

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

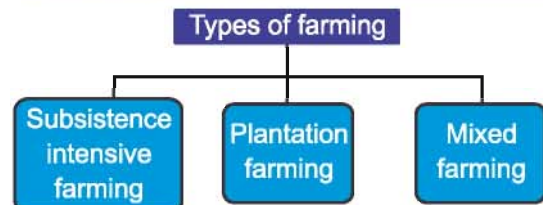
(sericulture, apiculture, animal husbandry, orchard farming, viticulture, floriculture, poultry)

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

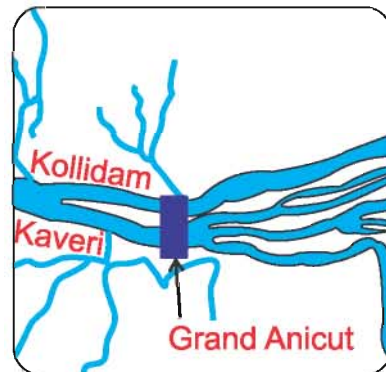
The main sources of irrigation are canals, tanks and wells.

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 Thamiravaruni 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 Karikalan is still in use and considered to be the oldest water-regulatory structure in the world.

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

Tanks

Lakes are natural water bodies. Lakes are converted into tanks by strengthening their bunds to store water for irrigation. Tank maintenance and management is a common practice associated with temples. There are about 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 ?

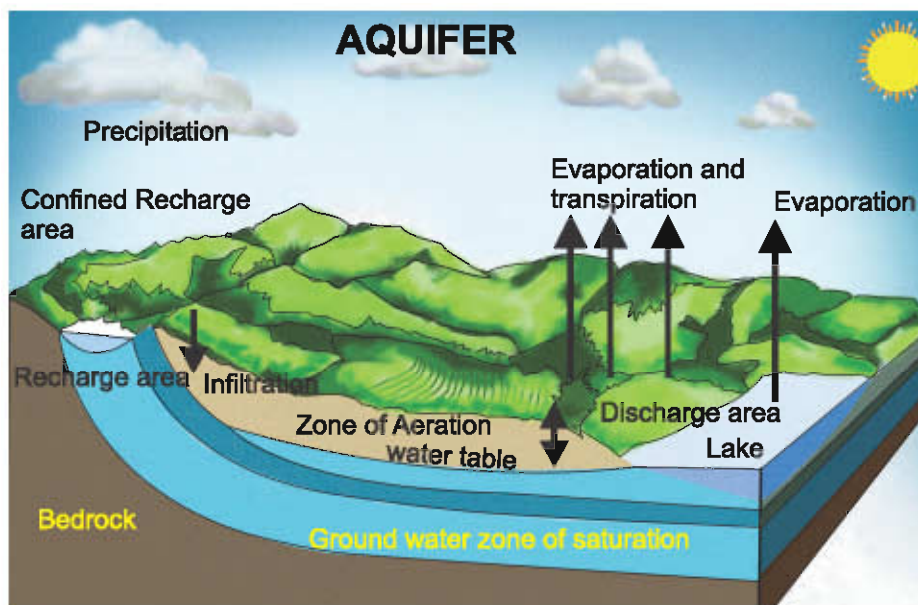
Kancheepuram is known as the land of 'thousand lakes'

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.

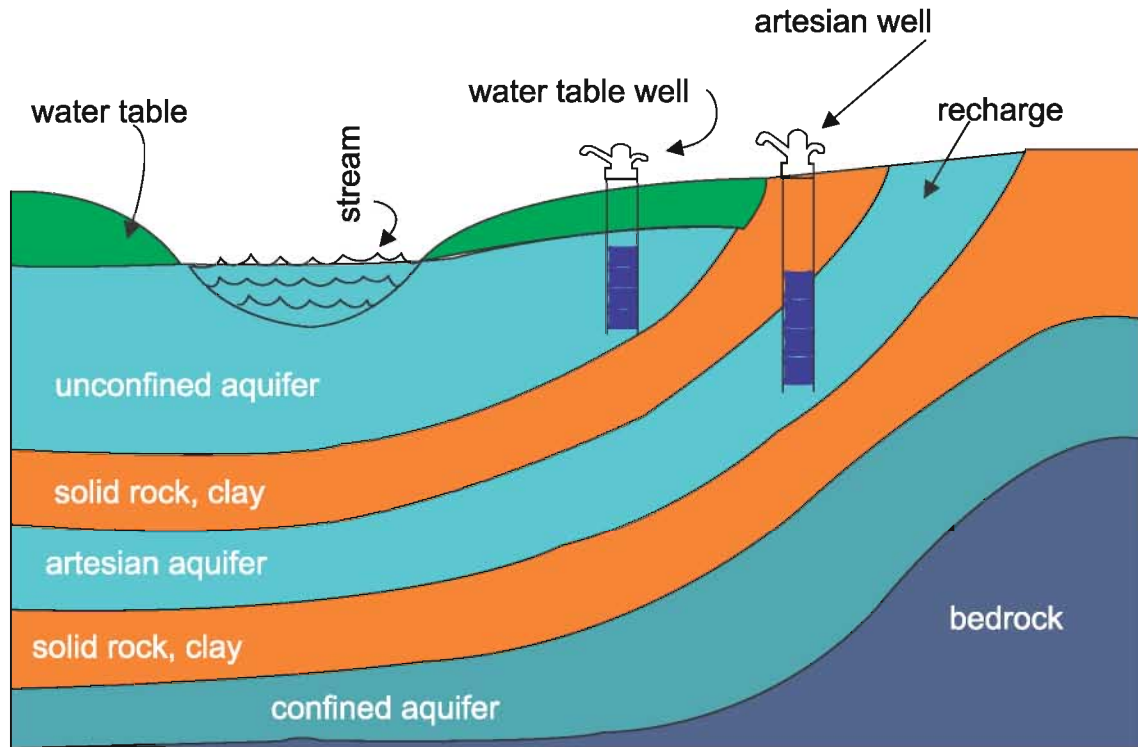


Aquifers are underground rock layers which store water and allow water to pass through them.

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.

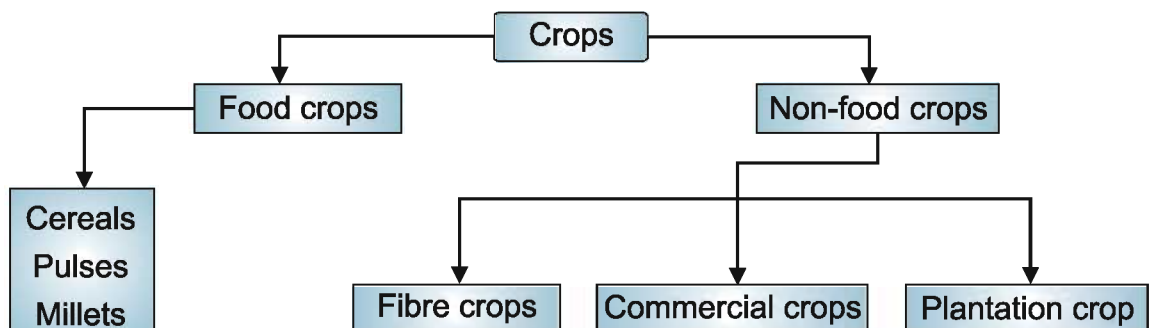
Aquifers at different depth



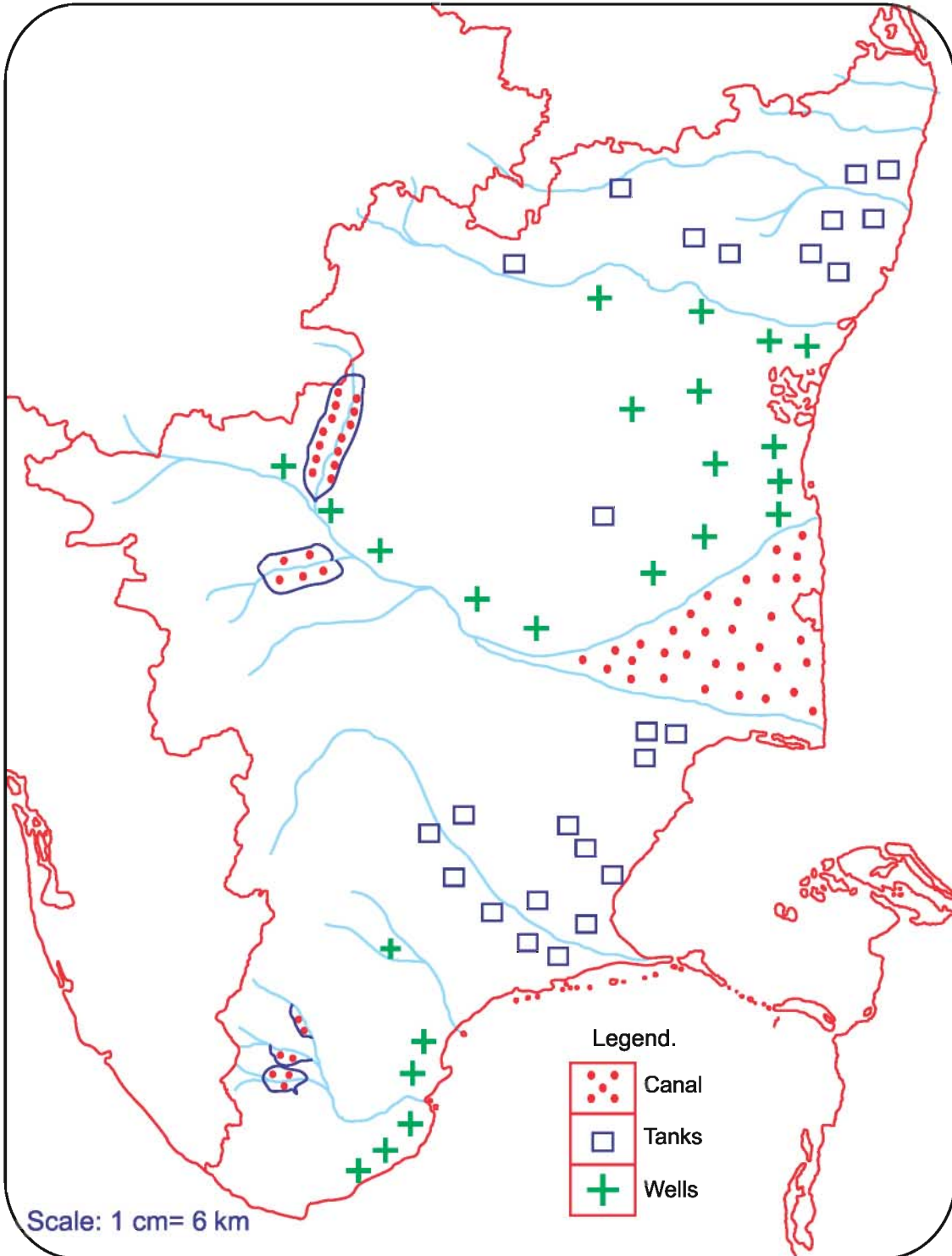
Activity

Find out the source of irrigation in your area

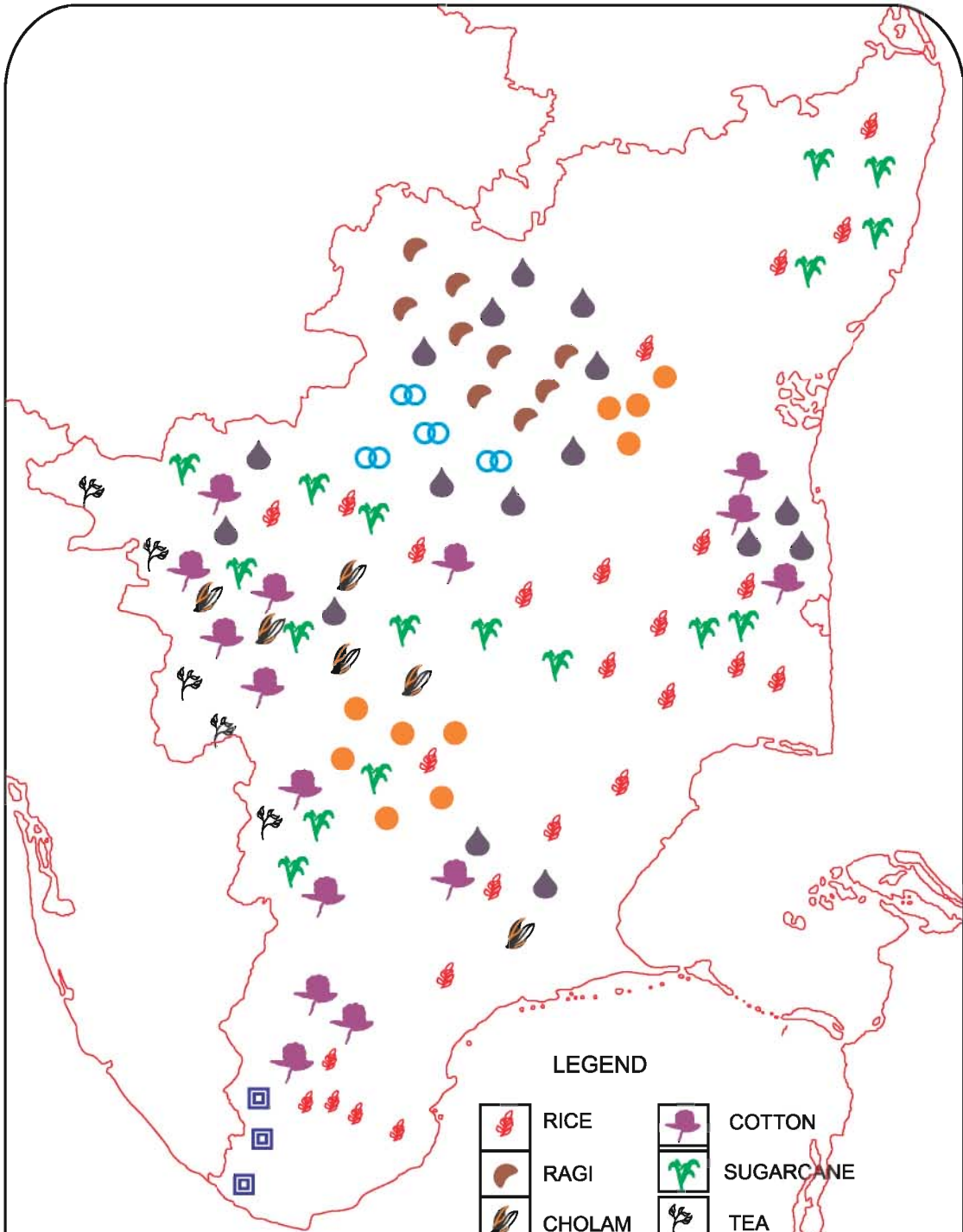
Major Crops of Tamil Nadu



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 chillies, turmeric and coriander are examples of commercial crops.

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

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

Plantation crops

Tea, coffee, rubber, pepper and cashew are the main plantation crops of Tamil Nadu. Tamil Nadu ranks second in area and production of tea next to Assam. Tea estates are seen to be concentrated on the hill slopes of the 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 mangoes, jackfruits, banana, guava and grapes are widely grown in groves. Krishnagiri leads in mango production, Coimbatore and Erode are known for banana production and Theni for grapes. Dharmapuri leads the other districts in acreage for horticulture. It also specializes in floriculture.

Animal husbandry

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

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

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

Fisheries

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



Inland fishing

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

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

production in the state.

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

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

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

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

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

Agricultural Development

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

Changing trends in agriculture

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

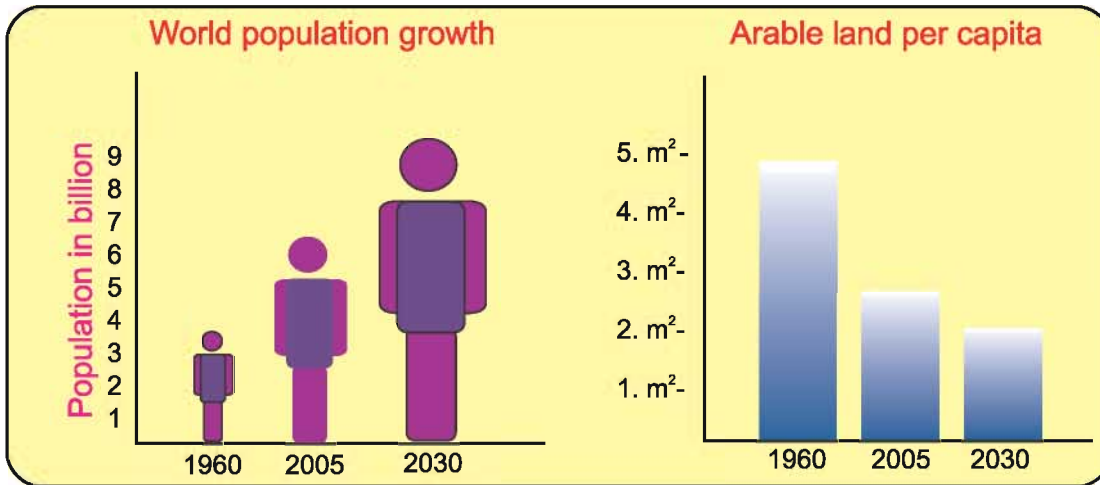
- The Government supplies quality and certified seeds to the farmers.
- Organic matter and micro nutrients are supplied at subsidised rate.
- Free electricity is provided to small and marginal farmers for about 6 to 8 hours a day.
- Government fixes the prices for agricultural products to safeguard farmers 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.

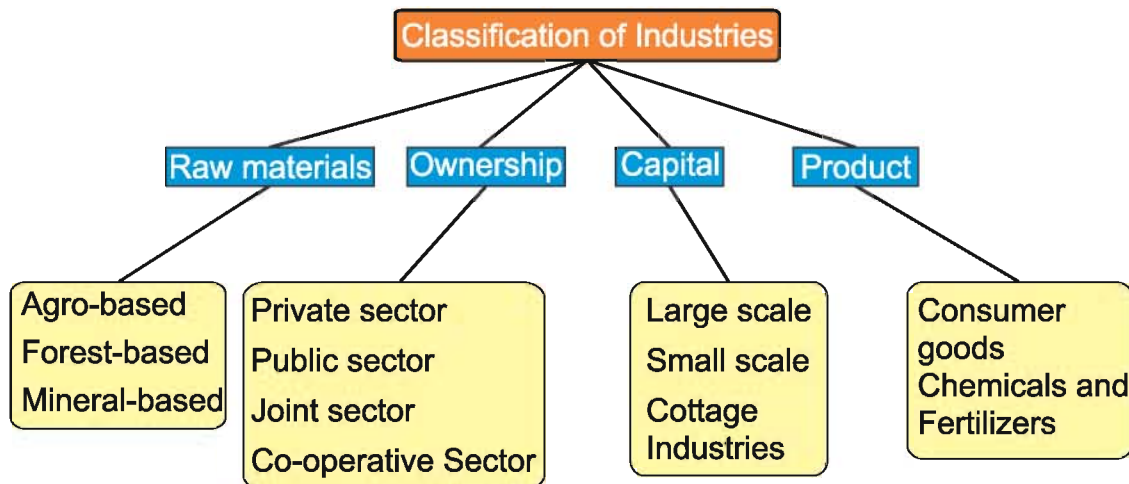
Activity

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:

- a) Raw materials;
- b) Ownership;
- c) Capital involved; and
- d) 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, 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 Thazhayuthu.

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?

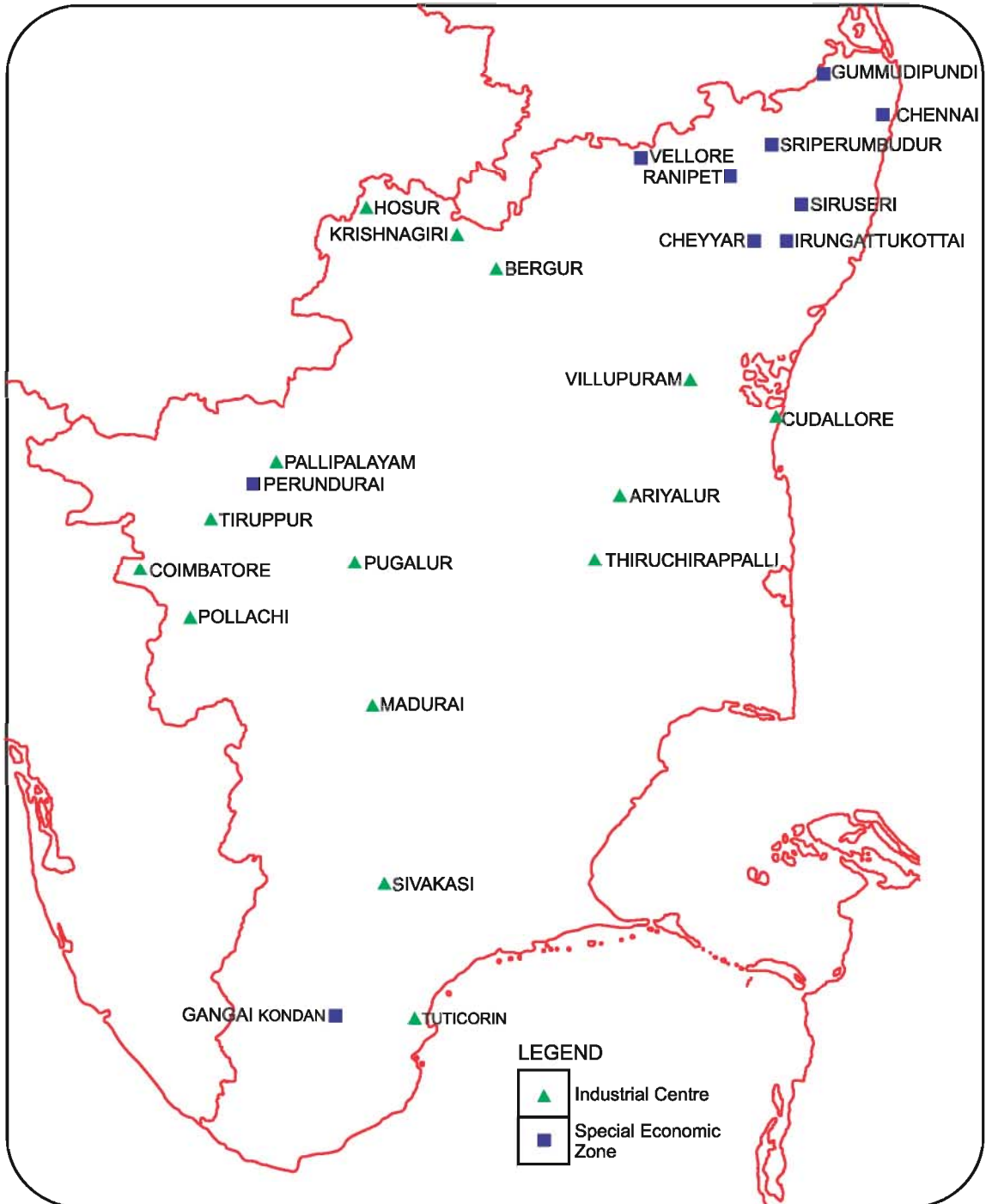
State Industries Promotion Corporation of Tamil Nadu (SIPCOT) Limited, a fully government owned

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).

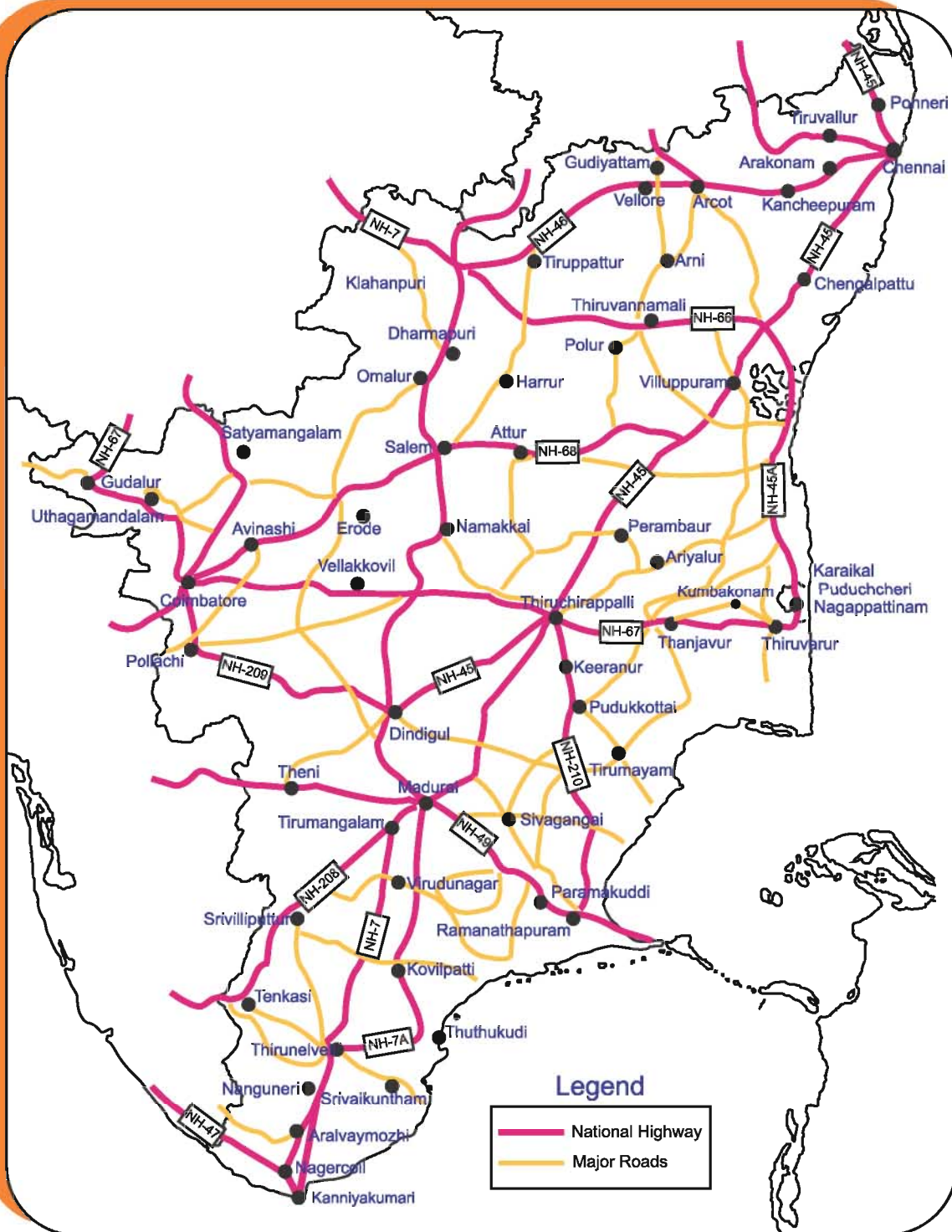
6. Tamil Nadu State Transport Corporation-Madurai (Madurai, Viridhunagar, Dindigul and Theni districts with Madurai as head quarters).

7. Tamil Nadu State Transport Corporation-Thirunelveli (Thirunelveli, Thuthukudi, Kanyakumari 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

Tamil Nadu Roadways



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.

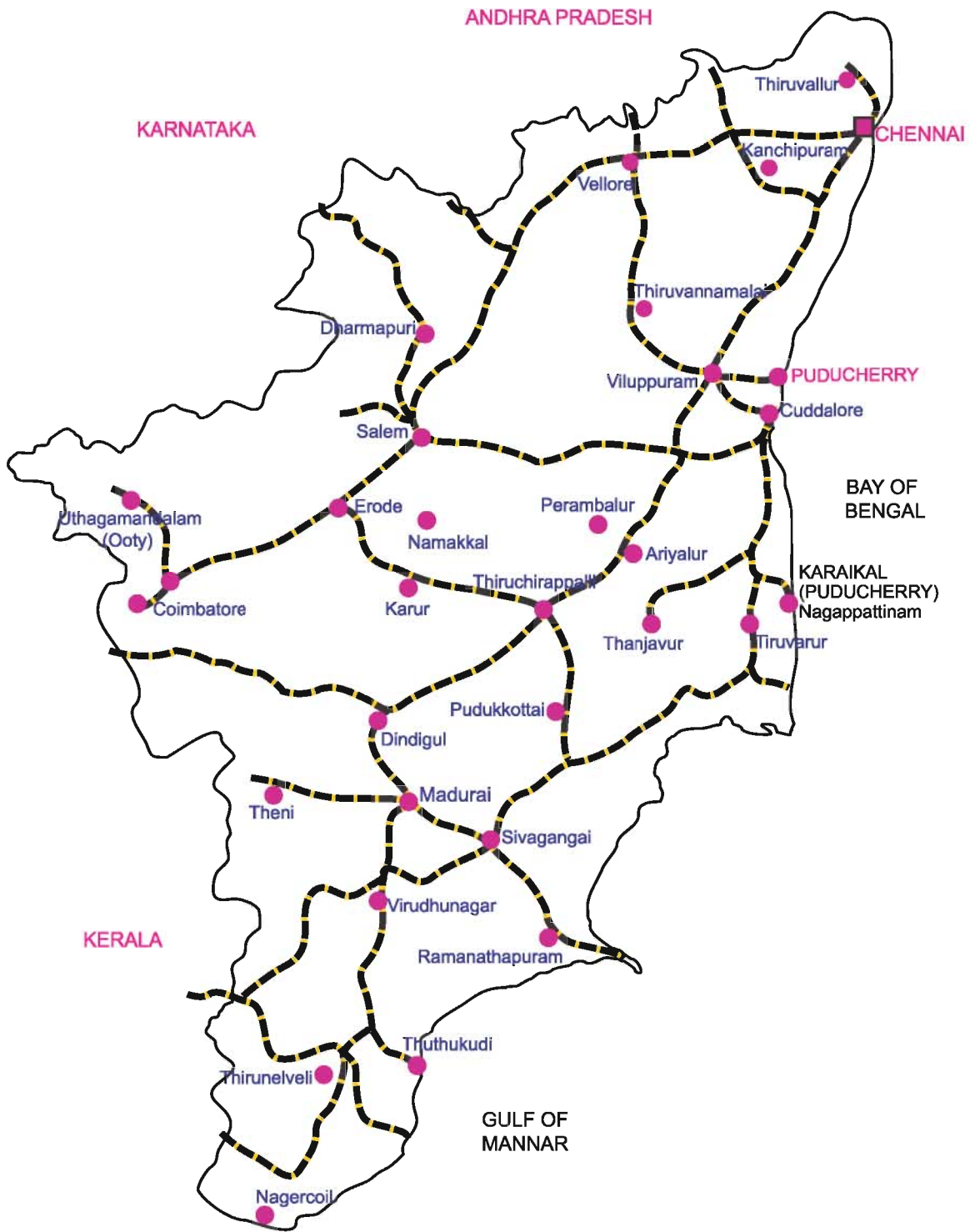
Railways

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 gauge;
- ▶ 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 Thiruchirappalli. 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

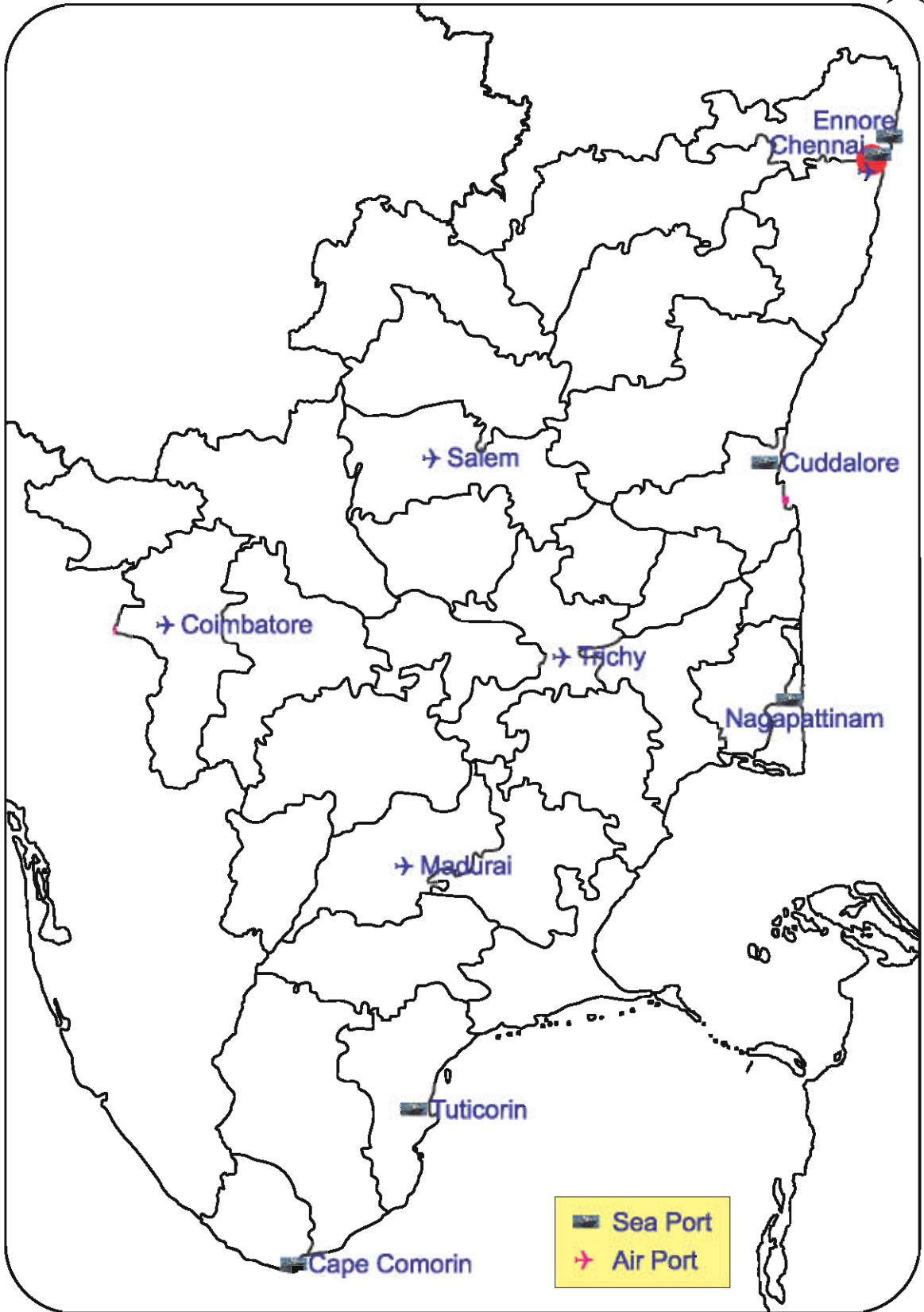
	(in million tonnes)
1.Chennai	57.15
2.Tuticorin	21.62
3.Ennore	11.56

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".



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 Foreign Currencies

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 (Agmarket 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 ₹ 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 TamilNadu 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.

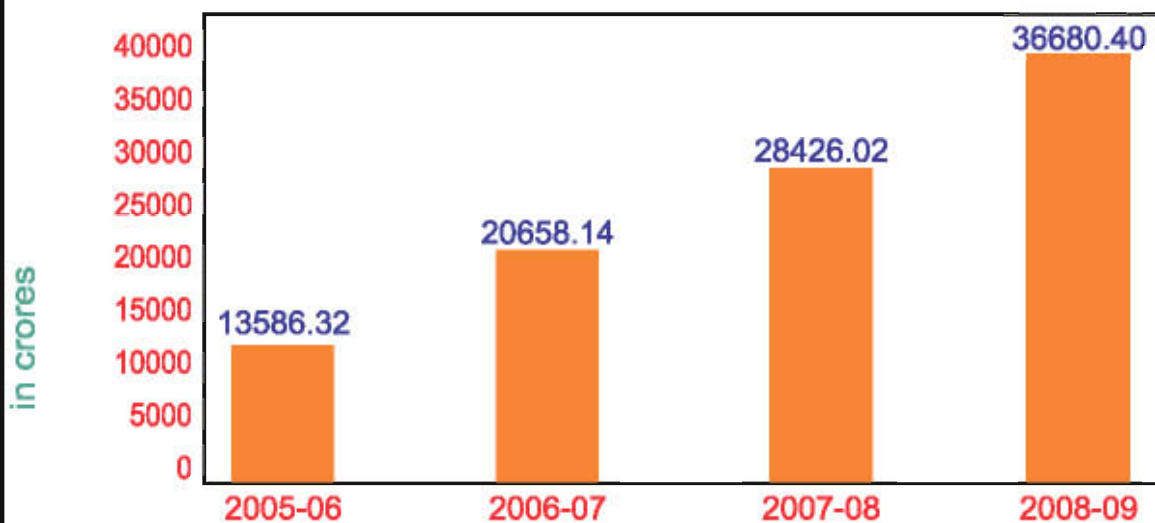
The export of Tamil Nadu has been increasing at a faster rate than the overall exports of the country. The drastic rise in Information Technology (IT) companies in Tamil Nadu has

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.

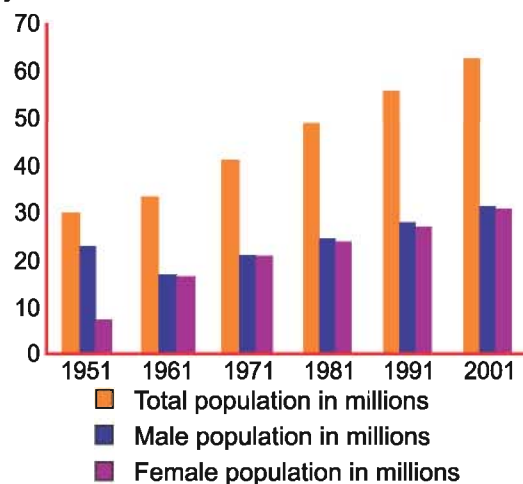
Life expectancy—the number of years an individual at a given age would be expected to live at present mortality levels.

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.

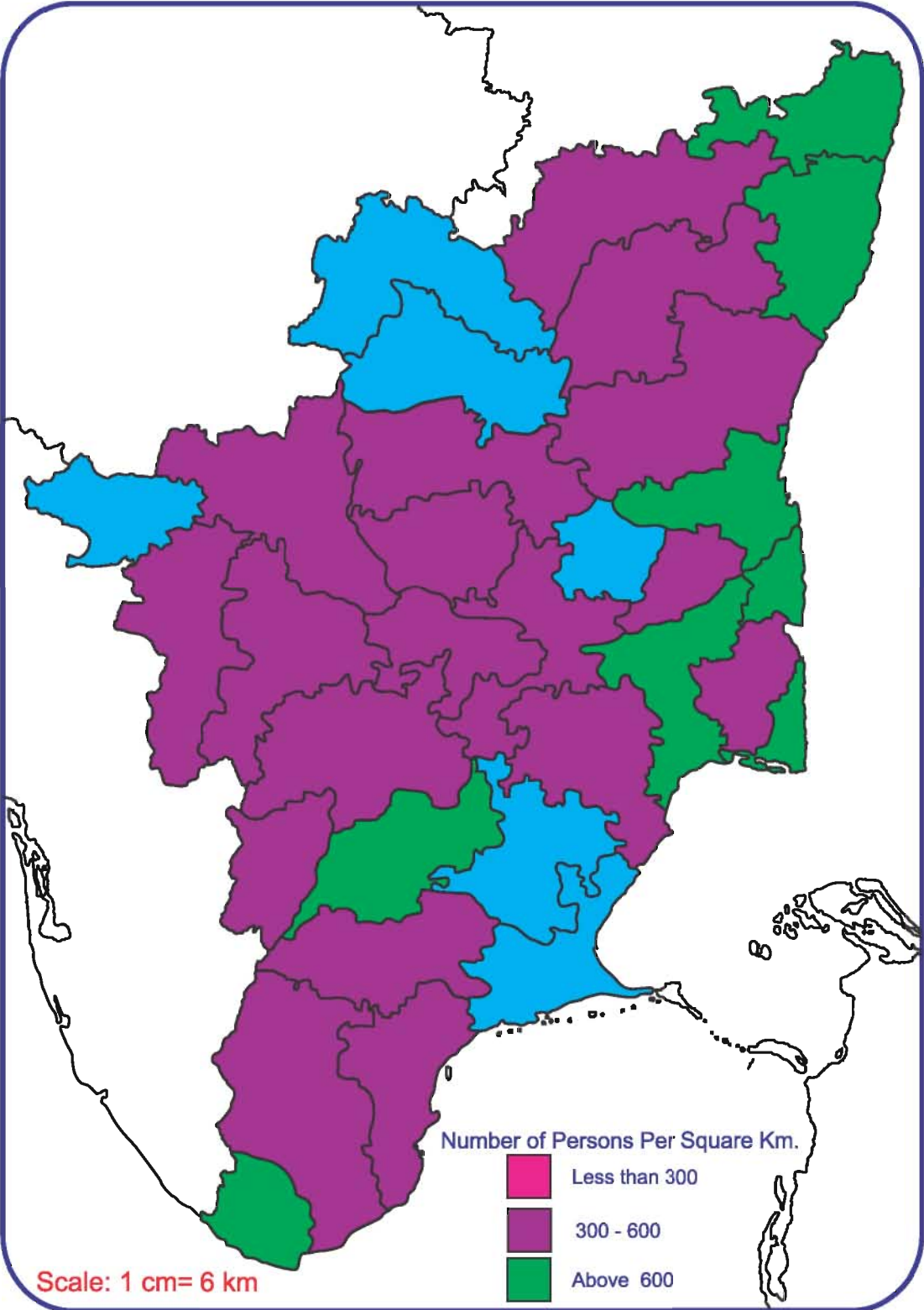
In general, the variations in population among different regions are identified by **population density**. Density of population is a means of finding out the number of persons living in one unit area, which is generally expressed as persons per square kilometre. It gives an idea of how crowded a region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

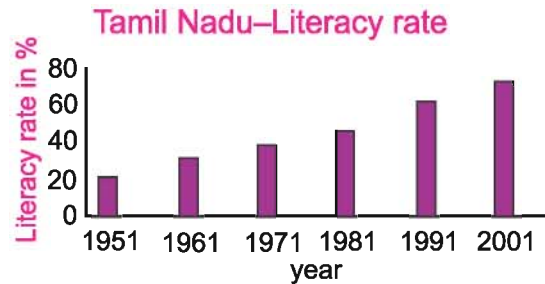
The state has a sex ratio of 987 women for 1,000 men. The highest sex ratio is in Thuthukodi (1,050) and the least is in Salem (929). Fifteen districts record more females than males.

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.

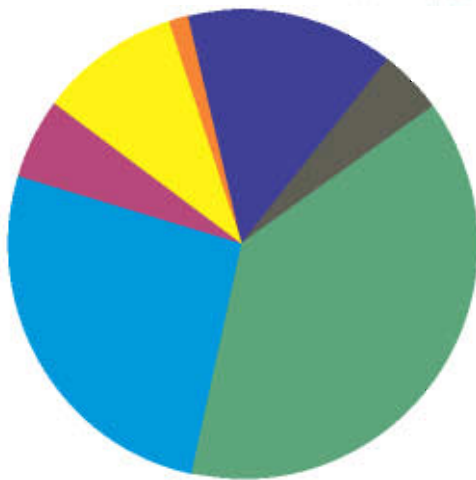
Occupation

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 Coonoor).

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 Pitchavaram 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 mangoose
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 bio-diversity.

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

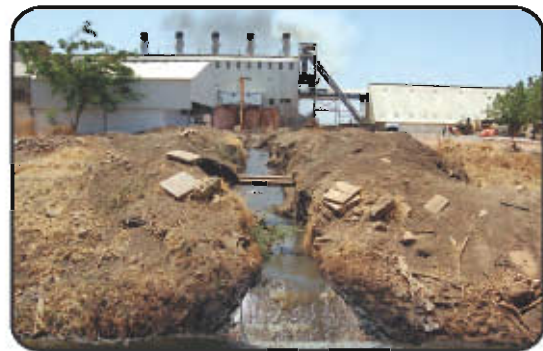
**Find the chemicals by substituting the missing letters
Harmful effects of certain chemicals**

- 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)
Harmfull 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 TNPCB.

- 6) In order to control the emission from goods transport vehicles, vehicle emission monitoring stations are set up in Chennai by the TNPCB at Alandur, Madhavaram and Ambattur areas and in the other districts at Nilgris, Dindigul, Palani and Chengalpet. 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?

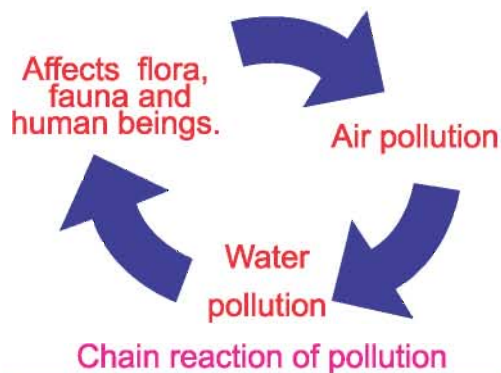
ACTIVITY

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



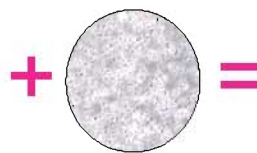
Contour ploughing
Restoring soil fertility



Terrace farming



Farm waste and garbage



plus beneficial bacteria and fungi



equals biofertilizer

Conservation of Forests and Wildlife in Tamil Nadu

Tamil Nadu 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.

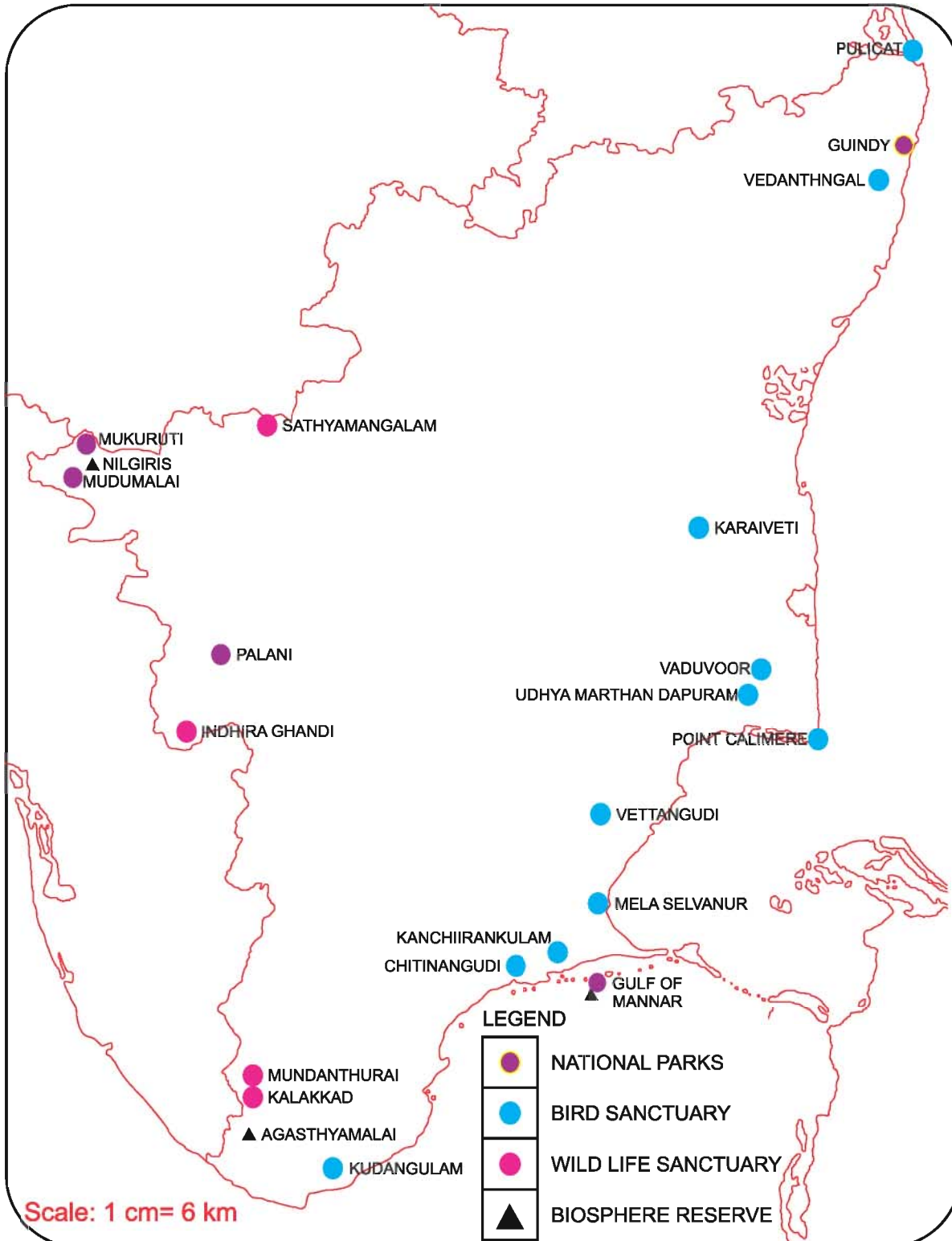
Many afforestation programmes are carried out in Tamil Nadu by both governmental and non-governmental organizations. The trees are planted along the road sides, railway tracks, river banks, and catchment areas

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	Nagapattinam 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 langur, 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.

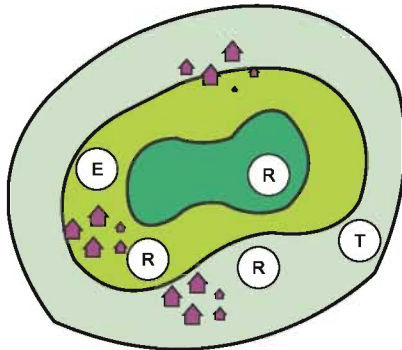
Do you know?

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.

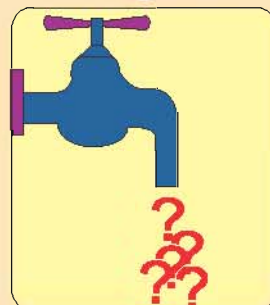
Do you pay for your potable water?

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

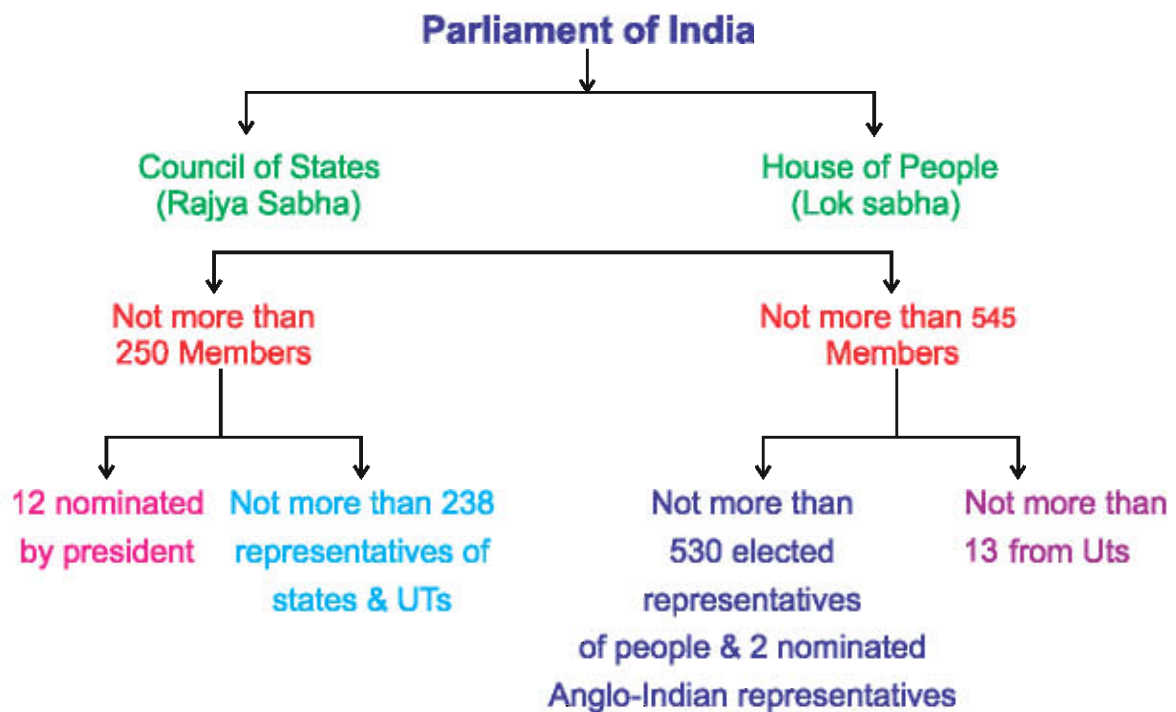
1. THE UNION GOVERNMENT



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 dissolved by the President on certain occasions, on the recommendation of the prime minister or when the President is convinced of the uncertainty of any group enjoying necessary majority in the House. 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 appointed as the Prime Minister by the President.

PRESIDENT OF INDIA

According to the Indian Constitution, the President of India is

the Head of the Indian Republic or the State.



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).

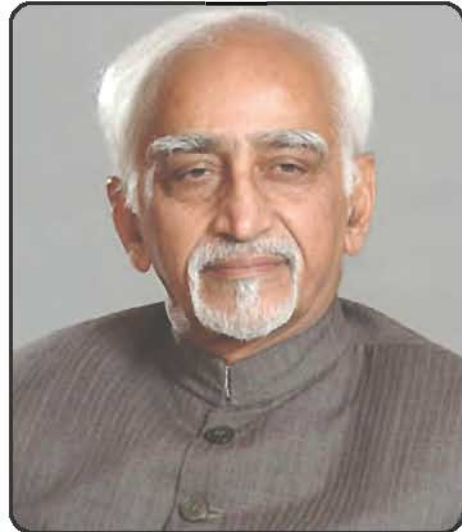
*** Financial emergency**

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.

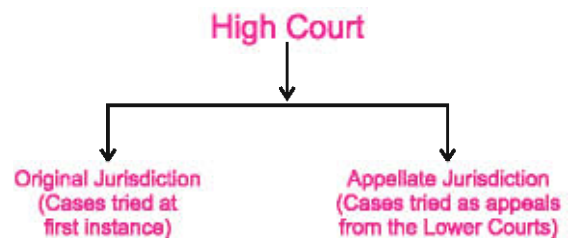
Originally the age of retirement of the judges was fixed at 60. By the 15th Amendment to the Constitution in 1963 the age of retirement of the judges was raised to 62.

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 judgement of a sessions judge or an additional sessions judge.

Administrative powers

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

Power of judicial review

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

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

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

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.

- The parliament of India consist of
 - one house
 - two houses
 - three houses
 - none
- Prime Minister is appointed by
 - Lok sabha
 - Council of Ministers
 - Rajya sabha
 - The President
- Lok Sabha has _____ elected members.
 - 530
 - 238
 - 545
 - 250
- Members of Lok Sabha are elected by
 - Indirect election
 - Direct election
 - Chair person
 - Prime minister
- The upper house is known as
 - Rajya Sabha
 - Lok Sabha
 - Cabinet
 - Parliament
- The head of the Indian Republic and Union is _____
 - Speaker
 - Vice President
 - President
 - Supreme Court Judge
- Money bills cannot be introduced without the approval of _____
 - Parliament
 - Prime Minister
 - President
 - Attorney General
- The Union Finance Minister presents the Annual Budget before _____
 - The Parliament
 - The Lok Sabha
 - Rajya Sabha
 - Prime minister
- The Article of the constitution provides for a Vice President _____
 - Article 53
 - Article 356
 - Article 360
 - Article 63
- The President of India is _____
 - Mrs. Sonia Gandhi
 - Dr. Manmohan Singh
 - Smt. Pratibha Devisingh Patil
 - Dr. Abdul Kalam
- Supreme Court Judge is appointed by _____
 - Cabinet Minister
 - Members of the Parliament
 - Prime Minister
 - 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) 1987 c) 1984 d) 2000
15. Head quarters of Supreme Court is in _____
a) Chennai b) Mumbai c) Kolkata d) New Delhi

II) Answer briefly.

1. What are the qualifications to become 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



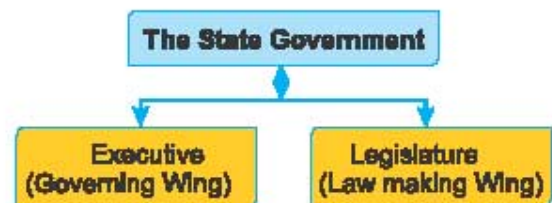
India is a union of 28 States and 7 Union Territories. Among the 7 union territories, "DELHI" is the "National Capital Territory". The States are administered by the State Governments. The Union Territories are administered by the President through the Lieutenant Governors or Chief Administrators.

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".

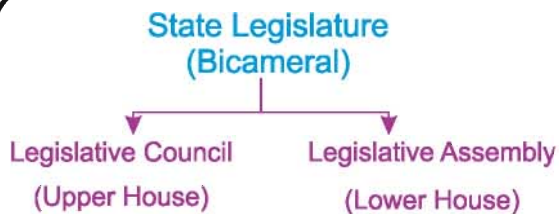
The Legislature

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.

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?

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.

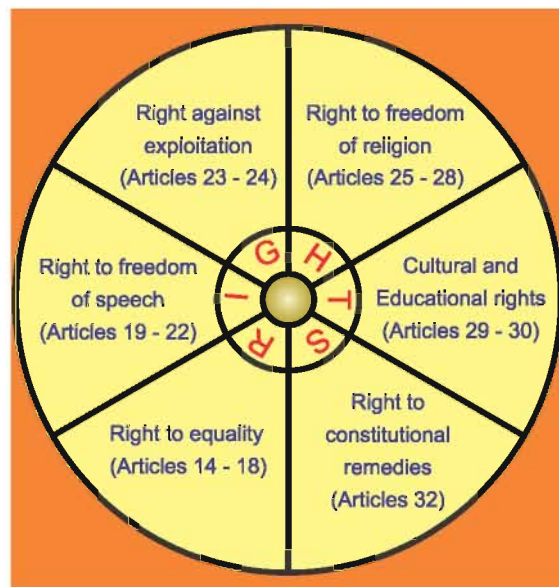
Fundamental Rights

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.

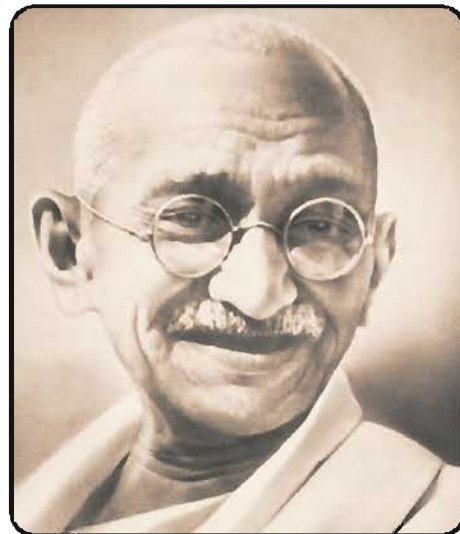
The monopolistic Brahmins exploitation of rich temples was restrained by "**Hindu religious Endowment Act**". The **Devadasi system** was abolished in which **Dr.Muthulakshmi Reddy** the first women doctor, played the key role. By invoking Panchami land act, lands were distributed to the scheduled communities. 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 Party 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 castless 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

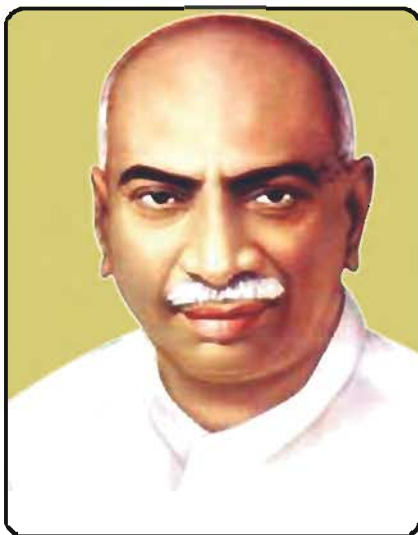


Ramalinga Adigalar

abolition of untouchability, but justified the Varna system. Dayanand Saraswati (Arya samaj) rejected caste but justified Varna system. The Siddhas and Ramalinga 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 graduate 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 Vaidyanatha Aiyar 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 ₹ 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 Kg of mangoes yesterday at T-nagar at a price of ₹ 50 per Kg.

Activity

Constitute some more supply statements to understand the concept properly.

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

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

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

Activity

Mention some Taxes of Central and State Governments.

- 1.
- 2.
- 3.

Law of demand and Law of Supply

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

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

Alfred Marshall's Law of demand: "The greater the amount to be sold, the smaller must be the price at which it is offered. In other words the amount demanded 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 ₹ 25 per Kg, the consumer demands 1 Kg. when the price falls from ₹ 25 to ₹ 20, ₹ 15, ₹ 10, ₹ 5 the consumer increases the demand from 1 to 2, 3, 4 and 5 Kgs respectively. This shows that with a fall in price the demand increases. It indicates the indirect relationship between price and demand.

Activity

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 gold, diamond. In these cases when the price rises demand also rises and when the price falls demand also falls.

Activity

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

Law of supply

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

Law of supply:

As the price of a commodity rises the quantity supply is extended and as the price of the commodity falls the quantity 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 ₹10 per Kg of wheat. When the price of wheat increases to ₹ 20 the supply of wheat rises to 2Kg. From ₹ 20 the price rises to ₹ 30, ₹ 40, ₹ 50 and ₹ 60 per Kg the supply of wheat also rises to 3Kg, 4Kg, 5Kg and 6Kg respectively. It is simple to observe that as the price of wheat increases the quantity supplied also increases.

Activity

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 table given below 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 ₹ 20 per Kg demand is 5Kg and the supply is 1Kg. When the price rises to ₹ 40, ₹ 60, ₹ 80 and ₹ 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 ₹ 60/- and equilibrium quantity is 3Kg.

If the price is greater than equilibrium price that is ₹ 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 ₹ 60.

If the price is lower than equilibrium price that is ₹ 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 ₹ 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?