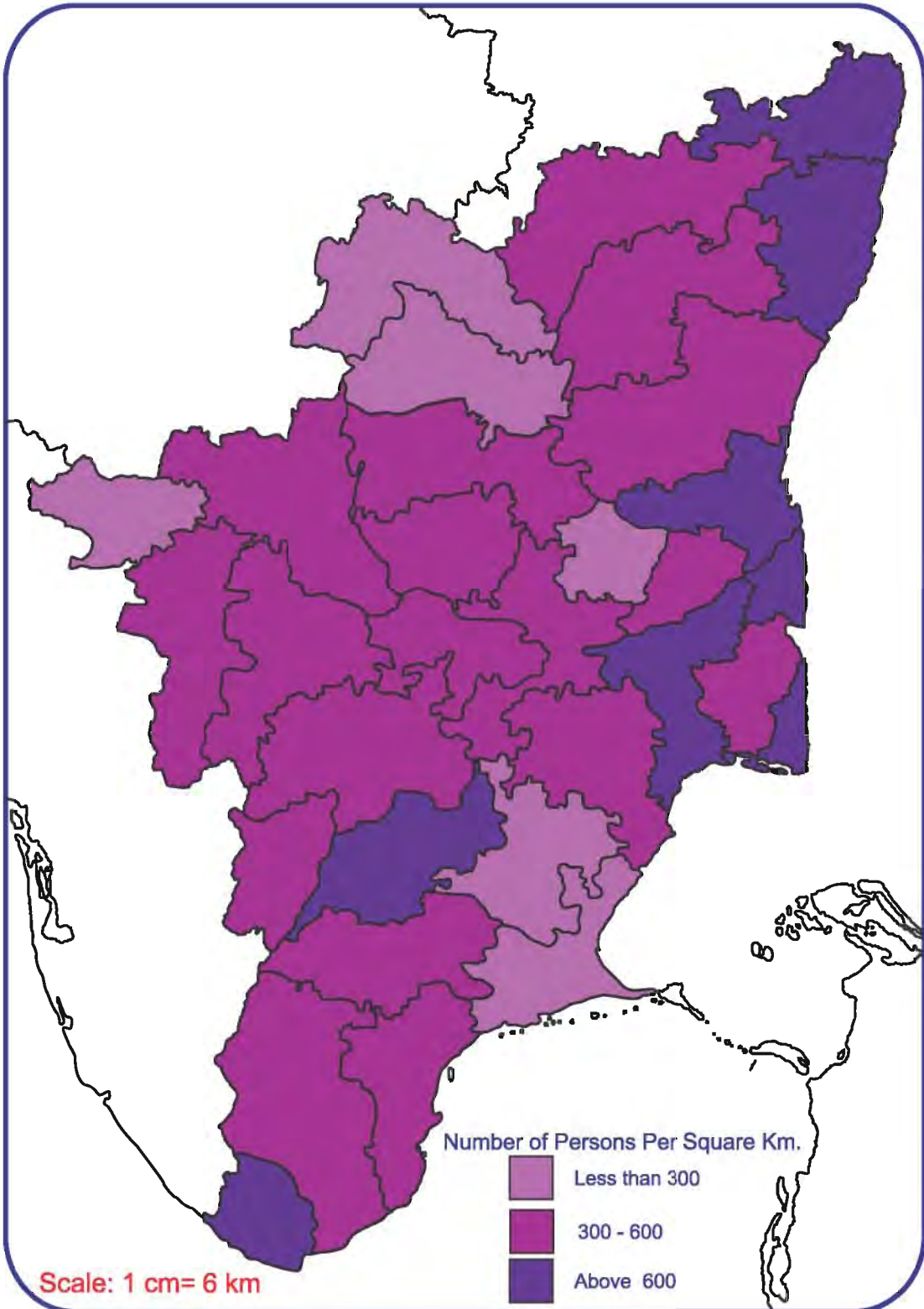
In general, the variations in population among different regions are identified by **population density**. Density of population is a means of finding out the number of persons living in one unit area, which is generally expressed as persons per square kilometre. It gives an idea of how crowded a region is. The following table gives the density of population in Tamil Nadu, by districts of the states.

Table: Tamil Nadu: District wise density of population

Number of persons per square km	Density	Districts (density is given in brackets)
Less than 300	Low	Sivagangai (279), Ramanathapuram (284), Perambalur (289), Dharmapuri (297), Nilgiris (299)
300 - 600	Medium	Erode (314), Pudukkottai (314), Dindigul (317), Karur (323), Thoothukkudi (340) Tiruvannamalai (353), Ariyalur (358), Theni (381), Tirunelveli(400), Virudhunagar (409) Viluppuram (412), Namakkal (439), Thiruvarur (492), Tiruchirappalli (536), Coimbatore (572), Vellore (572), Salem (575)
Above 600	High	Nagapattinam (616), Cuddalore (617), Thanjavur(638), Kancheepuram (668), Madurai (698), Thiruvallur (776), Kanniyakumari (995), Chennai (24,963).

Source: Census of India 2001

Tamil Nadu Population Density



Activity

1. With the help of the given map and the table, identify the status of population in your area.
2. List the reasons for this variation among districts.

From the table, it may be understood that eight districts exhibited high population density. Seventeen districts have medium densities and five districts fall under low population density. Chennai, the capital city, a centre for administration, education, industry, trade, commerce and recreation, has the highest density of population. Sivagangai has the lowest density of population.

Composition of Population in Tamil Nadu

As per 2001 census, 37 % of population in Tamil Nadu is below 20 years, 54% is between 20 and 60 years, and 9% is above 60 years.

Percentage of Schedule Castes and Schedule Tribes is 19 % and 1.04% respectively.

In Tamil Nadu there are about 88% Hindus, 5.5% Muslims, 6% Christians and the rest are of religions such as Sikhs, Buddhist and Jains.

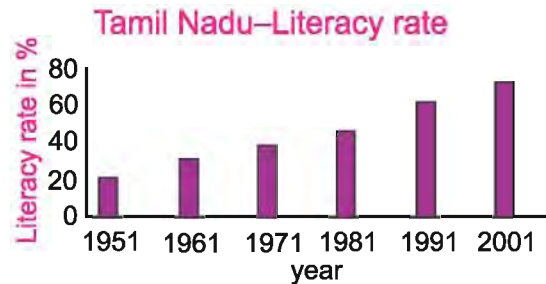
The state has a sex ratio of 987 women for 1,000 men. The highest sex ratio is in Thuthukodi (1,050) and the least is in Salem (929). Fifteen districts record more females than males.

In Tamil Nadu, 56 % of the people live in rural areas and 44 % of the population live in urban centres.

Literacy

The literacy in Tamil Nadu has greatly increased in the period 1951 to 2001. The overall literacy of Tamil Nadu is 73.5 %. Among the districts,

Dharmapuri has the least literacy of 61.39 %. Kanyakumari has the highest 87.55% of literates. Chennai, Thuthukudi and the Nilgris have 80 % literates. Among the Schedule Castes and Schedule Tribes 55 % and 35 % of them are literates.



The state has considerably reduced the school dropouts. Education for all is the prime ambition of the government. Among men, 726 out of every 1000 are literates. Likewise among women 571 out of every 1000 are literates. Among the districts, Kanyakumari has the highest literacy with 803 for every thousand men and 758 for every thousand women.

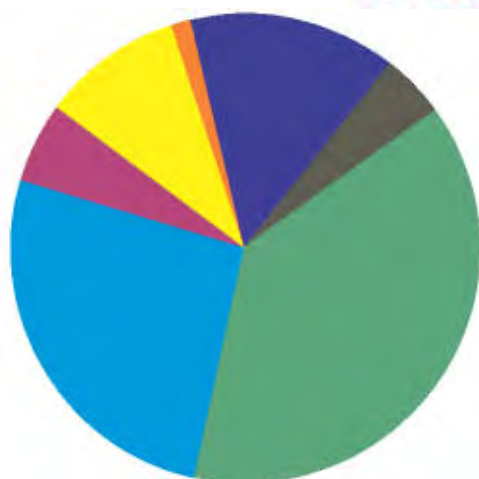
Occupation

According to 2001 Census, the total number of workers in Tamil Nadu account for 44.67 %; non-workers accounts for 55.33 %. Among the workers, 41.5% work in the primary sector, followed by 27.7 % in the secondary sector and 30.8 % in the tertiary sector.

Classification of workers

It may be noticed from the table that agricultural workers are seen to, be reducing in number. Construction workers and tertiary workers are increasing year after year which indicates the trend of increasing urbanization in Tamil Nadu. In the year 2000, the unemployment rate for the state was 2.4 %.

Tamilnadu workers and Non-workers



■ Main workers	26.4%
■ Cultivators	5.7%
■ Agricultural labourers	9.6%
■ Household Industry	1.7%
■ Other workers	14%
■ Marginal workers	4.5%
■ Non-workers	38.2%

Table: Classification of Workers and Distribution

Workers	1961 (in %)	1991 (in %)	2001 (in %)
Cultivators	42.0	25.0	18.4
Agricultural labourers	18.4	36.0	31.1
Household, Industry, Manufacturing	13.4	03.6	05.3
Other workers	26.2	35.0	45.2

Source: Tamil Nadu Human Development Report.

Women Development, their contribution to economy

The potential of women should be realized and recognized for the well-being of any society and development of the nation. Tamil Nadu is a pioneer state which had encouraged the empowerment of women.

Women empowerment includes

- Women's sense of self-worth;
- Right to seek and decide upon choices;
- Right to have access to opportunities and resources; and
- Right to have control on their lives, both within and outside of their homes.

Do you Know?

Former UN Secretary General Kofi Annan has stated: "Gender

equality is more than a goal in itself. It is a precondition for meeting the challenge of reducing poverty, promoting sustainable development and building good governance.



Strategies Adopted by Government of Tamil Nadu for Women Empowerment

Tamil Nadu Government has implemented several welfare schemes for women empowerment.

In order to empower women, the Science City has been organizing Entrepreneurship Development Programme (EDP) and

Entrepreneurship Awareness Programme (EAP) to bring out the talents of women and to make them prove their potential.

A Self-Help Group (SHG) is a group of women, organized for eradication of poverty. They agree to save regularly and convert their savings into a common fund known as the Group Corpus. The members of the group use this common fund through a common management. In Tamil Nadu the SHGs were started in 1989 in Dharmapuri District. At present 1,40,000 groups are functioning with 2.383 million members. Tamil Nadu Corporation for Development of Women Ltd arranges credit assistance for the successful groups through various schemes implemented by State as well as

Central Government. Tamil Nadu ranks first in witnessing economic well-being of the people involved in such SHGs.

Human resource management

Since human resources are the most valuable of the resources of the earth, the people must be carefully managed so that everyone on the earth live peacefully. Human resource management aims at developing personal qualities in an individual so that he or she may contribute in a healthier manner for the national and world peace.

Activity

List the qualities to be developed by each individual to live and let others live peacefully.

- 1
- 2
- 3
- 4
- 5
- 6



EXERCISE

I) Choose the correct answer .

1. _____ has the highest percent of literates in the state.
 - a) Karur
 - b) Kanyakumari
 - c) Chennai
 - d) Perambalur
2. The district which has the lowest density of population is _____.
 - a) Sivagangai
 - b) Nilgris
 - c) Kanyakumari
 - d) Thiruvallur

3. Population in Tamil Nadu has _____ over a period of 50 years from 1951 to 2001.

- a) increased b) doubled c) decreased d) No change

4. Mountainous regions with steep slopes and forest covers supports _____ population.

- a) medium b) more c) small d) very low

II) Match the following.

1. The annual growth rate	44%
2. Rural population	56%
3. Literacy percentage in Tamil Nadu	1.1 %,
4. Hindus	73.5 %
5. Urban population	88%
	10 %
	25%

III) Give brief answers.

1. What are the factors that influence the distribution of population?
2. What are self-help groups?
3. Give reasons for considering people as resource.
4. Distinguish between birth rate and death rate.
5. What are the aims of human resource management?
6. List the qualities to be developed by each individual to live and let others live peacefully.

IV) Answer in a paragraph.

1. Describe about the distribution of population in Tamil Nadu.
2. Write about the strategies adopted by the Government of Tamil Nadu for Women Empowerment.

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

- Mark the regions of low density of population.
Mark the regions of high density of population.

10. ENVIRONMENTAL ISSUES

Man and Environment

Development and environment are two sides of a coin. Development is highly essential for economic growth of a country but not at the cost of the environment. Man has lived continuously in harmony with the nature. Man has transformed the environment by scientific and technological revolution. In the recent years human intervention in the natural process has created ecological imbalance and environmental damages. Environment is the surrounding of living organisms in which they live and interact. Human beings are dependant on the environment for their basic needs. Needs multiply with the increase of population. To meet these needs, all natural resources in the environment are being used at a rapid rate which leads to long term adverse effect. These adverse effects become environmental issues of the entire surrounding in which human beings live.

Major environmental issues are:-

- Urbanization
- Deforestation
- Environmental pollution and
- Global warming.

Urbanisation

It refers to increasing inhabitants of people with non-agricultural occupation with a higher population density than the surrounding regions. The factors influencing urbanization are, industrialization, commercialization, dense network of transport and communication. The

level of urbanization in Tamilnadu is about 44% as per census of 2001. It is the second highest urbanized State in the country. In Tamilnadu, Sriperumbudur, Kancheepuram and



Arakonam are being urbanized due to rapid industrialization and nearness to the Chennai City and due to this they face higher rate of environmental deterioration.

Unorganised encroachment and uncontrolled growth of slums that spring up on all available chunks of vacant lands, river margins and road margins have created an adverse impact on urban environment. The Tamil Nadu Slum Clearance Board has already taken steps and constructed nearly 3000 shelter units to replace the existing slums.

Table: Slum families along Major Waterways

Name of the river	No of slum families
Coovum River	8266
Buckingham Canal	18423
Adyar River	6624

Source: Census 2001.

ACTIVITY

Find out any slum near your area and assess the living conditions.

Notable impacts of urbanisation

- 1) Large areas of agricultural and pastoral lands around the City are getting converted into residential and industrial areas.
- 2) Increase in traffic and traffic congestion cause environmental pollution.
- 3) Clearance of trees and bushes to meet the fuel and construction needs has reduced the green cover which in turn reduces the amount of rainfall.
- 4) Loss of habitats of animals and birds and depletion of greeneries made the urban air polluted with less oxygen content.
- 5) A rapid increase in the urban population has resulted in the breaking down of sanitary facilities and other infrastructures in cities and towns.
- 6) Land value increases and rent becomes high due to stiff competition for land.

Deforestation

Deforestation is simply the cutting down of a tree. It has seriously affected the quality of environment by increasing the temperature, decreasing rainfall, top soil erosion, loss of bio-diversity and flash flood. Trees play an important role in maintaining the environmental balance.

Long term effects of Deforestation

The long term effects are climate change and loss of bio diversity. Climate change occurs due to an increase of green houses gases such

as carbon dioxide. An increase in carbon dioxide will increase the temperature of the earth and will therefore alter the weather.



Deforestation

Deforestation ruins the habitat of the animals and plants causing them to die. Destruction of forest affect the beauty of an area and directly exerts an impact on tourism.

Short term effects of Deforestation

Fast depletion of forests urges rural people to use inferior quality firewood and make them to spend more time on fuel collection. Shortage of forest also force the villagers to use more commercial fertilizers in the place of organic manures. Fodder for grazing cattle diminishes resulting in decreasing number of live stock. Loss of green cover leads to soil erosion. Landslide occur due to in discriminate cutting of trees(Ooty and Coonor).

Activity

List the uses of a tree

- 1)
- 2)
- 3)
- 4)
- 5)



Bio Diversity

Wide variety of living organisms including plants, animals and micro organisms are collectively referred to as bio diversity.



Bio diversity

Today, human beings are largely to be blamed for their irrational activities that cause bio diversity losses.

Loss of Bio Diversity

Extinction of plants and animals due to natural causes or human activities is called loss of bio diversity. It leads to an ecological imbalance.

Major threats to biodiversity in Tamil Nadu are:

- 1) Uncontrolled commercial exploitation of natural resources like forests, coastal areas, wetlands and habitat destruction.
- 2) Conversion of rich bio diversity sites for human settlements and industrial development.

ACTIVITY

Areas in Pichavaram and Muthupet with dense mangroves suffered due to human encroachment. (Guess as to what human activities threaten these areas)

To protect the biosphere, biosphere reserves have been set up in the Nilgiris and Gulf of Mannar.

The main objectives of the reserves are:-

- 1) To conserve the genetic diversity of species and to restore degraded ecosystems to their natural and original conditions.

Do you know?

Common household items derived from killing animals:

1. Paintbrush - from wild boar and mongoose
2. To produce 100 gm of silk - about 1500 moths are boiled to death
3. Silver foil - Ox-gut is used (intestine)
4. Lac - To produce 1 kg. of lac 300,000 insects are killed.

Global Warming

It is one of the major issues that everyone of us is faced with. It may be defined as an increase in the atmospheric temperature near the earth surface due to rise in carbon dioxide levels and the greenhouse effect.

Causes

Emission of greenhouse gases like carbon di-oxide, methane, nitrus oxide and choloro fluoro carbon.

Burning of fossil fuels (coal and petroleum) and aggravated deforestation.

Effects of Global Warming

- 1) Heat waves and fluctuating weather cause diseases and warming up of Antarctic and Arctic oceans.
- 2) Sea level rise and coastal flooding due to glaciers' melting.
- 3) Coral reef bleaching due to change in ecosystem.
- 4) Frequent drought, fire and heavy snowfall.



Melting of Glacier

Control of Global Warming

A few controlling measures are:

- 1) Switching over from non-renewable energy sources to renewable energy.
- 2) Stopping the emission of greenhouse gases.
- 3) Afforestation and encouraging people to use public transport.

Role of man in protecting the deteriorating environment

It is now the duty of every citizen of the world to conserve all the resources and aim at sustainable development. Human beings need to change their lifestyle and realize that they should take special responsibility towards protection of the environment. The following are the steps to be taken for protecting our green earth from degradation.

- 1) Maintaining harmony with the nature and protecting the environment
- 2) Eco-development eco-efficiency and eco-friendly technology for the protection of natural resources.
- 3) Switching off the unused lights and electrical equipment. at home and save fuel in transport.
- 4) Stabilising the population growth,

control of overconsumption of natural resources and preservation of biodiversity.

Pollution

Substances released into an environment that cause harm to living organisms and built up structures are called pollution. Any substance that causes pollution is called pollutant. Pollutants are of two types: chemical and biotic. Our planet is getting choked with poisonous gases released from industries and vehicles. The problem is worse in crowded metropolitan cities. On the basis of sources, they are classified as

- 1) Air pollution;
- 2) Water pollution; and
- 3) Noise pollution

Air pollution

The air which contains traces of undesirable gaseous, liquid or solid components that creates health hazard is called polluted air.



Air Pollution

These undesirable components in air adversely affect the health of the living beings and respiratory diseases are caused due to air pollutants.

Chief sources of air pollution

- 1) Industrial wastes;
- 2) Automobiles;

- 3) Domestic wastes;
- 4) Thermo-nuclear wastes;
- 5) Volcanic wastes and forest fires.

In Tamil Nadu air pollution is heavy and widespread in urban areas due to vehicular growth, higher concentration



Vehicular pollution

of industries along with thermal power plants and indiscriminate burning of garbage and refuse.

Effects of air pollution

- 1) Global warming;
- 2) Acid rain;
- 3) Ozone depletion;
- 4) Smog; and
- 5) Health problems

Find the chemicals by substituting the missing letters

Harmful effects of certain chemicals

- 1) L__ d- can damage the working of the kidneys and intestines.
- 2) M____y__ can lead to paralysis and mental retardation
- 3) C____nmo____e_ reduces oxygen carrying capacity of blood
- 4) _it__gen d__ xi__ causes irritation in the eyes
- 5) Su____r____xide_ causes severe lung ailments
- 6) Hy__ _gen__ _phide causes sore

throat, takes up the iron from blood.

- 7) It causes acute poisoning of tissues. (hydrogen sulphide, sulphur dioxide, tin, nitrogen dioxide, carbon monoxide, mercury and lead)

Water Pollution

Contamination of water is due to pollutants released from

1. Sewage and domestic wastes.
2. Pesticides and agricultural run offs;
3. Industrial wastes;
4. Nuclear wastes;
5. Oil spills.



Water Pollution

Industrial Waste (dyeing Industrial Water)

Harmful effects of water pollution

- 1) It destroys microorganisms in water and affects aquatic life.
- 2) It causes water borne diseases such as cholera, jaundice, dysentery and typhoid.
- 3) Damages crops, decreases agricultural production due to deterioration of soil quality and fertility.
- 4) Oil spill results in death of sea organisms.

River Pollution in Tamil Nadu

Most of the rivers of Tamilnadu are non-perennial in nature. Due to irregular supply of water the rivers are mostly used to carry effluents of

tanneries, textile bleaching, dyeing and hospital wastes.

The indiscriminate discharge of effluents from textile bleaching and dyeing units in and around Tiruppur, Erode and Karur areas have caused pollution in the river system of Noyyil and Amaravathi. Effluents from tanneries is the main reason for land quality deterioration in the Palar river basin of Vellore district. Most towns located along the banks of four major rivers cause sewage pollution. The Kaveri river receives sewage from 11 towns, Palar from 6 towns, Vaigai from 5 towns and Tamiravaruni from 3 towns.

The Government imposed a total ban on setting up of highly polluting industries close to important water sources such as the Kaveri and its tributaries, Ponnaiar, Palar, Vaigai and Tamiravaruni. Tamil Nadu Pollution Control Board (TNPCB) has set up a special monitoring cell in the head office for monitoring the highly polluting industries. Ooty, Kodaikanal and Yercaud lakes are monitored by GEMS (Global Environment Monitoring System). Chennai City River Conservation Project has taken up Cooum River Buckingham Canal, Adyar River, Otteri Nallah and Mamblam Canal for cleaning up.

Soil and land pollution

Land pollution is the contamination of land by solid wastes. Any substance that reduces the productivity of the soil and lessens the quality is known as a soil pollutant and the process is known as soil pollution.

Sources of soil and land pollution

Land pollution is caused due to dumping and accumulation of solid wastes from agricultural, industrial and urban sources.



Dumping of Waste on land

The excessive use of artificial fertilizers and pesticides greatly reduce the quality and fertility of the soils.

Table : Solid wastes generated in major cities of Tamil Nadu

City	Tons/Day
Chennai	3500
Madurai	711
Coimbatore	710
Trichy	408
Salem	330
Tirunelveli	210

Effects of soil pollution

Harmful chemicals enter food chain and cause harmful diseases. Pesticides affect the central nervous system, liver and damage reproductive organs.

Noise pollution

Noise can be defined as the unwanted and undesirable sound. Noise pollution is severe in the industrialized, urbanized and thickly populated regions of Tamil Nadu. Ambient noise level in Chennai is about 75-80 decibels, Coimbatore 80-85 decibels and Madurai 70-75 decibels.

Harmful effects of noise pollution

- 1) It causes loss of hearing, headache, mental disorder, anxiety and stress.
- 2) Excessive noise causes vibration in buildings .

- 3) Disturbs sleep which leads to irritability and nervous disorder.
- 4) The fertility of living organisms gets reduced considerably due to noise pollution.

The Tamil Nadu Government has taken several steps to protect and preserve the environment. They are:

- 1) Rehabilitation and reclamation of forest resources through afforestation.
- 2) National Green Corps: It is mainly to strengthen environmental awareness among school children. The programme was launched in 29 districts at the rate of 100 schools per district. Nearly 3 lakh children are participating in this programme.
- 3) Environmental awareness camps, competition and eco-celebration:

Celebrations of special days like World Environment Day (June 5th), Earth Day (April 22nd), Ozone Day (16th September) are celebrated every year.

- 4) Segregating solid wastes into different types on the basis of degradation through waste management.

5) Electronic Waste Management

The increasing pace of IT and Electronic industries generate 70% of e-wastes and should be disposed through the authorized recyclers as approved by the TNPCCB.

- 6) In order to control the emission from goods transport vehicles, vehicle emission monitoring stations are set up in Chennai by the TNPCCB at Alandur, Madhavaram and Ambattur areas and in the other districts at Nilgiris, Dindigul, Palani and Chengalpeta. Three monitoring stations have been established at Guindy,

Vyasarpadi and Thirumangalam in Chennai to check vehicular emission. There are 46 air pollution monitoring stations in the city of Chennai.



Electronic waste

- 7) To create SINGARA CHENNAI, parks, flyovers, bridges, modernization of beaches and relaying of footpaths and roads, besides clearing encroachments have been undertaken.

Do You Know ?

House Sparrows are not found now-a-days due to electromagnetic waves from mobile towers.

Tiger population is going down rapidly due to poaching.



EXERCISES

I) Choose the correct answer.

1. The surroundings in which organisms live and interact is called _____.
a) Environment b) Ecosystem c) Lithosphere d) Biosphere
2. The process of clearing the forests by human is called as _____.
a) Afforestation b) Deforestation c) Cultivation d) Attrition
3. The process by which ecosystem species become extinct is _____.
a) Loss of biodiversity b) Deforestation c) Acid rain d) Bio-diversity
4. The excessive use of artificial fertilizers greatly reduces the quality of _____.
a) Air b) Soil c) River d) Sea

II) Match the following.

- | | |
|--------------------|---------------------------|
| 1. Global warming | pesticides |
| 2. Deforestation | air pollution |
| 3. Automobile | unauthorized encroachment |
| 4. Water pollution | CO ₂ |
| 5. Urbanisation | coastal flooding |
| | H ₂ O |
| | Congestion |

III) Answer in brief.

1. What are the major environmental issues?
2. What is global warming?
3. What is deforestation?
4. Name some of the greenhouse gases.
5. What is pollution?
6. What is urbanization?
7. What are the main threats to biodiversity?
8. What are the sources of land pollution?

IV) Answer in a paragraph.

1. What are the effects of global warming?
2. What are the main objectives of the biosphere reserves?
3. Mention the areas of water pollution in Tamil Nadu and what steps have been taken by the Government to stop it?

4. What steps have been taken by the Tamil Nadu Government to protect and preserve the environment?
5. What are the adverse effects of deforestation?

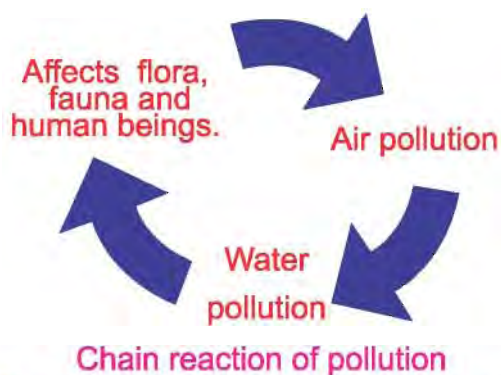
ACTIVITY

1. Collect information on various environmental issues other than what is mentioned in your text. book.
2. Discuss the environmental problems faced in your locality.

11. CONSERVATION OF RESOURCES AND SUSTAINABLE DEVELOPMENT

Nature is generous in providing a variety of resources to the people. Humans in modern civilization, with advanced development in science and technology, utilize these resources beyond permissible limits. It has led to environmental degradation. In response to it, humans have been forced to think of conservation and preservation of all kinds of resources.

Resources are valuable and are mandatory for life. The existence and purity of one resource reflects the status of the other and finally the human beings. Therefore proper management techniques should be adopted for retaining the uniqueness of these natural resources.



Activity

- 1) Draw a flow chart to represent the chain reaction of the ill-effects of pollution in your locality.
- 2) Find the source of pollution
- 3) Interact with other students to know the intensity of the ill-effects of such pollution.
- 4) Find few methods to reduce the ill effects.
- 5) Conduct an awareness programme regarding this, among other students and the public.

Conservation of resources means a judicious and planned use of natural resources so that the different resources are also left over to the benefit of the future generations. Preservation is to protect the resources without using it for a longer duration.

Conservation of land resources

Soil is the most important land resource as it provides room for all human activities. In Tamil Nadu soil erosion by wind is very common in Kambam valley, parts of Thirunelveli, Thuthukudi and Ramanathapuram. Soil erosion by river flow and deforestation occur along the hill slopes of the Western Ghats. Several soil erosion control schemes have been successfully implemented by the Tamil Nadu government. Tamil Nadu Agricultural Department has set up soil testing laboratories at village level to help farmers with the scientific assessment of soil quality and treating method. Every district has a soil research station to help the farmers in assessing the fertility of the soils. Soil conservation is done in two ways: namely restoring soil fertility and preventing soil erosion.

Do you know?

Soil health card is issued to the farmers to monitor the soil status. There are also 16 mobile soil testing laboratories to serve the villages in Tamil Nadu.

Conservation	Preservation
1) Afforestation is one method to conserve forest. 2) Drip irrigation is one method of conservation of water. 3) Seasonal shearing of fur of animals is one of the methods of conservation. 4) Protecting animals in their habitats is also conservation.	1) Declaring an area as a reserve forest is preservation. 2) Percolation tank is a technique for preserving underground water. 3) Reproduction of endangered animals in captivity is preservation. 4) Delimiting an area for biosphere reserve is preservation.

Types of soil erosion and conservation methods



Sheet erosion



Gully erosion



Wind erosion



Inter cropping



Contour ploughing
Restoring soil fertility



Terrace farming



Farm waste and garbage



plus beneficial bacteria and fungi



equals biofertilizer

Conservation of Forests and Wildlife in Tamil Nadu

TamilNadu has 17% of its land area under forest cover. Forests are rain harvesters, rechargers of soil moisture, reservoirs for underground water, habitats for variety of fauna and flora, and stabilizers of environment. For constant supply of forest products in a region at least one-third of the area should be under forests.

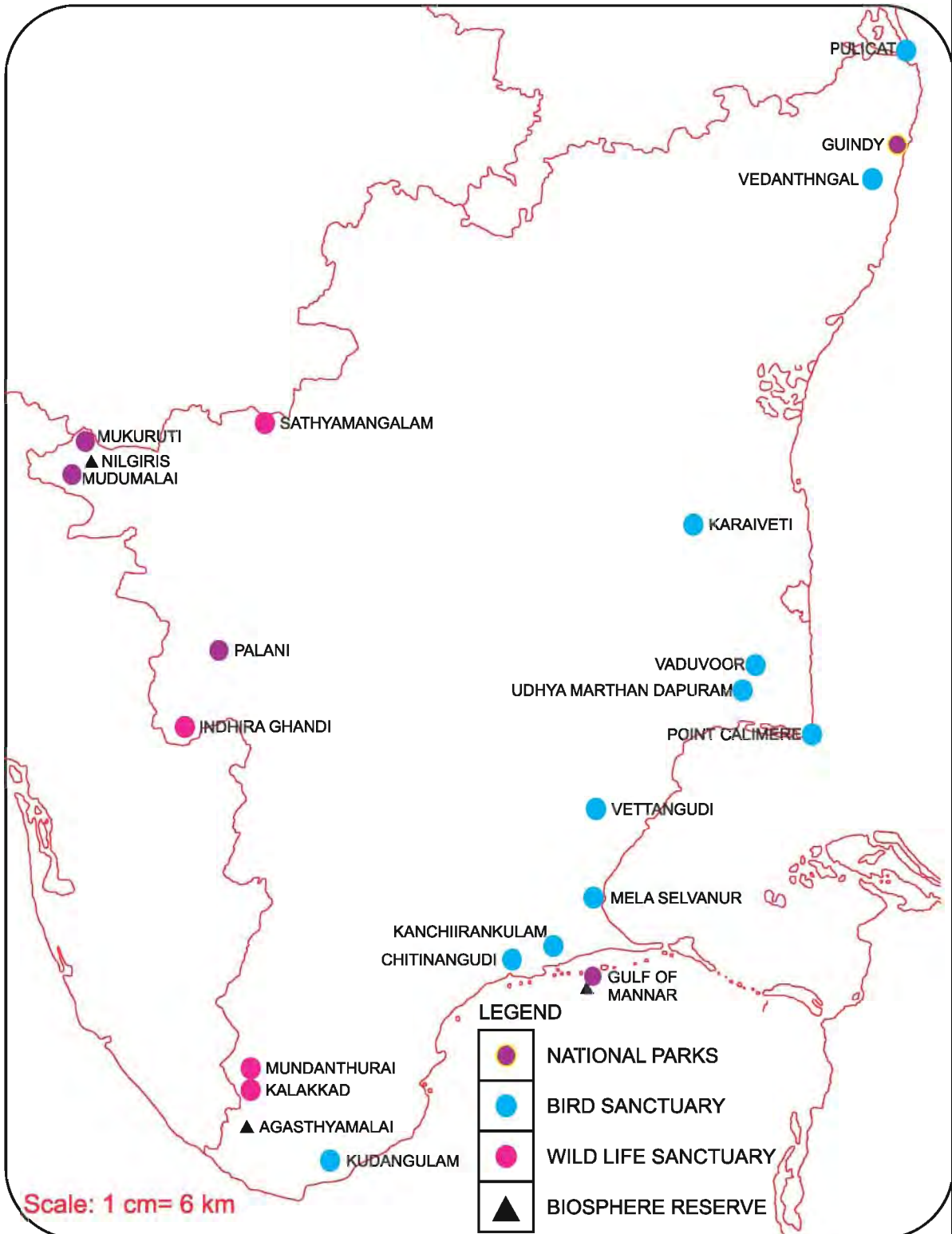
Many afforestation programmes are carried out in Tamil Nadu by both governmental and non-governmental organizations. The trees are planted along the road sides, railway tracks, river banks, and catchment areas

under social forestry schemes. The vacant lands available in villages are brought under community forest schemes. A comprehensive programme to retain the ecological balance and maintain the bio-diversity has been undertaken as Peoples' Participatory Programme in selected areas. There are 13 Bird Sanctuaries 5 National Parks and 7 Wildlife Sanctuaries in Tamil Nadu. Birds from arctic region visit the sanctuaries in Tamil Nadu every year during the winter season for breeding. Like the Project Tiger, Project Elephant has been launched by the Government to save elephants from extinction.

Table: Bird Sanctuaries and Wildlife Sanctuaries of Tamil Nadu

1) Chitrangudi Bird Sanctuary	Ramanathapuram District
2) Kanjirankulam Bird Sanctuary	Ramanathapuram District
3) Melaselvanur - Kilaselvanur Bird Sanctuary	Ramanathapuram District
4) Gulf of Mannar Marine National Park	Ramanathapuram District
5) Karaivetti Bird Sanctuary	Ariyalur District
6) Koothankulam Bird Sanctuary (Largest Reserve)	Thirunelveli District
7) Kalakkad Wildlife Sanctuary Tiger Reserve	Thirunelveli District
8) Mundanthurai Sanctuary	Thirunelveli District
9) Point Calimere Wildlife and Bird Sanctuary	Thanjavur District
10) Pulicat Lake Bird Sanctuary	Thiruvallur District
11) Udayamarthandapuram Bird Sanctuary	Thiruvarur District
12) Vaduvor Bird Sanctuary	Nagapattinam District
13) Vedanthangal Bird Sanctuary	Kancheepuram District
14) Vellode Bird Sanctuary	Erode District
15) Sathyamangalam Sanctuary	Erode District
16) Vettangudi Bird Sanctuary	Sivagangai District
17) Mudumalai National Park	Nilgiris District
18) Mukurthi National Park	Nilgiris District
19) Mudumalai Wildlife Sanctuary	Nilgiris District
20) Guindy National Park	Chennai District
21) Palani Hills National Park	Dindigul District
22) Grizzled Squirrel Wildlife Sanctuary	Virudhunagar District
23) Indira Gandhi Wildlife Sanctuary	Coimbatore District
24) Kanyakumari Wildlife Sanctuary	Kanyakumari District

Tamil Nadu National Parks and Wild life Sanctuaries



Activity

Name the sanctuaries located nearby in your district. List birds, animals and plants known in that sanctuary.

Birds of Tamil Nadu

The following are the list of birds that are native to Tamil Nadu.



Spot-billed Pelican



Common spoonbilled stork

Spot-billed Pelicans, Cormorants, Egrets, Grey heron, Stork, White Ibis Common Spoonbills Flamingos Teals, Gulls, Terns, Plovers and Stilts Little Cormorant, Darter, Indian Reef Heron, White necked stork, Black-headed Munia, White-breasted Kingfisher, Spotted Dove, Pintail Ducks, Darter Asian Openbill Stork and Night Herons. Apart from these, migratory birds such as Garganey, Teals, Shovallers also can be seen in the state.



Painted stork

Animals of Tamil Nadu

Tiger, elephant, Nilgiri tahr hare, squirrel, dugong, sea turtles dolphin, chital black buck, grizzled giant squirrel, flying squirrel, tree shrew, panther, sloth bear, wild boar, dhole, Nilgiri languor, and lion-tailed Macaque are the common animals of Tamil Nadu.

Appiko movement synonymous to chipko movement, started in Karnataka and spread over forests of Eastern Ghats in Tamil Nadu. This is a comprehensive people's participatory movement. It aims at saving the remains of tropical wet evergreen forests in the Western Ghats. It is initiated to restore the denuded forest areas, to propagate the rational use of forest products and to relieve the pressure created on forest resources. The popular slogan for this movement is "to save, to grow, and to use rationally" Alternative energy sources have been popularized among the villages which have reduced firewood consumption to nearly 40% in Southern India.

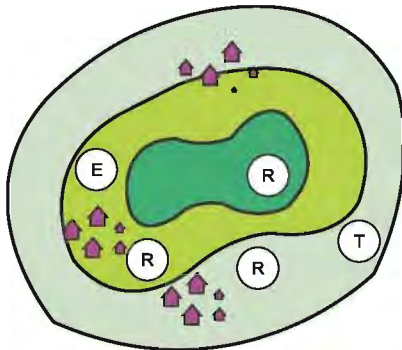
Do you know?

The UNESCO's Man and the Biosphere Programme (MAB) was established in 1977 to promote an interdisciplinary approach in research, training and communications in ecosystem conservation and rational

use of natural resources. This resulted in forming 553 biosphere reserves in 107 countries of the world.

Biosphere Reserves

Biosphere reserves are a series of protected areas linked through a global network, intended to demonstrate the relationship between conservation and development. It consists of;



Model of biosphere reserve

- Core Area
- Buffer Area
- Transition Area
- Human Settlement
- R Research
- E Education / Training
- T Tourism/ Research

- a) An inner core area which is well protected.
- b) A buffer zone with facilities for education training and research.
- c) An outer transition area for tourism and recreation.

Tamil Nadu has three such Biospheres in Nilgiris, Gulf of Mannar and Agastiyamalai.

Do you know?

The notable governmental and non-governmental organizations that are actively engaged in conserving medicinal plants of Tamil Nadu are

1) FRLHT (Foundation for Revitalization of Local Health and Traditions)

2) Tamil Nadu Forest Department

3) DANIDA (Danish International Development Agency).

Tamil Nadu Forest Department has initiated two methods to conserve medicinal plants in the forests with the help of non-governmental organizations. As a part of it Medicinal Plants Conservation Areas (MPCA) have been identified to protect the endangered species of plants. There are 11 MPCAs in Tamil Nadu in the following places:

- 1) Alagarkoil
- 2) Kodaikanal
- 3) Kolli Hills
- 4) Kurumbaram
- 5) Kuttralam
- 6) Mundanthurai
- 7) Ambasamudhram
- 8) Pechiparai
- 9) Thaniparai
- 10) Thenmalai and
- 11) Top Slip

Medicinal Plants Development Area (MPDA) is yet another method which aims at restoring degraded forests by raising the native plants with community participation.

There are eight such MPDAs in Tamil Nadu. They are in

- 1) Attur
- 2) Chengalpattu
- 3) Coimbatore
- 4) Dharmapuri
- 5) Doddabetta
- 6) Madurai
- 7) Salem and
- 8) Vellore

Activity

Name a few medicinal herbs and their usage.

Example: Thulasi is used as medicine for cough and common cold.

Wetland conservation

Areas of marshy land not exceeding 6 m depth with or without permanent water, is classified as **wetlands**. A wetland has a prominent role in groundwater recharge. A wetland area directly or indirectly support many people and is a salient caretaker of the entire region. Tamil Nadu has such wetland areas in the following places: Point Calimere, Kazhuveli in Villupuram, Pallikaranai in Chennai, Muthupet, and Pichavaram and in a few pockets of Ramanathapuram district. Government has taken steps to restore these regions, realizing the immense benefit they provide for the entire surroundings.

Conservation of water

Water is the basis for life. It is essential to conserve water and to protect water from being polluted. Watershed management is the comprehensive method to conserve water not only during heavy rains when rivers and tanks are over-flowing but also during dry season when they are devoid of water. Linking rivers which have surplus water with rivers in deficit areas is a wise suggestion to manage the twin problems of flood and drought.

Common practices of conservation of water are

- 1) Wastage of water should be avoided.
- 2) Rainwater harvesting methods and construction of small check dams to arrest water from runoff and to store water for ground water recharge.

3) Recycling of water wherever possible.

4) Grow more trees. Trees act as sponge in absorbing excess water and recharge the underground water reserve.

Activity

Look at these pictures and discuss about issues of water.

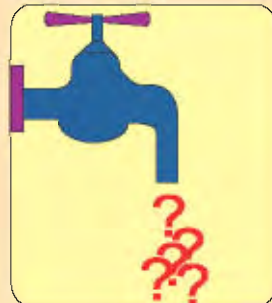
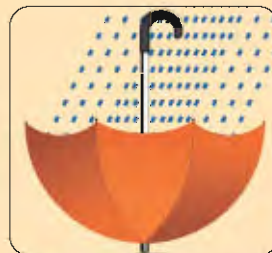
Do you pay for your potable water?

List the possibilities of saving water in your neighbourhood.

Write slogans to save water, like "Do not watch rain, catch rain".

Activity

As an individual list the possible ways by which one can reduce the amount of water used everyday.



List the ways by which wastage is avoided and yet sufficient water is supplied to plants in agriculture.

Find out by discussion how to use recycle water in industries.

Conservation of Energy

Energy produced by conventional resources is definite to be exhausted in future. Therefore, every country is

trying to trap energy from renewable resources like energy from winds, waves, bio-gases, and bio-fuels. Under the scheme Bio-Gas Development Programme Tamil Nadu has installed 1,285 Bio-Gas plants up to March 2008. Tamil Nadu Government is a pioneer in bio-fuel production. It is one among the nine states to use 5% ethanol blended fuels for vehicles since 2003.

The state Forest Department, Government of Tamil Nadu has established Karanja based biodiesel esterification plants at three locations. These plants are based on the TNAU model developed at Hosur and Thuthukudi Forest Division.



Jatropha plant and seeds

Do you know?

Esterification is the general name for a chemical reaction in which two reactants form an ester as the reaction product. Ester is used in fragrance and flavour industry for their pleasant, fruity odour.

Seeds of Jatropha plant is used in the production of biofuel. Other seeds used in the production of biofuels are neem, karani and pungam.

Any developmental programme aiming at development of a place should meet the needs of the present generation without compromising the right of the future generations to do so. This is known as Sustainable Development.

Conservation and preservation are not only for natural regions and resources but also for the large built-up areas in cities. Eco-friendly building materials and techniques are emerging in the market in order to conserve and preserve our natural resources without sacrificing our comforts.



It is very important to realize that the nature's gift, in the form of resources should go to the hands of next generation with minimum damage.

EXERCISES

I) Choose the correct answer .

- 1) In Tamil Nadu soil erosion by _____ is very common in Kambam valley.
a) wind b) river c) glacier d) wave
- 2) For constant supply of forest products in a region at least _____ of the area should be under forest.
a) three-fourths b) two- thirds c) one-third d) one-fifth
- 3) Seasonal shearing of fur of animal in captivity is _____.
a) conservation b) preservation c) protection d) destruction
- 4) Protecting animals in their habitat is in
a) Preservation b) Sanctuary c) Park d) zoo
- 5) Garganey, Teals and Shovallers are _____ birds.
a) migratory b) native c) captivity d) domestic

II) Match the following.

- | | |
|-------------------|--------------------|
| 1) Gulf of Mannar | Tiger reserve |
| 2) Point Calimere | Elephant reserve |
| 3) Agastiyamalai | Marine sanctuary |
| 4) Mudumalai | Bird sanctuary |
| 5) Mundanthurai | Biosphere reserve |
| | reserve forest |
| | squirrel sanctuary |

III) Give brief answers.

- 1) Give reason for conservation and preservation of all kinds of resources.
- 2) Distinguish between conservation and preservation.
- 3) Distinguish between MPCA and MPDA
- 4) Define Sustainable Development.

IV) Answer in a paragraph.

- 1) What are the common practices of conservation of water?
- 2) What are the methods of soil conservation?
- 3) Describe about Appiko movement.
- 4) Describe about bio-sphere. reserve.

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

- 1) Bird sanctuaries, National parks, Biosphere reserves.

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, ie, 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

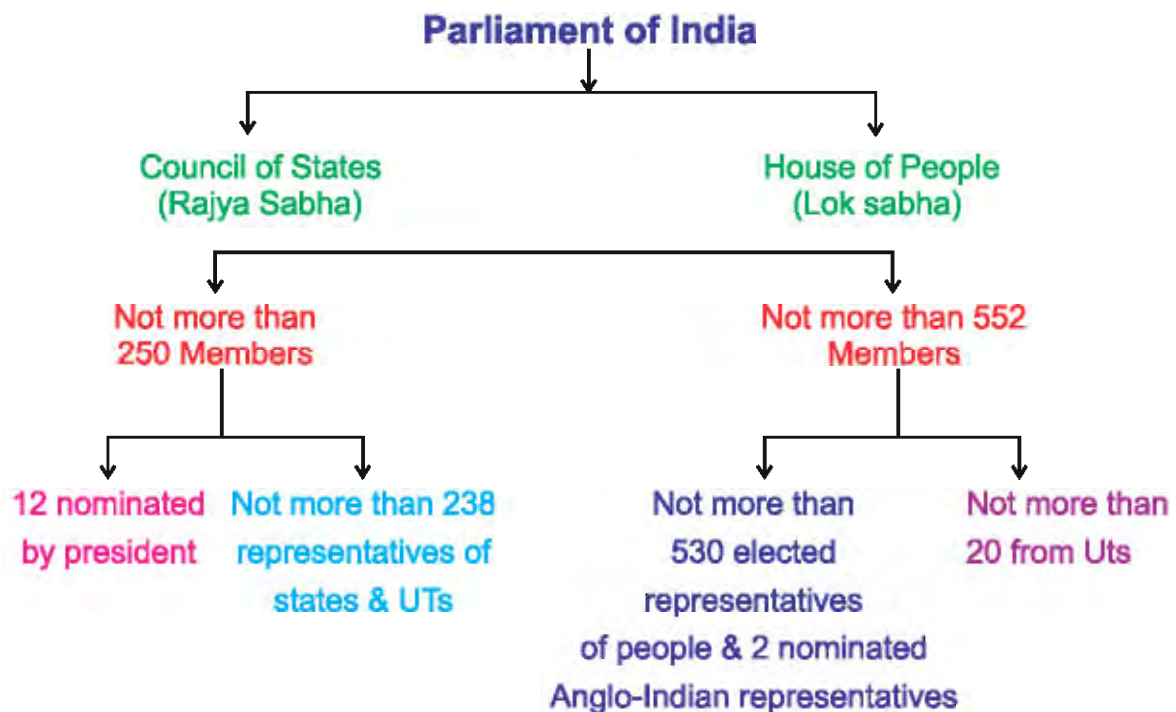
1. THE UNION GOVERNMENT



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

The Lok Sabha is the popular 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 different 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

Do you Know?

1. Present elected members of Lok Sabha are 543 in number and two Anglo-Indian members are nominated by the President of India.
2. For Lok Sabha, Candidate can contest the election from any part of India.

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 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 cut short 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. The emergency provisions of the Constitution enable the President to prorogue or dissolve the Lok Sabha either on the advice of the Prime Minister or on being convinced that no party or no alliance of Parties enjoys necessary majority support in the House.

ELECTION

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 is 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.

Can You name the first woman speaker of Lok Sabha ?



Tmt. Meera Kumar

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 or social service.

Do you Know?

1. Members should not exceed 250
2. Nominated membership may go up to 12.



Rajya Sabha

QUALIFICATION

A person seeking membership of 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 must possess such other qualification as may be prescribed by the Parliament for that purpose from time to time.
- ⇒ 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 the Rajya Sabha.

Name the present Chair person and Vice Chair person of Rajya Sabha.

ELECTION

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.

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 to be paid by the people.

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 nominated 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.



Smt. Pratibha Devisingh Patil

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.

QUALIFICATIONS OF THE PRESIDENT

- ⇒ The Constitution lays down qualifications for a presidential candidate.
- ⇒ 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 National Capital Territory of Delhi and Puducherry. The President of India can be relieved 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 N.C.T Delhi, Puducherry.

POWERS OF THE PRESIDENT

The powers of the President can be divided into two categories

1. Power in normal times
2. Emergency powers

In normal times the president enjoys the following powers:

1. Executive Powers
2. Legislative Powers
3. Financial Powers
4. Judicial Powers

5. Military Powers

6. Diplomatic 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 is authorized to make a number of appointments. He/she appoints the Prime Minister and other members of Council of ministers, the Judges of Supreme 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. He represents the State in international affairs.

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 President has the powers to nominate twelve members to the Rajya Sabha who are having special knowledge or practical experience in respect of such matters such as art, literature, science or 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 previous sanction 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**

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).

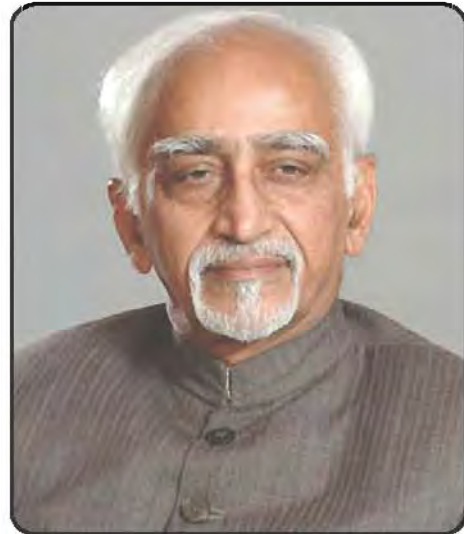
*** Financial emergency**

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. 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.



Shri M. Hamid Ansari

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.

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.



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



Dr. Manmohan Singh

policy making body which formulates the policies and programmes of the state. He / she is the principal advisor to the President on all governmental issues.

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 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

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 26 Judges including the Chief Justice

Appointment of Judges

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 Constitution also provides for the appointment of judges (besides the regular judges) to the Supreme Court on an ad-hoc (temporary) basis.

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 21 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 into 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".

Activity

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.

Do you know ?

There is one High Court for Punjab, Haryana and Union Territory of Chandigarh. Similarly, there is one High Court in Chennai for Tamilnadu and the Union Territory of Puducherry. Can you give any other example?

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.

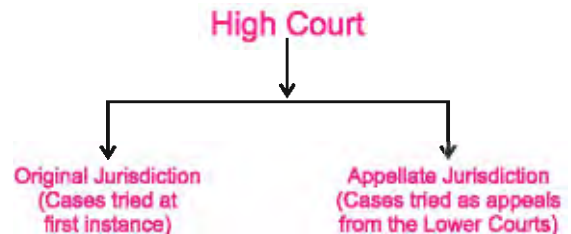
Originally the age of retirement of the judges was fixed at 60. By the 15th Amendment to the Constitution in 1963 the age of retirement of the judges was raised to 62.

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

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.

Activity

Find out what are the courts below the High Court in a state? Who is a sessions judge?

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 judgment 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.

Activity

Learn more about the importance of law and justice for mankind.

Know more things about how the various courts in the state are functioning.

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

EXERCISE

I) Choose the correct answer.

1. The parliament of India consist 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) 545
 - d) 250
4. Members of Lok Sabha are elected by
 - a) Indirect election
 - b) Direct election
 - c) Chair person
 - 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 President of India is _____
 - a) Mrs. Sonia Gandhi
 - b) Dr. Manmohan Singh
 - c) Smt. Pratibha 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) 26 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) 1947 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 the Rajya Sabha Member?
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. Describe about the 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 about 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.

2. THE STATE GOVERNMENT

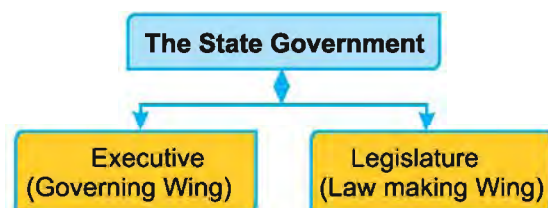
India is a union of 28 States and 7 Union Territories. Among the 7 union territories, "DELHI" is the "National Capital Territory". The States are administered by the State Governments. The Union Territories are administered by the President through the Lieutenant Governors or Chief Administrators.

Delhi attained the status of National Capital Territory by the 69th amendment of the Constitution in 1991.

The powers and functions of the State Governments are clearly defined in the Constitution. They are responsible for the administration of the subjects in the "State List" of the Constitution. Like the Government at the centre, the State Government also has its own legislative and Executive wings.

Activity

Do you know the other two lists besides the "State List" mentioned in our Constitution?



Articles 152 to 237 of our constitution mention clearly about the administration of the states. Articles 153 to 160 deal with the appointment, qualification, powers and functions of the Governor.

Activity

Do you think the separation of powers are needed or any one organ can be enough for looking after all the matters?

The Executive

The State Executive in each State consists of the Governor, the Chief Minister and the Council of Ministers. The State Executive.

The State Executive

Governor

Chief Minister

Council of Ministers

Activity

What does the State Executive consist of ?

The Governor

The entire executive authority rests with the Governor. He is the nominal and Constitutional head of the State Government. The Council of Ministers with the Chief Minister as the head, is the real executive. The Council of Ministers is collectively responsible to the State Legislative Assembly.

The Appointment of the Governor

The Governor is appointed by the President by warrant under his hand and seal. He / She can be transferred from one State to another by the President. The Governor has to take an oath of office before the Chief Justice of the High Court.

Qualifications

- ⇒ He / She must be a citizen of India
- ⇒ He / She should have completed 35 years of age.
- ⇒ He / She should not be a member of Parliament or of any state

legislature. If so He/ She has to vacate the post.

- ⇒ He / She should not hold any office of profit under state or central government.
- ⇒ He / She should not belong to the same state where He / She is appointed as the governor.



Raj Bhavan, Chennai

The term of office

The term of office of the Governor is normally "five years". But he / she holds office during the pleasure of the president. The President can remove the Governor before the expiry of his term or can extend his term for another five years. The Governor can resign from his post but no impeachment proceedings against him are contemplated in the constitution.

Activity

Name the woman Governor of Tamilnadu

Powers and functions of the Governor

According to article 164 of the Constitution, the Governor appoints the Chief Minister and other Ministers on the advice of the Chief Minister. He also appoints the Advocate General, Chairperson and members of State Public Service Commission, Vice-Chancellors of the universities in the state etc. The Governor has to send

periodical reports to the President regarding the functioning of the State Government. He directly rules the state when there is imposition of the President's rule.

The Governor is the part of the State Legislature. He / she nominates 1/6 of the members to the Legislative Council wherever it exists. The Anglo Indian representative in the state Assembly is also nominated by the governor. All bills passed by the State Legislature become "laws" only with his/her assent. He/she can pass "Ordinances" when the Legislature is not in session.

If there is problem in law and order situation in any state, the President issues a "proclamation" under Art.356 of the Constitution by which the State Assembly will be dissolved. The Governor under such circumstances gets real administrative powers. This is called as "President's Rule".

Activity

What are ordinances?

The "Ordinances" issued by the Governor will have the same effect of the "law of the state". But, the ordinances must be ratified by the State Legislature, within 6 weeks of reassembling State Legislature.

The permission of the Governor is necessary for introducing money bills in the State Legislature. "Demand for Grants" can be made only on the recommendation of the Governor. "State Budget" is presented in the Legislative Assembly only with his / her permission. The Constitution empowers the Governor to spend money from the "Contingency fund of the State" to meet unforeseen expenditure.

Activity

What do you know about "Money Bill"?

The state Budget is the "Annual Financial Statement" which states the income and expenditure of the state for the forthcoming year.

The Governor is empowered to pardon, commute or suspend the sentence of any criminal convicted under the jurisdiction of the state (high court) on advice from the state's cabinet/chief minister however, he / she has no powers to increase the punishments. The Governor receives annual report of the State Public Service Commission and submits the same to the Legislature for the consideration and approval.

The Chief Minister and the Council of Ministers

Chief Minister

The real executive powers of State Governments are vested in the Council of Ministers, headed by the Chief Minister. In the State, the Chief Minister runs the administration in the name of the Governor. His position in the state is similar to that of the Prime Minister in centre.

The appointment of the Chief Minister

The Chief Minister is appointed by the Governor of the State. The leader of the majority party or majority group in the State Legislative Assembly is appointed as the Chief Minister. In case no party commands absolute majority in the Legislative Assembly or the majority fails to elect its leader, the Governor can use his power and invite the leader of the other largest party to form the ministry. He has to prove the confidence (majority support) in the Legislative Assembly within the period

stipulated by the Governor.

The term of the Chief Minister is not fixed. He may remain as the Chief Minister as long as he/she enjoys the support of the majority of the members of the Legislative Assembly. He has to resign when he loses confidence of the majority in the assembly. It is understood that normally he completes 5 years term like other members in the Legislative Assembly.

Powers and functions of the Chief Minister

The Chief Minister is the real executive head of the State administration. He has the following powers and functions.

The primary functions of the Chief Minister are

- i) To form the ministry, (Council of Ministers) by preparing a list of ministers.
- ii) Distribute the portfolios (departments) to colleagues and get them allocated by Governor.
- iii) Ask a minister to resign if he fails in his duties.
- iv) He has the right to change the department of ministers at his will and get it notified by Governor.
- v) The Chief Minister is the head of the cabinet. He/she convenes and presides over its meetings.
- vi) He / She is link between Governor and Council of Ministers.
- vii) He/ She can advise the Governor for the early dissolution of the State Assembly.

Council of Ministers

Like the centre, the "Council of Ministers" is the real executive. The Council of Ministers is collectively responsible to the State Assembly. All

of them must be the members of the state legislature. Those who are not the members at the time of their appointment, must secure their seats in the legislature within a period of "Six months". All the ministers have to work as a team under the guidance of the Chief Minister. As long as the Chief Minister is in office, the Council of Ministers also will be in power. If a no – confidence motion is passed against the Ministry in the Legislative Assembly, the State ministry led by the Chief Minister has to resign. If the Chief Minister resigns, the whole Council of Ministers have to resign. This is called "collective responsibility".

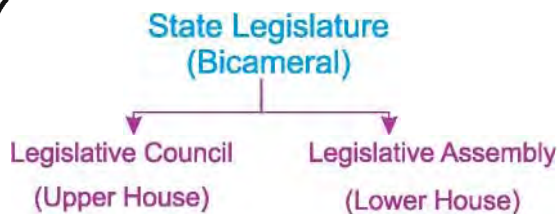
The Legislature

The Constitution provides a legislature for every state. Most of the States have only unicameral legislature i.e., Legislative assembly. Some State have bicameral legislatures (example Bihar, Karnataka, Maharashtra, Uttar Pradesh, Andhra Pradesh and Jammu-Kashmir). The lower house, legislative assembly represents the people of the state. The upper house, Legislative Council represents special interests like teachers, graduates and local governments.



Tamil Nadu Assembly

The constitution (61st Amendment) Act of 1988 lowered the voting age from 21 years to 18 years.



The Legislative Assembly (Lower House)

The Legislative Assembly is the real centre of power in the State. It consists of members directly elected by the people on the basis of “universal adult franchise”. The strength of the assembly varies from state to state depending on the population. The maximum strength of the assembly is 500 and the minimum strength is 60. Some seats in the assembly are reserved for candidates from Scheduled Castes/Scheduled Tribes. They are called “Reserved Constituencies”. In India a person who is not less than 25 years of age can contest in the election to legislative assembly.

The term of office of the legislative assembly is 5 years. It can be dissolved even before the expiry of its term.

Activity

Find out the strength of the Tamil Nadu Legislative Assembly

Speaker

The Legislative Assembly is presided over by the Speaker. The Assembly elects from among its members a Speaker and a Deputy Speaker. In the absence of Speaker, the Deputy Speaker performs his functions. The efficient functioning of the Assembly is in the hands of the Speaker.

Activity

Do you know who is the Speaker of Tamilnadu now?

The Legislative Council (Upper House)

The legislative council wherever it exists like the Rajya Sabha at the centre is a permanent house, but is subject to abolition by Parliament on the recommendation of State Assemblies. 1/3 of the members retire after every second year, and these vacancies are filled up by fresh elections or nominations. It cannot be dissolved.

Its members are indirectly elected. The tenure of elected or nominated member is fixed as six years. And such members are eligible for reelection or renomination. The total number of the members in the Legislative Council of a state shall not exceed 1/3 of the total number of members of the Legislative Assembly of the state. But, it should not be less than 40.

Do you know?

Citizen of India above 30 years of age can contest in the election to legislative council.

Election to Upper House

- ⇒ 1/3 of the members are elected by local bodies
- ⇒ 1/12 of the members are elected by Graduates of the universities in the State.
- ⇒ 1/12 of the members are elected by Graduate teachers.
- ⇒ 1/3 of the members are elected by the members of the Lower House.
- ⇒ 1/6 are nominated by the Governor who are eminent in the field of literary excellence, art, social services or Co-operation.

On November 1, 1986, the Upper House (Legislative Council) was abolished in Tamil Nadu by an Act.

Tamil Nadu is going to have an Upper House in the near future as the Legislative Council has been created by the Parliament and notified by President of India.

The Chairman

The Chairman (chair person he/she) is the Presiding Officer of the Upper house. The Members elect a Chairman and a deputy chairman from among themselves. In the absence of the chairman, the deputy chairman will officiate the functions of the Legislative Council.

Activity

Can you say, which house of the State Legislature is more powerful? Why?

The functions of the State Legislature

The State Legislature, being the law making body of the State makes laws on all subjects mentioned in the "State List" as per the constitution. It can make laws on concurrent subjects also.

The passing of "Bill" in to "Law" have the same procedure as in the Central legislature. (5 stages including 3 readings) . Then it becomes an Act with Governor's assent.

The Legislature controls the finances of the State. "Money Bills" have to be introduced only in the Legislative Assembly (Lower House). No new tax can be levied without the sanction of the Assembly. The appropriation Bills (Demand for Grants) are also introduced only in the Legislative Assembly.

The Council of Ministers is responsible to the Legislative Assembly. The Ministers have to answer the questions put forth by the members of the Legislature. If the Assembly passes a vote of no confidence against the Ministry, they will be removed from office. Thus the executive is accountable to the Legislature.

Activity

What do you know about "question hour" in the Legislature? Is it necessary?

The administration in the state, is run by a team of highest officials, chosen from Indian Administrative Service and Indian Police Service, and the subordinate staff are recruited through the state public service commission.

EXERCISE

1) Choose the correct answer.

- India consists of _____.
 - 26 states and 6 union territories
 - 24 states and 7 union territories
 - 27 states and 5 union territories
 - 28 states and 7 union territories
- The constitution head of the state government is _____.
 - Chief Minister
 - President
 - Prime Minister
 - Governor

3. The Governor is appointed by the _____.
- a) Cabinet b) Ministers c) Chief Minister d) President
4. The Chief Minister and other Ministers are appointed by _____.
- a) President b) Prime Minister c) Governor d) Judge
5. Ordinances are passed by _____.
- a) State Legislature b) Chief Minister
c) Prime Minister d) Governor

II) Answer in briefly.

1. How many states and union Territories are in India?
2. Which is the National Capital territory?
3. How is council of Ministers formed?
4. What is called collective responsibility?
5. What are the duties of the state Legislature?
6. What is the role of the speaker?

III) Answer in a paragraph.

1. What are the powers and functions of the governor?
2. What are the primary functions of the chief minister?
3. Describe about the council of ministers
4. How are the members elected to the upper house of the Legislature council?

3. RIGHTS AND DUTIES OF CITIZENS

The founding fathers of the Indian Constitution were conscious of the need to recognize the basic rights of the people, and to protect these rights from the onslaughts of the transitory aggressions of the executive and legislative wings of the government. A Constitutional guarantee to such fundamental rights becomes indispensable for keeping the democratic spirit of the state. Hence the makers of the constitution consciously included a separate chapter as Part III for enumerating the 'Fundamental Rights'.

In the same way rights if not associated with responsibilities are likely to lead to licentiousness and indiscipline. Hence in 1976, through the 42nd amendment, a separate chapter as Part IV A was inserted in the constitution which enumerates the 'Fundamental Duties' of the citizens. The Constitution Makers also wanted to constitutionally indicate to the rulers, their duties towards their people, by way of enlisting the prospective objectives of their governance. Such Constitutionally indicated objectives or directives to the governments are enshrined as "Directive Principles" in Part IV of the constitution. These three parts i.e. III, IV and IV A together constitute the basis of a democratic welfare state in India.

Fundamental Rights

Part III of the Indian constitution (from Article 12 to Article 35) enshrines certain rights known as Fundamental Rights which are classified as 'under the following heads (i) Right to Equality (Art 14 – Art 18), (ii) Right to Freedom (Art 19 – Art 22), (iii) Right against Exploitation (Art 23 – Art 24), Right to freedom of religion (Art 25 – Art 28), (v) Cultural and Educational Rights

(Art 29–Art 30) and (vi) Right to Constitutional Remedies (Art 32).

Right to equality

The State should ensure that every person is equal before law and all are equally protected by law. In order to establish equality the constitution prescribes (i) non-discrimination between citizens (Art 15), (ii) equality of opportunity for all in matters of Public appointment (Art 16), (iii) abolition of untouchability (Art 17) and (iv) abolition of all titles except military and academic distinctions (Art 18).



Right to freedom

Article 19 of our Constitution guarantees 'six freedoms' to all its citizens.

- (i) Freedom of speech and expression
- (ii) Freedom to assemble peacefully without arms
- (iii) Freedom to form association or unions

- (iv) Freedom of movement throughout the territory of India.
- (v) Freedom to reside and settle in any part of the territory of India and
- (vi) Freedom to practice any profession or to carry on any occupation, trade or business.

Article 20 of the Constitution prohibits arbitrary imprisonment of any person. No person shall be prosecuted and punished for the same crime more than once. No one would be compelled to give a self incriminating evidence.

Article 21 of the Constitution establishes the right of life and personal liberty to all people. Nobody shall be deprived of his life or personal liberty except according to procedure established by law.

Articles 22 of the Constitution prohibits the State from arbitrarily arresting any person. This article provides safeguards to people from arbitrary arrest. People who are arrested shall have the right to be informed about the reasons for the arrest (ii) to consult a legal practitioner (iii) to be produced before a magistrate within twenty four hours of arrest.

Right against exploitation

Article 23 of the Indian constitution prohibits traffic in human beings and forced labour system. This article prohibits slavery, traffic in women or children or crippled persons for immoral purposes like prostitution or begging.

Article 24 prohibits any child below the age of fourteen from working in dangerous, hazardous employment like mining.

Right to freedom of religion

Indian constitution observes an attitude of neutrality and impartiality



towards all religions. Since India is a secular state, it is founded on the idea that the state is concerned with relation between man and man and not with relation between man and God.

Article 25 of the Constitution ensures freedom of conscience, and freedom to profess, practice and propagate religion of ones choice.

Article 26 of the Constitution guarantees the right to establish and maintain institutions for religious or charitable purposes.

Article 27 of the Constitution guarantees the citizen the freedom from payment of taxes for the promotion or maintenance of any particular religion.

Article 28 of the constitution prohibits religious instruction or worship in any educational institution other than religious institution maintained out of state funds.

Cultural and educational rights

Article 29 of the Constitution protects the rights of minorities to safeguard their distinct language, script or culture.

Article 30 of the Constitution grants rights to 'Minorities' to establish and administer educational institutions.

Right to constitutional remedies

Article 32 of the constitution grants the right to move the Supreme court by appropriate writ for enforcement of rights conferred by the constitution. The Supreme Court or High court has the power to issue writs or orders in, the nature of 'habeas corpus', 'mandamus', 'prohibition', 'certiorari' and 'quo warranto' whichever may be appropriate.

Right to education Guaranteed under Act 21 A

Based on this, a new act of 2009 guarantees free and compulsory education to children below the age of 6-14 free and compulsory education.

Fundamental Duties

Part IV A of the constitution in Art 51A enshrines the fundamental duties for all Indian citizens. This part has been inserted by 42nd Amendment Act 1976. According to this article it shall be the

- (i) To respect the constitution, National Flag or National Anthem.
- (ii) To cherish and follow noble ideals that inspired our national struggle.
- (iii) To protect the sovereignty, unity and integrity of India.
- (iv) To defend the country.
- (v) To promote the spirit of common brotherhood amongst all the people of India.



- (vi) To preserve the rich heritage of our composite culture.
- (vii) To protect and improve the natural environment.
- (viii) To develop the scientific temper and spirit of enquiry .
- (ix) To safeguard public property.
- (x) To strive towards excellence in all spheres of individual and collective activity.
- (xi) A parent or guardian should provide opportunities to educate the ward.

Directive Principles of state policy

The Constitution of India not only defines the rights and duties of citizens, but also provides certain directives to the government so that the people are assured of a progressive welfare state. These directives known as the 'Directive Principles' are enshrined in Part IV of the constitution from Article 36 to Article 51.

These principles strive to create a frame work of socio-economic ideals through which a welfare state can be formed. Most of these directives aim at the establishment of the economic and social democracy pledged for in the preamble. These principles cover a wide range of state activities and lay down objectives in social, economic, legal, educational, administrative, cultural and international fields. The state is required to uphold these directives in their policies and programmes. These principles can be classified under three headings (i) directives in the nature of ideals of the state (ii) directives shaping the policy of the state (iii) non justifiable rights of citizens.

Directives in the nature of ideals of the state

The state shall (i) secure social, economic and political justice (ii) secure just and human conditions of work and a decent standard of living (iii) raise the level of nutrition and improve public health (iv) secure equal distribution of wealth and means of production (v) endeavor to promote international peace and amity.

Directives shaping the policy of the states

The policies of the state shall (i) secure economic rights (ii) secure uniform civil code (iii) provide free and compulsory primary education (iv) prohibit consumption of liquor and intoxicating drugs (v) develop cottage industries (vi) organize agriculture and animal husbandry on modern lines (vii) prevent slaughter of useful cattle (viii) organize village panchayats as units of self government (ix) promote educational and economic interests of weaker sections (x) protect and improve the environment (xi) protect and maintain places of historic interest. (xii) to separate judiciary from the executive.

Non Justifiable rights of citizens

(i) Right to adequate means of livelihood (ii) right of both sexes to equal pay for equal work (iii) right against economic exploitation (iv) right of children and the young to be protected against exploitation (v) right to equal opportunity for justice and free legal aid (vi) right to work (vii) right to public assistance for old age, sick and unemployed people (viii) right to humane conditions of work and maternity relief (ix) right to decent standard of life for workers (x) right of

workers to participate in management of industries (xi) right of children to free and compulsory education.

These principles are just directives to the government which the government has to strive to follow. These principles are not enforceable by legal interventions.

EXERCISE

I) Choose the correct answer.

1. Through the _____ amendment enumerates the fundamental duties of the citizen.
a) 42 b) 45 c) 48 d) 52
2. The fundamental rights are classified under _____ heads.
a) Eight b) five c) six d) seven
3. India is a _____ state.
a) Secular b) Non – secular c) Hindu d) Christian
4. Article _____ of the constitution grants rights to minorities to establish educational institutions.
a) 40 b) 30 c) 50 d) 60
5. Article 19 of our constitution guarantees _____ freedom to all citizen.
a) Seven b) nine c) six d) five

II) Answer briefly.

- 1) Write a short note on Fundamental Rights ?
- 2) What is the Freedom of Religion ?
- 3) What is known as Directive principles ?
- 4) Write a note on 'writ'.

III) Answer in a paragraph.

- 1) Explain the Fundamental Duties.
- 2) Describe the Directive principles of state policy ?

4. CONTEMPORARY SOCIAL ISSUES OF TAMIL NADU

Social Inequality

Social divisions exist in every country. But India's caste system is a unique one. Here social status, responsibilities, socio religious privileges and occupational positions have been determined by birth. Such birth-based social divisions are the basis of social inequalities and social injustice. Large sections of the society, mostly doing manual work, had been termed as Sudras and Panchamas. These people were deprived of education, government jobs, right to temple entry, property and usage of public paths and water sheds; such a system resulted in exploitation of majority of people by the people of higher castes.

In Tamilnadu, the chaturvarna based caste system was not popular in the Sangam age. In the post Kalabhra age especially during the days of Pallavas, Imperial Cholas and Imperial Pandyas, Brahmins gained ascendancy in the social order. They were able to attract the monarchs towards the Vedic yagnas and Smritis and gradually influenced the royal houses to accept and adopt the Varna system. Once, due to Bakthi movement, the temple system became a major socio political economic factor, the Brahmins by invoking "Agamas" captured the priesthood in the rich temples. Already as scholars in Vedas and the Smritis they received fertile villages as endowments. Temples, formal education, high offices and property rights were denied to the hardworking tillers and artisans. All of them were categorised as Sudras and the landless labour were denigrated as

Panchamas. Thus the masses of Tamilnadu were deprived of rights, property, education, office and social status for thousands of years leading to their deplorable backward conditions in the modern times.

Untouchability is an extension of the caste system. Sudras were also subjected to untouchability. In spite of Constitutional prohibitions on untouchability and inhuman treatments even now the scheduled communities (Dalits) continue to suffer from denial of basic rights resulting not only in inequality and deprivation but also humiliation in extreme forms.

The Brahmin monopoly in higher education and in government services and cornering of public institutions and facilities by them prompted the non-Brahmins to launch a Non Brahmin movement. By 1912, **C.Natesa Mudaliar** ran a "Dravidian Hostel" for non-Brahmin students in Madras. **Pitty Thiyagaraya Chetty and Dr.T.M Nair** organised a socio political movement



Dr.T.M Nair



Dr. Muthulakshmi Reddy

(South Indian liberal Federation), popularly known as the Justice party to secure constitutional safeguards for the non-Brahmins that party headed the first diarchy government at Madras for 16 years (1921-37).

During that period they brought out the "Communal G.O" assigning government jobs to different communities on the basis of their strength in population. By removing the "Sanskrit Compulsory" clause they enabled non-Brahmins to enter into medical colleges.

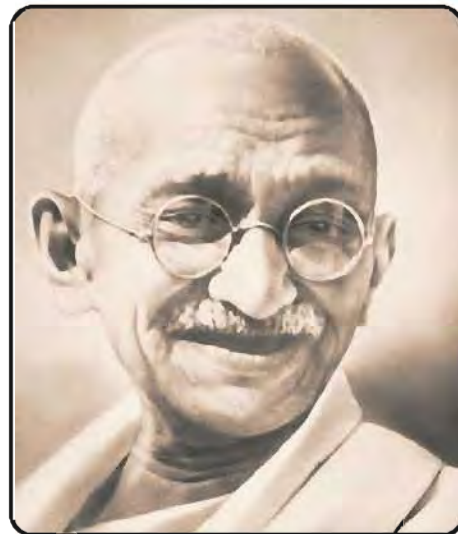
The monopolistic Brahmins exploitation of rich temples was restrained by "**Hindu religious Endowment Act**". The **Devadasi system** was abolished in which **Dr. Muthulakshmi Reddy** the first women doctor, played the key role. By invoking Panchami land act, lands were distributed to the scheduled communities. To improve the condition of landless labour, **Mirasdari system** was abolished. For the first time in India women were enfranchised in the Madras Presidency. The Justice administration of Madras city introduced a mid day meal scheme at

Chindadripet School to ensure uninterrupted education for poorer children. Positive industrial regulations and encouragement to industries in the form of industrial estates also go the credit of the Justice Movement.

Caste system

Caste reforms and casteless social order

A progressive liberal society requires the negation of caste system and its offshoots. There were movements which wanted to reform the caste system.



Mahatma Gandhi

The "Sanadhanists" including Mahatma Gandhi favoured only the



Ramalinga Adigalar

abolition of untouchability, but justified the Varna system. Dayanand Saraswati (Arya samaj) rejected caste but justified Varna system. The Siddhas and Ramalingar Vallalar and Vaikuntasamy in Tamilnadu disapproved caste system in to Mahatma Phule and Sahu Maharaj in Maharashtra, Narayana Guru in Kerala, Ayothidasa Pandithar in Tamilnadu condemned both Varna and caste.

Reserving certain number of seats in the legislature of the diarchy government at Madras was the first step towards this direction, and the Communal G.O ensuring proportional representation to all social segments was another major step towards that goal. While the reformers were content with temple entry acts, the opponents of caste order strived for equal footing for all especially the depressed and deprived classes in all fields.

In the post independence Tamil Nadu, the judicial verdict against reservation for backward and depressed communities in educational institutions became a major challenge to efforts for social justice.



K. Kamarajar



C.N. Annadurai

Periyar. E.V.R launched a vigorous struggle against this verdict. Kamaraj of the Congress party and C.N. Annadurai of DMK extended support to the demand of Periyar.

Ultimately Pandit Jawaharlal Nehru brought forward the first amendment to the fundamental rights enabling the states to implement social reservation policies. Now the reservation system in Tamil Nadu is more improved and more elaborate with 18 percent for SC, one percent for ST, 20 percent for MBC and 30 percent for other backward communities. Further inner reservation is provided for Arunthathiyar, backward Muslims, and adequate reservation for women in local bodies and full reservation for women in certain categories of jobs are also provided.

Thanthai Periyar

E.V.Ramasamy(EVR) was a strong crusader against caste system. He took a leading part in the Vaikkam Satyagraha (1924) which was meant for securing equal rights for Sudras and Panchamas in using public path. His struggle against Cherenmadevi Gurukulam was against caste

discriminations in educational institutions. E.V. Ramasamy opposed the Varnashrama followed in the VVS.Iyer's Cheranmadevi's gurukulam. He, as a leader of the Congress party argued for proportional representation for all social divisions in political bodies and in administrative spheres.



E.V. Ramasamy

His Self respect movement was meant to liberate the Sudras and panchamas from socio cultural religious slavery and to redeem women to equal status. Its aim was to liberate the Dravidians from Brahminical order and to expose its tyranny and deceptive methods by which they controlled all spheres of Hindu life, he denounced the caste system and encouraged the Inter caste marriages and Self respect Marriage. He himself conducted many marriages without any rituals. He emphasised rationalism and humanism as the basis for social change. He founded the Tamil journals Kudiarasu, Puratchi, Viduthalai and an English journal Revolt to propagate his ideas. He condemned the laws of Manu which he called the basis of the entire Hindu social fabric of caste. His struggles to secure reservation of seats

for deprived caste in educational institutions and priesthood rights to all castes have been revolutionary ones. His crusade for women rights earned for him the title **"PERIYAR"**.

The constitution of India with its intensive democratic ideas does not recognise the caste system and specifically forbids discrimination against untouchables. Great thinkers and leaders of India right from the days of Buddha and Mahaveera to Mahatma Jotiba Phule, Ramalinga Vallalar, Periyar and Dr.Ambedkar denounced the caste and urged for a progress towards casteless society. The major task of today is the bridging of social gaps, by special measures which include encouragement and protection to trans-caste marriages, removal of social disabilities and measures to overcome religious, social, cultural and economic backwardness; all these require a change in the mindset of the people. Fraternal feelings should replace caste consciousness.



Dr.B.R Ambedkar

Proper education plays an important role to uplift the under privileged and to bring about equality

among various social groups. The Grant in aid system introduced by the British government in the 19th century instituting more schools in rural areas, the midday meal scheme introduced by kamaraj government and improving the same into the Nutritious Noon meal scheme by MGR government, abolition of tuition fees upto graguate level and special considerations for first generation learners and such measures meant to uplift the socially backward classes. The 'Equitable education' schemes are also meant to promote social equity.

Untouchability

Untouchability in India is worse than slavery and 'Apartheid'. Until the advent of the British rule and during the British rule the untouchables were treated as outcastes (i.e. beyond the Hindu fold). They were not only untouchables but also unseebles, unapproachables, and they had no right to education, to residence in general villages and towns, to use public path and watersheds, to enter into temples, to own land, to do official work or to seek justice in the court of laws. Their women were not even allowed to cover their upper parts of the bodies, they should not wear sandals, use umbrellas, and not to have civilised names. Even in the early 20th century Panchamas and sometimes even Sudras were not allowed to use the public transport and public restaurants. In short they were not even treated as humans. During the colonial period, especially in the second half of the 19th century and in the first half of the 20th century voices were raised against this inhuman tradition. Demands for equal opportunities in education, employment religious rights, social status, and economic opportunities

arose in different parts of India. In the 19th century due to the 'Sanar rebellion' in the southern districts and also due to the British government's intervention lower caste women including the untouchable women secured the right to wear 'blouse'. The temple entry attempts by Nadars were ruthlessly suppressed in the 19th century. The British government and Christian missionaries were sympathetic to the cause of untouchables. Considerable number of them embraced Christianity. The prospect of large scale conversions opened the eyes of benevolent Hindu leaders like Dayanand Saraswati, G.Subramaniya Iyer and Mahatma Gandhi who began to focus on removal of untouchability. Gandhi accepted them as Hindus and named them 'Harijans' (Children of God).

Gandhi ran a journal '**Harijan**' and brought forward Harijan upliftment programmes within the Congress. He also evinced interest in Temple entry programmes.

In Tamilnadu Ayothidasa Pandithar suggested conversions to Buddhism. However Periyar in Tamilnadu, and Dr.B.R Ambedkar at all India level were the effective contributors in bringing up the scheduled communities on par with other communities. Due to Ambedkar's efforts, untouchability, denial of public places, and humiliation were declared crimes in our Republican constitution. In 1938, the first Congress party ministry led by Rajaji introduced legislation facilitating entry of 'harijans' into Hindu temples. Madurai V a i d y a n a t h a A i y a r and Muthuramalinga Thevar were actively involved in securing temple entry rights to scheduled communities in Madurai Meenakshi temple. The Tamilnadu

Archaka Act of 2006 enables non Brahmins including Sudras and Panchamas to enter into temple services as Archakas. Now there is no constitutional protection to caste system and untouchability. Reservations in education, political and administrative bodies have constitutional protections. Yet much is to be done to change the mindset of the people who are blindly subscribing to unhealthy and inhuman caste prejudices especially in remote villages. Formal and informal education will help to enlighten the people to overcome caste based prejudices, so that a healthy fraternal feeling can be strengthened and social integration and peace can be achieved.

Child labour

According to the Committee on Child labour (1978-79) "child labour can be broadly be defined as that segment of the child population which participates in work either paid or unpaid".



Child labour

Child labour means a working child who is between 6 and 15 years of age, not attending school during the day, and working under a employer or learning some trade as an apprentice. The term "child labour is commonly interpreted in different ways: first, as an economic practice and second, as a

social evil. There is a general opinion that India has the largest child labour force in the world.

Areas of child labour

A child may be found employed in many different kinds of activities to earn his/her livelihood. He/She may be employed forcibly or voluntarily, in an organized sector or in an unorganized sector. The commonplaces of employment may be carpet weaving, match factories, fireworks, beedi works, restaurants, auto garages, quarries, household works, rag picking, cultural traditional begging etc.,

Causes of Child Labour

There is no single factor responsible for Child labour. Poverty seems to be one of the most explicit reasons.

Child Labour is no longer legally permissible. Poverty of parents, or Parental neglect leads children to seek employment. Inadequate income of the parents does not fulfil the minimum requirement of the children which in most of the cases induce the children to enter into the jobs market, by foregoing their education.

Poverty is most often supplemented by other socio-cultural factors to expose the child to manual jobs. Due to high degree of illiteracy and ignorance of the parents, the children are deprived of getting proper counselling for building up their future career. The greedy employers lure such poor, neglected, and ignorant children to their factories, hotels and other work places by promising them food and paltry wages. The child labour becomes a convenient tool for employers to evade adequate wages to employees, and to evade all laws on

labour protection. The tendency to employ child labour for hazardous works, for low wages and without required service conditions has serious socio economic cultural implications. Health hazards of the working children, the adverse impact on physical and mental development, and treating them as almost like bonded labour are the serious human issues that cannot be ignored by a civilised society.

Impact of Child Labour

It is said in general terms that physical labour has an adverse tremendous impact on the growth of the child. The socio –psychological studies have portrayed the real magnitude of the problem. Labour has its impact on the physical development, psyche, general condition and morality of a child. Physical labour and consequent work pressure make the child weak at times. The use of children as a source of labour force, raises many other questions with regard to demographic and economic implications. Among other implications child labour causes adult unemployment, low productivity and inefficient utilization of manpower with economic loss to the society.

Government efforts against Child Labour

Legislation has vital role to play in combating hazardous child labour. Article 24 of the Indian constitution mentions explicitly that no child below



Conference on Child Labour

the age of 14 shall be employed to work in any factory or mine or engaged in any hazardous employment.

Besides these constitutional provisions, at least 13 major legislative enactments for children have been made. Factories Act of 1948, Mines Act of 1952, Plantation Labour Act of 1951, Merchant Ship Act of 1950, Motor Transport workers Act of 1961, Employment of Children Act of 1938 were brought in different states. Free and compulsory primary education, midday meal schemes, and other incentives are meant to reduce the avenues of child labour.

NGO's Role

Here it is worth mentioning that child labour cannot be abolished by mere legislations alone, creating public awareness, and organising campaigns for compulsory primary education, improving social protective measures for poorer families, and effective social monitoring to detect child labour are to be carried out. In this NGO's can play a vital role. Most of the measures adopted by the government to eradicate child labour have not yielded the expected results due to public non-participation. The role of non-governmental organizations is expected to be of immense help. The effectiveness of the NGO is attributed to two major factors. First its workers do not belong to the government department, they are more acceptable to the people as these people had an aversion towards government officials. Secondly since the workers of the NGOs operate at the grass- roots level, they constitute the strongest source of motivating the people by their personal interest and involvement with the problems that the people face in their day to day activities.

Unorganized Labour

In recent years there has been a growing awareness of the pathetic conditions of the unorganized labour. The unorganised labour has no clear-cut employer-employee relationships and have been beyond the reach of labour protection acts and social welfare measures.



unorganized labour

The unorganized sector workers include agricultural labourers, small and marginal farmers, forest workers, fisher folk, beedi rollers, garment makers, construction workers, rag pickers etc. Having no fixed employer and no labour protective arrangements these workers attempt to earn a living from whatever meagre assets and skills they possess. Unorganised women labour is another social issue, In fact women constitute the majority in unorganised labour. Now attempts are being made to improve the service conditions of the domestic helps; balawadis, anganwadis are being promoted to take care of the children of unorganised women labour.

Migrant Labour

India is a vast country with high percentage of uneducated, unemployed and unskilled labour suffering from acute poverty. Regional



Migrant Labour

imbalances add to their problem. Many of them are unable to find means of livelihood within their habitat. Frequent droughts, famines and other calamities force these poorest sections to migrate. These sections of people are constantly on the move seeking avenues of manual work. Such migrants are mostly employed by contractors in road works, quarry and brick works, mining works, clearing forests and in many hazardous works. A few of them become domestic helps, and some became menials in hotels and other establishments. As migrant labour, there is no protection to their person, no guarantee for a fair wage. They are forced to live in unhygienic transit slums without clean water and nutritious food. There is no guarantee for health care and no provision for care and education of their children.

Migrant labour, means, the labour who goes on moving from place to place seeking manual employment on temporary basis. They are constantly exploited by contractors. As they work in regions of different languages it becomes very difficult to become organised and to articulate on their needs and to demand and secure necessary remedies. It is a fact that the ration cards and benefits of public distribution systems are inaccessible to them. In fact, most of the migrant labour are treated almost like bonded labour.

In a globalised economic order, Tamilnadu is making remarkable progress in infrastructure expansion. Wider highways, huge buildings for industries, business and institutions are coming up fast, however the conditions of the human labour involved in the expanding economy cannot be ignored. More than half of the labour involved in these developmental activities are migrant labour. Now the government and the nongovernmental organisations are awakened to the miserable conditions of the migrant labour. Attempts are being made to ensure proper working condition, fair wage, adequate living condition, and to provide avenues of social security including education to their children. But more is yet to be done.

Transgender Evolution of the term Transgender



The term transgender (TG) was popularized in the 1970's describing people who wanted to live cross gender without sex reassignment surgery. In the 1980's the term was expanded to an umbrella term, and become popular as a means of uniting all those for whom no gender could be assigned at birth.

Government Policies towards Transgender in Tamilnadu

Tamilnadu became the first state in the country to recognize transgender as a separate gender and issue ration cards to them. The application for a new passport now has three options in gender- M, F and E(for Eunuch).

A Matrimonial website for Trans Community

Members of the transgender community in Chennai launched the world's first matrimonial website for their clan. Thirunangai.net is a matrimonial website for Tamil trans women. Trans women by birth are not physically women but by soul and heart, they consider themselves women. Later in their journey to completeness, they had gone through innumerable struggles and only those who are courageous succeed.

Transsexuals model villages in south Indian state

In a unique first of its kind move in India, the Cuddalore district administration in the southern state of Tamilnadu has proposed to establish model villages to rehabilitate members of the transgender community. Tamilnadu is the only state in India that has given a gender status to transsexuals.

The model villages planned in Cuddalore, Panruti and Chidambaram regions of Tamilnadu will help reallocate members of the transgender community and begin hassle-free implementation of several welfare schemes by the state government under the newly established welfare board of transsexuals. The district administration has identified a two acre site in Cuddalore and according to the Revenue Divisional officer (RDO), the

transsexuals would be provided with three cent house sites (about 308 square feet) and loans would be arranged for construction of houses. Once the beneficiaries move into the proposed villages all other basic requirements right from the ration cards, voter identity cards and medical care would be provided for them.

Education

The State Government has issued an order, providing for admission of transgenders into government colleges. This is probably the first instance where a third gender category was created for giving admission to transgender in government colleges and the G.O., was passed by the State Higher Education Department. In an effort to broaden employment opportunities for transgender people, the Tamilnadu government offers computer training.

Conclusion

The Preamble of the constitution and the Directive Principles envisage measures towards a just social order and fair distribution of wealth and opportunities.

Thousands of years of discriminatory orders, alien rule, ignorance and superstitions caused irrational inequalities in the Indian and Tamil society. Political freedom should lead us socio-economic freedoms too. Here freedom, means, freedom from inequalities and exploitations. The Government of India and the Government of Tamilnadu have brought forward several schemes to promote social and economic justice. The non-governmental organisations and the general public, including the enlightened students have to support and supplement these measures.

EXERCISE

I) Choose the correct answer.

- 1) Dravidan Hostel for Non Brahmin students was run by _____.
a) Pitty Thiyagaraya Chetty b) Dr. Ambedhkar
c) Dr.Natesa Mudaliar d) Dr. T.M. Nair
- 2) Dr. Muthu Lakshmi abolished _____.
a) Caste system b) Mirasdari system
c) Devadasi system d) Non – Braminial movement
- 3) Self Respect movement was led by _____.
a) K.Kamaraj b) C.N.Annadurai c) Periyar d) Dr.T.M Nair
- 4) First amendment to the Fundamental rights for social reservation policies to the state was brought by _____.
a) V.V. Subramaniya Iyer b) Mahatma Gandhi
c) Dr.Muthu Lakshmi d) Pandit Jawahar Lal Nehru

5) Panchami land Act distributes lands to _____.

- a) Brahmins b) Atchakar c) Temples d) Scheduled communities

II) Answer briefly.

- 1) What are the inequalities of the society in Tamil Nadu?
- 2) What are the results of Bakthi Movement ?
- 3) Write a short note on Justice party .
- 4) Who condemned Varna and caste system ?
- 5) What is meant by self respect marriages ?
- 6) Define – Child Labour.

III) Answer in a Paragraph.

- 1) Write some of the social issues in Tamil Nadu.
- 2) Write a note on untouchability .
- 3) What was the Government Provision to child Labour prevention.?
- 4) Write a note on Transgender in Tamil nadu.
- 5) Describe briefly about unorganized labour.

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 that most related and 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 called 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 Demanded?
3. Where is Demanded?
4. At what price it is 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 Rs.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 Supplied?
3. Where is Supplied?
4. At what price Supplied?

The answers to these questions can be derived from the following statement of supply Ex: Raju sold 2 klos of mangoes yesterday at T-nagar at a price of Rs.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.
3. Prices of other products.

4. No. of producers.
5. Future price expectations.
6. Taxes and subsidies.
7. Few factors out side the economic sphere.

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 show that there is an indirect relationship between price and demand.

Alfred Marshalls's Law of demand: "The grater the amount to be sold the smaller must be the price at which it is offered. In other words the amount demanded increased 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 Rs.25per Kg, the consumer demands 1 Kg. when the price falls from Rs.25 to Rs.20, Rs.15, Rs.10, Rs.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

From your friend 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 diamond jewels. In these cases when the price rises demand also rises and when the price falls demand also falls.

Activity

List out the necessaries, 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: Other things remaining same as the price of a commodity rises it's supply is extended and as the price of the commodity falls it's supply 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 Rs.10 per Kg of wheat. When the price of wheat increases to Rs.20 the supply of wheat rises to 2Kg. From Rs.20 the price rises to Rs.30, Rs.40, Rs.50 and Rs.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

Write supply schedules for some products of your choice.

EXERCISE

I) Choose the Correct answer.

- There exists an indirect relationship between
 - Price and demand
 - Price and supply
 - Price and income
 - Price and Tax.
- Law of demand is only applicable to
 - Necessaries
 - Comforts
 - Luxuries
 - Very low priced goods.
- One of the determinants of demand is
 - Taste and preference
 - Production technology
 - No of producers
 - Price of factors of production

II) Write short notes on.

- Alfred Marshal's Law of demand
- Law of supply
- List out the determinants of supply.

III) Write in a paragraph.

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

2. EQUILIBRIUM PRICE

You have learnt the relationship between price and demand and the relationship between price and supply in the previous lesson. This relationship is explained with the help of law of demand and law of supply.

It is clear from the below given table that demand decreases and supply increases when the price rises. At a particular price the quantity demanded and the quantity supplied will become equal. At this price the quantity bought (Demand) and the quantity sold (Supply) will be equal. This price equalizes the demand and supply.

Price (In Rs)	Demand (in Kilos)	Supply (in Kilos)
20	5	1
40	4	2
60	3	3
80	2	4
100	1	5

When the price of mangoes is Rs.20 per Kg demand is 5Kg and the supply is 1Kg. When the price rises to Rs.40, Rs.60, Rs.80 and Rs.100 per Kg, the demand decreases to 4Kg, 3Kg, 2Kg and 1Kg and the supply rises to 2Kg, 3Kg, 4Kg, 5Kg. At a particular price the demand and supply are equal that is 3Kg. This price is called equilibrium price and the quantity is called equilibrium quantity. In the given table equilibrium price is Rs.60/- and equilibrium quantity is 3Kg.

If the price is greater than equilibrium price that is Rs.80 per Kg, supply is more than the demand. Sellers are interested in selling 4Kg but the buyers are willing to buy only 2Kg. There is a gap between the demand and supply that is 2Kg. Supply is greater than demand by 2Kg. This is called excess supply. To dispose the excess quantity the sellers will reduce the price and it will fall to Rs.60.

If the price is lower than equilibrium price that is Rs.40 per Kg, demand exceeds supply by 2Kg. This is called excess demand. At this price demand is 4 Kg supply is 2Kg. So the buyers increase the price to Rs.60.

Thus if the price is below or above the equilibrium price the forces of demand and supply will react to bring the price to the equilibrium level. This is called market equilibrium.

Changes in equilibrium price

The role of time in influencing the equilibrium price is explained by Alfred Marshall who introduced the following time periods that affect the equilibrium price.

1. Market period or very short period

Here the time available to change the supply is very much limited. So the supply can not be increased or decreased. Hence the supply is constant in this period. So if the demand increases price increases, and if the demand falls price also falls. Thus during the market period demand plays a dominant role in influencing the price as the supply is constant.

2.Short Period

During the short period supply can be altered to some extent only. Supply cannot be fully altered to the demand changes. Rise in demand increases the price slightly and a fall in demand

decreases the price slightly. Price rise and price fall during short period is not to the extent of price rise or price fall in market period because of slight changes in the supply in the short period.

EXERCISE

I) Choose the Correct answer.

1. Equilibrium price equalizes
 - a) Demand and supply
 - b) Demand and income
 - c) Supply and production
 - d) Demand and utility.

2. Supply is constant in
 - a) Very short period
 - b) Short period
 - c) Long period
 - d) Very long period.

II) Write short note on.

1. Equilibrium price
2. Short period.

III) Write in a paragraph.

1. How is the equilibrium price determined?

