SUB: GEOGRAPHY, CLASS- X TOPIC: CHAPTER: 6 – MANUFACTURING INDUSTRIES DATE OF SUBMISSION:	<u>WORKSHEET</u>
NAME OF STUDENT:	ROLL NO
CLASS & SEC.: X	DATE:
Please write following question-answers in your	r note book:

### Summary:

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

<u>Cotton Textiles</u>: At present, there are 1600 cotton and synthetic textile mills in India. Almost 80% of them are in the private sector. The rest are in the public sector and cooperative sector. Additionally, there are several thousand small factories with four to ten looms.

# **Aluminium Smelting**

Aluminium smelting is the second most important metallurgical industry in India. Aluminium is often turned into alloy and then used for making various products.

### **Chemical Industries**

The chemical industry contributes about 3% to the GDP. The chemical industry of India is the third largest in Asia and is at twelfth position in the world.

## Fertiliser Industry

India is the third largest producer of nitrogenous fertilisers. There are 57 fertiliser units which manufacture nitrogenous and complex nitrogenous fertilisers.

# **Cement Industry**

Cement industry requires bulky raw materials like limestone, silica, alumina and gypsum. There are many cement plants in Gujarat because of proximity to ports. There are 128 large and 323 mini cement plants in India.

### **Automobile Industry**

Almost all types of vehicles are manufactured in India. After liberalization in 1991, many automobile manufacturers set up their base in India. With the launch of contemporary models, India became an attractive market for automobiles. At present, there are 15 manufacturers of cars and multi-utility vehicles, 9 of commercial vehicles, 14 of two and three-wheelers.

### **Information Technology and Electronics Industry**

Bangalore is often termed as the electronic capital of India. Mumbai, Pune, Delhi, Hyderabad, Chennai, Kolkata, Lucknow and Coimbatore are the other important centres. There are 18 software technology parks in the country and they provide single window service and high data communication to software experts

### **Industrial Pollution and Environmental Degradation**

Air Pollution: High proportion of carbon dioxide, sulphur dioxide and carbon monoxide create air pollution.

Water Pollution: Organic and inorganic industrial wastes and effluents cause water pollution. Paper, pulp, chemical, textile, dyeing, petroleum refineries, tanneries, etc. are the main culprits of water pollution.

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

Noise Pollution: Noise pollution can result in constant irritation, hypertension and hearing impairment. Factory equipments, generators, electric drills, etc. are the major sources of noise pollution.

# **Preventing Environmental Degradation by Industry:**

Water should be reused and recycled in the industry. Rainwater harvesting should be promoted. Hot water and effluents should be treated before being released in rivers and ponds.

Q1.		3
	RUBBER INDUSTRY  What is manufacturing? Cive four examples of manufacturing (1.2)	
	What is <b>manufacturing</b> ? Give four examples of manufacturing. (1+2) Ans.	
	a) Processing of goods in large quantities after processing from raw materials to	
	more valuable products is called manufacturing. (1)	
	b) Paper manufactured from wood, sugar from sugarcane, iron and steel from iron ore and aluminium from bauxite. (4X½)	
Q2.	What are <b>secondary activities</b> ? Give four examples. (1+2)	3
	Ans. I) People employed in the secondary activities manufacture the primary	
	materials into finished goods. (1)	
	II) The workers employed in steel factories, car, breweries, textile industries, bakeries etc. (4X½)	
Q3.	"Manufacturing sector is considered the backbone of development in general and economic development in particular." Justify the statement giving four examples.  Ans. a) Manufacturing industries not only help in modernizing agriculture, which forms the backbone of our economy.  b) They also reduce the heavy dependence of people on agriculture income by providing them jobs in secondary and tertiary sectors.  c) Industrial development is a precondition for eradication of unemployment and poverty from our country. This was the main philosophy behind public sector industries and joint—sector ventures in India. It was also aimed at bringing down regional disparities by establishing industries in tribal and backward areas.  d) Export of manufactured goods expands trade and commerce, and brings in much needed foreign exchange.  e) Countries that transform their raw materials into a wide variety of furnished goods	5

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	of higher value are prosperous. India's prosperity lies in increasing and diversifying its manufacturing industries as quickly as possible.	
Q4.	'Agriculture and industry are not exclusive of each other, they move hand in	3
Q4.	hand.' Explain the statement with three examples.	3
	Ans. I) The agro-industries in India have given a major boost to agriculture by raising	
	its productivity.	
	II) They depend on the latter for raw materials and sell their products such as	
	irrigation pumps, fertilizers, insecticides, pesticides, plastic and PVC pipes, machines and tools to the farmers.	
	III) Development and competitiveness of manufacturing industry has not only	
	assisted agriculturalists in increasing their production but also made the production	
	processes very	
	efficient.	
		_
Q5.	Explain how our industry in the present day world of globalization will be able to	2
	compete in the international market.	
	Ans. a) Industry needs to be more efficient and competitive. b) Self-sufficiency alone is not enough. Our manufactured goods must be at par in	
	quality with those in the international market. Only then, will we be able to compete in	
	the international market.	
Q6.	Explain the growth of industry and its contribution to the national economy.	1
	Ans.	mark
	a) Over the last two decades, the share of manufacturing sector has stagnated at	for
	17% of GDP-out of a total of 27% for the industry, which includes 10% for mining,	each
	quarrying, electricity and gas. b) The trend of growth rate in manufacturing over the last decade has been	
	around 7% per annum.	
	c) Since 2003, manufacturing is once again growing at the rate 9-10% per	
	annum. d) With appropriate policy interventions by the govt. and renewed efforts by the	
	industry to improve productivity, economists predict that manufacturing can	
	achieve its target over the next decade.	
Q7.	Mention any four factors that influence the industrial location.	2
	Ans. i) Availability of raw material ii) Labour iii) Capital iv) Power v) Market	
Q8.	Where were the industrial units located in the pre-independence period? Give	3
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	l two examples of such centres. Also state what emerged consequently around such	
	two examples of such centres. Also state what emerged consequently around such centres?	

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	a) In the pre-independence period, most manufacturing units were located in	
	places from the point of view of overseas trade.	
	b) Centres- Mumbai, Kolkata	
	c) Consequently, there emerged certain pockets of industrially developed urban	
	centres surrounded by a huge agricultural rural hinterland.	
Q9.	Name the four factors that influence the ideal location of a factory.	4
	Ans.	
	a) Cost of production at site	
	b) Cost of obtaining raw materials at site	
	c) Cost of distribution of production	
	d) Decision to locate factory at site	
Q10	Classify industries on the basis of the following: (With two points in each)	1
	Source of raw material II) According to their main role	mark
	Ans. I) Source of raw material:	for
	Agro-based: Cotton, woollen, jute, silk textile, rubber and sugar, tea,	each
	coffee, edible oil etc.	
	<ul> <li>Mineral based: Iron and steel, cement, aluminium, machine tools,</li> </ul>	
	petrochemicals.	
	II) According to their main role:	
	a) Basic or key industries which supply their products or raw materials to	
	manufacture other goods e.g. iron and steel and copper smelting, aluminium	
	smelting.	
	b) Consumer industries that produce goods for direct use by consumers- sugar,	
	toothpaste, paper, sewing machines, fans etc.	
Q11	Classify industry on the basis of the following: (With two points in each)	5
Q 1 1	A) On the basis of capital investment B) On the basis of ownership	
	Ans. A) On the basis capital investment:	
	i) Small Scale industry: A small-scale industry is defined with reference to the	
	maximum investment allowed on the assets of a unit. This limit at present has	
	changed over a period of time. At present the maximum investment allowed is	
	rupees one crore.	
	ii) Large Scale industry: If investment is more than one crore on any industry then it	
	is known as a large-scale industry.	
	D) On the basis symprohing	
	B) On the basis ownership:	
	i) Public Sector industry: Public sector, owned and operated by govt. agencies.	
	Examples- BHEL, SAIL etc.	
	ii) Private Sector industry: Private sector industries owned and operated by	
	individuals or a group of individuals. Examples- TISCO, Bajaj Auto Ltd. Dabur	
	Industries.	
	iii) Joint Sector industry: Joint sector industries which are jointly run by the state and	
	individuals or a group of individuals. Example- Oil India Ltd. (OIL) is jointly owned by	
	public and private sector.	
	iv) Cooperative Sector industry: Cooperative sector industries are owned and	
	operated by the producers or suppliers of raw materials, workers or both. They pool	
1	in the resources and share the profits or losses. Example- Sugar industry in	I

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Q12	How are industries classified on the basis of the bulk and weight of raw materials	2
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•	and finished goods? (1+2)	
	Ans. 1) Heavy industries such as iron and steel.	
	2) Light industries- industries that use light raw materials and produce light	
	goods such as electrical industries.	
	SHIP BUILDING INDUSTRY MATCH MAKING (LIGHT	
	INDUSTRY)	
Q13	Why does the textile industry occupy a unique position in the Indian economy?	5
	Ans.	
-	1) It contributes significantly to industrial production (14%).	
	2) Contributes to employment generation (35 million persons- directly- the	
	second largest after agriculture)	
	3) Source of foreign exchange earnings. (About 24.6%)	
	4) It contributes 4% towards GDP.	
	5) It is the only industry in the country, which is self-reliant and complete in the	
	value chain i.e. from raw material to the highest value added products.	
Q14	Give reasons why the cotton textile industry was concentrated in Maharashtra	3
	and Gujarat in the early years.	
	Ans. I) Availability of raw cotton II) Market III) Transport including accessible port	
	facilities IV) Labour V) Climate	
Q15	Name the <b>country that buys Indian yarn</b> . Also name the four other cotton goods	3
	importing countries. (1+2)	
	Ans. 1. India exports yarn to Japan.	
	2. Cotton importing countries- USA, UK, Russia, France, East European	
	countries, Nepal, Singapore, Sri Lanka etc.	
Q16	What is the major drawback for the cotton textile industry in India? State its	3
Q 10	result.	
.	Ans.	
	A) The weaving, knitting and processing units cannot use much of the high	
	quality yarn that is produced in the country.	
	B) There are some large and modern factories in these segments, but most of	
	the production is in fragmented small units, which cater to the local market.	
	This is mismatch is a major drawback for the industry.	
	C) Result: - many of our spinners export cotton yarn while apparel/garment	
1	manufacturers have to import tapric	
Q17	manufacturers have to import fabric. What are the problems of cotton textile industry?	1

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	Ans. a) India has made a significant increase in the production of good quality long staple cotton but the need to import is still felt. b) Power supply is erratic	mark of each
	<ul> <li>c) Machinery needs to be upgraded in the weaving and processing sector.</li> <li>d) Other problems- low output of labour and stiff competition with the synthetic fibre industry.</li> </ul>	
	When and where was the first jute mill set up in India? What was the major challenge jute industry faced after partition in 1947?  Ans.  a) First jute mill was set up near Kolkata in 1859 at Rishra.  b) The jute mills remained in India but three-fourth of the producing area went to Bangladesh.	3
	Explain the factors responsible for location of jute industry in Hugli basin.  Ans.  a) Proximity of the jute producing areas b) In expensive water transport c) Support by a good network of railways, roadways and waterways to facilitate movement of raw material to the mills d) Cheap labour from West Bengal and adjoining states of Bihar, Orissa and Uttar Pradesh.	4
	What are <b>the challenges faced by the jute industry</b> ? <u>Ans.</u> I) Stiff competition in the international market from synthetic substitutes.  II) Competition from other competitors like Bangladesh, Brazil, Philippines, Egypt & Thailand.	2
	When was the National Jute Policy formulated? What were its objectives? (1+3)  Ans. a) In 2005 National Jute Policy was formulated.  Objectives: a) Increasing productivity b) Improving quality c) Ensuring good prices to the jute farmers d) Enhancing the yield per hectare	4
-	Name the four important countries that buy Indian jute products. Also state the reasons that have opened the opportunity for Indian jute products. (2+2)  Ans.1) The main buyers are USA, UK, Canada, Russia, United Arab Republic and Australia.  2) Reason-The growing global concern for environment friendly, biodegradable materials has once again opened the opportunity for jute products.	4
	Where should the sugar mills be ideally located?  Ans. The raw material used in this industry is bulky, and in haulage its sucrose	2

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	content reduces. Therefore the sugar mills are ideally located closer to the	
	sugarcane fields.	
Q24	'In recent years, there is a tendency for the mills to shift and concentrate in the	3
	<b>southern and western states</b> .' Justify the statement giving three examples.	
	Ans. Reasons:	
	a) The cane produced here has higher sucrose content.	
	b) The cooler climate ensures a longer crushing season.	
	c) The cooperatives are more successful in these states.	
Q25	Explain the major challenges faced by sugar industry.	4
	Ans. Challenges faced by sugar industry:	
-	a) Seasonal nature of industry	
	b) Old and inefficient methods of production.	
	c) Transport delay in reaching cane to factories.	
	d) The need to maximize the use of bagasse.	
Q26	Why is the iron and steel industry called the basic industry?	2
QZU		
•	Ans.	
	i) The 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, construction	
	material, defence, medical, telephonic, scientific equipment and a variety of	
	consumer goods.	
Q27	Give two reasons why iron and steel industry is considered a heavy industry.	1
	Ans. Iron and steel is a heavy industry because all the raw materials as well as	
	finished goods are heavy and bulky entailing heavy transportation costs.	
Q28	Where should the steel plants be ideally located?	2
	Ans. * Since the raw material and the finished products are heavy, hence the iron &	
	steel industry should be located near the sources of raw materials.	
	* The finished products also need an efficient transport network for their	
	distribution to the markets and consumers.	
Q29	'Chotanagpur plateau region has the maximum concentration of iron and steel	4
QLU	industry.' Justify the statement giving four examples.	
•	Ans. Reasons: Mainly due to the relative advantages this region has for the	
	development of	
	the industry. These include:	
	Low cost iron ore     3. High grade raw materials in proximity	
	2. Cheap labour  4. Vast growth potential in the home market.	
<u> </u>		4
Q30	'Though, India is an important iron and steel producing country in the world	4
•	yet, we are not able to perform to our full potential.' Explain the statement	
	giving four reasons.	
	Ans. Reasons:	
	a) High costs and limited availability of coking coal c) Lower productivity of	
	labour.	
	b) Irregular supply of energy d) Poor infrastructure	
Q31	What has given a boost to iron and steel industry in India? What more is	2
	needed to produce steel more competitively?	
	Ans. a) Liberalisation and Foreign direct Investment have given a boost to the	1

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	industry with the e	fforts of private entrepreneurs.		
	b) There is a	need to allocate resources for	research and development to	
	produce steel r	nore competitively.	·	
Q32		rime factors that influence th	ne location of aluminium	2
	smelting industry			
	Ans. Factors:			
		ply of electricity b) Assured sou	urce of raw material at minimum	
	cost.	, ,		
Q33		en the inorganic chemicals a	nd organic chemicals on the	5
400	basis of the following		o. ga o o o	Ū
•	Ans.	.9.	( Marks:1+2+1)	
	7410		( Warre 1 2 1 1)	
	Basis	Inorganic Chemical	Organic Chemical	
	1.Chemicals	Sulphuric acid and nitric	Petrochemicals	
	included	acid, alkalis, soda ash	retrochemicals	
			Llood for manufacturing of	
	2. Any four	Sulphuric acid:	Used for manufacturing of	
	uses	Manufacture fertilizers,	synthetic fibres, synthetic	
		synthetic fibres, plastics,	rubber, plastics, dye-stuffs,	
		adhesives, paints	drugs and pharmaceuticals.	
		Nitric acid, alkalis, and soda		
		ash: to make glass, soaps		
		and detergents, paper and		
		caustic soda.		
	3. Location	These industries are widely	Organic chemical plants are	
	of industry	spread over the country.	located near oil refineries or	
			petrochemical plants.	
Q34	'The chemical ind	ustry is its own largest cons	umer industry.' Justify the	3
	statement giving th		, <u> </u>	
			er produce other chemicals that are	
		I application * Agriculture *		
Q35		<u> </u>	red for cement industry. Also two	3
		of cement industry. (2+1)		•
'		ials- Industry requires bulky an	d heavy raw materials like	
	limestone, silica,	and madery required banky are	a neary raw materials into	
	alumina an	d avneum		
		<b>.</b>	vor and rail transportation	
000		rements- Coal and electric pov		
Q36		t has strategically location of co		2
		y has strategically located plan		
	b) Suitable acc	cess to the market in the Gulf c	ountries.	

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Q37	What led to the expansion of cement industry after independence? State the	3
	number of large and mini cement plants in the country.	
Ans	a) Decontrol of price and distribution since 1989 and other policy reforms led to	
	cement industry to make rapid strides in capacity, process, technology and	
	production.	
	b) 128- Large plants and 332 Mini cement plants.	
Q38	Where and what has made a readily available market for cement?	3
	Ans. 1. Readily available market in East Asia, Middle East, Africa and South Asia	
	apart from large demand within the country.	
	2. Improvement in the quality.	
Q39	'The automobile industry had experienced a quantum jump in less than 15 years.'	2
	State two reasons.	
	Ans. Reasons: a) Foreign Direct Investment brought in new technology	
	b) Aligned the industry with global developments.	
Q40	How is the software industry a major foreign exchange earner? What is the key to the	2
	success of IT industry in India?	_
•	Ans. a) This industry has been a major foreign exchange earner in the last two or	
	three years because of its fast growing Business Processes Outsourcing (BPO)	
	sector.	
	b) The continuing growth in the hardware and software is the key to the success of IT	
	industry in India.	
Q41	Explain <b>air pollution</b> under the following: (4x1)	4
Q41	- ' '	4
•	Ans.	
	a) Causes- By the presence of high proportion of undesirable gases, such as	
	sulphur dioxide and carbon monoxide.	
	b) Particulate materials- Contain both solid and liquid particles like dust, sprays	
	mist and smoke.	
	c) Sources of smoke-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.	
	d) Effects- Air pollution adversely affects human health, animals, plants,	
0.40	buildings and the atmosphere as a whole.	
Q42	Explain water pollution under the following headings: (4x1)	4
	Ans.	
	a) Causes: Caused by organic and inorganic industrial wastes and affluent	
	discharged into rivers.	
	b) Main source of water pollution: Paper, pulp, chemical, textile and dyeing,	
	petroleum refineries, tanneries and electroplating industries	
	c) Pollutants in the water bodies: dyes, detergents, acids, salts and heavy metals	
	like lead and mercury pesticides, fertilizers, synthetic chemicals with carbon,	
	plastics and rubber.	
	d) Major solid wastes: Fly ash, phospo-gypsum and iron and steel slags	
Q43	How does the thermal pollution of water occur?	1
	Ans. Thermal pollution of water occurs when hot water from factories and thermal	
	plants is drained into rivers and ponds before cooling.	
Q44	What are the effects of waste from nuclear power plants, nuclear and weapon	3
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•	production facilities?	
	Ans. They cause: a)Cancer b) Birth defects c) Miscarriages	
Q45	What renders the soil useless? How does the ground and under ground water gets	3
	contaminated?	
	Ans.	
	a) The following renders the soil useless:	
	1. Dumping of wastes specially glass 4. Harmful chemicals	
	Industrial effluents     S. Packaging	
	3. Salts 6. Garbage	
	b) Rain water percolates to the soil carrying the pollutants to the ground.	
	b) Italii water percolates to the son earlying the politicalits to the ground.	
Q46	What are the results of noise pollution? Also state the sources that lead to noise	5
	pollution?	
•	Ans. Results:	
	a) Irritation and anger b) Hearing impairment c) Increased heart rate and	
	blood pressure	
	·	
	d) Other psychological effects- stress etc.	
	Sources of noise pollution:	
	Industrial and construction activities 2. Machinery	
	3. Factory equipment 4. Generators	
	5. Saws 6. Pneumatic and electric drills	
Q47	How can the industrial pollution of fresh water be reduced? (1+1+2)	5
	Ans. Some suggestions:	
	A) Minimising use of water for processing by reusing and recycling it in two or	
	more successive stages.	
	B) Harvesting of rainwater to meet water requirements.	
	C) Treating hot water and effluents before releasing them in rivers and ponds.	
	Treatment of industrial effluents can be done in three phases:	
	<ul> <li>Primary treatment by mechanical means- This involves screening,</li> </ul>	
	grinding, flocculation and sedimentation	
	Secondary treatment by biological process	
	, , , , , , , , , , , , , , , , , , ,	
	Tertiary treatment by biological, chemical and physical processes. This	
	involves recycling of wastewater.	
Q48	Suggest ways: A) to reduce particulate matter in the air and B) to reduce smoke.	3
	(2+1)	
	Ans.	
	a)To reduce particulate matter in the air:	
	i) Fitting smoke stacks to factories with electrostatic precipitators	
	ii) Fabric filters iii) Scrubbers iv) Inertial separators	
	b)To reduce smoke:	
	a) Using oil or gas instead of coal in factories.	
Q49	Suggest four measures to reduce noise pollution.	4
	Ans. Suggestions:	
	a) Machinery and equipment can be reduced and generators should be fitted with	
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	silencers.	
	b) All machinery can be redesigned to increase energy efficiency and reduce	
	noise.	
	c) Noise absorbing material may be used	
	d) Personal use of earplugs and earphones.	
Q50	NTPC is a major power-providing Corporation in India. Explain how NTPC has	4
	played an important role in preserving the natural environment and resources.	
	Ans. This has been done by NTPC through the following:	
	a) Optimum utilisation of equipment adopting latest techniques and upgrading	
	existing equipment.	
	b) Minimising waste generation by maximising ash utilization.	
	<ul> <li>c) Providing green belts for nurturing ecological balance and addressing the question of special purpose vehicle for afforestation.</li> </ul>	
	d) Reducing environmental pollution through ash pond management, ash water	
	recycling system and liquid waste management.	
	e) Ecological monitoring reviews and online database management for all its	
	power stations.	
	PREVIOUS YEARS QUESTIONS	
Q1	Why copper is mainly used in electrical industries? 1m	2016
Q2	Classify industries on the bases of raw materials used. 1m	2016
Q3	Industrialisation and Urbanisation go hand in hand .Validate the statement. 3m	2016
Q4	Why are major steel plants located around Chhotanagpur region?	2015
Q5	How are Integrated Steel Plants different from Mini steel plants? What problems	2015
	does this industry face?	
Q6	Analyze the advantages of the decentralization of industries in India?	2015
Q7	Analyse any three major challenges faced by the sugar industry in India.(3M)	2014
Q8	Explain any three values which inspire us to conserve our energy resources. (3M)	2014
Q9	"Production and consumption of steel is often regarded as the index of a country's development." Examine the statement (5M)	2014
Q10	"Agriculture and industry move hand in hand." Analyse the statement with three examples.(3m)	2013
Q11	Explain any five measures to control industrial pollution in India. (5m)	2013
Q12	What are Software Technology Park? Give 2 points of significance if I.T Industry in India.(3m)	2012

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