

Manufacturing Industries 6

Objective Section _____ (1 mark each)

Q. 1. Business processes Outsourcing (BPO) is an example of _____ industry in India. [CBSE OD, Set 1, 2020]

Ans. Information Technology.

Q. 2. Limestone, silica, alumina and gypsum are the raw materials of _____ industry. [CBSE OD, Set 1, 2020]

Ans. Cement Industry.

Q. 3. Fill in the blank :

_____ industry is used for manufacturing aircraft, utensils and wires. [CBSE Delhi, Set 1, 2020]

Ans. Aluminium smelting.

Q. 4. _____ Industry is the basic industry since all the other industries heavy, medium and light, depend on it for machinery. [CBSE Delhi, Set 3, 2020]

Ans. Iron and Steel.

Very Short Answer Type Questions _____ (1 mark each)

Q. 1. Why has the 'National Manufacturing Competitiveness Council' been set up? [CBSE OD, Term 2, Set 2, 2015]

Ans. National Manufacturing Competitiveness Council (NMCC) has been set up to improve the productivity through proper policy interventions by the government.

Q. 2. Why is the 'least cost' known as decision making factor for ideal location of an industry? [CBSE Delhi, Term 2, Set 2, 2015]

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

Short Answer Type Questions-II _____ (3 marks each)

Q. 1. "Consequences of environmental degradation do not respect national or state boundaries." Justify the statement. [CBSE Delhi, Set 1, 2019]

Ans. Environment is degraded through the depletion of resources like air, water and soil. It leads to destruction of ecosystem and extinction of wildlife. It is a global issue and has been debated over a decade.

- (i) Pollution in one country may affect the other in the form of acid rain, climate change etc.
- (ii) Deforestation in some countries may disturb the rainfall pattern in the surrounding countries.
- (iii) Land degradation and dam burst can bring massive siltation and flood like situation.

Thus, consequences of the actions of one state or country may affect others, this proves that

environmental degradation does not respect land boundaries.

Q. 2. Why are we not able to perform to our full potential in the production of iron and steel in India? Explain any three reasons. [CBSE OD, Term 2, Set 2, 2017]

Ans. Today with 32.8 million tonnes of steel production, India ranks 9th among the world crude steel producers. It is the largest producer of sponge iron. In spite of large production of steel, per capita consumption per annum is only 32 Kg. India's export of steel is 2.25% of the global steel trade. Though India has many advantages for the development of this industry, which includes low cost of iron ore, high grade raw material in proximity, cheap labour and vast growth potential in home market. Yet we are not able to perform to our full potential largely due to:

- (i) High cost and limited availability of cooking coal.

- (ii) Lower productivity of labour.
- (iii) Irregular supply of energy.
- (iv) Poor infrastructure.

Q. 3. Classify industries on the basis of source of raw material. How are they different from each other?

[CBSE OD, Term 2, Set 1, 2016]

Ans. On the basis of source of raw materials, industries are classified into four categories. They are:

(i) Agro-based Industries:

The industries which use agriculture products as their raw material are called agro-based industries.

For example: food processing, vegetable oil, cotton textile, dairy products, leather, fruit pulp, juice, pickle and spices.

(ii) Mineral-based Industries:

These industries are those industries, which get raw material from minerals like- Iron and steel and cement industries.

Iron made from iron ore is the product of mineral based industry. This is used as raw material for the manufacturing of a number of other products, such as heavy machinery, building materials and railway coaches.

(iii) Pastoral-based industries:

These industries depend upon animals for their raw materials. Hides, skins, shoes, dairy products, etc. are some of the pastoral-based industries.

(iv) Forest-based industries:

The industries use forests as their raw material and are called forest-based industries. Paper, plywood, rayon, bamboo, resin, honey, coir industries, furniture, are some examples of forest based industries.

Q. 4. Analyse the role of the manufacturing sector in the economic development of India. [CBSE OD, Term 2, Set 1, 2017]

Ans. Contribution of Manufacturing sector to national economy:

- (i) Creation of alternative employment: Manufacturing reduces dependence on agriculture by providing alternative employment opportunities in factory.

- (ii) Better standard of living: The industrial labourers and other employees get higher wages and enjoy higher standard of living compared to landless agricultural labourers.

- (iii) Support to agricultural production: Increase in use of fertilizers, pesticides, plastics, electricity and diesel in agriculture has been possible due to the growth and competitiveness of the manufacturing industries.

- (iv) In the present day world of territorial specialization, our industry needs to be more efficient and competitive. Our goods must be at par with those of other countries in the international market. This will fetch foreign exchange and increase national wealth.

(Any three)

Q. 5. Classify industries on the basis of capital investment. How are they different from one another? Explain with examples.

[CBSE Delhi, Term 2, Set 1, 2016]

Ans. On the basis of capital investment industries can be classified as:

- (i) Small-scale industry,

- (ii) Large-scale industry.

Difference: If the investment is more than one crore rupees in any industry, it is considered as a large scale industry. For example—Iron and Steel industry, cement industry etc.

If the investment is less than one crore rupees in any industry, it is considered as a small scale industry. For example—Plastic industry, toy industry etc.

Q. 6. Explain with examples, how do industries give boost to the agriculture sector?

[CBSE Delhi, Term 2, Set 1, 2015]

Ans. Agriculture and industry go hand in hand. The agro-industries in India have given a major boost to the agriculture by raising its productivity.

They depend on the latter for raw materials and sell products such as—irrigation pumps, fertilizers, insecticides, pesticides, plastic and PVC pipes, machines and tools, etc. to the farmers. Thus, development and competitiveness of manufacturing industry has not only assisted agriculturists in increasing their production but also made the production process very efficient.

Q. 7. Suggest any three steps to minimise the environmental degradation caused by the industrial development in India.

[CBSE OD, Term 2, Set 1, 2016]

Ans. The following three steps can be taken to minimise environmental degradation by the industries:

- (i) Treating waste matter and effluents before releasing them in rivers and ponds.
- (ii) Fitting smoke stacks in factories with electrostatic precipitators.
- (iii) Smoke can be reduced by using oil or gas instead of coal in factories.

Q. 8. "The textile industry is the only industry in the country which is self-reliant and complete in the value chain." Justify the statement.

[CBSE Delhi, Term 2, Set 1, 2016]

Ans. The textile industry is considered to be self-reliant because products at each stage are used as the raw material for the next stage of production. It performs all activities from the production of raw material to the delivery of finished goods and a substantial amount is added at each stage, thereby, increasing the value of the production and as a result profits are increased.

Q. 9. "Agriculture gives boost to the industrial sector" support the statement with arguments.

[CBSE Delhi, Term 2, Set 2, 2015]

Ans. Agriculture and industry are complementary to each other in the following ways:

- (i) Where Agriculture has been boosted by industries on one hand in turn, it has also encouraged industrial sector, since the raw material produced by the farmers are used by secondary sector.

(ii) Agriculture provides market for industrial goods, for example—irrigation pumps, fertilisers, insecticides, pesticides, plastic and PVC pipes, machine tool sprinkles, drip irrigation systems etc.

(iii) The agricultural raw materials like jute, cotton and sugarcane has helped in the development of various agro based industries.

Q. 10. Why has the 'Chota Nagpur Plateau Region' the maximum concentration of iron and steel industries? Analyse the reasons.

[CBSE OD, Term 2, Set 1, 2015]

Ans. The major factors are:

- (i) **Availability of raw material:** Iron ore, cooking coal and lime stone are required in the ratio of approximately 4 : 2 : 1. All these materials are available in the Chota Nagpur region.
- (ii) **Availability of water:** Water is provided by Damodar river and its tributaries, which is a perennial source of water.
- (iii) **Cheap labour:** High density of population provides large and cheap labour force.

Q. 11. "Textile industry occupies a unique position in Indian economy." Support the statement with appropriate arguments.

[CBSE Delhi, Term 2, Set 3, 2015]

Ans. The textile industry occupies a unique position in Indian economy because:

- (i) It contributes significantly to industrial production and it also provides employment.
- (ii) Earns foreign exchange of 24.6%.
- (iii) Its contribution towards the GDP is about 4%.



Long Answer Type Questions _____ (5 marks each)

Q. 1. Explain the factors which are responsible for location of industries.

OR

Explain the ways through which the industrial pollution of fresh water can be reduced. [CBSE OD, Set 1, 2020]

Ans. The factors which are responsible for location of industries are given below :

- (i) Availability 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. Steel centres are developed where coal and iron are easily available. Jute mills in West Bengal and the cotton textile mills in Maharashtra are located due to the availability of raw materials.
- (ii) Power resources : Coal, oil and water are the main sources of power. Most of the industries are located near coal fields. Aluminum industries and paper industries are located near hydroelectric stations.
- (iii) 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.
- (iv) Climate : Stimulating climate increase the efficiency of the labourers. The cotton textile industry required humid climate. The film industry needs good weather with clear blue skies. Similarly the aircraft industry also needs clear weather.
- (v) Skilled Labour : cheap and skilled labour is essential for the location of industries. Glass industry at Firozabad and the sports goods industry in Jalandhar are located due to the availability of skilled labour.

OR

The industrial pollution of fresh water can be reduced by following ways:

- (i) Minimising the use of water for processing by reusing.
- (ii) Harvesting of rain water to meet water requirement.
- (iii) Treating hot water and effluents before releasing them in rivers and ponds.
- (iv) Regulation of use of ground water by industries.
- (v) Installing water treatment plants at the industrial sites for recycling.

Q. 2. How can the industrial pollution of fresh water be reduced? Explain various ways. [CBSE OD, Set 1, 2019]

Ans. Main causes of water pollution is due to the wastes discharged from factories, refineries into water bodies. These wastes contains harmful chemicals such as alkalis, acids etc. and toxic metals like mercury, lead, arsenic etc. which kill aquatic life.

The following steps can be taken to reduce the industrial pollution:

- (i) Restructuring the manufacturing processes to reduce or eliminate pollutants, like, lead, zinc, arsenic through a process called Pollution Prevention. Chimneys for treating of gaseous waste are also important.
- (ii) It is necessary to encourage industries to promote green methods of product production. It includes environment-friendly operating processes.
- (iii) It is advisable to create cooling ponds which are man made and designed to cool the heated waters of industries by evaporation, condensation and radiation.
- (iv) It is very important to attach water treatment plant in industries for filtration of sewage before it enters the water bodies. Sewage treatment plants are important for treatment of polluted water.

Q. 3. How are industries responsible for environmental degradation in India? Explain with examples.

[CBSE Delhi, Set 1, 2019]

Ans. Industries are responsible for environmental degradation in India in following ways:

- (i) The presence of high proportion of undesirable gases such as sulphur dioxide, and carbon monoxide are a product of these industries. They affect the environment majorly.
- (ii) Industrial and construction activities, machinery and factory equipments, generators, saws and pneumatic and electric drills also make a lot of noise in environment.
- (iii) The main culprits in this regard are paper, pulp, chemical and textile industries that let out dyes, detergents, acids, salts and heavy metals etc., with carbon, plastic and rubber into the water bodies.

- (iv) Air-borne waste particle contains both solid and liquid particles like dust, sprays, mist and smoke which pollutes the environment.
- (v) Rain water carrying pollutants from wastes dumped by industries contaminates the ground water.

Q. 4. Explain with examples any five factors that are responsible for industrial location. [CBSE Delhi, Set 2, 2019]

Ans. Factors responsible for industrial location are as follows:

- (i) Availability of raw material is one major basic factor for the location of any industry, e.g.: Jute mills in West Bengal are concentrated close to the source of raw material.
- (ii) Climate also plays a major role in the concentration of industries at a certain place. Favourable weather conditions required for the growth and harvesting of the crop causes its industries to be located in certain places. For e.g. Cotton textile industry are generally found in Maharashtra and Gujarat because of favourable climatic conditions.
- (iii) Availability of capital and other infra-structural facilities is also one reason. It is due to the availability of capital that Mumbai, Kolkata, and Chennai became big industrial centres. These places have banking facilities and well developed infrastructure.
- (iv) Availability of both skilled and unskilled labour also governs the location of an industry. Cheap and abundant labour is one necessary condition which affects location of an industry.
- (v) The entire process of manufacturing is futile until the finished products reach the market and the consumers. Thus, availability of a good market near by also benefits the owners.
- (vi) Government policies, peace, protection of environment play a vital role in the location of industries.

Q. 5. Explain five types of 'industrial pollution.' [CBSE Delhi, Set 3, 2019]

Ans. Industrial pollution creates environmental degradation in the following ways:

- (i) Due to the release of undesirable gases like sulphur dioxide and carbon monoxide, air borne particulate matter containing smoke, dust and spray mist, toxic gases by burning fossil fuels in the industries, air pollution is caused. Release of these pollutants also causes acid rain. Thus, chemicals pollute the atmosphere and cause life threatening diseases. This also affects monuments, buildings and animals.
- (ii) Water pollution is caused by organic and inorganic industrial wastes discharged into the rivers, liquid wastes produced by chemical and textile industry, tanneries, petroleum refineries, electroplating industries and metallic pesticides etc. solid wastes like fly ash, phospo-gypsum and slags produced by iron and steel industries. Water pollution leads to loss of rich aquatic life and flora-fauna. This causes water scarcity as well. This also causes diseases like typhoid and cholera.
- (iii) All the pollutants that cause water pollution, along with wastes from nuclear power plants are responsible for land pollution. Water and land pollution are closely related. All the liquid and solid effluents, if not being disposed off into the rivers, goes directly into the soil and degrade the land areas.
- (iv) All the unwanted sounds caused due to industrial and construction activities, machinery, generators and drilling activities create irritants and are a source of stress.
- (v) Rain water carrying pollutants from wastes dumped by industries contaminates the ground water.

Q. 6. Explain the reasons for concentration of iron and steel industries in and around Chotanagpur region.

[CBSE, 2019]



20 The reasons for the concentration of iron and steel industries in and around the Chotanagpur plateau are:-

- (i) Availability of iron ore
The region is close to the iron mines, thus the raw material can be easily transported to the industries.
- (ii) Proximity of other raw material
Limestone and coking coal is also readily and easily available for production.
- (iii) Good transport system.
The region is well connected through railways as well as roadways facilitating easy transportation of the raw material as well as the distribution of finished products.
- (iv) Availability of labour
Cheap and skilled labour is easily available for the states of Uttar Pradesh, Bihar and Jharkhand.
- (v) Port facilities
Kolkata port nearby facilitates the export of the finished goods.
- (vi) The industry has immense scope for development in the home market.

Q. 7. Why is the economic strength of a country measured by the development of manufacturing industries? Explain with examples. [CBSE, 2018]



Introduction : Development of manufacturing industries is a major of economic prosperity of country. It measure of development in general and economic development in particular because.

(i) It
by providing the people with jobs in secondary and tertiary sector.

agriculture

(b) The export of industrial goods brings in the much-needed foreign exchange and expands trade and commerce.

(c) It is the prerequisite for elimination of poverty and unemployment. This was the main aim beside the development of public and joint sector ventures in India.

(d) The developed countries are developed due to development of manufacturing sector. India's prosperity lies in increasing and diversifying industrial products.

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(d) The developed countries are developed due to development of manufacturing sector. India's prosperity lies in increasing and diversifying industrial products.

(e) It contributes to GDP - 17% and helps in development. Desired growth rate over next decade - 12%.

Conclusion: Thus, it is an index of development of country. It also calls for urbanisation.

Ans. Economic strength of a country is measured by manufacturing industries:

- (i) Manufacturing industries not only help in modernising agriculture which forms the backbone of the economy, they also reduce the dependency of people on agriculture.
- (ii) Industrial development is a precondition for eradication of unemployment and poverty from a country.
- (iii) Export of manufactured goods expands trade and commerce and brings much needed foreign exchange on international level.
- (iv) Countries that transform their raw materials into a wide variety of furnished goods of higher value are prosperous and developed.
- (v) India's prosperity lies in increasing and diversifying its manufacturing industries as quickly as possible.

Q. 8. Analyse the role of chemical industries in the Indian economy.

[CBSE OD, Term 2, Set 1, 2017]

Ans. The chemical industry in India is diversifying and growing fast. It contributes approximately percent 3% of GDP. It is the third largest in Asia and occupies twelfth place in the world in terms of its size. It comprises both large and small scale manufacturing units. Rapid growth has been recorded in both inorganic and organic sectors. Inorganic chemicals includes sulphuric acid, nitric acid, alkalies, soda ash and caustic soda. These industries are widely spread over the country.

Organic chemicals includes petrochemicals, which are used for manufacturing of synthetic fibres, synthetic rubber, plastics, dye-stuffs, drugs and pharmaceuticals. Organic chemical plants are located near oil refineries and petrochemical plants.

The chemical industry has its own largest consumers. Basic chemicals undergo processing for the further production of other chemicals that are used for industrial application, agriculture or directly for consumer markets.

Q. 9. Examine any five factors affecting the location of industries in India.

[CBSE OD, Term 2, Set 3, 2017]

Ans. Maximisation of profit which also implies cost minimisation is the most important goal in their choice of particular place for the location of industries. Some factors influencing the same are:

- (i) Proximity to markets: Areas or regions having high purchasing power provide large market therefore luxury items producing industries are located in these regions.
- (ii) Availability of raw material: Raw material used by industries should be cheap and easy to transport. Industries based on cheap, bulky and weight losing material (ores) are located close to the sources of raw material. Such as steel, sugar, and cement industries.
- (iii) Availability of labour: Some types of manufacturing requires skilled labour therefore IT industries are located near urban-educational centres where skilled labours are easily available.
- (iv) Access to sources of energy: Industries which use more power are located near energy supplying sources such as the aluminium industry.
- (v) Transportation and communication facilities: Speedy and efficient transport facilities reduces the cost of transport. Therefore, industries are attracted to regions which have good transport facilities.
- (vi) Government policy: Governments adopt 'regional policies' to promote 'balanced' economic development and hence set up industries in backward and tribal areas.

Q. 10. Explain any two main challenges faced by the jute industry in India. Explain

any three objectives of National Jute Policy. [CBSE Delhi, Term 2, Set 1, 2017]

Ans. India is the largest producer of raw jute and jute goods. There are about 70 jute mills in India, mainly along the banks of Hooghly River in West Bengal. Challenges faced by jute industries are:

- (i) Stiff competition in the international market from synthetic substitute and from other competitors like Bangladesh, Brazil, Philippines, Egypt and Thailand.
- (ii) Due to increase of demand, use of jute packaging material has increased, to fulfill this demand, the product needs to be diversified.

Objective of National Jute Policy:

- (i) Increasing productivity, means jute industries should be given incentives.
- (ii) Ensuring good prices to jute farmers.
- (iii) Enhancing the yield per hectare by proper research in the field.

Q. 11. Show two ways in which industrial pollution degrades the environment? Suggest three measures to control environment degradation.

[CBSE, Term 1, 2016]

Ans. Industrial pollution degrades environment in the following ways:

- (i) Air is polluted by gases like-carbon dioxide, carbon monoxide etc., which are harmful for humans.
- (ii) Industrial effluents pollute rivers. Paper pulp, textile, chemicals industries pollute land and soil due to their toxic materials.

Steps to control industrial pollution can be explained as follows:

- (i) Smoke can be reduced by using oil or gas instead of coal in factories.
- (ii) Treating hot water and effluents before releasing them in rivers and ponds.
- (iii) Minimizing use of water for processing by reusing and recycling into two or more successive stages.

Q. 12. "The economic strength of a country is measured by the development of manufacturing industries." Support the statement with arguments.

[CBSE Delhi, Term 2, Set 1, 2016]

Ans. The economic strength of a country lies in the development of manufacturing industries because:

- (i) Manufacturing industries help in modernising agriculture which forms the backbone of our economy.
- (ii) It reduces the heavy dependence of people on agriculture sector and creates jobs in secondary and tertiary sectors.
- (iii) It is necessary for the removal of unemployment and poverty.
- (iv) It brings down regional disparities.
- (v) Export of manufactured goods expands trade and commerce and enhances prosperity.
- (vi) It brings much needed foreign exchange.

Q. 13. Why are sugar mills concentrated in sugarcane producing areas? Explain any three problems faced by sugar industry in India. [CBSE Delhi, Term 2, Set 2, 2016]

Ans. Sugar industries are concentrated in the sugarcane producing areas because of the following reasons:

- (i) The raw material that are used in the sugar mills, *i.e.*, sugarcane is bulky to transport.
- (ii) With time its sucrose content reduces. Challenges faced by sugar industry are as follows:
 - (i) Seasonal nature of the sugar industry.
 - (ii) Old and inefficient methods of production are used.
- (iii) Transport delays in delivery of sugarcane to the mills because of bad transport facilities.

Q. 14. What is the manufacturing sector? Why is it considered the backbone of development? Interpret the reason.

[CBSE OD, Term 2, Set 1, 2015]

Ans. Industries which are involved in the production of good in large quantities after processing raw materials to more valuable products are called manufacturing

industries. For example—Iron and Steel industries.

Manufacturing sector is considered the backbone of development in general and economic development in particular mainly because:

- (i) Manufacturing industries not only help in modernising agriculture, which forms the backbone of our economy, they reduce the heavy dependence of people on agricultural income by providing them jobs in secondary and tertiary sectors.
- (ii) Industrial development is a precondition for eradication of unemployment and poverty from our country. This was the main philosophy behind public sector industries and joint sector ventures in India. It was also aimed at bringing down regional disparities by establishing in tribal and backward areas.
- (iii) Export of manufactured goods expands trade and commerce, and brings in much needed foreign exchange.
- (iv) Countries that transform their raw materials into a wide variety of furnished goods higher value are prosperous.

Q. 15. Why was the cotton textile industry concentrated in the cotton growing belt in the early years? Explain.

[CBSE OD, Term 2, Set 2, 2015]

Ans. Cotton textile industry was concentrated in the cotton growing belt in the early years because:

- (i) Availability of raw cotton: Good quality raw cotton was easily available in the states of Maharashtra and Gujarat.
- (ii) Moist climate: The moist and humid climate helped in the growth of cotton.
- (iii) Transport: A good network of roads and railways helped in procuring raw materials and distribution of finished products.
- (iv) Port facilities: The nearness to

Mumbai port helped in the export of finished cotton products.

(v) Cheap labour.

(vi) Proximity to market.

Q. 16. Explain the pro-active approach adopted by the National Thermal Power Corporation (NTPC) for preserving the natural environment and resources.

[CBSE OD, Term 2, Set 3, 2015]

Ans. The National Thermal Power Corporation (NTPC) is an ISO certified corporation. It has several thermal power stations all over the country. As thermal power plants are harmful to the environment, the NTPC has come up with pro-active approaches for preservation of the natural resources and environment.

(i) Making use of latest technology:

Latest technology tend to be very

environment-friendly. It uses the guidelines and technology to prevent environmental degradation.

(ii) Making use of ash: After burning the fossil fuels, like coal and petroleum for thermal energy, the ash remains. Ash is quite effective when heated in producing energy.

(iii) Making use of local water bodies, the NTPC feels that Ash-water and Ash-pond management is another eco-friendly method.

(iv) Shelter belts: Placing Shelter near thermal power plants will definitely reduce the harmful effects of the thermal power plants.

(v) Keeping check: By keeping an eye on the ecology and maintaining some information, NTPC feels that ecological balance will be maintained.