

NCERT QUESTIONS WITH SOLUTIONS

1. Choose the right answer from the four alternatives given below :

(i) Which one of the following industries uses limestone as a raw material?

- (a) Aluminium
- (b) Cement
- (c) Plastic
- (d) Automobile

(ii) Which one of the following agencies markets steels for the public sector plants?

- (a) HAIL (b) SAIL
- (c) TATA Steel (d) MNCC

(iii) Which one of the following industries uses bauxite as a raw material?

- (a) Aluminium smelting
- (b) Cement
- (c) Paper
- (d) Steel

(iv) Which one of the following industries manufactures telephones, computer, etc?

- (a) Steel
- (b) Electronics
- (c) Aluminium Smelting
- (d) Information Technology

Ans. (i) - (b), (ii) - (b), (iii) - (a), (iv) - (b)

2. Answer the following questions briefly.

(i) What is manufacturing?

Ans. The process of converting raw materials into finished goods is known as manufacturing. Raw materials in some cases may also be manufactured products.

(ii) Name any three physical factors for the location of the industry.

Ans. Industrial locations are complex in nature. They are influenced by a number of factors that determine their location in region. The physical factors that influence that location of industries are as follows :

(a) Availability of raw materials: Raw materials for industries range from agricultural products to minerals. Raw material required for the industry must be available cheaply and at close range or at well-linked places. In case of industries using bulky raw materials like iron, bauxite, etc., the ideal location is near the sources of raw materials.

(b) Power resources: Power, energy or fuel is essential for the working of any industry, for running machineries and as fuel for the furnaces and smelters. So, power resources like coal and electricity must be available in abundance in the vicinity of the site chosen for the industry.

(c) Water: Water is needed in abundance by almost all industries, e.g., cotton and jute textiles for processing, cleaning and cooling of machineries. So many industries are located near rivers and other water bodies.

(d) Favourable climate: Climate affects production process, for example, humid climate is suitable for spinning of cotton yarns. The industry must be located in an area where the climate does not damage the raw materials or finished products. (iii) Name any three human factors for the location of an industry. Ans. Human factors influencing the location of industries are : (a) Labour - Cheap and efficient labour must be available in the region surrounding the industry for proper functioning of the industry. (b) Capital - Industries require finances in large amounts. For setting up an industry in a chosen site, large amount of cash guarantees and banking facilities are required. (c) Market - The goods produced must have a market for their sale. The market influences the demand as well as type of goods produced in a region. (d) Transport facilities - Well-linked road, railways or waterways must be available for transfer of raw materials and manufactured products to and from the industrial area. (e) Government Policies. (iv) What are basic industries? Give an example. Ans. Basic or key industries are those which supply their products or raw materials to manufacture other goods e.g., iron and steel and copper smelting, aluminium smelting.	(v) Name the important raw materials used in the manufacturing of cement? Ans. Cement industry requires bulky and heavy raw materials like limestone, silica, alumina, and gypsum. Heavy costs are involved in the haulage of the raw materials. Hence, economically, the ideal location for cement factories is near the sources of raw materials. Apart from raw materials, coal and electric power is needed to provide energy for working of the plants. 3. Write the answers to the following questions in 120 words. (i) 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 smaller, have electric and induction furnaces, and use steel scrap and sponge iron as raw material. They may have re-rollers manufacturing bar and rods. They produce mild and alloy steel and also liquid steel which are turned into ingots. They are decentralized secondary units scattered across the country to meet local demands. An integrated steel plant is large and handles everything in one complex from assembling raw material and melting of iron ore in the blast furnace to steel making, rolling and shaping. They are usually concentrated near the sources of raw materials and market.
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Presently there are 10 integrated steel plant in India, which are as follows :

- (a) Indian Iron and Steel Company, HSCO at Kulti and Burnpur, West Bengal.
- (b) Tata Iron and Steel Company, TISCO at Jamshedpur, Jharkhand.
- (c) Visveswaraya Iron and Steel Plant, at Bhadravati, Karnataka.
- (d) Bhilai Steel Plant, at Bhilai, Chhattisgarh.
- (e) Bokaro Steel Plant, at Bokaro, Jharkhand.
- (f) Durgapur Steel Plant, at Durgapur, West Bengal.
- (g) Rourkela Steel Plant, at Rourkela, Odisha.
- (h) Vishakhapatnam Steel Plant, at Vishakhapatnam, Andhra Pradesh.
- (i) Salem Steel Plant, Salem, Tamil Nadu,
- (j) Vijayanagar Steel Plant in Karnataka.

Though India is an important iron and steel producing country in the world, we are not able to perform to our full potential largely due to the following problems faced by the industry :

- (i) High costs and limited availability of coking coal.
- (ii) Lower productivity of labour.
- (iii) Irregular supply of energy.
- (iv) Poor infrastructure.

Today with 32.8 million tonnes of steel production. India ranks ninth among the world crude steel producers. It is the largest producer of sponge iron. In spite of large quantity of production of steel, per capita consumption of steel per annum is only 32 kg.

(ii) How do industries pollute the environment?

Ans. Pollution is a negative effect of industrialisation. It results in degradation of the environment and affects human health, animals, plants and the atmosphere as a whole. It contributes to major environmental problems like land degradation, water scarcity, health hazards and, on a larger scale, global warming and climate change. Industries are responsible for four types of pollution, namely, air, water, land and noise.

Air pollution is caused by presence of high proportion of undesirable gases, such as sulphur dioxide and carbon monoxide, dust, sprays, mist and smoke in the atmosphere due to emission from industrial units. Smoke emitted by chemical and paper factories, brick kilns, refineries and smelting plants burning of fossil fuels in big and small factories that ignore pollution norms cause enormous pollution. Toxic gas leaks from factories are extremely hazardous. Water pollution is caused by organic and inorganic industrial wastes and effluents discharged into rivers and other water bodies. The main culprits in this regard are paper, chemical textiles and dyeing, petroleum refineries, tanneries and electroplating industries. They let out dyes, detergents, acids, salts and heavy metals like lead and mercury, pesticides, fertilisers, synthetic chemicals with carbon, plastics and rubber, etc., into water bodies. They

turn big and small rivers into toxic streams. Dumping of wastes especially glass, harmful chemicals, industrial effluents, packaging, salts and garbage renders the soil useless due to land pollution. Rainwater percolates into the soil carrying these pollutants and contaminates ground water. Noise pollution is by industrial and construction activities, machineries and factory equipment, generators, saws and pneumatic and electric drills.

(iii) Discuss the steps to be taken to minimise environmental degradation by industry.

Ans. Careful planning of industries, better design equipment and better operation of the equipment can prevent pollution to a great extent. Some measures to control industrial pollution are:-

(a) Restricting use of fossil fuels can reduce smoke. Air pollution can be reduced by reduction of particulate

matter, aerosol emission in the air by fitting smokestacks to factories with electrostatic precipitators, fabric filters, scrubbers and inertial separators.

(b) Water pollution can be controlled by

(i) minimising use of freshwater by reusing and recycling

(ii) Treatment of hot water effluents before releasing them in rivers and other water bodies. These include mechanical, biological, chemical and physical processes.

(c) Land pollution can be controlled by collection of wastes, dumping and disposing the wastes in filling areas and recycling the wastes.

(d) Machinery and equipment and generators can be fitted with silencers or redesigned to make them energy efficient and to reduce noise.