Very Short Answer Questions

Q. 1. Define manufacturing.

Ans. Production of goods in large quantities after processing from raw materials to more valuable products is called manufacturing.

Q. 2. How do manufacturing industries help agriculture?

Ans. Manufacturing industries not only help in modernizing agriculture, which forms the backbone of our economy, but also reduce the heavy dependence of people on agriculture income by providing them jobs in secondary and tertiary sectors.

Q. 3. What was the main philosophy behind public sector industries?

Ans. Public sector helps in eradication of unemployment and poverty. It also aimed at bringing down disparities by establishing industries in tribal and backward areas.

Q. 4. How does manufacturing help in earning foreign exchange?

Ans. Export of manufactured goods expands trade and commerce and brings in much needed foreign exchange.

Q. 5. What is the idea behind prosperity of the country?

Ans. Countries that transform their raw materials into a wide variety of furnished goods of higher value are prosperous.

Q. 6. What is the contribution of industries to national economy?

Ans. Over the last two decades, the share of manufacturing sector has stagnated at 17 per cent of GDP—out of a total of 27 per cent for mining, quarrying, electricity and gas.

Q. 7. How does industrialisation and urbanisation go hand in hand?

Ans. Cities provide markets and also provide services such as banking, insurance, transport, labour, consultants and financial advice, etc., to industry.

Q. 8. What are agglomeration economies?

Ans. Many industries tend to come together to make use of the advantages offered by the urban centres are known as agglomeration economies.

Q. 9. Where were manufacturing units located in Pre-independence period?

Ans. In the Pre-independence period, most of the manufacturing units were located in places from the point of view of overseas trade such as Mumbai, Kolkata, Chennai, etc.

Q. 10. What are consumer industries?

Ans. Consumer industries are the industries that produce goods for direct use by consumers, e.g., sugar, toothpaste, paper, sewing machines, etc.

Q. 11. Classify industries on the basis of ownership.

Ans. (i) Public Sector

(ii) Private Sector

(iii) Joint Sector

(iv) Cooperative Sector

Q. 12. Give one difference between public and private sectors.

Ans. (i) Public sector is owned and operated by government agencies, e.g., BHEL and SAIL, etc.

(ii) Private Sector— These industries are owned and operated by individuals or a group of individuals, e.g., TISCO, Bajaj Auto Ltd., Dabur Industries.

Q. 13. Which twin states of India are known for cotton production?

Ans. Maharashtra and Gujarat are the twin states of India known for cotton production.

Q. 14. Why are more cotton textile mills located in Gujarat and Maharashtra?

Ans. Availability of raw cotton, market, transport including accessible port facilities, labour, moist climate, etc., contributed towards its localisation.

Q. 15. Name the people who are provided employment opportunities by cotton textile industries.

Ans. Cotton farmers, cotton boll pluckers, workers engaged in ginning, spinning, weaving, dyeing, designing, packaging, tailoring and sewing. People who have industries of chemical and dyes, mill stores, packaging materials and engineering works.

Q. 16. What standard is India maintaining in weaving and spinning processes in India?

Ans. India has world class production in spinning, but weaving supplies low quality of fabric as it cannot use much of the high quality yarn produced in the country.

Q. 17. What are the main problems faced by cotton textile industries?

Ans. Power supply is erratic; machinery needs to be upgraded, low output of labour and stiff competition with the synthetic fibre industry.

Q. 18. What is India’s status in jute production?

Ans. India is the largest producer of raw jute and jute goods and stands at the second place as an exporter after Bangladesh.

Q. 19. Where was the first jute mill set up?

Ans. The first jute mill was set up in 1859 at Rishra near Kolkata.

Q. 20. What happened to jute production after partition?

Ans. After partition in 1947, the jute mills remained in India but three-fourth of the jute producing area went to Bangladesh.

Q. 21. Give any two main factors responsible for the location of Jute industries in the Hughli Basin.

Ans. (i) Proximity of the jute producing areas.

(ii) Inexpensive water transport.

(iii) Supported by a good network of railways, roadways and waterways to facilitate movement of raw material to the mills.

Q. 22. How does jute industry support the workers and farmers?

Ans. The jute industry supports 2.61 lakh workers directly and another 40 lakh small and marginal farmers who are engaged in the cultivation of jute and mesta.

Q. 23. Give any two challenges faced by jute industry.

Ans. (i) Stiff competition in the international market from synthetic substitutes.

(ii) Competition from the other competitors like Bangladesh, Brazil, Philippines, Egypt and Thailand.

Q. 24. What was the objective of National Jute Policy formulated in 2005?

Ans. In 2005, National Jute Policy was formulated with the objective of increasing productivity, improving quality, ensuring good prices to the jute farmers and enhancing the yield per hectare.

Q. 25. Which are the main markets of jute?

Ans. The main markets of Jute are USA, Canada, Russia, United Arab Republic, UK and Australia.

Q. 26. Where does India stand in sugar production?

Ans. India stands second as a world producer of sugar but occupies the first place in the production of gur and Khandsari.

Q. 27. Name the regions where sugar mills of India are located.

Ans. There are over 460 sugar mills in the country spread over UP, Bihar, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Gujarat, Punjab, Haryana and Madhya Pradesh.

Q. 28. Why are sugar mills shifting to South India?

Ans. (i) It is so because the cane produced in these states has high sucrose content.

(ii) The cooler climate also ensures a longer crushing seasons.

Q. 29. What are the major challenges of sugar industries?

Ans. Challenges include the seasonal nature of industry, old and inefficient methods of production, transport delay in reaching cane to factories and the need to maximise the use of baggage.

Q. 30. What ingredients are used to produce steel?

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

Q. 31. What are mini steel plants?

Ans. Mini steel plants are smaller in size, have electric furnaces, use steel scrap and sponge iron. They have re-rollers that use steel ingots as well.

Q. 32. What is an integrated steel plant?

Ans. An integrated steel plant is large, handles everything in one complex—from putting together raw material to steel making, rolling and shaping.

Q. 33. What do you know about SAIL?

Ans. All public sector undertakings market their steel through Steel Authority of India Ltd. called SAIL.

Q. 34. Why has Chota Nagpur Plateau the maximum concentration of steel industries?

Ans. It is largely because of the relative advantages this region has like low cost of iron ore, high grade of raw material in proximity and cheap labour.

Q. 35. What are the weaknesses of iron and steel industries?

Ans. (i) High costs and limited availability of coking coal.

(ii) Lower productivity of labour.

(iii) Irregular supply of energy.

(iv) Poor infrastructure.

Q. 36. What are the chief characteristics of aluminium?

Ans. It is light, resistant to corrosion, a good conductor of heat, malleable and becomes strong when it is mixed with other metals.

Q. 37. What are the main uses of aluminium?

Ans. Aluminium is used to manufacture aircraft, utensils and wires.

Q. 38. Name the eight aluminium plants of India.

Ans. (i) In Odisha (Nalco and Balco) (z)

(ii) West Bengal

(iii) Kerala

(iv) Uttar Pradesh

(v) Chhattisgarh

(vi) Maharashtra

(vii) Tamil Nadu

Q. 39. What are the two prime factors for the location of aluminium industries?

Ans. (i) Regular supply of electricity.

(ii) An assured source of raw material at minimum cost.

Q. 40. Which inorganic chemicals are produced in India?

Ans. Sulphuric acid (used to manufacture fertilisers, synthetic fibres, plastics, adhesive, paints, dyes stuffs), nitric acid, alkalies, soda ash (used to make glass, soaps and detergents) and caustic soda.

Q. 41. Which organic chemicals are produced in India?

Ans. Organic chemicals include petrochemicals, which are used for manufacturing of synthetic fibres, synthetic rubber, plastics, dye stuff, drugs and pharmaceuticals.

Q. 42. What are the uses of cement?

Ans. Cement is essential for construction activity such as building houses, factories, bridges, roads, airports, dams and for other commercial establishment.

Q. 43. Which ingredients are used in the production of cement?

Ans. The industry requires bulky and heavy raw materials like limestone, silica, alumina and gypsum.

Q. 44. How is Gujarat a suitable location for cement production?

Ans. The industry has strategically located plants in Gujarat that have suitable access to the market in Gulf countries.

Q. 45. Where was the first cement plant set up in India?

Ans. The first cement plant was set up in Chennai in 1904.

Q. 46. Which decisions of the government helped in the rapid production of cement?

Ans. Decontrol of price and distribution since 1989 and other policy reforms led the cement industry to make rapid strides in capacity, process technology and production.

Q. 47. How did liberalisation policy of government help in the progress of automobile industry?

Ans. After the liberalisation, the coming in of new and contemporary models stimulated the demand for vehicles in the market, which led to the healthy growth of the industry including passenger cars, two and three wheelers.

Q. 48. What is the contribution of FDI in automobile industries?

Ans. Foreign Direct Investment brought in new technology and aligned the industry with global development.

Q. 49. Why is Bangalore called as the 'Electronic Capital' of India?

Ans. Bangalore has been called as the electronic capital of India as it has lots of software companies working there and thousands of employees working in those companies.

Q. 50. What does electronic industry cover?

Ans. The electronic industries covers a wide range of products from transistor sets to television, telephones, cellular telecom, pager, telephone exchange, radars, computers and many other equipments required by the telecommunication industry.

Q. 51. How is air polluted by industries?

Ans. Smoke is emitted by chemical and paper factories, brick kilns, refineries and smelting plants and burning of fossil fuels in big and small factories that ignore pollution norms.

Q. 52. What does 'Thermal Pollution' mean?

Ans. Thermal Pollution of water occurs when hot water from factories and thermal plants is drained into rivers and ponds before cooling.

Q. 53. How do factories cause noise pollution?

Ans. Industrial and construction activities, machinery, factory equipment, generators, saws and pneumatic and electric drills also make a lot of noise.

Q. 54. Classify industries on the basis of source of raw materials.
[CBSE Sample Paper 2016]

Ans. (i) Agro based industries

(ii) Mineral based industries.

Q. 55. Why has aluminium metal great importance? [CBSE (AI) 2016]

Ans. Aluminium metal has great importance because:

It combines the strength of metals such as Iron with extreme lightness and also with good conductivity and great malleability.

Q. 56. How is iron-ore transported from Kudremukh mines to a port near Mangaluru?
[CBSE (F) 2016]

Ans. Iron-ore is transported as slurry through pipelines.

Q. 57. How did the 'Bailadila' Iron ore field get its name? [CBSE (F) 2016]

Ans. The Bailadila hills look like the hump of an ox, hence 'Bialadila' name given to the iron-ore field.

Q. 58. Name the mineral which is used to harden steel during manufacturing.
[CBSE Sample Paper 2017]

Ans. Manganese

Short Answer Questions

Q. 1. ‘‘Manufacturing sector is considered as the backbone of economic development of a country.’’ Support the statement with examples. [CBSE (F) 2017]

Ans. Manufacturing sector:

(i) It helps in modernizing agriculture.

(ii) Helps in providing jobs in secondary and tertiary sectors.

(iii) Reduces unemployment and poverty.

(iv) It brings down the regional disparities by establishing industries in tribal and backward areas.

(v) Export of manufactured goods expands trade and commerce.

(vi) It brings in much needed foreign exchange.

(vii) Example- Cotton textile, Iron and Steel industry, etc.

Q. 2. How can agriculture and industry go hand in hand?

Ans. The agro industries in India have given a major boost to agriculture by raising its production. It produces equipments like tractors, harvesters, threshers, etc.

On the other hand, industries are run on agricultural products like cotton, sugarcane, jute, edible oils, etc.

Q. 3. “Industrialization and urbanisation go hand in hand.” Validate the statement. [CBSE Sample Paper 2016]

Ans. After an industrial activity starts in a town, urbanisation follows. Industry provides employment to the people of the area. Population migrates from rural hinterlands to seek jobs, Housing and transport facilities are developed to accommodate these people. Other infrastructural developments take place leading to growth and development of the town into a city.

Sometimes, industries are located in or near the cities. Cities provide markets and services such as banking, insurance, transport, labour, consultants and financial advice, etc. to the industry. Thus, industrialisation and urbanisation go hand in hand.

Q. 4. Analyse the role of the manufacturing sector in the economic development of India. [CBSE (AI) 2017]

Ans. The Role of manufacturing sector in the economic development of India:

(i) Manufacturing industries not only help in modernizing agriculture but also reduces the heavy dependence of people on agricultural income.

(ii) Eradication of Unemployment and poverty.

(iii) Export of manufactured goods expands trade and commerce and brings in much needed foreign exchange.

(iv) Countries that transform their raw material into a wide variety of furnished goods of higher value are prosperous.

Q. 5. Classify industries on the basis of their main role. How are they different from each other? [CBSE (F) 2016]

Ans. (i) Basic or key industries: These industries supply their product or raw materials to manufacture other goods; e.g., iron and steel, copper smelting and aluminium smelting.

(ii) Consumer industries: These are the industries that produce goods for direct use by consumers; e.g., sugar, toothpaste, paper, sewing machines, fans, etc.

Q. 6. Which factors were responsible for the concentration of cotton textile industries in Maharashtra and Gujarat?

Ans. Raw cotton is easily available in and around that area because of the black cotton soil.

Transport including accessible port facilities for export of cotton goods.

Cheap and skilled labour is available around that area.

Favourable moist climate contribute towards its localisation.

Q. 7. What problems are faced by the cotton textile industry?

Ans. Power supply remains erratic, thereby, affecting its production.

Machinery needs to be upgraded in the weaving and processing sectors particularly.

There is lower output of labour, since they are not skilled in their jobs.

There is a stiff competition with the synthetic fibre industry.

Q. 8. What efforts were made by the government to stimulate demands of jute in the market?

Ans. In 2005, the National Jute Policy was formulated with the objective of increasing production.

Efforts would be made to improve production and introduce some new products of jute-like fabric.

Government can ensure good prices to the jute farmers, enhancing the yield per hectare.

Q. 9. Why do you feel that there are plans to shift sugar mills to South India?

Ans. Reasons to shift sugar mills:

(i) Sugarcane produced in these states have higher sugar content.

(ii) The cooler climate also ensures a longer crushing season.

(iii) The cooperatives are more successful in these states.

(iv) If sugarcane is transported from South to North India, due to delays in trains, sugarcane loses its sugar content as it is a perishable good.

Q. 10. "Agriculture and industry are complimentary to each other." Support the statement with three examples. [CBSE (Comptt.) 2017]

Ans. Agriculture and industry both depend on each other

(i) Agriculture supplies raw material for the manufacturing industries. Shortage of these raw materials can spell doom for the industry.

(ii) Agriculture gets its basic inputs form the manufacturing industries.

(iii) In this way agriculture offers a big market for industrial products, fertilizers, water pumps, tractors, farm equipment etc.

(iv) In short, agriculture and industry are not exclusive of each other they move hand in hand.

Q. 11. What are the challenges faced by the sugar industry?

Ans. Challenges:

(i) The industry is seasonal, so getting labour becomes difficult

(ii) India is still using old and inefficient methods of production, thereby, affecting its production.

(iii) There are transport delays in transporting sugarcane to factories, with the result that it loses its sugar content.

(iv) There is a need to maximise the use of bagasse to face the problem of power break up.

Q. 12. Why does the Chota Nagpur plateau have the maximum concentration of iron and steel industries?

Ans. It is because of the relative advantages this region has for the development of this industry.

(i) Low cost of iron ore is available, since it is mined in this region.

(ii) Its high grade raw material is available in close proximity.

(iii) Cheap, hard and skilled labour is easily available.

(iv) There is a vast growth potential in the home market.

Q. 13. How is the information technology industry able to generate more employment?

Ans. Major Impact of this industry has been on employment generation.

(i) Upto 31st March 2005, the IT industry employed over one million persons.

(ii) This number is expected to increase sharply in the coming years.

(iii) It is encouraging to know that 30 per cent of the people employed in this sector are women.

Q. 14. Explain with examples the interdependence of agriculture and industries. [CBSE (Delhi) 2017]

Ans. Interdependence of agriculture and industry:

(i) The agro-industries in India have given a major boost to agriculture by rising its productivity.

(ii) They depend on the latter for raw materials.

(iii) They sell their products such as irrigation pumps, fertilisers, insecticides, pesticides and PVC pipe, machines and tools etc. to the farmers.

(iv) Development and competitiveness of manufacturing industries has not only assisted agriculturists in increasing their productions, but also made the production processes very efficient.

Q. 15. Why did Mahatma Gandhi lay emphasis on spinning yarn and weaving khadi?

Ans. Weaving is done by handloom, power loom and in mills.

The handspun khadi provides large-scale employment to weavers in their homes as a cottage industry.

Mahatma Gandhi also wanted to propagate the use of the indigenous khadi material to revive the jobs of jobless weavers during the British period.

Q. 16. Which major industries are responsible for water pollution?

OR

How are industries responsible for polluting freshwater? Suggest any three measures to reduce the water pollution. [CBSE (F) 2017]

Ans. Water pollution is caused by organic and inorganic industrial wastes and effluents discharged into rivers.

The main culprits are paper, pulp, chemical, textile and dyeing, petroleum refineries, tanneries and electroplating industries that let out dyes, detergents, acids, salts and heavy metals like lead and mercury, pesticides, fertilizers, synthetic chemicals with carbon, plastics and rubber, etc., into the water bodies.

Fly ash, phospo-gypsum and iron and steel slags are the major solid wastes in India.

Steps to minimize water pollution:

(i) Minimising use of water for processing by reusing and recycling it in two or more successive stages. Harvesting of rainwater to meet water requirements.

(ii) Treating hot water and effluents before releasing them in rivers and ponds. Treatment of industrial effluents can be done in three phases

(a) Primary treatment by mechanical means. This involves screening, grinding, flocculation and sedimentation.

(b) Secondary treatment by biological process

(c) Tertiary treatment by biological, chemical and physical processes. This involves recycling of wastewater.

(d) Overdrawing of groundwater needs to be regulated legally.

Q. 17. How is land polluted?

Ans. Land is polluted by wastes from nuclear power plants, nuclear and weapon production facilities.

Dumping of wastes, especially glass, harmful chemicals, industrial effluents, packaging, salts and garbage, makes the soil useless.

Rainwater percolates into the soil carrying the pollutants to the ground and the groundwater also gets contaminated.

Q. 18. How can we compete in international market in manufacturing?

Ans. In the present-day world of globalisation, our industry needs to be more efficient and competitive. Self-sufficiency alone is not enough. Our manufactured goods must be at par in quality with those in the international market. Only then, we will be able to compete in the international market.

Q. 19. What are 'agglomeration economies'?

Ans. Cities provide markets and also provide services such as banking, insurance, transport, labour, consultants and financial advisors, etc., to the industries. Many industries tend to come together to make use of the advantages offered by the urban centres known as ‘agglomeration economies. Gradually a large industrial agglomeration takes place. So, it is basically coordination of various industries’ in a city for the development of manufacturing industries.

Q. 20. Classify industries on the basis of capital investment.

Ans. Following is the classification of industries on the basis of capital investment:

(i) Small-scale Industries: A small-scale industry is defined with reference to the maximum investment allowed on the assets of a unit. This limit has changed over a period of time. At present, the maximum investment allowed is ₹1 crore.

(ii) Large-scale Industries: If investment is more than ₹1 crore on any industry,then it is known as a large-scale industry.

Q. 21. Classify industries on the basis of bulk and weight of raw materials and finished goods.

Ans. Industries are classified on the basis of the weight of raw materials and finished goods in the following manner:

(i) Heavy Industries: These industries use heavy raw materials and also produce heavy goods, e.g., iron and steel, cement, ship-building, automobiles, etc.

(ii) Light Industries: These industries use light raw materials and produce light goods such as electrical industries, e.g., watches, electric bulbs, paint brushes, etc.

Q. 22. How were cotton textiles produced in ancient India?

Ans. In ancient India, cotton textiles were produced with hand spinning and handloom weaving techniques. After the 18th century, power looms came into use. Our traditional industries suffered a setback during the colonial period because they could not compete with the mill-made cloth from England.

Q. 23. How many cotton mills do we have in India?

Ans. Today, there are nearly 1,600 cotton and human made fibre textile mills in the country. About 80 per cent of these are in the private sector and the rest are in the public and cooperative sectors. Apart from these, there are several thousand small factories with four to ten looms.

Q. 24. What is the status of spinning and weaving in India?

Ans. While spinning continues to be centralised in Maharashtra, Gujarat and Tamil Nadu, weaving is highly decentralised to provide scope for incorporating traditional skills and designs of weaving in cotton, silk, jari, embroidery, etc. India has world-class production in spinning, but weaving supplies low quality of fabric as it cannot use much

of the high quality yarn produced in the country. Weaving is done by handloom, power loom in mills.

Q. 25. To which countries are cotton goods exported?

Ans. India exports yarn to Japan. Other importers of cotton goods from India are USA, UK, Russia, France, East European countries, Nepal, Singapore, Sri Lanka and African countries. We have a large share in the world trade of cotton yarn accounting for one-fourth of the total trade.

Q. 26. How is jute industry associated with people?

Ans. The jute industry supports 2.61 lakh workers directly .Another 40 lakh small and marginal farmers are engaged in cultivation of jute and mesta. Many more people are associated indirectly like in preparation of various jute goods and further trading in jute items.

Q. 27. Why is the iron and steel industry called a heavy industry?

Ans. Iron and steel industry is called a heavy industry because all the raw material as well as finished goods are heavy and bulky entailing heavy transportation costs. Iron ore, coking coal and limestone are required in the ratio of 4:2:1 approximately. Some quantity of manganese is also required to harden the steel.

Q. 28. Compare India's steel production with that of China.

Ans. In the 1950s, China and India produced almost the same quantity of steel. In 2004, India was the largest exporter of steel which accounted for 2.25 per cent of the global steel trade. Today, China is the largest producer. China is also the world's largest consumer of steel.

Q. 29. "Though India is an important iron and steel producing country in the world, yet we are not able to perform to our full potential." Why?
[CBSE (AI) 2017]

Ans. It is largely due to high costs and limited availability of coking coal. There is low productivity of labour. Moreover, there is irregularity of supply of energy and of course, the poor infrastructure.

Q. 30. What efforts should be made to improve steel production?

Ans. (i) Liberalisation and Foreign Direct Investment have given a boost to the industry with the efforts of private entrepreneurs.

(ii) There is a need to allocate resources for research and development to produce steel more competitively.

(iii) We need to regularise the supply of energy and improve the infrastructure for better production.

Q. 31. Name the aluminium smelting plants of India.

Ans. There are eight aluminium smelting plants in the country:

(i) Nalco in Odisha

(ii) West Bengal

(iii) Kerala

(iv) Uttar Pradesh

(v) Chhattisgarh

(vi) Maharashtra

(vii) Tamil Nadu

(viii) Balco in Odisha

Q. 32. What are the uses of chemical industries?

Ans. The chemical industry is its own largest consumer. Basic chemicals undergo processing to further produce other chemicals that are used for industrial application, agriculture or directly for consumer markets.

For example, sulphuric acid is used to manufacture synthetic fibres and plastics or petrochemicals are used for producing synthetic fibres and synthetic rubber, etc.

Q. 33. Which ingredients are needed for the fertiliser production?

Ans. The fertiliser industry is centered around the production of nitrogenous fertilisers (mainly urea), phosphatic fertilisers, and ammonium phosphate and complex fertilisers, which have a combination of nitrogen, phosphate and potash. The potash is entirely imported as the country does not have any reserves of commercially usable potash or potassium compounds in any form. India is the third largest producer of nitrogenous fertilisers.

Q. 34. How many fertiliser industries do we have in India?

Ans. There are 57 fertiliser units manufacturing nitrogenous and complex nitrogenous fertilisers. There are 29 plants for urea, nine for producing ammonium sulphate as a by-product and 68 other small units producing single super phosphate. At present, there are ten public sector undertakings and one in cooperative sector at Hazira in Gujarat under the Fertiliser Corporation of India.

Q. 35. In which states do we find fertiliser industries?

Ans. After the Green Revolution, the industry expanded to several other parts of the country. Gujarat, Tamil Nadu, U.P., Punjab and Kerala contribute towards half of the fertiliser production. Other significant producers are: Andhra Pradesh, Odisha,

Rajasthan, Bihar, Maharashtra, Assam, West Bengal, Goa, Delhi, Madhya Pradesh and Karnataka.

Q. 36. What are the ingredients required for making cement?

Ans. Cement is essential for construction activity, such as building houses, factories, bridges, roads, airports, dams and for other commercial establishments. This industry requires bulky and heavy raw materials like limestone, silica, alumina and gypsum. Coal and electric power are needed apart from transportation.

Q. 37. What is the status of production of cement?

Ans. This industry is doing well in terms of production as well as export. Improvement in the quality has found the produce, a readily available market in East Asia, Middle East, Africa and South Asia apart from a large demand within the country. Efforts are being made to generate adequate domestic demand and supply in order to sustain this industry.

Q. 38. Where do we manufacture various automobiles in India?

Ans. At present, there are 15 manufacturers of passenger cars and multi utility vehicles, nine of commercial vehicles, 14 of the two-wheelers and three-wheelers.

The industry is located around Delhi, Gurgaon, Mumbai, Pune, Chennai, Kolkata, Lucknow, Indore, Hyderabad, Jamshedpur and Bengaluru.

Q. 39. What does the electronic industry cover?

Ans. The electronic industry covers a wide range of products from transistor sets to television, telephones, cellular telecom, telephone exchanges, radars, computers and many other equipments required by the telecommunication industry.

Q. 40. Name the regions where electronic industries are located.

Ans. Bengaluru has emerged as the ‘electronic capital’ of India. Other important centres for electronic goods are Mumbai, Delhi, Hyderabad, Pune, Chennai, Kolkata, Lucknow, Coimbatore.

Q. 41. Name the software technology parks of India.

Ans. (i) Srinagar (J&K)

(ii) Mohali (Punjab)

(iii) Noida (U.P.)

(iv) Jaipur (Rajasthan)

(v) Gandhinagar (Gujarat)

(vi) Indore (M.P.)

(vii) Mumbai and Pune (Maharashtra)

(viii) Bengaluru and Mysore (Karnataka)

(ix) Thiruvananthapuram (Kerala)

(x) Chennai (Tamil Nadu)

(xi) Hyderabad (Andhra Pradesh)

(xii) Vishakhapatnam

(xiii) Bhubaneshwar (Odisha)

(xiv) Kolkata (West Bengal)

(xv) Guwahati (Assam)

Q. 42. Which industries are the main culprits of water pollution?

Ans. The main culprits are paper pulp, chemical, textile and dyeing, petroleum refineries, tanneries and electroplating industries that discharges dyes, detergent, acids, salts and heavy metals like lead and mercury pesticides, fertilisers, synthetic chemicals with carbon, plastics and rubber, etc., into the water bodies.

Q. 43. "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 2016]

Ans. The textile industry is self-reliant and complete in value chain:

(i) It contributes significantly to industrial production (14%).

(ii) Employment generation (35 million persons directly - the second largest after agriculture).

(iii) Foreign exchange earnings (about 24.6%).

(iv) It contributes 4 per cent towards GDP.

Q. 44. Classify industries on the basis of source of raw material. How are they different from each other? [CBSE (AI) 2016]

OR

Classify industries on the basis of source of raw materials used.

Ans. On the basis of sources of raw material industries are classified as:

(i) Agro based: Agro based industries draw their raw materials from agricultural products.

For example, Textiles, Sugar, Coffee, Tea and Edible Oil, etc.

(ii) Mineral based: Mineral based draw their raw material from minerals.

For example, Iron and Steel industries, cement, machine tools, petrochemicals, etc.

Q. 45. Suggest any three steps to minimise the environmental degradation caused by the industrial development in India. [CBSE (Comptt.) 2017, CBSE (AI) 2016]

Ans. Three steps to minimise the environmental degradation caused by Industrial development in India are:

(i) Water Pollution

Energy lite of waste water discharged by one industry pollutes eight times the quantity of fresh water.

i. Minimising use of water for procuring by reusing and recycling it in two or more successive stages.
ii. Harvesting of rain water can be done to meet water requirement.
iii. Treating hot water and effluents before releasing them in rivers and ponds.

(ii) Air Pollution

i. Particulate matter in the air can be reduced by fitting smoke stacks to factories with electrostatic precipitators, fabric filters, scrubbers and inertial separaters.
ii. Smoke can be reduced by using oil or natural gas instead of coal in the factories.

(iii) Noise Pollution

i. Machinery and equipments can be used and generators should be fitted with silencers.
ii. Almost all machineries can be redesigned to increase energy efficiency and reduce noise.
iii. Noise absorbing material may be used apart from personal use of ear plugs and earphones.

Long Answer Questions

Q. 1. What factors are required to set up an industry in a region?

Ans. Factors required to set up an industry:

(i) *Availability of raw materials:* Raw materials should be easily available from nearby areas only.

(ii) *Labour:* Labour should be skilled and easily available from the neighbouring areas only.

(iii) *Power supply:* Without power supply, an industry cannot run, so it should also be available as per the requirements.

(iv) *Market:* If it is a heavy material and a perishable good, market for the sale of the goods should also be available in a nearby area only.

Q. 2. What are the major drawbacks for the cotton textile industry?

Ans. Major drawbacks:

India has a large share in the world trade of cotton yarn but its trade in readymade garments is only 4 per cent of the world's total.

India's spinning mills are competitive at the global level and capable of using all the fibres produced.

But the weaving, knitting and processing units cannot use much of the high quality yarn that is produced in the country.

There are some large and modern factories in these segments, but most of the productions are in fragmented small units, which cater to the local market.

This mismatch is a major drawback for the industry. As a result, many Indian spinners export cotton yarn while garment manufacturers have to import fabric.

Q. 3. Why are jute mills concentrated along the Hoogly River? Explain giving reasons.

OR

"Jute industry is concentrated in the Hugli basin". Validate the statement with three suitable reasons. [CBSE Sample Paper 2017]

Ans. Reasons for concentration of jute mills along the Hoogly River:

West Bengal is the storehouse of jute. It produces the highest quantity of jute.

The industry requires a lot of water which is easily available from the Hoogly River.

Cheap labour is easily available because of migrating labour from neighbouring states of Bihar and Odisha.

Inexpensive water transport in the river Hoogly is available.

A large urban sector in Kolkata provides banking, insurance and loan facilities.

Kolkata is a good harbour which can provide facilities for the export of jute products in various parts of the world.

Q. 4. What is the contribution of manufacturing industry to the national economy?

Ans. Over the last two decades, the share of manufacturing sector has stagnated to 17 per cent of the GDP, which is required to be increased.

The trend of growth rate in manufacturing over the last decade is around 7 per cent per annum, whereas the desired growth rate is 12 per cent.

Since 2003, manufacturing is once again growing at the rate of 9 to 10 per cent per annum.

With proper policies of the government and efforts by the industry to improve productivity, economists predict that manufacturing can achieve its target over the next decade.

The National Manufacturing Competitiveness Council (NMCC) has been set up with this objective.

Q. 5. Classify industries on the basis of ownership.

Ans. On the basis of ownership, industries can be classified as:

(i) Public Sector: These industries are owned and operated by the government agencies.

(ii) Private Sector: These industries are owned and operated by private entrepreneurs, e.g., TISCO, Bajaj Auto Ltd., Reliance Industries, Dabur Industries, etc.

(iii) Joint Sector: These industries are jointly run by the state and individual or a group of individuals. Oil India Ltd. (OIL) is jointly owned by public and private sectors.

(iv) Cooperative Sector: These industries are owned and operated by the producers or suppliers of raw materials, workers or both. They pool in the resources and share the profits or losses proportionately such as the sugar industry in Maharashtra, the coir industry in Kerala.

Q. 6. What is the status of India in jute production?

Ans. India is the largest producer of raw jute and jute goods and stands at second place as an exporter after Bangladesh. There are about 70 jute mills in India. Most of these are located in West Bengal, mainly along the banks of the Hugli River, in a narrow belt.

The first jute mill was set up near Kolkata in 1859 at Rishra. After partition in 1947, the jute mills remained in India but three fourths of the jute producing areas became part of Bangladesh.

Q. 7. Explain any two main challenges faced by the jute industry in India. Explain any three objectives of National Jute Policy.

Ans. Challenges faced by the jute industry:

(i) Stiff competition in the international market from synthetic substitutes.

(ii) To stimulate the demand of the products need to be diversified.

(iii) Stiff competition from the other competitors like Bangladesh, Brazil etc.

Objective of National Jute policy:

(i) Increasing productivity

(ii) Improving quality.

(iii) Ensuring good prices to the jute farmers.

(iv) Enhancing the yield per hectare.

Q. 8. What is India's status in chemicals production?

Ans. The chemical industry in India is growing fast and diversifying. It contributes approximately three per cent of the GDP. It is the third largest in Asia and occupies the twelfth place in the world in terms of its size. It comprises both large-scale and small-scale manufacturing units. Rapid growth has been recorded in both inorganic and organic sectors.

Q. 9. What is the status of cement industry in India?

Ans. The first cement plant was set up in Chennai in 1904. After Independence, the industry expanded. Decontrol of price and distribution since 1989 and other policy reforms led the cement industry to make rapid strides in capacity, process, technology and production. There are 128 large plants and 332 mini cement plants in the country. India produces a variety of cement, which is needed for domestic as well as international market.

Q. 10. What is the current position of automobile industry in India?

Ans. Automobile industry provides vehicle for quick transport of goods and passengers. Trucks, buses, cars, motorcycles, scooters, three-wheelers and multi-utility vehicles are manufactured in India at various centres. After the liberalisation, the coming in of new and contemporary models stimulated the demand for vehicles in the market, which led to the healthy growth of the industry including passenger cars, two and three-wheelers. The industry had experienced a quantum jump in less than 15 years. Foreign Direct

Investment brought in new technology and aligned the industry with global developments.

Q. 11. Why are sugar mills concentrated in sugarcane producing areas? Explain any three problems faced by sugar industry in India. [CBSE Delhi 2016]

OR

Give reasons as to why the ideal location of sugar mills is near sugarcane producing areas. Support the statement with reasons.

Ans. Sugar industries are concentrated in the sugarcane producing areas:

(i) Sugarcane is a perishable good, it looses its sucrose content if delays in transportation occurs, so it needs to be in the nearby place.

(ii) Sugarcane is bulky and perishable, so transportation cost reduces.

(iii) Near it is to the production area, its production automatically increases.

(iv) The raw material used in the sugar mills, that sugarcane is bulky.

(v) In haulage, its sucrose content reduces.

Challenges:

(i) Seasonal nature of the industry.

(ii) Old and inefficient methods of production.

(iii) Transport delays in reaching cane to the mills.

(iv) Need to maximise the use of bagasse.

Q. 12. Analyse the role of chemical industries in the Indian economy. [CBSE (AI) 2017]

Ans. Role of chemical industries in the Indian Economy:

(i) It contributes approximately 3 % of the GDP.

(ii) It is the 3rd largest in Asia and occupies the 12th place in the world.

(iii) It compromises both large and small scale manufacturing units.

(iv) Rapid growth has been recorded in both inorganic and organic sector.

(v) Organic chemicals include petrochemicals which are used for manufacturing of synthetic fibers, rubber, plastics, and dye stuffs.

(vi) In organic chemicals include sulphuric acid, fertilizers, synthetic fibers, plastics, adhesives, paints etc.

(vii) The chemical industry is its own largest consumer.

Q. 13. Suggest any five measures to control industrial pollution in India. [CBSE (F) 2017]

Ans. Measures To Control Industrial Pollution

(i) Minimizing the use of water for processing by reusing and recycling it in two or more successive stages

(ii) Harvesting of rainwater to meet water requirements

(iii) Treating hot water and effluents before releasing them in to rivers and ponds.

(iv) Treatment of industrial effluents can be done in three phases

(v) Primary treatment by mechanical means involves screening, grinding, flocculation and sedimentation. , Secondary treatment by biological process, Tertiary treatment by biological, chemical and physical processes. This Involves recycling of wastewater.

(vi) Over drawing of ground water needs to be regulated legally.

(vii) Particulate matter in the air can be reduced by fitting smoke stacks to factories with electrostatic precipitators, fabric filters, scrubbers and inertial separators.

(viii) Smoke can be reduced by using oil or gas instead of coal in factories.

(ix) Machinery and equipment can be used and generators should be fitted with silencers.

(x) Almost all machinery can be redesigned to increase energy efficiency and reduce noise.

(xi) Noise absorbing material may be used apart from personal use of earplugs and earphones.

Hots (Higher Order Thinking Skills)

Q. 1. How is manufacturing sector considered the backbone of economic development of the country? Explain any three points in this regard.

OR

"The economic strength of a country is measured by the development of manufacturing industries." Support the statement with arguments. [CBSE Delhi 2016]

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

(i) Manufacturing Industries not only help in modernising agriculture, which forms the backbone of our economy, they also reduce the heavy dependence of people on agricultural income by providing them jobs in secondary and tertiary sectors.

(ii) Industrial development eradicates 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 industries 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 finished goods of high value are prosperous. India's prosperity lies in increasing and diversifying its manufacturing industries as quickly as possible.

Q. 2. "Agriculture gives boost to the Industrial Sector." Support the statement with arguments.

Ans. Agriculture and Industry are not exclusive of each other.

(i) They move hand in hand.

(ii) The Agro-Industry in India has given a major boost to agriculture by raising its productivity.

(iii) They depend on agriculture for raw material and sell their products such as irrigation pumps, fertilisers, insecticides, pesticides, plastics and PVC pipes, machines and tools, etc. to the farmers.

(iv) Thus, development and competitiveness of manufacturing industry has not only assisted agriculturists in increasing their production but also made the production processes very efficient.

Q. 3. "The economic strength of a country is measured by the development of manufacturing industries." Give three arguments to support this statement.

Ans. (i) In the present day world of globalisation, our industry needs to be more efficient and competitive, self-sufficiency alone is not enough.

(ii) Our manufactured goods must be at par in quality with those in the international market. Only then we will be able to compete in the international market and earn foreign exchange.

(iii) Countries that transform their raw materials into a wide variety of furnished goods of higher values are prosperous like Japan and US are industrialised. India's prosperity lies in increasing and diversifying its manufacturing industries as quickly as possible.

Q. 4. "The textile industry occupies unique position in the Indian economy." Justify.

OR

Explain the contribution of textile industry in the Indian economy. [CBSE (F) 2017]

Ans. Textile Industry occupies unique position in Indian economy due to following reasons:

(i) It occupies a unique position in the Indian economy because it contributes significantly to the industrial production (14 per cent).

(ii) It employs about 35 million people directly and earns foreign exchange of about 24.6 per cent. The second largest after agriculture.

(iii) The industry has close links with agriculture and provides a living to farmers, cotton ball pluckers and workers engaged in ginning, spinning, weaving, dyeing, designing, packaging, tailoring and sewing.

(iv) The handspun Khadi provides large scale employment to weavers in their homes as cottage industry.

(v) India exports yarn to Japan and exports cotton goods to USA, UK, Russia, France, East European countries, Nepal, Singapore, Sri Lanka and African countries. It helps in earning foreign exchange about 24.6%.

(vi) We have a large share in the world trade of cotton yarn, accounting for one tenth of the total trade.

(vii) Our spinning mills are competitive at the global level and capable of using all the fibres we produce.

(viii) It contributes 4 per cent to our GDP. This industry is self-reliant and complete in the value chain from raw material to the highest value added products.

Q. 5. Why have the demands of Jute products increased internally as well as globally?

Ans. The demand for jute products increased internally as well as globally due to following reasons:

(i) Jute is a biodegradable product and due to invasion of plastics, Jute is needed for being environment friendly.

(ii) Many countries want to get rid of plastic bags and want to replace it with environment friendly jute bags.

(iii) Jute industry also support a large number of marginal farmers who are engaged in cultivation of Jute and Mesta in the countries like India and Bangladesh.

(iv) Internal demand has increased in India due to the Government's policy of Jute Packaging.

Q. 6. "Production and consumption of steel is often regarded as the index of a country's development." Examine the statement.

Ans. (i) Iron and steel Industry is the basic industry. Since all the other industries — heavy, medium and light, depend on it for their machinery.

(ii) Steel is needed to manufacture a variety of engineering goods.

(iii) It is also needed as construction material, defence, medical, telephonic, scientific equipment and a variety of consumer goods. Therefore, production and consumption of steel is often regarded as the index of a country's development.

Q. 7. Why is aluminium smelting industry close to power sector? Describe other important factors for location of aluminium smelting. Why is this industry gaining importance? Give reasons.

Ans. (i) Aluminium smelting industry is close to the power sector as regular supply of electricity is the prerequisite for the industry.

(ii) 18,600 Kwh of electricity is needed per ton of bauxite ore for manufacturing aluminium. Aluminium smelting plants in the country are located in Odisha, West Bengal, Kerala, Uttar Pradesh, Chhattisgarh, Maharashtra and Tamil Nadu.

Aluminium Industry is gaining power due to following reasons:

(i) It is light, resistant to corrosion a good conductor of heat, malleable and becomes strong when it is mixed with other metals.

(ii) It is used for manufacturing aircrafts, utensils and wires.

(iii) It has gained popularity as a substitute of steel, copper, zinc and lead in a number of industries.

Factors of Location

Bauxite, the raw material used in the smelters is a very bulky, dark reddish coloured rock.

Q. 8. Examine the impact of liberalisation on automobile industry in India.

Ans. (i) Automobiles provide vehicles for quick transport of goods, services and passengers.

(ii) This Industry had experienced a quantum jump in less than 15 years.

(iii) Foreign direct investment brought in new technology and aligned the industry with global developments.

(iv) Now you have any latest automobile vehicle launched in any part of the world simultaneously it is launched in our country.

(v) After liberalisation, the coming in of new and contemporary models stimulated the demand for vehicles in the market, which led to the healthy growth of the industry including passenger cars, two and three wheelers.

Q. 9. NTPC has set an example of a pollution-free industry. How is it possible? Explain.

Ans. Optimum utilisation of equipments adopting latest techniques and upgrading existing equipments.

Minimising waste generation by maximising ash utilisation.

Providing green belts for nurturing ecological balance.

Addressing the question of special purpose vehicles of afforestation.

Reducing environmental pollution through ash pond management, ash water recycling system and liquid waste management.

Ecological monitoring, reviews and online database management for all its power stations.