Write down the questions & answers in the note book & submit on or before Jan.10, 2012
(Answers can be further improved)
Class X: Geography Term II
Manufacturing Industries
Book Exercises prepared by students' participation By Geography Department

Multiple Choice Questions

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. Sugar d. Jute

Answer: b. Cement

ii. Which one of the following agencies markets steel for public sector plants?

a. HAIL b. SAIL
c. TATA steel d. MNCC

Answer: b. SAIL

iii. Which one of the following industries uses bauxites as a raw material?

a. Aluminium b. Cement
c. Jute d. Steel

Answer: a. Aluminium

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

a. Steel b. Electronics
c. Aluminium d. Information Technology

Answer: b. Electronics

Questions and Answers

1. Why is iron and steel industry termed as basic industry?

Ans: Basic or key industries supply their products as raw materials to other industries to manufacture their goods.

Iron and steel industry is termed as a basic industry because:

i) It produces iron and steel which in turn is used for manufacturing machines, tools and equipments. Machineries and tools are basic for any manufacturing process. Thus, iron and steel industry plays a key role in the development of any manufacturing industry and agriculture.

ii) Iron and steel industry provides raw materials for heavy engineering, automobiles, ship building, manufacturing of railway engines, locomotives, etc. The development of these industries is dependent on the supply of iron and steel.
Many of the items used by us in our daily life, from a tiny nail to bring railway locomotives, are made of iron.

2. Describe four physical and four human factors that affect the location of an 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:

i) **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.

ii) **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.

iii) **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.

iv) **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.

Human factors influencing the location industries are:

i) **Labour:** Cheap and efficient labour must be available in the region surrounding the industry for proper functioning of the industry.

ii) **Capital:** Industries require finances in large amounts to setting up an industry in a chosen site, large amounts of cash guarantees and banking facilities are required.

iii) **Market:** The goods produced must have a market for their sale. The market influences as well as types of goods produced in a region.

iv) **Transport facilities:** Well linked road, railway or water ways must be available to transfer of raw materials and manufactured products to some industrial areas.

3. How do industries pollute the environment?

Or

How does industrial pollution affect the environment?

Ans: Pollution is a negative effect of industrialization. It results in degradation of the environment and affects human health, animals, plants and the atmosphere as a whole. It contributes to the 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 viz.,

i. Air,
ii. Water
iii. Land and
iv) Noise

Air pollution is caused by presence of a high proportion of undesirable gases such as sulphur-di-oxide and carbon monoxide, dust sprays, mist and smoke in the atmosphere due to emissions of industrial units. Smoke emitted by chemical and paper factories, bricks, kilns, refineries and smelting plants and burning of fossil fuels in big and small factories that ignore pollution norms cause pollution. Toxic gas leaks from factories are extremely hazardous. Water pollution is caused by organic and inorganic wastes and effluents discharged into rivers and other water bodies.

The main culprit in this regard, paper, chemical textiles and dyeing, petroleum, refineries, tanneries and electro-plating industries. They let out dyes, detergents, acids, salts, heavy metals like lead and mercury, pesticides, fertilizers, synthetic chemicals with carbon,

plastics and rubber, etc. into water bodies. They turn big and small rivers into toxic streams.

Dumping of wastes specially glass, harmful chemicals, industrial effluents, packaging, salts and garbage render the soils useless due to land pollution. Rainwater percolates to into the soil carrying these pollutants and contaminates the ground waters.

Noise pollution is by industrial and construction activities, machineries and factory equipments, generators, saws and pneumatic and electric drills.

4. Briefly describe any four measures of controlling industrial pollution.

OR

Discuss the steps to be taken to minimize environmental degradation by industries.

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

i. Restricting the use of fossil fuels can reduce smoke. Air pollution can be reduced by minimizing the particulate matter, aerosol emission in the air by fitting smoke stacks to factoring with electrostatic precipitators, fabric filters, scrubbers and inertial separators.

ii. Water pollution can be controlled by
   a. minimizing use of freshwater by reusing and recycling
   b. 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 equipments and generators can be fitted with silencers or redesigned to make them energy efficient and to reduce noise.

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Other MCQs and Short and Long Answer Type Questions
Compiled by students' participation and as Group Activity

1. The economic strength of a country is measured by the development of which of the following?

a. Agriculture
b. Manufacturing industries
b. Infrastructure facilities
d. Export trade

Ans: c. Manufacturing industries

2. How can industrialization assist in bringing in foreign exchange?

a. Modernization of agriculture
b. Removing dependence on agriculture by providing alternative employment
c. Export of manufactured goods
d. Import of manufactured goods

Ans: c. Export of manufacture goods.

3. Which of the following developments usually follows industrial activity?

a. Agriculture
b. Urbanization

c. Electrification d. Mining

Ans: b. Urbanization

4. In which of the following groups of cities were most of the manufacturing units located in the pre-independence period?

a. Delhi, Kanpur, Moradabad b. Bangalore-Hyderabad

c. Mumbai, Kolkata, Chennai d. Chandigarh, Ludhiana, Amristar

Ans: c. Mumbai, Kolkata, Chennai

5. Many industries tend to come together to make use of the advantages offered by the urban centres known as agglomeration economies. Which of the Urabanization following are the main advantages provided by cities of industries?

a. Market and services b. Agricultural products and minerals

c. Power supply d. Suitable climate and services

Ans: a. Market and services

6. Which of the following is not a factor of production?

a. Land b. Raw materials

c. Capital d. Enterprise

Ans: b. Raw materials

7. Which of the following industries is in private sector?

a. Dabur b. BHEL

c. SAIL d. HINDALCO

Ans: a. Dabur

8. Oil India Limited (OIL) belongs to which of the following types of industries?

a. Public sector b. Private sector

c. Cooperative sector d. Joint sector

Ans: d. Joint sector

9. Which of the following industries belongs to the category of heavy industries?

a. Watches b. Shipbuilding

c. Knitting needles d. Electric bulbs

Ans: b. Shipbuilding

10. When and where was the first successful textile mill established in India?

a. In Ahmedabad in 1858 b. In Chennai in 1954

c. In Kolkata in 1816 d. In Mumbai in 1854

Ans: d. In Mumbai in 1854

11. Which of the following techniques of cotton textile production came into use after the eighteenth century?

a. Powerlooms b. Hand-spinning

c. Zari embroidery d. Handloom weaving

Ans: a. Powerlooms

12. Sixty percent of sugar mills are concentrated in which of the following States?

a. Punjab and Haryana b. Mahrashtra and Gujarat

c. Uttar Prdesh and Bihar d. West Bengal and Orissa

Ans: c. Uttar Pradesh and Bihar

13. On the basis of character of raw material and finished product, iron and steel industry belongs to which category?

a. Medium industry b. Heavy industry

c. Perishable goods industry d. Light industry

Ans: b. Heavy industry

14. Which of the following public sector plants in India is located near port?

a. Vishakhapatnam b. Durgapur
c. Vijaynagar d. Bhadravati

Ans: a. Vishakhapatnam

15. Which of the following is the effect of liberalization and foreign direct investment or iron and steel industry of India?

a. Lower productivity of labour
b. Boost to the industry
c. Irregular supply of energy
d. High costs and limited availability of coking coal

Ans: b. Boost to the industry

16. Which of the following inorganic chemicals is used for the making of glass, soaps, detergents and paper?

a. Soda ash b. Alkalies
c. Nitric acid d. Sulphuric acid

Ans: a. Soda ash

17. Which of the following is not an inorganic chemical?

a. Sulphuric acid b. Petrochemicals
c. Nitric acid d. Alkalies

Ans: b. Petrochemicals

18. Which of the following industries is the largest consumer of chemicals?

a. Fertilizers b. Chemicals
c. Textiles d. Paper

19. Which of the following led to expansion of fertilizer industry?

a. The Green Revolution
b. MNCs
c. Liberalization and foreign direct investment
d. All the above

Ans: a. Green Revolution

20. Which of the following cities is one of the centres around which automobile industry is located?

a. Jaipur b. Itanagar
c. Ahmedabad d. Gurgaon

Ans: a. Gurgaon

21. When and where was the first cement plant set up in India?

a. Kottayam in 1924 b. Dalmianagar in 1937
c. Chennai in 1904 d. Porbandar in 1924

Ans: c. Chennai in 1904

22. Which of the following cities is the electronic capital of India?

a. Bengalaru b. Hyderabad
c. Mumbai d. Delhi

Ans: a. Bengaluru

23. Which of the following industries has been a major foreign exchange earner in the last few years?

a. Tourism Industry b. Information Technology Industry
c. Electronics Industry d. Engineering Industry

Ans: b. IT Industry

24. Which of the following is an electronics industry?

a. HMT, Bangaluru b. BALCO, Korba
c. TISCO, Jamshedpur d. BHEL, Hyderabad

Ans: d. BHEL, Hyderabad

25. Which is the following is a negative effect of industrialization?

a. Rapid urbanization b. Economic growth
c. Pollution d. Foreign exchange earnings

Ans: c. Pollution

Short Answer Type Questions

1. Name the marketing body through which all public sector undertakings market their steel.

Ans: The Steel Authority of India Ltd. Or SAIL is the marketing body through which all public sector undertakings of iron and steel industry market their steel.

2. Classify manufacturing industries into two groups on the basis of source of raw materials used?

Or

Differentiate between agro-based industries and mineral based industries. Give examples.

Ans: Manufacturing industries can be classified into i. Agro-based industries and ii. Mineral based industries.

Agro-based Industries	Mineral-based Industries
1. Industries using agricultural raw materials are called agro-based industries. Examples: Cotton textiles, Jute industry, Sugar industry.	1. Industries using minerals as raw materials are called mineral-based industries. Examples: Iron & Steel industry, Cement industry, Aluminium industry, Petro-chemical industry
2. Agro-based industries are generally light industries.	2. Mineral based industries are generally heavy industries.
3. Agro-based industries spread all over India	3. Mineral-based industries are using heavy and bulky materials. Therefore, mostly they are located near the source of raw materials.

3. 'Agriculture and industry move hand in hand'. Elucidate.

OR

'Agriculture and industry are compliment to each other'. Justify the statement.

Ans: A close relationship exists between agriculture and manufacturing industries. Each of them compliments each other.

Each of them serves as market for good produced by the other and in the process raised demand for each other's goods.

For example, the agro-based industries, like textiles, sugar, etc., depend upon agriculture for raw materials. These industries have given a major boost to agriculture by raising their demand and hence, productivity. Manufacturing industries sell the products such as

irrigation pumps, fertilizers, insecticides, pesticides, plastic and PVC pipes, agricultural machineries and tools, etc. to the farmers. Agriculture serves as their market and effects their development.
These inputs from industries assist agriculturists in increasing productivity as well as have the production processes very efficient.

4. Why did the traditional cotton textile industry of India receive a setback during the colonial period?

The traditional cotton textile industry of India suffered a setback during the colonial period because of competition from mill-made cloth from England. In England cotton textiles were produced in large quantities with the help of power looms. The surplus was sold in India for profit as India was then a colony of England. Mill-made cloth was cheaper on account of large scale production. On the other hand, our traditional textiles used ancient techniques like hand-spinning and handloom weaving. Hence, its production could not compete with mill-made cloth of England.

5. What is the ideal location for sugar mills? Why this industry is ideally suited to the cooperative sector?

Sugarcane, the raw material used in sugar industry is bulky, and its sugar content reduces in haulage and time lag between reaping and sugar production. Therefore, the ideal location for sugar mills is in close proximity of sugarcane producing areas.

The sugar industry is seasonal in nature and so is ideally suited to the cooperative sector. For entire year the farmers are engaged in producing sugarcane as it is an annual crop. When the crop is harvested, the farmers pool their resources, set up mills within the sugarcane producing areas and produce sugar. The seasonal nature of the sugar industry is considered by setting up cooperative where farmers share the profits and losses.

6. Which factors are responsible for shifting sugar mills to southern and western States? Mention two challenges faced by the industry.

In recent years, there is a tendency among the sugar mills to shift and concentrate in the southern and western States, especially Maharastra because:

a. The cane produced here has higher sucrose content and yields greater quantity of sugar.
b. The cooler climate here ensures longer crushing and yields greater quantity of sugar.
c. Cooperatives are more successful in these States.

Two challenges faced by sugar industry are:

a. Seasonal nature of the industry.
b. Old and inefficient methods of production.

7. Why does the north eastern part of the Peninsular Plateau have the maximum concentration of iron and steel industries?

The north-eastern part of the Peninsular Plateau, the Chotanagpur plateau region, has the maximum concentration of iron and steel industries because:

i. The region has rich reserves of iron ore of mainly hematite iron variety. Availability of good quality of iron ore at low cost, provides ideal location for setting up of iron and steel industries.

ii. High grade coking coal is available from the coal fields of Jharkhand and West Bengal.
iii. High quality manganese and limestone is available in proximity.
iv. The surrounding densely populated region supply cheap labour.
v. The vast growth potential in the home market is an additional advantage. Local markets for the finished goods are provided by other industries using steel as raw material. Good linkage of roads and railway helps in distribution of finished products all over India.

8. How are integrated steel plants different from mini steel plants?

Mini steel plants	Integrated steel plants
1. Mini steel plants are smaller and use steel scrap and sponge iron as raw materials.	1. Integrated steel plants are larger.
2. They have electric and induction furnaces. They produce mild and alloy steel and liquid steel which are turned into ingots.	2. They handle everything in one complex from assembling raw material and melting of iron ore in the blast furnace to steel making, rolling and shaping.
3. They are decentralized and scattered across India to meet local demands.	3. They are usually concentrated near the sources of raw materials and market.

9. Name the integrated steel plants of India.

There are 10 integrated steel plants in India. They are:

1. Indian Iron and Steel Company (IISCO) at Kulti and Burnpur in West Begal.
2. Durgapur Steel Plant at Durgapur in West Bengal.
3. Tata Iron and Steel Company (TISCO) at Jamshedpur in Jharkhand.
4. Bokaro Steel Plant at Bokaro in Jharkhand.
5. Bhilai Steel Plant at Bhilai in Chhattisgarh.
6. Rourkela Steel Plant at Rourkela in Orissa.
7. Vishakhapatnam Steel Plant at Vishakhapatnam in Andhra Pradesh.
8. Visveswaraya Iron and Steel Plant at Bhadravati in Karnataka.
9. Vijayanagar Steel Plant in Karnataka.
10. Salem Steel Plant at Salem in Tamil Nadu.

10. What are the problems faced by Iron and Steel Industries in India?

1. High costs and limited availability of coking coal.
2. Lower productivity of labour.
3. Irregular supply of energy.
4. Poor infrastructure.

11. What is India's present position with regard to manufacturing and consumption of iron and steel?

Presently with 32.8 million tonnes of steel production, India ranks 9^{th} among the world 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.

12. In which region are most of the Jute mills of India concentrated? Why?

Most of the Jute mills of India are concentrated in the Hoogli basin in West Bengal. It is a narrow belt of 98 km long and 3 km wide along the Hoogli river.

The factors responsible for the localization of Jute industry in Hoogli region are:

i. Proximity to the Jute producing areas of Ganga-Brahmaputra basin. West Bengal is the leading producer of raw Jute in India and provides the mills the required raw material.
ii. Abundant water for processing of raw Jute.
iii. Cheap water transport, supported by a good network of railways and roadways, facilitates the movement of raw materials to the mills.
iv. Cheap labour from West Bengal and adjoining States of Bihar, Orissa and Uttar Pradesh.
v. Banking and insurance facilities from Kolkata city.
vi. Sea port facilities of Kolkata for export of Jute goods.

13. What are the challenges faced by Jute industry in India?

1. Stiff competition in the international market from synthetic substitutes.
2. Competition from other Jute goods producing countries like Bangladesh, Philippines, Thailand, Egypt and Brazil.
3. Decrease in demand for packing materials and Jute carpet, and high cost of production.
4. Old and inefficient machineries.

14. What step has resulted in the increase of internal demands of Jute in recent years?

To face the competition from synthetic fibres and other countries producing Jute, Government has taken measures to boost production of Jute goods. In 2005, the National Jute Policy was formulated with this objective. Government policy of mandatory use of Jute packaging has resulted in the increase of internal demand of Jute in recent years.

15. Write about the role of Information Technology (IT) in modern India.

IT industry is concentrating on Research and Development, manufacturing of electronics and production of hardware and software.

A major impact of IT industry has been on employment generation. Upto 31st March 2005, the IT industry employed over 1 million persons. IT industry is now giving employment to 8 million persons.

IT industry provides employment to women. About 30% of the people employed in IT industry are women.

IT industry has been a major foreign exchange earner in the last few years because of its fast growing Business Process Outsourcing (BPO) sector.

The continuing growth in hardware and software is the key to success of IT industry in India. Hence IT industry has provided India a special position in the industrial world.

16. What is the main purpose of soft ware technology parks?

Soft ware technology parks provide single window service and high data facility to export software to other countries and earn foreign exchange.

17. Where in India soft ware technology parks are located?

1. Sringar	2. Mohali	3. NOIDA
4. Jaipur	5. Gandhinagar	6. Indore

7. Mumbai	8. Pune	9. Kolkata
10. Bhubaneswar	11. Guwahati	12. Bengaluru
13. Hyderabad	14. Mysore	15. Chennai
16. Thiruvananthapuram		17. Vishakhapatnam.

18. Discuss the role of NTPC in paving the way to control environment degradation.

National Thermal Power Corporation is a major power providing Corporation in India. It has ISO certification for Environment Management System (EMS) 14001. The NTPC has a proactive approach for preserving the natural environment and resources like water, oil, gas and fuels in places where it is setting up power plants. This is achieved through the following methods:

i. Optimum utilization of equipment adopting latest techniques and upgrading existing equipment.
ii. Minimizing waste generation by maximizing ash utilization.
iii. Providing green belts for nurturing ecological balances and encouraging afforestation.
iv. Reducing environmental pollution through ash pond management, ash water recycling system and liquid waste management.
v. Ecological monitoring reviews and online database management for all its power stations.

19. Classify industries on the basis of Capital Investment.

i. Large scale industries make large capital investment of more than 1 crore Rupees. They employ large number of people and use of a large number of machineries. Example: Cotton textile
ii. Small scale industries involve capital outlay of less than 1 crore Rupees, employ a smaller number of labourers and use few power driven machineries. Example: cycle parts manufacturing.

20. Classify industries on the basis of Ownership.

i. Public sector industries are owned and operated by Government agencies. Example: Rourkela Steel Plant
ii. Private sector industries are owned and operated by an individual or a group of individuals. Example: Bajaj Auto Ltd.
iii. Joint sector industries are jointly run by the State and individual entrepreneurs. Example: Oil India Ltd.
iv. Co-operative sector industries are owned and managed by the producers and suppliers of raw materials or by workers. They pool in their resources and share the profits and losses proportionately. Example: Sugar industry in Maharashtra.

21. Classify industries on the basis of bulk or weight of raw materials and finished products.

i. Heavy industries use bulky raw materials and their finished products are also heavy. Example: Iron and Steel Industry
ii. Light industries use light raw materials and their finished products are also light. Example: Electrical industries producing bulbs.

22. Mention the factors responsible for localization of cotton textile industry in Maharashtra-Gujarat region in early years.

The favourable factors for the location of cotton textile industry in Maharashtra-Gujarat region in early years were:

i. Availability of raw cotton from the cotton growing belt of Deccan in Maharashtra and Gujarat.
ii. The port of Mumbai facilitating export of cotton goods and import of machineries and other inputs.
iii. Moist climate in the belt facilitated shipping.
iv. Market for the finished goods.
v. Finance or capital from Parsi and Bhatia traders.
vi. Good transport network.
vii. Availability of cheap and skilled labour.

23. What factors were responsible for decentralization of cotton textile industry in India?

i. Huge market
ii. Development of transport network
iii. Banking facilities
iv. Availability of cheap labour contributed to the decentralization of cotton mills in India.
v. Weaving is highly decentralized for incorporating traditional skills and designs of weaving in cotton, zari, embroidery etc., prevalent among local weavers in different parts of India.

24. What are the problems faced by cotton textile industries in India?

1. Erratic Power Supply
2. Old and obsolete machinery
3. Stiff competition with the synthetic fibre industry.

25. What is the contribution of textile industry to Indian economy?

1. It contributes significantly to industrial production. 14 per cent of the total production of industries comes from textiles.
2. It provides employment to about 35 million people directly.
3. It contributes about 24.6 percent of the foreign exchange earnings of the country.
4. Textile contribute 4 percent towards GDP.

26. What are the prime factors in location of Aluminium smelting industries? Where are the main Aluminium smelting plants located in India?

i. Assured source of raw material, bauxite, at minimum cost as it is a bulky material at 4 to 6 tonnes of bauxite are required to manufacture 1 tonne of Aluminium.
ii. 18,600 kwh of electricity is required per ton of ore for smelting of Aluminium. Hence, regular supply of power is another important factor for location of the industry.

Orissa produces about 45% of the India's bauxite. Hence, aluminium smelting plants are located in Orissa. Hirakud dam in Orissa provides cheap hydroelectricity for the development of the aluminium industry.

West Bengal, Kerala, Uttar Pradesh, Chhattisgarh, Maharashtra and Tamil Nadu are other States where aluminium smelting plants are located.

INDAL, HINDALCO, MALCO, NALCO and Aluminium Corporation of India are some names of the major smelting plants.

27. What is the ideal location for setting up a cement factory?

i. Cement industry requires bulky and heavy raw materials like limestone, silica, aluminia and gypsum. Heavy costs are involved in the haulage of the raw materials. Hence, economically, the ideal location for cement factories is near the source of raw materials.

ii. Apart from raw materials, coal and electric power is required to provide energy for working of cement factories. Nearness to power source is required.

iii. Nearness to rail transportation for supplying the bulky, finished products to the market is another important location factor.

28. In which State of India, does the cement industry have strategically located plants?

The cement industry has strategically located plants in Gujarat that have suitable access to the market in the Gulf countries. Dwarka, Porbandar, Veraval, Sikka and Bhavnagar, where cement factories are set up in this State, lie along the coast. This facilitates the export of cement to the Gulf countries.

29. Write about the present position of cement industry in India.

i. Decontrol of price and distribution since 1989 and some other policy reforms led the cement industry to make rapid strides in capacity, process, technology and production. As a result, now there are 128 large cement plants and 332 mini cement plants in India, producing a variety of cement.

ii. Improvement in the quality has provided the cement industry a ready market in East Asia, Middle East and Africa along with the large demand in the domestic market. The industry is doing well in terms of production. Its export is providing the country with substantial foreign exchange.

Previous Year Questions

1. Explain any three factors that affect the location of industries in a region (2009)

2. How do industries pollute air and water? Explain with examples. (2009)

Find out the CBSE Board SA 2 Exam papers of 2011. Let us discuss the answers in the class.