

# MANUFACTURING INDUSTRIES

## Long Answer Type Question

### Previous Years' Questions

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- 1. Why is manufacturing industry sector considered the backbone of economic development of the country ? Explain four reasons. [Foreign 2008]**

**Ans.** Manufacturing sector is considered the backbone of economic development of the country due to following reasons :

- (i) Manufacturing industries have not only help in modernising agriculture but also reduce the dependence of people on agricultural income by providing them jobs in secondary and tertiary sectors
- (ii) Industrial development has helped in eradication of poverty and unemployment.
- (iii) It has reduced region and is parties by setting up industries in tribal and backward areas.
- (iv) Export of manufactured goods has led to expansion of trade and commerce and brought about the most needed foreign exchange.
- (v) Countries that transform their raw materials into wide variety of finished goods of higher value are prosperous. India's prosperity lies in diversifying and increasing its manufacturing industries as quickly as possible.

(Any two)

- 2. Explain any four factors which influence the industrial location. [Foreign 2008]**

**Ans.** Four Factors affecting the industrial location are as follows:

- (i) Industrial location is influenced by availability of raw material, labour, capital, power and market.
- (ii) Manufacturing activity tends to locate where all the factors of industrial location are either available or can be arranged at lower cost.
- (iii) Cities provide large market and other services like banking, insurance, transport, labour, consultants and financial advice etc.
- (iv) Heavy industries like Iron and steel should be located in close proximity to the source of raw materials and well developed network of transport. For example, Chotanagpur region.

- 3. Explain any four factors responsible for the concentration of jute industry in the 'Hugh Basin'. [Foreign 2008]**

**Ans.** Factors influencing the location of jute textile industry in the Hugh Basin are :

- (i) Proximity to the jute producing areas
- (ii) Inexpensive water transport provided by Damodar and its tributaries
- (iii) Good network of roads, railways and waterways to facilitate the movement of raw-material to the mills
- (iv) Abundant water for processing of jute called 'Retting'.
- (v) Nearness to the port of Kolkata, provides port facilities, banking and insurance facilities.
- (iv) Cheap labour for processing jute (Any four)

- 4. Describe any four major problems faced by cotton textile industry in India. [Delhi 2007]**

**Ans.** Four major problems faced by cotton textile industry in India are :

- (i) Lack of good quality cotton.
- (ii) Erratic power supply.

- (iii) Old and outdated machinery.
- (iv) Low efficiency of labour.
- (v) Stiff competition from synthetic textiles.

**5. Explain any four factors which are responsible for decentralisation of cotton industry in India. [AI 2007]**

**Ans.** Four factors responsible for decentralisation of cotton industry in India are :

- (i) Wide market.
- (ii) **Transport:** Both raw material and finished product are light and can be easily transported at low cost.
- (iii) Banking facilities.
- (iv) Electricity: Hydroelectricity is widely available.

Today cotton mills are spread over 80 towns and cities of India, but most of them are concentrated in Maharashtra, Gujarat, West Bengal, Uttar Pradesh, Madhya Pradesh and Tamil Nadu.

**6. Explain any four measures to control air pollution created by industries in India. [Delhi 2007]**

**Ans.** Four measures to control air pollution created by industries in India are :

- (i) Fuel selection and utilisation. For example, CNG is used in automobiles instead of diesel or petrol.
- (ii) Smoke may be prevented by use of oil instead of coal in the industries.
- (iii) Equipments to control aerosol emissions like inertial separators, filters, precipitators and scrubbers.
- (iv) Pollution check certificate has been made compulsory.
- (v) Vehicles which are very old not permitted for movement.

**7. What is the importance of sugar industry ? Why does sugar industry show the tendency to migrate towards the southern states of India ? Give four reasons. [Foreign 2005]**

**Ans.** Refer to Ans. 5 (1 Mark) and 9 (3 Marks).

**8. How has chemical industry gained an important position in the Indian economy ? Explain any six points in this regard ? [Foreign 2006]**

**Ans.** (i) to (v)—Refer to Ans. 3 (3 Marks) and  
 (v) Chemical industries contribute 3% of GDP.  
 (vi) It is the third largest in Asia and ranks 12th place in the world in terms of its size.

**9. "Cotton textile industry is distributed all over the country"; while iron and steel industry is confined to peninsular India." Support this statement with three distinctive features of each. [AI 2005C]**

**Ans.** Cotton textile industry is widely distributed all over India because (i) Cotton mills can be set up anywhere.  
 (ii) Cotton being a light raw material can be easily transported.  
 (iii) Cotton is widely grown.  
 (iv) India being a tropical country there is wide market for cotton cloth.  
 (v) Availability of hydroelectricity. (Any three )

**Iron and Steel industries are confined to peninsular India because of**

- (i) the availability of Iron ore.

- (ii) proximity to coalfields.
  - (iii) other raw materials like manganese, limestone, dolomite are also available.
  - (iv) nearness to the ports.
  - (v) rivers provide cheap inland water transport for iron and steel goods.
  - (vi) Kolkata provides huge market for iron and steel goods. (Any three)
- Thus most of the iron and steel plants like Jamshedpur, Durgapur, Bhilai, Bokaro, Rourkela are confined to the mineral rich north-eastern and southern part of Indian peninsula.

**10. Why are jute mills concentrated along the Hugli river ? Explain any six reasons. [Delhi 2004]**

- Ans.**
- (i) Proximity to jute growing areas.
  - (ii) Rivers provide cheapest inlandwater transport.
  - (iii) Good network of transport.
  - (iv) Cheaplabour.
  - (v) Plenty of water for processing of jute.
  - (vi) Kolkata being a metropolitan city provides huge market, banking and insurance facilities.
  - (vii) Kolkata being a major port helps in import of raw jute and export of jute goods. (Any six)

**11. Explain aluminium smelting and copper smelting industries with reference to the following for each of them.**

- (i) two major uses.**
- (ii) names of two smelting states.**
- (iii) annual production.**

**[AI2004C]**

**Ans. Copper Smelting Industries :**

- (i) **Two major uses :** It is used for making utensils, electrical wires and alloys.
- (ii) **Two smelting states :** Ghatshila in Jharkhand and Khetri in Rajasthan.
- (iii) **Annual production :** India produces 43 thousand tonnes of copper blister (partly purified) which is only half of the requirement and the other half is imported.

**AluminiumSmelting :**

- (i) **Two major uses :** Because of its flexibility and good conductivity of electricity and heat, aluminium is widely used in a large number of industries. It is substituting steel, copper and lead in many industries.
- (ii) **Two smelting states :** Orissa, West Bengal, Kerala, Uttar Pradesh.
- (iii) **Annual production :** India produces about 620 thousand tonnes of aluminium per annum. (Any two)

**NCERT Questions**

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**12. How are integrated steel plants different from mini steel plants ? What problems does the industry face ? What recent developments have led to a rise in the production capacity ?**

- Ans.** Mini steel plants are decentralised, small, secondary units have electric furnaces which produce steel using scrap and sponge iron. They produce mild and alloy steel of various kinds. Integrated steel plants on the other hand are large, handle everything in one complex- from transport of raw material to steel, making, rolling, shaping metal. The problems faced by the iron and steel plants are :
- (i) High costs andlack of availability of coking coal.
  - (ii) Low efficiency of labour.

- (iii) Erratic supply of energy resources.
- (iv) Poor infrastructure. In recent years the policy of liberalisation and direct investment of capital from foreign countries and private entrepreneurship and more funds for research and development for updating of technology has contributed to increased production capacity.

### 13. How do industries pollute the environment ?

**Ans.** Industries cause four different kinds of pollution, namely, air, water, thermal and noise pollution.

**Air pollution** is caused

- (i) by the presence of undesirable gases beyond certain levels like sulphur dioxide and carbon monoxide.
- (ii) by the emission of smoke from chemicals paper industries, burning of fossil fuels,
- (iii) by the leakage of poisonous gases and hazardous chemicals,

**Water pollution** is caused by discharge of industrial effluents into rivers. Industries like paper, Chemical, textile and dyeing, tanneries, petroleum, refining, detergents, soaps that let out chemical and solid wastes pollute the waterbodies.:

**Thermal pollution** is caused by discharge of hot water from factories into rivers and ponds, affect the aquatic life. Wastes from nuclear power plants, chemicals cause land and soil pollution. Percolation of rainwater pollutes the groundwater also.

**Noise pollution** Undesirable noise produced from industries like pneumatic drills, construction activities cause impairment of hearing, blood pressure and other health problems.

### 14. Discuss the steps to be taken to minimize the environmental degradation by industry.

**Ans.** To prevent environmental degradation caused by industries the following measures should be taken

- (i) Reducing the use of water for processing by reusing and recycling at various stages.
- (ii) Rainwater harvesting to meet the growing needs.
- (iii) Proper treatment of hot water and effluents before discharging into rivers, etc. Industrial effluents can be treated at three stages. Primary treatment involves mechanical process like screening, grinding, flocculation and sedimentation. Secondary treatment involves biological process. Tertiary treatment involves biological, chemical and physical processes.
- (iv) Aerosol emissions can be reduced by the use of separators, scrubbers, niters, precipitators, etc.
- (v) Selection of fuel and better maintenance of equipment.
- (vi) Use of silencers.
- (vii) Redesigning the machinery.
- (viii) Shifting of industries away from cities.'

### Additional Questions

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### 15. The economic strength of a country is measured by the development of manufacturing industries. Explain the statement by giving six examples.

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

- (i) all the developed countries such as Japan, U.S.A., Germany, France are highly industrialised.
- (ii) Industries create variety of jobs thus reduce the dependence of people on agriculture and contribute to modernisation of our agriculture.
- (iii) Industrial development has contributed to eradication of poverty and unemployment.

- (iv) Export of manufactured goods adds value addition to the economy.
- (v) Industries utilise primary materials and convert them into articles of utility thus adding value to raw materials.
- (vi) Industries help in improving the public services like transport, communication, health, education, banking, administration, etc. They help in raising the standard of living of the people.

**16. Attempt a classification of industries based on various factors.**

**Ans.** Industries are classified based on different criteria

(i) Source of raw material (ii) importance (iii) capital (iv) ownership (v) weight of the raw material and finished goods.

(i) **Based on raw materials** On the basis of source of raw materials, industries are classified into Agro-based and Mineral-based. Examples of Agro-based industries - Cotton textiles, Sugar, Rubber, Mineral-based industries, Iron and Steel, Aluminium industry.

(ii) **Based on importance** Basic industry - Industries which are very important on which other industries depend, e.g., Iron and steel. Consumer industries produce goods for consumption like paper, utensils, luxury items.

(iii) **Based on capital** Large-scale industries are those where the capital investment is more than one crore rupees like Iron and Steel, Cotton textile whereas small-scale industries have investment of less than one crore rupees like manufacture of cycles, fans.

(iv) **On the Basis of ownership** Private sector owned by individuals public sectors industries are owned and run by state or Central Govt. or its agencies, e.g., Tata, Bajaj, Reliance. **BALCO.**

Joint sector - owned jointly by the state and individuals or group of individuals like Oil India Ltd. (OIL).

Cooperative sector owned and run by producers or suppliers of raw materials, workers or both, e.g., DMS.

(v) **Based on weight of raw materials and finished products** Heavy industries where both raw materials and finished products are heavy, e.g., Iron and steel. Engineering industry. Light industries where both raw materials and finished products are light in nature, e.g., Paper, Aluminium, Electrical industries,

**17. Bring out the importance and development of cotton textile industry in India.**

**Ans.** Textile industry occupies an eminent position in our economy as it contributes 14% to industrial output and 25% of foreign exchange and provides employment to about 35 million people. It contributes 4% to GDP. Cotton textile industry is one of the oldest industries and date is back to Indus Valley Civilization. At present there are about 1600 cotton mills in India owned by private, public and cooperative sectors. The first cotton mill was located in Mumbai in 1854. Maharashtra and Gujarat are the hub of cotton textile industry due to various locational advantages. Indian cotton textile industry strikes a judicious balance between tradition and modernity by producing handloom, power loom and machine made cloth. Cotton textile industry is now decentralised in various parts of India depending on the availability of labour market, transport and power supply. India exports cotton goods mainly to USA, UK, Russia, France, Singapore, East European countries. India has a large share in the world trade of cotton yarn accounting for one fourth of the total trade and our garment trade is only 4 per cent of the world's total. We are able to compete at the global level in terms of spinning, using all types of fibres.