

UNIQUE STUDY POINT

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Class: X	Subject: Social Science (Geography)	Session: 2025-26
Chapter: 06 - Manufacturing Industries	Time: 1½ Hours	Max. Marks: 40

General Instructions:

1. All questions are compulsory.
2. This question paper contains 20 questions divided into five sections A, B, C, D and E.
3. Section A contains 10 MCQs of 1 mark each.
4. Section B contains 4 questions of 2 marks each.
5. Section C contains 3 questions of 3 marks each.
6. Section D contains 1 question of 5 marks.
7. Section E contains 2 Case Study Based questions of 4 marks each.

SECTION A - Multiple Choice Questions (1 mark each)

- Q1.** Which industry is known as the 'backbone' of modern industry?
- (a) Textile industry
 - (b) Iron and steel industry
 - (c) Sugar industry
 - (d) Cotton industry
- Q2.** The first successful textile mill in India was established in Mumbai in which year?
- (a) 1850
 - (b) 1854
 - (c) 1860
 - (d) 1865
- Q3.** Which of the following is NOT a mineral-based industry?
- (a) Iron and steel
 - (b) Cement
 - (c) Sugar
 - (d) Aluminium smelting
- Q4.** The first jute mill was set up near Kolkata in which year?
- (a) 1850
 - (b) 1855
 - (c) 1860
 - (d) 1865
- Q5.** Which raw material is used for manufacturing aluminium?
- (a) Iron ore
 - (b) Bauxite
 - (c) Limestone

(d) Coal

Q6. In which region is the maximum concentration of iron and steel industries found?

- (a) Western Ghats
- (b) Chhotanagpur plateau
- (c) Deccan plateau
- (d) Indo-Gangetic plain

Q7. Which city is known as the 'electronic capital' of India?

- (a) Mumbai
- (b) Chennai
- (c) Hyderabad
- (d) Bengaluru

Q8. The ratio of iron ore, coking coal and limestone required for steel manufacturing is approximately:

- (a) 2:1:1
- (b) 4:2:1
- (c) 3:2:1
- (d) 5:2:1

Q9. Which type of pollution occurs when hot water from factories is drained into rivers?

- (a) Air pollution
- (b) Thermal pollution
- (c) Noise pollution
- (d) Land pollution

Q10. NTPC has ISO certification for which environment management system?

- (a) EMS 12001
- (b) EMS 14001
- (c) EMS 16001
- (d) EMS 18001

SECTION B - Short Answer Questions (2 marks each)

Q11. Define manufacturing. Give two examples of manufactured products from your daily life.

Q12. Why did Mahatma Gandhi lay emphasis on spinning yarn and weaving khadi?

Q13. Mention any two advantages of aluminium over other metals.

Q14. What are the two main types of chemical industries in India? Give one example of each.

SECTION C - Short Answer Questions (3 marks each)

Q15. Explain three ways in which manufacturing industries have helped in reducing unemployment in India.

Q16. Describe the location factors responsible for the concentration of jute mills in the Hugli basin.

Q17. Explain how industries cause water pollution. Suggest two measures to control it.

SECTION D - Long Answer Question (5 marks)

Q18. "Agriculture and industry move hand in hand." Support this statement with suitable examples from India's agro-based industries.

SECTION E - Case Study Based Questions (4 marks each)

Q19. Read the following case study and answer the questions that follow:

The textile industry occupies a unique position in the Indian economy because it contributes significantly to industrial production, employment generation and foreign exchange earnings. It is the only industry in the country which is self-reliant and complete in the value chain, from raw material to the highest value-added products. In ancient India, cotton textiles were produced with hand spinning and handloom weaving techniques. After the 18th century, power-looms came into use.

- (i) Why is the textile industry considered unique in the Indian economy? (1 mark)
- (ii) What were the traditional techniques of cotton textile production? (1 mark)
- (iii) Name any two states where cotton textile industry is concentrated. (2 marks)

Q20. Read the following case study and answer the questions that follow:

Industries are responsible for four types of pollution: Air, Water, Land, and Noise. Air pollution is caused by the presence of high proportion of undesirable gases, such as sulphur dioxide and carbon monoxide. Smoke is emitted by chemical and paper factories, brick kilns, refineries and smelting plants. Water pollution is caused by organic and inorganic industrial wastes discharged into rivers. The main culprits are paper, pulp, chemical, textile and dyeing industries.

- (i) Name any two types of industrial pollution. (1 mark)
- (ii) Which industries are mainly responsible for water pollution? (1 mark)
- (iii) How does air pollution affect human health and environment? (2 marks)

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SECTION A - Answers to MCQs

Ans 1. (b) Iron and steel industry

Iron and steel industry is called the backbone of modern industry because all other industries depend on it for their machinery and equipment.

Ans 2. (b) 1854

The first successful textile mill was established in Mumbai in 1854.

Ans 3. (c) Sugar

Sugar is an agro-based industry as it uses sugarcane (agricultural product) as raw material. Iron and steel, cement, and aluminium smelting are mineral-based industries.

Ans 4. (b) 1855

The first jute mill was set up near Kolkata in 1855 at Rishra.

Ans 5. (b) Bauxite

Bauxite is the raw material used for manufacturing aluminium. It is a bulky, dark reddish colored rock.

Ans 6. (b) Chhotanagpur plateau

Chhotanagpur plateau region has the maximum concentration of iron and steel industries due to proximity to raw materials like iron ore, coal, and limestone.

Ans 7. (d) Bengaluru

Bengaluru has emerged as the electronic capital of India, with major concentration of IT and electronics industries.

Ans 8. (b) 4:2:1

Iron ore, coking coal and limestone are required in the ratio of approximately 4:2:1 for steel manufacturing. Some quantities of manganese are also required to harden the steel.

Ans 9. (b) Thermal pollution

Thermal pollution of water occurs when hot water from factories and thermal plants is drained into rivers and ponds before cooling, affecting aquatic life.

Ans 10. (b) EMS 14001

NTPC has ISO certification for EMS (Environment Management System) 14001, showing its commitment to environmental protection.

SECTION B - Answers to Short Answer Questions

Ans 11.

Manufacturing: Production of goods in large quantities after processing raw materials into more valuable products is called manufacturing.

Examples from daily life:

1. Paper (manufactured from wood)
2. Sugar (manufactured from sugarcane)

Other acceptable examples: clothes from yarn, steel from iron ore, aluminium from bauxite, bread from flour, etc.

Ans 12.

Mahatma Gandhi laid emphasis on spinning yarn and weaving khadi for the following reasons:

1. **Employment generation:** Handspun khadi provides large scale employment to weavers in their homes as a cottage industry.
2. **Self-reliance:** It promoted self-reliance and economic independence from British mill-made cloth, supporting the freedom movement and empowering rural artisans.

Ans 13.

Two advantages of aluminium over other metals:

1. **Light weight:** Aluminium is light in weight, making it ideal for aircraft manufacturing and reducing transportation costs.
2. **Corrosion resistant:** It is resistant to corrosion, which makes it durable and suitable for making utensils, wires, and various industrial applications.

Other properties: good conductor of heat, malleable, becomes strong when mixed with other metals.

Ans 14.

Two main types of chemical industries:

1. **Inorganic chemicals:** These include sulphuric acid, nitric acid, alkalies, soda ash, and caustic soda.
Example: Sulphuric acid (used to manufacture fertilizers, synthetic fibres, plastics, adhesives, paints, dye stuffs)
2. **Organic chemicals:** These include petrochemicals used for manufacturing synthetic fibers, synthetic rubber, plastics, dye-stuffs, drugs and pharmaceuticals.
Example: Petrochemicals (used for synthetic fibers and plastics)

SECTION C - Answers to Short Answer Questions

Ans 15.

Three ways manufacturing industries have helped in reducing unemployment:

1. **Direct employment in industries:** Manufacturing industries provide direct employment to millions of workers in factories, plants, and workshops across various sectors like textiles, steel, chemicals, automobiles, etc. This has significantly reduced unemployment in both urban and rural areas.
2. **Employment in secondary activities:** Industries create jobs in related secondary activities such as packaging, transportation, maintenance, sales, and distribution. For example, the textile industry employs workers in ginning, spinning, weaving, dyeing, designing, and tailoring.
3. **Employment in support industries:** Manufacturing industries support many other industries by creating demand for their products and services. For instance, the textile industry creates employment in chemical industries (dyes), packaging industries, and engineering works, thereby generating indirect employment opportunities.

Ans 16.

Location factors for concentration of jute mills in Hugli basin:

1. **Proximity to raw material:** The Hugli basin is close to jute producing areas of West Bengal and neighbouring regions, reducing transportation costs of bulky raw jute.
2. **Good transportation network:** The region has excellent water transport facilities through the Hugli river, supported by good railway and roadway networks for easy movement of raw materials and finished products.
3. **Abundant water supply:** Plentiful water from the Hugli river is essential for processing raw jute in various stages of manufacturing.
4. **Cheap and abundant labour:** Easy availability of cheap labour from West Bengal and adjoining states like

Bihar, Odisha and Uttar Pradesh.

5. **Port facilities:** Kolkata provides excellent banking, insurance and port facilities for export of jute goods to international markets.

(Any 3 points with proper explanation)

Ans 17.

How industries cause water pollution:

Industries discharge organic and inorganic wastes and effluents into rivers, causing severe water pollution. The main polluting industries are:

- Paper, pulp, chemical, textile and dyeing industries discharge dyes, detergents, acids, salts and heavy metals like lead and mercury into water bodies.
- Petroleum refineries, tanneries and electroplating industries release pesticides, fertilisers, synthetic chemicals with carbon, plastics and rubber.
- Fly ash, phospho-gypsum and iron and steel slags contaminate water sources.

Two measures to control water pollution:

1. **Minimize water use and recycling:** Industries should minimize water use by reusing and recycling it in two or more successive stages, reducing the volume of wastewater discharged.
2. **Effluent treatment:** Hot water and industrial effluents should be treated through primary (mechanical), secondary (biological) and tertiary (chemical and physical) processes before releasing them into rivers and ponds. This removes harmful pollutants and makes water safer.

Other measures: Rainwater harvesting, legal regulation of groundwater overdrawn.

SECTION D - Answer to Long Answer Question

Ans 18.

"Agriculture and industry move hand in hand" - Explanation with examples:

Agriculture and industry are interdependent and complementary sectors that support each other's growth. This relationship is clearly visible in India's agro-based industries:

1. Industries depend on agriculture for raw materials:

- **Cotton Textile Industry:** Depends entirely on cotton grown by farmers. The industry provides livelihood to cotton farmers, cotton boll pluckers, and workers in ginning operations.
- **Sugar Industry:** Uses sugarcane as raw material. India is the second largest producer of sugar globally and first in production of gur and khandsari. The industry is concentrated near sugarcane producing areas in UP, Bihar, Maharashtra, etc.
- **Jute Industry:** Depends on jute cultivation. India is the largest producer of raw jute and jute goods, with mills concentrated in West Bengal near jute growing regions.

2. Industries support and modernize agriculture:

- **Manufacturing of agricultural inputs:** Industries produce irrigation pumps, fertilizers, insecticides, pesticides, plastic and PVC pipes, machines and tools that farmers need for modern agriculture.
- **Increasing agricultural productivity:** Agro-industries have given a major boost to agriculture by providing equipment and technology that raises productivity and efficiency.

3. Creating employment linkages:

- The textile industry provides employment not only in factories but also to farmers, cotton pickers, and workers in spinning, weaving, dyeing, designing, packaging, and tailoring.
- This reduces heavy dependence on agricultural income alone and provides alternative livelihood options in rural areas.

4. Supporting other industries:

- Agro-industries create demand for other industries like chemicals (for dyes), packaging materials, and engineering works, creating a multiplier effect in the economy.

Conclusion: The symbiotic relationship between agriculture and industry is essential for India's economic development. Industries process agricultural raw materials into valuable products, while simultaneously providing farmers with tools and markets. This interdependence ensures that development and competitiveness of manufacturing industries directly assists agriculturists in increasing production and efficiency, making both sectors stronger together.

SECTION E - Answers to Case Study Based Questions

Ans 19.

(i) Why is the textile industry considered unique in the Indian economy? (1 mark)

The textile industry is considered unique because it is the only industry in India that is self-reliant and complete in the value chain, from raw material to the highest value-added products. It contributes significantly to industrial production, employment generation, and foreign exchange earnings.

(ii) What were the traditional techniques of cotton textile production? (1 mark)

The traditional techniques of cotton textile production in ancient India were hand spinning and handloom weaving.

(iii) Name any two states where cotton textile industry is concentrated. (2 marks)

1. **Maharashtra:** Concentrated in and around Mumbai. The state has historical advantages including proximity to cotton growing areas, port facilities, and market access.
2. **Gujarat:** Major concentration in Ahmedabad and Surat. Gujarat benefits from cotton cultivation in the state and good transportation infrastructure.

Other acceptable answers: Tamil Nadu (Chennai, Coimbatore), Punjab, Haryana.

Ans 20.

(i) Name any two types of industrial pollution. (1 mark)

Two types of industrial pollution are:

1. Air pollution
2. Water pollution

Other acceptable answers: Land pollution, Noise pollution

(ii) Which industries are mainly responsible for water pollution? (1 mark)

Paper, pulp, chemical, textile and dyeing industries are mainly responsible for water pollution. Other culprits include petroleum refineries, tanneries, and electroplating industries.

(iii) How does air pollution affect human health and environment? (2 marks)

Effects on human health:

- Air pollution causes respiratory diseases, lung infections, and breathing difficulties
- Toxic gases can cause long-term health effects, cancers, and reduced life expectancy
- Particulate matter affects eyes, throat, and causes various allergies

Effects on environment:

- Air pollution damages plants and vegetation, reducing their growth and productivity
- It causes deterioration of buildings and monuments through acid rain and corrosion
- Affects the atmosphere as a whole by contributing to global warming and climate change
- Harms animals and disrupts ecosystems

(Any 2 points with proper explanation)

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