1. **Explain the Importance of Manufacturing**

 **OR**

 **How is manufacturing sector considered the backbone of economic development of the country ? Explain any three points in this regard**

 **OR**

**The economic strength of a country is measured by the development of manufacturing industries. Explain**

The manufacturing sector is considered the backbone of development in general and economic development in particular. The importance of manufacturing is outlined below.
a) Manufacturing industries help in modernizing agriculture

b) It reduces the heavy dependence of people on agriculture income by providing them jobs.

c) Helps in the eradication of unemployment & poverty.

d) Helps in bringing down regional disparities.

e). Exports of manufactured goods expand trade & commerce

It is worth noting that countries that transform their raw materials into a wide variety of furnished goods of a higher value are prosperous.

1. “Industrialisation and urbanisation go hand in hand.” Validate the statement.
Answer:
(i) After an industrial activity starts in a town, urbanisation follows. Industry provides employment to the people of the area. Population migrates from rural hunterlands to seek jobs and other opportunities.

(ii) Housing and transport facilities are developed to accommodate these people. Other infrastructural developments also take place leading to growth and development of the town into a city.

(iii) Sometimes, industries are located in or near the cities. Cities provide markets and services such as banking, insurance, transport, labour, consultants and financial advice, etc., to the industry. Thus, industrialisation and urbanisation go hand in hand

1. **Agriculture and industry are not exclusive of each other. Justify the statement**

**Or**

**“Agriculture and industry are complementary to each other.” Explain with examples.**

**OR**

**How do industries give a boost to the agriculture sector?**

Agriculture and industrymove hand in hand. For instance, the agro-industries in India have given a major boost to agriculture by raising its productivity. They depend on the latter for raw materials and sell their products such as irrigation pumps, fertilisers, insecticides, pesticides, plastic and PVC pipes, machines and tools, etc. to the farmers. Thus, the development and competitiveness of the manufacturing industry has not only assisted agriculturists in increasing their production but also made the production processes very efficient

1. **How India will be able to compete in the international market?**

In the present day world of globalisation, our industry needs to be more efficient and competitive. Self-sufficiency alone is not enough. Our manufactured goods must be at par in quality with those in the international market. Only then, will we be able to compete in the international market.

1. **What are the five criteria based on which industries are classified?**
2. On the basis of source of raw materials used — Agro-based and mineral-based.

Examples:

1. According to their main role — Basic and Consumer industries.

Examples:

1. On the basis of capital investment — Small-scale and large-scale industries.

Examples:

1. On the basis of ownership — Public Sector, Private Sector, Cooperative Sector, Joint Sector.

Examples:

1. Based on the bulk and weight of raw material and finished goods — Heavy industries, Light

Examples:

1. **What are the four types of industries based on ownership?**
2. Public Sector industries: Owned and operated by government agencies, e.g., BHEL, SAIL, etc.
3. Private Sector industries are owned and operated by an individual or a group of individuals, e.g., TTSCO, Bajaj Auto Ltd., Dabur Industries.
4. Joint Sector industries are jointly run by the Public (government) and Private Sector (individuals), e.g., Oil India Ltd.
5. Cooperative Sector industries are owned and operated by the producers or suppliers of raw materials, workers, or both. They pool in the resources and share the profits or losses proportionately, e.g., sugar industry in Maharashtra and coir industry in Kerdla
6. **Explain the reason for setting up of the National Manufacturing Competitiveness Council (NMCC)?**

The economists predict that manufacturing in India can achieve its target over the next decade by (a) appropriate policy interventions by the government, and (b) renewed efforts by the industry to improve productivity. The National Manufacturing Competitiveness Council (NMCC) has been set up with this objective.

1. **What are the factors that influence the selection of Industrial locations?**

Manufacturing / industrial activity tends to locate at the most appropriate place where all the factors of industrial location are either available or can be arranged at a lower cost.

The location of manufacturing industries depends on
a. **Nearness To The Source of Raw Material**: Large quantities of raw materials are needed for industries. Therefore industries are located near the source of raw materials. It saves the cost of transportation. Eg. Jute mills in West Bengal are located near the jute fields and the cotton textile mills in Maharashtra are located near the cotton fields.

b. **Power Resources**: Coal, oil and water power are the main sources of power depending on the nature of industries. Eg.

c. **Means of Transportation**: Modern Industries need cheap, developed and quick means of transportation. Cheap means of transportation are required for the movement of workers, raw materials and machinery to the factories. Eg. Many of the industries are located either having access to the railway line for carrying products via goods train or sea ports.

d. **Climate**: Stimulating climate increase the efficiency of the labourers. The cotton textile industry required a humid climate. The film industry needs good weather with clear blue skies. Similarly, the aircraft industry also needs clear weather. E.g. Bengaloru is the hub of India’s software industry due to its warmth climate

e. **Skilled Labour**: Cheap and skilled labour is essential for the location of industries. Eg. The Glass industry at Firozabad and the sports goods industry in Jalandhar are located due to the availability of skilled labour. Similarly, many of the multi-national software companies have their branches in India due to the availability of skilled professionals with less salary.

f. **Other Factors**: The selection of Industrial locations is also based on factors such as the availability of a market for selling products, Government policies, Banking and insurance facilities, capital etc.

1. **The textile industry occupies unique position in the Indian economy. Justify**

Or

**“The textile industry of India is self reliant and complete in Value” Explain the** **contribution of textile industry to the Indian economy.**

It contributes significantly to industrial production (14%). It employs the largest number of people after agriculture, i.e., 35 million persons directly. Its share in the foreign exchange earnings is significant at about 24.6%. It contributes 4% towards GDP and is the only industry in the country which is self-reliant and complete in the value chain

1. **Factors for concentration/location of cotton textile industry in Maharashtra and Gujarat in early years?**
2. Availability of raw cotton was abundant and cheap.
3. Moist climate in these coastal States also helped in the development of cotton textile industry because humid conditions are required for weaving the cloth, else the yam breaks.
4. Well developed transportation system and accessible port facilities in Maharashtra and Gujarat.
5. Proximity to the market as cotton clothes are ideal to wear in these warm and humid States.
6. **Outline the problems faced by cotton textile industry in India**

**OR**

**Though India is the largest producer of cotton yarn, most of the cotton products are still imported. Why?**

1. Machinery is obsolete. It needs to be upgraded in the weaving and processing sectors
2. There is an erratic power supply and this industry requires a good power supply for its growth
3. There is stiff competition among the synthetic fibre industry because synthetic fibre is available at cheap rates
4. Low productivity of the labours is also another problem faced by this industry

Because of the above reasons, though India is the largest producer of cotton yarn, most of the cotton products are still imported

1. **Why is it important for our country to keep the mill sector lower than the power loom and handloom?**

Significant numbers of people in the rural areas in India are working by power loom and handloom. It is one of the key earnings of their life. If industrial production of clothes using mill loom increases, it will impact the livelihood of many families in their homes who work on power looms and handlooms. Unemployment and hunger would also result from it. Thus, the industrial or mill looming is often held lower than the power looms and the handlooms, in order to prevent such circumstances and to make rural people self-sufficient.

OR

Because, (a) the power loom and the hand loom can provide more employment to the rural people. (b) Both of them promote decentralization and benefit a wider area of the country. (c) Both of them require less investment as compared to mill-sector loomage

1. **Can you write a brief outline about the position of Indian cotton industry at** **international level?**
 1. India has the second largest installed capacity of spindles in the world, next to china at around 34 million.
2. We have a large share in the world trade of cotton yarn, accounting for one fourth of total trade.
3. Our trade in garments is only 4% of the world’s total.
4. Our spinning mills are competitive at global level and capable of using all the fiber products.
2. **Why is it important for India to improve weaving sector instead of exporting yarn in** **large quantities?**

The weaving, knitting and processing units cannot use much high quality yarn that is produced in the country. There are some large and modern factories in these segments, but most of the production is in fragmented small units, which cater to local market. This mismatch is a major drawback for the industry. As a result, many of our spinners export cotton yarn while apparel/garment manufactures have to import fabric. Our high quality yarn is used by other countries. It is important to improve weaving sector because it is decentralized to provide scope for incorporating traditional skills. That’s why weaving sector should be improved so that it may use high quality yarn produced in the country

1. **What are the factors responsible for the concentration of the jute industry on the banks of Hoogly?**
	1. Proximity of the jute producing areas to the Hoogly Basin.
	2. Inexpensive water transport provided by the Hoogly river.
	3. It is well connected by a good network of railways, waterways and roadways.
	4. Abundant water for processing raw jute.
	5. Availability of cheap labor from West Bengal,Bihar, Odisha and Uttar Pradesh.
	6. Kolkata as a port and large urban centre, provides banking, insurance and port facilities.
2. **Why has there been a decline in the Jute Industry?**
1. Because of high cost Jute products the demand has greatly declined.
2. The invention of synthetic as a substitute for jute has greatly led to the decline of the jute industry.
3. International competition especially from Bangladesh has also led to decline of the Jute industry.
3. **What were the major objectives of National Jute Policy 2005?**
	* 1. To increase the productivity
		2. To improve the quality
		3. To Ensure good prices to the jute farmers
		4. To Enhance the yield per hectare
4. **Why is the internal demand for jute increasing?**

The internal demand for jute has been on the increase because –
(i) Government policy of mandatory use of jute packaging
(ii) The growing global concern for environment-friendly biodegradable materials

1. **What is the importance of Jute Industry?**

 1. Employment- The jute industry supports 2 61 Lakh workers directly another 40 lakh small and marginal farmers who are engaged in cultivation of jute and Mesta.
2. Products: Jute industry provides products of daily use like jute bags, ropes, mats etc.
3. Foreign Exchange: Exports of raw jute and manufactured goods bring foreign exchange
4. Promotion of Small Scale Industry: Many products of the jute industry are manufactured by cottage and small scale industry. So it promotes decentralization of industry.

1. **What are the reasons for location of sugar mills close to the fields?**
2. The raw material used, sugarcane is bulky and perishable.
3. It cannot be transported to long distances because its sucrose content dries up fast, so it should be processed within 24 hours of its harvest.
4. **Sugar Industry is shifting towards southern and western States, Why?**
5. Cane produced here has higher sucrose content
6. The favorable climatic conditions (cooler climate) ensure a longer growing and crushing season.
7. The Cooperatives are more successful in these States. Sugar industry being seasonal in nature, is ideal for the cooperative sector.
8. Yield per hectare is higher in southern States.
9. **India is an important iron and steel producing country in the world yet we lag behind. Why?**
* High costs and limited availability of coking coal.
* Lower productivity of labour.
* Irregular supply of energy.
* Poor infrastructure
1. **Iron and steel industries is concentrated in and around Chhotanagpur Plateau Region, Why?**

**Or**

**Why does the north eastern part of the peninsular plateau region have the maximum** **concentration of iron and steel industries?**

* Low cost of iron-ore which is mined here
* High grade raw materials in close proximity
* Availability of cheap labour
* Vast growth potential in the home market
* Efficient transport network for their distribution
* Availability of power because this region has many thermal and hydel power plants
* Liberalisation and FDI.
1. **Why is iron and steel industry called a basic industry?**

Iron and steel industry is called the basic industry because:

(i) It is the industry that lays the foundation of rapid development of other industries such as heavy Engineering, defence equipment, automobiles, aeroplanes etc.

(ii) It is also helpful in providing employment.

(iii) It also helps in the development of agriculture.

1. **What are the characteristics of aluminium?/ What are the advantages of aluminium over other metals?**
	1. It is a light metal
	2. Aluminium is resistant to corrosion
	3. It is a good conductor of heat
	4. Aluminium is malleable and becomes strong when mixed with other metals
2. **What are the types of Industrial pollution?**

**.**

* **Air pollution.** Air pollution is caused by the smoke emitted by chemical and paper factories, refineries and smelting plants, and the burning of fossil fuels in factories that ignore pollution norms. Air-borne particulate materials contain both solid and liquid particles like dust, sprays, mist and smoke.
* **Water pollution.** Major water pollutants are dyes, detergents, acids and salts emitted from the industries. Heavy metals like lead and mercury, pesticides and fertilizers and synthetic chemicals with carbon, plastics and rubber, etc. discharged in the water bodies without treatment pollute these water bodies.
* **Noise pollution.** The generators, compressors, machines, furnaces, looms, exhaust fans, etc. used by industries create a lot of noise. Noise can raise blood pressure and can have physiological effects as well.
* **Land pollution.** Land and water pollution are closely related. Dumping of industrial wastes especially glass, harmful chemicals, industrial effluents, packing, salts and garbage into the soil result in land pollution.
* **Thermal pollution.** This occurs when hot water from factories and thermal plants is drained into rivers and ponds before cooling. They can cause cancer and other problems including birth defects.

**=======**

1. Air pollution: This is caused due to presence of high proportion of gases which are undesirable, e.g., Sulphur dioxide and carbon monoxide.
2. Water pollution: Water pollution is caused by organic and inorganic industrial waste and effluents discharged in to rivers.
3. Noise pollution: Industrial and construction activities, machinery, factory equipment, generators,

saws and pneumatic and electric drills make a lot of noise.
4. Thermal pollution: Thermal Pollution of water occurs when hot water from factories and thermal plants is drained in to river and ponds before cooling.

1. **How do industries pollute the environment? Explain with five examples**

**Air Pollution:**Smoke is emitted by chemical and paper factories, brick kilns, refineries and smelting plants, and burning of fossil fuels in factories that ignore pollution norms. Air-borne particulate materials contain both solid and liquid particles like dust, sprays, mist and smoke.
**Water Pollution:**Major water pollutants are dyes, detergents, acids and salts. Heavy metals like lead and mercury, pesticides and fertilizers and synthetic chemicals with carbon, plastics and rubber etc. discharged in the water bodies without treatment pollute these water bodies.
**Noise Pollution:**The generators, compressors, machines, furnaces, looms, exhaust fans, etc. used by industries create a lot of noise. Noise can raise blood pressure and can have physiological effects as well.
**Land Pollution:** Land and water pollution are closely related. Dumping of industrial wastes especially glass, harmful chemicals, industrial effluents, packing, salts, and garbage renders the soil useless.
**Thermal Pollution:** The hot water from industries is directly discharged into the water bodies causing thermal pollution due to changes in temperature. Wastes from nuclear power plants, nuclear and weapon production facilities cause cancer and birth defects.

####  **Suggest any three steps to minimize the environmental degradation caused by the industrial development in India?**

ANS) Three steps to minimize the environmental degradation caused by the industrial development in India are:

**i) Water pollution:**

Firstly- Minimising use of water by reusing and recycling.

**ii) Air pollution:**

Secondly- dust particles in the air can be reduced by fitting filters.

**iii) Noise pollution:**

Lastly- Noise can be reduced with silencers to avoid noise pollution.

1. **How can the industrial pollution of fresh water be reduced? Give some suggestions**

Every litre of wastewater discharged by our industry pollutes eight times the quantity of fresh water.

* 1. minimising the use of water for processing by reusing and recycling it in two or more successive stages
	2. harvesting of rainwater to meet water requirements
	3. treating hot water and effluents before releasing them into rivers and ponds
1. **What are the three phases of treatment of industrial effluents?**
	* 1. Primary treatment by mechanical means. This involves screening, grinding, flocculation and sedimentation.
		2. Secondary treatment by biological process
		3. Tertiary treatment by biological, chemical and physical processes. This involves recycling of wastewater
2. What is noise pollution? What is its major source? How does it affect human health? Suggest two ways to reduce noise pollution.
Answer:
Noise pollution is the disturbing or excessive noise that may harm the activity or balance of human or animal life. The source of most outdoor noise worldwide is mainly caused by machines and transportation systems, motor vehicles, aircraft, and trains. Noise pollution leaves adverse effects on human health. It not only results in irritation and anger, it can also cause hearing impairment, increased heart rate and blood pressure among other physiological effects. Unwanted sound is an irritant and a source of stress.
3. **What are the pro-active approach adopted by the National Thermal Power Corporation (NTPC) for preserving the natural environment and resources?**
4. Optimum utilization and up-gradation of equipment by adopting latest techniques.
5. Minimizing waste generation by maximizing ash utilization.
6. Providing green belts for nurturing ecological balance.
7. Reducing environmental pollution through ash pond management, ash water recycling system and liquid waste management.
8. Ecological monitoring, reviews and online data base management for all its power stations
9. **Bring out the importance of information Technology and Electronic in India?**

1. Electronic industry produces a wide range of goods like televisions, telephone, radars, computers etc.
2. It has provided employment to more than one million people.
3. It has contributed to a lot of foreign exchange in the last few years.
4. Bangalore has emerged as the electronic capital of India.

1. **Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
1. Silk Textile centre
2. Iron and steel Plant
B. Locate and Label Coimbatore cotton textile centre with appropriate symbols on the same map given for identification.**



1. **Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
1. Iron and Steel Plant
2. Iron and steel Plant
B. Locate and Label Kanpur woolen textile with appropriate symbols on the same map given for identification**



1. **A. Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
1. Iron and steel Plant
2. Iron and steel Plant
B. Locate and Label Ludhiana cotton textile with appropriate symbols on the same map given for identification.**



1. **Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
1. Software Technology park
2. Electronic capital of India
B. Locate and Label Software technology park of Kerala with appropriate symbols on the same map given for identification**



1. **A. Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.**
**1. Software technology park**
**2. Iron and steel Plant**
**B. Locate and Label Ahmadabad cotton textile Centre with appropriate symbols on the same map given for identification**

