

Manufacturing Industries

Check Point 01

Q. 1. Name two products that industries produce for agriculture.

Answer: Agriculture forms the basis of any developing economy, and transforming agriculture from traditional to modern techniques is also important. This modern techniques in agriculture are done by equipment manufactured by the industries.

The products that industries produce for agriculture are:

Irrigation pumps, fertilizers, insecticides, pesticides, plastics, and PVC pipes, machines, tools etc. are some that are put in use by the farmers.

Q. 2. What happens when industries are established in backward regions?

Answer: Manufacturing industries are pivotal in boosting the economy of a nation, rather could be said that industries form the backbone of the nation. These manufacturing industries produce products that are used by everyone including farmers, common people. The manufacturing industry is the sector that generates employment in secondary and tertiary sectors.

When industries are established in backward regions:

1. It removes poverty from that region.
2. It brings down regional disparity that was prevalent.
3. The backward region shapes and converts into a developed region.
4. The common public services like roads, schools, hospitals are built which prove useful to the people.

Q. 3. Name the categories of industries classified on the basis of capital investment.

Answer: The industries are classified on the following basis:

1. On the basis of raw material used.
2. According to the utility of the product.
3. On the basis of the capital investment.
4. According to the ownership of the industries.
5. On the basis of the quantity of raw material used.

On the basis of capital investment: It is the type of industry that is classified according to the capital being invested in the industry.

A small-scale industry has a limit over investment. This limit keeps changing, but at present, the maximum investment allowed in the small-scale industry is 1 crore.

Q. 4. Which industry is the only self-reliant industry in India?

Answer: A self-reliant industry is one that can process the product itself that is from collecting raw material to producing furnished goods.

The textile industry which is also an Agro-based Industry is the only self-reliant industry in the country. It is complete in the value chain, that is, it is itself engaged in the process ; from raw material to the production of the highest value-added products.

In India, the textile industry occupies 14% of the industrial production and contributes 4% towards GDP.

Q. 5. Which country is the largest exporter of jute in the world?

Answer: Jute textile industry is an agro-based Industry.

Bangladesh is the largest exporter of Jute in the world. India is placed second in export and first in the production of raw jute and jute goods.

The factors that facilitate its production are :

1. The proximity of the Jute production areas.
2. Water availability.
3. Good transportation network.
4. Availability of labour.

As per the factors, West Bengal is a best-suited region for the textile industry, and this is the reason that most of the industries are located in West Bengal.

Check Point 02

Q. 1. What is the raw material in a steel plant?

Answer: The raw materials used in a steel plant are Iron Ore, Coking coal and limestone in the ratio of 4:2:1. A small quantity of manganese is also used.

Q. 2. How many software technology parks are in India?

Answer: A Software Technology Park is the accumulation of software export units, which aims at encouraging, promoting and boosting the export of software from India.

In 1991 a society named Software Technology Parks of India(STPI) was set up by the Ministry of electronics and IT.

There are 46 STPI across India and major among them are in Bengaluru, Mumbai, Chennai, Hyderabad, and Pune.

Q. 3. Name the important centres of electronic industry in India.

Answer: Electronic Industry is an important industry that covers a wide range of products including TV, Telephones, cellular Telecom, Computers, etc.

India has emerged globally in this sector. Bengaluru has emerged as the electronic capital of India. There are also other cities that have engaged itself in this sector. They are Mumbai, Delhi, Kolkata, Pune, Chennai, Lucknow, Coimbatore.

Q. 4. Give a list of major pollution can lay an impact on our lives?

Answer: The major types of pollution are :

1. Air Pollution: It occurs when the atmosphere is filled with undesirable gases like Sulphur dioxide and Carbon Monoxide. The particles that settle down in the atmosphere are both solid and liquid-like dust, spays mist, smoke. Air pollution adversely affects health and the environment.

2. Water Pollution: When organic and inorganic waste from industries get discharged into the rivers. The industries that increase water pollution are paper, pulp, chemical. textiles and dyeing, petroleum refineries, tanneries, and electroplating industries.

3. Thermal pollution: This occurs when the hot water from the plants, factories are drained into rivers and water bodies before cooling down. This scenario has an ill effect upon the aquatic life.

4. Noise Pollution: The unwanted loud sound from vehicles, industrial and construction activities etc. creates noise pollution. This affects heart rate, blood pressure, stress, and psychological effects etc.

Q. 5. What effects noise pollution can lay on our lives?

Answer: The unwanted loud sound from vehicles, industrial and construction activities etc. creates noise pollution. This affects heart rate, blood pressure, stress, and psychological effects etc.

The effects of noise pollution are :

1. Increased heart rate.
2. Blood pressure increases.
3. Cause irritation and leads to stress.
4. Physiological effects.

Self Assessment

Q. 1. What factors determine the location of the industry?

Answer: The factors that determine locations of industry are :

1. The proximity of the Jute production areas.
2. Water availability.
3. Good transportation network.
4. Availability of labour.

Q. 2. Which industry acts as a nodal industry for synthetic textile?

Answer: Petroleum industry acts as a nodal synthetic industry. Some of the main petroleum products that are manufactured for trade with foreign countries are petroleum gases, gas oil, propane, distilled crude oil, naphtha, ethane, and kerosene. The manufacturing industry has benefitted greatly due to this.

Q. 3. What do you mean by cottage industry?

Answer: Cottage industry is a small-scale industry, where the products are created at homes rather than a factory. Here the labour force is minimum. Example: Weaving, Pottery etc.

Q. 4. Which rank does India hold in terms of production of steel, chemical, jute, and sugar?

Answer: India is the largest producer of jute, but it is the second largest exporter of jute after Bangladesh.

India is the second largest producer of Sugar in the world.

India is the 4th largest producer of crude steel.

India is the 12th largest producer of Chemicals in the world and ranks third in Asia.

Q. 5. Classify industries on the basis of the capital investment.

Answer: The industries are classified on the following basis:

1. On the basis of raw material used.
2. According to the utility of the product.
3. On the basis of the capital investment.
4. According to the ownership of the industries.
5. On the basis of the quantity of raw material used.

On the basis of capital investment: It is the type of industry that is classified according to the capital being invested in the industry.

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Q. 6. What are the ways of treating industrial effluents?

Answer: To minimize the effects of pollution The hot waters and effluents could be treated before releasing it into the rivers.

This treatment could be done in 3 phases:

1. Primary treatment: By using mechanical means like screening, grinding, flocculation, and sedimentation. Here the solids are separated from the wastewater stream.

2. Secondary treatment: Using the biological process. The dissolved biological matter is progressively converted into a solid mass by using indigenous, water-borne micro-organisms.

3. Tertiary: The wastewater is recycled in the tertiary stage.

Q. 7. The sugar industry is ideally suited for the cooperative sector. Why?

Answer: Sugarcane cultivation is seasonal hence the production too is seasonal. The farmers are engaged in the cultivation of the sugarcane, and when it is reaped, a cluster of farmers set up a mill and produce sugar. So this cooperation among the farmers helps them bear profits and losses together. Hence it is a cooperative sector. The cooperative formation has been successful in Maharashtra.

Q. 8. Which state is the leading producer of cotton in India?

Answer: Gujrat is the leading producer of cotton in India. In early days the cotton textiles were mainly based in Maharashtra and Gujrat belt. This region provides ideal conditions in terms of sunlight, humidity, soil, etc.

Q. 9. Name an iron and steel plant of Tamil Nadu.

Answer: India is the fourth largest producer of crude steel. The steel plants are mainly concentrated in Jharkhand and West Bengal region.

Salem Steel Plant is in Tamil Nadu.

Q. 10. Which industries are responsible for water pollution?

Answer: When organic and inorganic waste from industries get discharged into the rivers, it results in water pollution. The industries that increase water pollution are paper, pulp, chemical, Textiles and dyeing, petroleum refineries, tanneries and electroplating industries. They discharge untreated wastes into a waterbody which eventually hampers the ecological balance of the region.

Q. 11. How do industries pollute and water?

Answer: When organic and inorganic waste from industries get discharged into the rivers, it results in water pollution. The industries that increase water pollution are paper, pulp, chemical, Textiles and dyeing, petroleum refineries, tanneries and electroplating industries. They discharge untreated wastes into a waterbody which eventually hampers the ecological balance of the region.

When the hot water from the plants, factories are drained into rivers and water bodies before cooling down, it has an ill effect upon the aquatic life.

Q. 12. Write a short note on the sugar industry.

Answer: Sugar industry is agro-based Industry. India is the second largest producer of Sugar in the world. This industry is seasonal in nature, hence many works in cooperatives.

60% of sugar mills in India is concentrated in Uttar Pradesh and Bihar.

But this industry also faces challenges like the seasonal change. Sugarcane is an annual crop and methods used in the production are old and inefficient. If any stage goes wrong, it results in a huge loss to the farmer.

Q. 13. Explain three facts about information technology and electronics industry.

Answer: Electronic Industry is an important industry that covers a wide range of products including TV, Telephones, cellular Telecom, Computers, etc.

1. This industry has boosted employment.
2. The office work included in this industry has attracted women, and 30% of the people employed are women.
3. This industry has also boosted the economy. It has been a major player in attracting foreign investments.

India has emerged globally in this sector. Bengaluru has emerged as the electronic capital of India. There are also other cities that have engaged itself in this sector; they are Mumbai, Delhi, Kolkata, Pune, Chennai, Lucknow, Coimbatore.

Q. 14. Compare the different pattern of development of jute and cotton industry.

Answer: The developments in the jute industry:

1. In 2005 the National Jute policy was formulated to Increase productivity of jute and increase the quality of the produced Jute.
2. The government made the jute packaging mandatory for goods.

The developments in the cotton industry:

1. Liberalization and Foreign direct investments have given a stimulus to the industry.

2. Earlier only public enterprises would participate in the industry, but now private entrepreneurs have also plunged into it.
3. As steel products are needed in every other sector too, its demand has increased.

Q. 15. How can we compete in the international market in manufacturing?

Answer: Efficiency and competitiveness are the keys to compete in the manufacturing sector in this era of globalization.

To boost the economy, it is important to export as well as import the goods; only either way would do not bear profit. To trade in the international market, the quality of the product must be better than others. This requires efficiency in the production sector.

Q. 16. Explain the objectives of the National Jute Policy 2005.

Answer: In 2005 the National Jute policy was formulated.

The objectives are:

1. Increase productivity of jute.
2. Increase the quality of the produced Jute.
3. The Jute farmers must be paid well.
4. To enhance the yield of the Jute.

Q. 17. How were the cotton textile produced in ancient India?

Answer: The cotton Industry has a long history. In ancient times, cotton was produced with hand spinning and handloom weaving techniques.

Later after the advent of British in 18th-century power looms came into use. This stopped the use of traditional handloom weaving technique.

Q. 18. Why has the demand for jute products increase internally as well as globally? Explain any two reasons.

Answer: Jute textile industry is an agro-based Industry.

USA, Canada, Russia, UAE, UK, and Australia are the main markets of jute where the demands have increased.

The main reason behind the increased demands are:

1. The demands have increased internally because of the norm made by the government on the mandatory packaging of goods with jute.
2. National Jute policy formulated increased the yield of jute production.

Q. 19. How are integrated steel plant different from mini steel plants? What problem does the industry face? What recent developments have led to a rise in the productions capacity?

Answer: Manganese is mainly used in the manufacturing of Steel. The Iron and steel industries are the basic industry as rest all other industries are dependent on them. Steel is used in the manufacturing of goods, construction material, defence medical, telephonic, scientific and variety of other goods.

An Integrated plant is one that is huge and manufactures everything from getting raw materials to produce the final product whereas mini Steel plants are smaller, have electric furnaces. They produce mild and alloy steel.

The problems associated with Steel Industry are :

1. Coking coal has limited availability and is costly.
2. The labour has lower productivity.
3. The industry requires huge energy supply, which is not always available.
4. Poor Infrastructure.

The developments that have led to a rise in the production capacity are:

1. Liberalization and Foreign direct investments have given a stimulus to the industry.
2. Earlier only public enterprises would participate in the industry, but now private entrepreneurs have also plunged into it.
3. As steel products are needed in every other sector too, its demand has increased.

Q. 20. Why are jute mills concentrated along the Hooghly river?

Answer: Jute textile industry is an agro-based Industry.

India is placed second in export and first in the production of raw jute and jute goods.

The factors that facilitate its production are :

1. The proximity of the Jute production areas.
2. Inexpensive Water availability.
3. Good transportation network including rail, road, and waterways.
4. Cheap Availability of labour from Bihar, Jharkhand, Orissa etc.

The above factors have led to the concentration of jute mills along the Hooghly river.

As per the factors, West Bengal is the best-suited region for the textile industry, and this is the reason that most of the industries are located in West Bengal.

Q. 21. "The challenge of sustainable development requires integration of economic development with environmental concern." Support this statement by giving four measures that can be taken by the industries to protect the environment.

Answer: Though Industrialisation is part of globalization we cannot ignore the harmful effect of it upon the environment is possible.

The effects could be reduced simultaneously by the Industries:

1. The industries could minimize water usage and could reuse the water by recycling.
2. Rainwater harvesting to store the rainwater.
3. Treating hot water effluents before discharging into water bodies.
4. Less drawing of groundwater.
5. Fitting smokestacks to factories with an electrostatic precipitator to reduce air pollution.
6. Using oil or gases instead of coal in factories.

Q. 22. The twin aim of industrial development along with conservation of the environment is not an impossible task. Comment on this statement.

Answer: Though Industrialisation is part of globalization we cannot ignore the harmful effect of it upon the environment is possible.

The effects of Industrialisation:

1. The pollutions namely air, water, thermal and Noise pollution are all caused due to industries. Hence, this fact cannot be overlooked and must be worked upon.
2. The pollutions have degraded the atmosphere and have led to global warming.
3. The increasing temperature has led to the melting of glaciers and rising sea level.
4. The health hazards have started deteriorating human capital.
5. Contaminated water has produced many deathly viruses.

The effects could be reduced simultaneously by the Industries:

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2. Rainwater harvesting to store the rainwater.
3. Treating hot water effluents before discharging into water bodies.
4. Less drawing of groundwater.

5. Fitting smokestacks to factories with an electrostatic precipitator to reduce air pollution.

6. Using oil or gases instead of coal in factories.

The above methods could be brought into practice in order to save the atmosphere from depleting and the environment from degradation.

Q. 23. "India is important to iron and steel producing country in the world yet, we are not able to perform our full potential. Comment on this statement.

Answer: India is the 4th largest producer of crude steel in the world.

The challenges faced by this industry are :

1. Coking coal has limited availability and also is costly.
2. The labour has lower productivity.
3. Since the industry requires huge energy supply, which could no be available.
4. Poor Infrastructure of the industries and factories.

Though the steels are produced and imported from other countries too, yet the production is not sufficient to meet the domestic demand.

To address this, there is a need of Steel policy similar to that of National Jute policy and work accordingly to increase the yield.

Q. 24. Why is it important for us to improve our weaving sector instead of exporting yarn in large quantities?

Answer: In ancient times the handloom weaving method was used to produce cotton textiles. Even now it is used, but it needs to improved and more mechanized. The yarn is a raw material which is exported to other countries. These countries process it and produce high-quality clothes which gets them huge profits. This is most of the times imported by us which affects the economy negatively.

We need to develop the weaving industry so as to process this domestically and then export the finished product for larger gains.

Q. 25. Explain any four problems faced by cotton textile industries in India.

Answer: The Cotton textile industry is agro-based Industry and provides living to many farmers, cotton ball pluckers and workers.

The factors that responsible for its localization are :

1. Availability of raw cotton.
2. Transportation facility.

3. Availability of labour.

4. Moist climate for cultivating cotton.

In India. Gujrat and Maharashtra region has most of the cotton industries.

Challenges faced :

1. There is strong competition in the synthetic fibre industry.

2. Though India is the largest producer of cotton yarn, yet most of the cotton products are still imported.

3. The power looms are run on electricity; this gets deterred by the fluctuating and erratic power supply.

4. The machinery used is traditional and need to be upgraded in order to increase the yield.

5. The low output of labour is also one challenge. This could be addressed by making the labourers efficient.