CHAPTER – 5

Industries

❖ Activity Pg-50

Question 1:

Trace the journey of your shirt from cotton field to your wardrobe.

Answer:

Cotton yarn that is used in making cotton garments has to go through a long journey from fields to our wardrobes. The first step is naturally growing cotton in the fields which takes a long time and lot of efforts. Cotton is found in small bud like structures. During harvesting season, farmers pluck out cotton buds and separate raw cotton. The raw cotton is then spinned on a handloom or power loom. After spinning, cotton yarn is weaved to make finished cotton cloth. This cloth is used by tailors to make different garments and sold to retailers. We buy garments from retailers and that is how it reaches us.

❖ Activity Pg-51

Question 1:

Give some examples of agro based industries.

Answer:

Agro-based industries are basically units which derive their raw materials from agricultural products.

Some of the examples of agro-based industries are cotton and jute textiles, sugar manufacturing industry or vegetable oil producing industry.

❖ **Activity Pg-52**

Question 1:

Find out the inputs, outputs and processes involved in the manufacture of a leather shoe.

Answer:

Leather is a highly used material for making shoes. However, the leather that goes into shoe making has to be processed before it could be brought to use.

Inputs: Raw material in the form of unprocessed leather, labor, machinery, an industrial unit.

Process: The process includes converting unprocessed leather called hide into tough leather, and then spinning and finally printing to give it a finished look.

Outputs: Finished leather is then turned into Leather shoes by shoemakers.

❖ **Let's do Pg-57**

Question 1:

On the outline map of India locate the places that supply raw material to TISCO.

Answer:

Tata Iron and Steel Company (TISCO) is one of the biggest steel producers in India. Production of iron and steel requires many raw materials which are supplied to TISCO from different places. The raw materials with their sources required for TISCO are:

1. Iron-ore: Iron ore is one of the primary raw materials for TISCO. Iron ore comes from mining fields of Orissa (Odisha) and Chhattisgarh.

2. Limestone, dolomite and manganese: Apart from iron ore, various other minerals are also required for iron and steel production like limestone, dolomite manganese. These minerals also come from mining fields of Orissa and Chhattisgarh.

3. Water: Water is used in abundance in any industrial unit. Water for TISCO comes from Kharkai and Subarnrekha rivers which flows through Jamshedpur, Jharkhand where the plant is situated.

❖ **Activity Pg-60**

Question 1:

Collect different types of piece of clothes from a tailor's shop and classify them under cotton, silk, synthetic and woolen. Find out the raw materials used in their manufacturing.

Answer:

Cotton - Cotton is an agro-based product. Cotton cloth is made from raw cotton which is grown in the fields.

Silk - Silk is derived from Silk worms. It comes from the cocoons of the larva of silkworms.

Synthetic - Synthetic is made from the process of chemical synthesis between two or more petroleum and other chemical compounds.

Woolen - Wool is made from the skin of the sheep. Sheep skin is shaved off and processed to form wool threads.

❖ Activity Pg-60

Question 1:

On the outline map of the world mark the places which provide raw material to cotton textile industry of Osaka.

Answer:

Osaka cotton textile industry is located in Kansai region of Japan. The main raw material of a cotton textile industry is raw cotton. For Osaka textile industry, cotton is imported from India, USA and Egypt.

❖ Activity Pg-61

Question 1:

Bangalore has some important public sector industries and research institutions. Find out the full forms of the organizations listed below:
BEL, BEHL, HAL, NAL, DRDO, ISRO, ITI, IISC, NCBS and UAS.

Answer:

BEL - Bharat Electronics Limited is an arms and electronics product manufacturing company. It manufactures arms and defense equipment for Indian armed forces. It is one of the Navratan companies of Government of India.

BHEL - Bharat Heavy Electricals Limited is a manufacturing company. It is India's largest manufacturer of power plant equipments. It has been given a Maharatan status by government of India for its outstanding performance.

HAL - Hindustan Aeronautics Limited is an aerospace and defense company. It manufactures equipments for aerospace industry and also defense equipment for forces.

NAL - National Aerospace Laboratories is second largest aerospace firm in India. It produces civilian aircrafts and also works for development of aerospace technologies.

DRDO - Defense Research and Development Organization is responsible for military's research and development. DRDO is India's largest research organization.

ISRO - Indian Space Research Organization is the space agency of India. It undertakes space based research and explorations, launches satellites into space and monitors its data.

ITI - Industrial Training Institute works to provide industrial and technical training to youth to make them employable. It provides diploma courses in various technical fields.

IISc - Indian Institute of Science is a public university for higher education. It is ranked as India's best university for science education by several organizations.

NCBS - National Center for Biological Science specializes in high end research in the field of biology. Its interest areas vary from study of single molecules to system biology.

UAS - University of Agricultural Sciences provides higher education and research degrees in the field of agricultural sciences. It is often regarded as best agricultural university in India.

❖ Exercise

Question 1 A:

Answer the following questions:
What is meant by the term 'industry'?

Answer:

The term industry refers to an economic activity. It is concerned with the production of goods, extraction of minerals and provisions of services. Industry runs with the help of both human resources and machinery and use of various raw materials.

Question 1 B

Answer the following questions:
What are the main factors which influence the location of an industry?

Answer:

The factors affecting the location of an industry are the availability of raw material, availability of land, abundant water, accessibility of labor, capital, transport connectivity and market accessibility.

Question 1 C:

Answer the following questions:
Which industry is often referred as the backbone of modern industry and why?

Answer:

Iron and steel industry is often referred as the backbone of modern industry. Right from a simple needle to the most complex machinery is made from steel or tools made from steel.

i. Ships, trains, tracks, airplanes etc. are made largely with steel.

ii. Oil wells are drilled with steel machinery.

iii. Minerals are mined with steel equipment.

iv. Agricultural equipments are also made from iron and steel.

Question 1 D:

Answer the following questions:
Why cotton textile industry expanded rapidly in Mumbai?

Answer:

For any industry to survive, it needs some pre conditions in terms of suitable climate, availability of labour, connectivity etc. Cotton textile industry is no different. Rapid expansion of cotton textile industry in Mumbai is due to favourable climatic

conditions i.e., warm moist climate, port for importing machinery, availability of raw material and skilled labour.

Question 1 E

Answer the following questions:

What are the similarities between information technology industry in Banglore and California?

Answer:

Both Bangalore and California are considered to be hubs of Information Technology. Below we discuss some similarities between these two.

Bangalore:

1. Bangalore is located in Deccan plateau of India.

2. The city is known for mild climate throughout the year.

3. Bangalore has the largest number of IT colleges and software companies.

4. It is considered dust-free city.

5. It is located close to major roads and airports.

6. Suitable access to market and skilled workforce.

California:

1. Silicon Valley is a part of Santa Clara Valley in California.

2. The area has temperate climate.

3. Proximity to some of the advanced scientific and technological research and educational centres of the world.

4. Pleasant climate with attractive and a clean environment.

5. It is also easily accessible to major roads and airports.

6. Good access to the market and skilled workforce.

Question 2 A:

Tick the correct answer:
Silicon Valley is located in:
A. Bangalore
B. California
C. Ahmedabad

Answer:

Silicon Valley is located in California, USA. It is the largest IT hub in the world. It is home to some of the most renowned IT firms in the world.

Question 2 B

Tick the correct answer:
Which of the following industries is known as the sunrise industry?
A. Iron and steel industry
B. Cotton textile
C. Information technology

Answer:

Sunrise industries are those industries which are new but are rapidly growing in importance. Information Technology is a

sunrise industry. It is not just one of the major employers for educated youth but is also behind some of the most important innovations in our generation.

Question 2 C:

Tick the correct answer:
Which one of the following is a natural fiber?
A. Nylon
B. Jute
C. Acrylic

Answer:

Jute is a vegetable fibre. It is made from plants.

Question 3 A:

Distinguish between the following:
Agro-based and mineral-based industry

Answer:

Agro – based Industry	Mineral – based Industry
1. Agro – based industry use plant and animals based products as their raw materials.	**1.** Mineral based industries are those industries that use mineral ores as their raw material.
2. Food processing, cotton textile are examples of agro – based industries.	**2.** Iron and steel industry is major example of mineral based industry.

Question 3 B:

Distinguish between the following:
Public sector and joint sector industry

Answer:

Public Sector Industry	Joint Sector Industry
1. There industries are owned and operated by government.	1. Joint sector industries are owned and operated jointly by state and private entities.
2. Examples: Hindustan Aeronautics Ltd., Steel Authority of India Ltd.	2. Example: Vistara airlines.

Question 4:

Give two example of the following in the space provided.
(i) Raw Materials: …………and ……………..
(ii) End Products: …………and…………
(iii) Tertiary Activities: ………..and……….
(iv) Agro-based Industries: …………..and……
(v) Cottage Industries: ………and……….
(vi) Co-operatives:…………and…….

Answer:

(i) Iron ore, cotton (Iron ore is used as a raw material for Iron and Steel Industry and Cotton is used as a raw material for Cotton Textile Industry)

(ii) Cotton cloth, Spear and hammer (Cotton cloth is the end product that comes out of cotton textile industry. Iron processed in Iron and Steel industry is used for making spear and hammer.)

(iii) Commerce, Banking (Tertiary sector is known as the service sector of economy. Tertiary sector provides services instead of products.)

(iv) Food processing, Cotton textile (Agro based industries are those industries whose raw materials come from agriculture. Food processing industries use plants, vegetables and fruits all of which comes from different forms of agriculture. Cotton textile industry uses raw cotton as its raw material which also comes through agriculture.)

(v) Basket weaving, pottery (Cottage industries are low scale or village based industries. Such industries are operated by people out of their own homes. The raw materials used are fairly simple and there is minimal use of machineries.)

(vi) Amul, Mother Dairy (A co-operative is an organization which is run in partnership by its members. Costs and profits are shared by each member.)

Question 5:

How to identify a location for establishing an industry? Divide your class into groups. Each group is a Board of Directors faced with the problem of choosing suitable site for an iron and steel plant Developed Dweep. A team of technical experts have submitted a report with notes and a map. The team considered access to iron-ore, coal, water and limestone, as well

as the main market, sources of labour and port facilities. The team has suggested two sites, X and Y. the Board of Directors has to take the final decision about where to locate the steel plant.

Read the report submitted by the team.
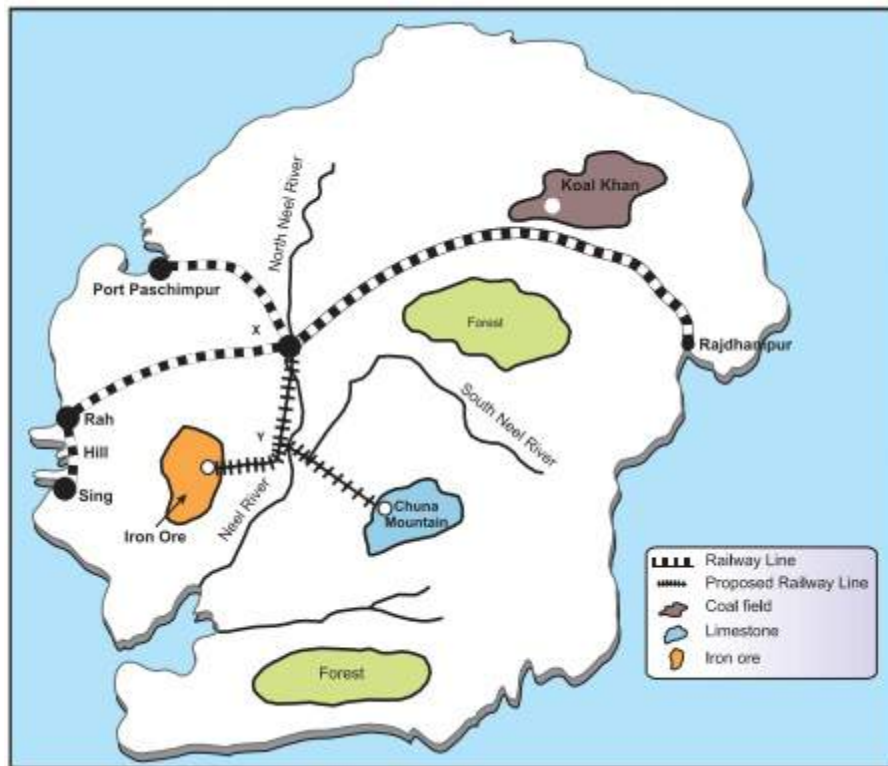
● Study the map to find out the distances of the resources from each site.

● Give each resources a "weight" from 1 to 10 according to its importance. The greater the 'pull' of the factor on the industry, the higher the weight from 1 to 10.

● Complete the table.

● The site with the lowest total should be the most satisfactory site.

● Remember each group of directors can decide differently.

Answer:

Try Yourself

❖ Report

Question 1:

Factors/Resources affecting the location of a proposed Iron and Steel Plant on developed Dweep.

● Iron-ore: There are very large deposits of low grade iron-ore in India. Long distance transportation of the ore would be uneconomic.

● Coal: The only coal field contains rich deposits of high grade coal. transportation of the coal is by railway, which is relatively cheap.

● Limestone: This is widely available over the island, but the purest deposits are in the Chuna mountains.

● Water: Both the tributaries of river Neel carry sufficient water to supply a large iron and steel plant in all seasons. The sea water, because of its high salt content is unsuitable.

● Market: It is expected that the chief market for the engineering works of Rajdhanipur. Transports for the products mainly small steel bars and light steel plates would be relatively low.

● Labour Supply: This will have to be recruited mainly from the unskilled workers in the 3 fishing villages of Hill, Rah and Sing. It is expected that most workers will commute daily from their present homes.

● Port Facilities: These are at present minimal. There is a good, deep natural harbor at port Pashimpuri developed to import metal alloys.

Resource	Distance from X	Distance from Y	Weighting* 1 - 10	Distance X weight for site X	Distance X weight for site Y
Iron ore					
Coal					
Limestone					
Water					
Chief market					
Labour supply					
			Total =		

Answer:

Resource	Distance from X	Distance from Y	Weighting* 1 - 10	Distance X weight for site X	Distance X weight for site Y
Iron ore	50 km	10 km	10	10	10
Coal	50 km	60 km	10	10	10
Limestone	60 km	10 km	10	10	10
Water	50 km	10 km	10	10	10
Chief market	15 km	65 km	10	10	10
Labour supply	15 km	65 km	10	10	10
Total =	240	220	50	50	50

Both the sites, X and Y, have its own pros and cons. While for site X, raw materials like iron ore and water are far, for site Y market and labour is far.

a. We feel that site X would be more appropriate since labour supply and market availability is crucial for the success of any enterprise.

b. We feel that site Y is more appropriate since the proximity of raw materials like iron ore, limestone and water will reduce the cost of production a part of which can be invested in bringing in skilled labour and transporting finished product to chief market.