

SOCIAL STUDIES

(HISTORY)

Chapter 4: The Age of Industrialisation



The Age of Industrialisation

The Industrial Revolution was a significant event in the world history. It is because it changed and determined the socio-economic conditions existing in the world at this time. The Europeans saw the process of industrialisation as a sign of modernity and progress. However, we also need to ask certain questions related to industrialisation such as "Can we today continue to glorify continuous mechanisation of all work? Did industrialisation only had positive effects? How did it impact the common people?"

In an attempt to answer these questions, let us first take a look at the conditions existing before industrialisation.

Conditions Existing before the Industrial Revolution

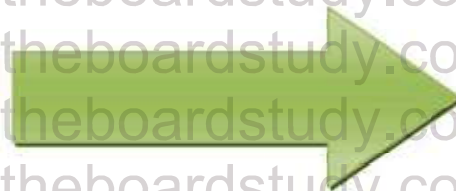
- Even before the establishment of factories, there was large-scale industrial production for the international market. This phase before industrialisation is known as **proto-industrialisation**. (Proto means original or primitive form).
- During the seventeenth and early eighteenth centuries, merchants visited the countryside and villages asking farmers to produce for international markets. These merchants often provided money to these farmers.
- Merchants and traders visited the countryside as the guilds of workers, producers and weavers were very strong in towns and had monopoly over production.
- In the countryside, farmers readily agreed to produce for international markets as it supplemented their income. Production and trade were controlled by merchants, with one merchant approximately employing 20-25 workers for weaving, spinning and dyeing the cloth.

The Beginning and the Growth of the Factory System

- Many factories began to open up in eighteenth-century England due to several changes which took place then. One of these changes were technological inventions.
- Cotton textile industries were established in large numbers at this time mainly because of technological advancements. The creation of the cotton mill by Richard Arkwright enabled the production of cotton cloth on a large scale in factories. Unlike in the countryside where each task was done separately at different places, work in the factories was managed under one roof.



Richard Arkwright



Cotton Gin

HISTORY | THE AGE OF INDUSTRIALISATION

- Britain saw rapid growth of industrialisation. However, this assumed the following forms:
 - Cotton textiles and iron and steel industries developed rapidly due to the Industrial Revolution. Other industries were still working in a traditional manner.
 - Factories came up at different places, but traditional industries were also operating on a large scale.
 - Traditional industries were not based on machine production, but they were also not stagnant. Small little innovations were taking place in traditional industries as well. Some examples of these industries were food processing, building, pottery, glass work, furniture making etc.
 - Technological changes took place gradually because new machinery was expensive and it was not easy to repair them. For example, it took many years before the steam engine began to be used widely in industries.
 - Historians thus accept that a worker in the nineteenth century was not a machine operator but a traditional craftsman.



A typical 19th century scene
Britain in cotton textile industries

Why Human Labour?

There was abundance of human labour in Britain. In the beginning, human labour was cheap compared to the machines which were costly.

Some forms of work in industries were seasonal, and industrialists preferred human labourers

Hand labour

Cloth with intricate designs could be produced only by hand and not by machine.

There was a high demand for such cloth.

The upper and aristocratic class in Britain also preferred expensive handmade goods.

Life of Human Labourers

- Because labour was in abundance in Britain, many people migrated from the countryside to the cities in search of employment.
- The possibility of getting a job also depended on the network of friendship and kinship.
- Many people while finding work, spent their nights in under bridges or in night shelters.

HISTORY | THE AGE OF INDUSTRIALISATION

- There were also long periods of unemployment for people who were working in seasonal industries.
- The wages of workers increased in the early nineteenth century, but the prices of goods also increased simultaneously.
- The fear of unemployment increased the hostility of the workers towards the introduction of machines in factories. For example, when the Spinning Jenny was introduced, women who depended on spinning for earning their livelihood attacked the new machines. Such conflicts continued for a long time.
- After 1840s, as the infrastructure expanded and roads, bridges and railway lines began to be laid down, there was an increase in the employment opportunities for the workers.



In Britain, thousands of workers migrated to cities in search of work

Industrialisation in India

India before Industrialisation

India was known for its cotton and silk textiles before the beginning of the Industrial Revolution in Britain. India produced the finer quality of cotton. Surat in Gujarat, Masulipatnam in coastal Andhra Pradesh and Hooghly in West Bengal were important port towns of India from where goods were exported to the other countries. Many bankers and Indian merchants financed the trading activities.

India during Industrialisation

- As the European companies gained power in India and received trading rights, they gradually established their own monopolies in trade.
- This resulted in the decline in the old ports of Surat and Hooghly. Exports from these ports fell considerably and the local bankers gradually became bankrupt.
- The new cities of Bombay and Calcutta grew under the colonial rule. The trade was controlled by the Europeans and was carried on by European ships.
- This led to the decline in many trading houses and the rise of new business houses.
- After the British East India Company established its political control over India and eliminated the other East India Companies, it established its monopoly over buying and selling of cotton goods and took various steps to ensure regular supply of raw cotton and silk. This was achieved by the Company by implementing the following steps:
 - The Company appointed their own servants called 'gomastha' to supervise the work of weavers, to collect supplies and to check the quality of cloth. This restricted the powers of the traders and merchants.
 - The above step also prevented the Company weavers from dealing and negotiating with other buyers. The Company paid advances to the weavers to produce cloth.



HISTORY | THE AGE OF INDUSTRIALISATION

- In many villages, there were clashes between the weavers and the gomasthas. Earlier, the supply merchants were closely related to the weavers and looked after their needs at the time of financial crises. The gomasthas however had no social relationship with the weavers, and hence, they acted arrogantly and were even accompanied by the police and punished the weavers for the delay in work.
- As a result, many villagers left their villages and fled to other villages and set up looms there.

Problems faced by the Indian weavers in the 19th century

- When the textile industries in England began to produce cloth, need was felt for imposing import duties on foreign cloth which entered its markets. Thus, various import duties were levied on Indian cloth also. As a result, the Indian weavers suffered.
- The English companies in order to sell their goods persuaded the British Government to remove all import duties on English cloth. The English machine-made cloth now entered the Indian markets. Because these cloths were cheap, the condition of weavers in India became worse as their export market collapsed and the local market was flooded with cheap British cloth.
- In the 1860s, the weavers faced another problem. They were not able to procure cotton of good quality as during the American Civil War, the Government exported much of the good quality Indian cotton to Britain.

Factories in India

By the mid-nineteenth century, factories began to be established in India. The first cotton mill in Bombay began production in 1856. The first jute mill was set up in 1855.

In 1974, the first spinning and weaving mill was established in Madras.

- In the eighteenth century, many Indian industrialists were profited by India's opium trade with China.
- Dwarkanath Tagore rose to fame after he became a major player in India's trade with China.
- Parsis such as Dinshaw Petit and J. N. Tata became rich because of exports to China and export of raw cotton to Britain. Later, they built huge industrial empires in India.
- Seth Hukumchand and Shiv Narayan Birla (grandfather of G. D. Birla) also profited from trade with China.
- Most of the industrialists had only limited opportunities for carrying out trade in India because of the monopoly of the English business houses in India. Till the First World War, European Managing Agencies in fact controlled a large sector of Indian industries. They usually had to engage in supplying raw materials to Britain. While Indian financiers often provided capital to European agencies, the latter made all investments and took business decisions.



Dwarkanath Tagore



Jamsetji Tata

HISTORY | THE AGE OF INDUSTRIALISATION

Workers in India

- Many farmers, artisans and peasants who were not able to find work in villages migrated to industrial cities in search of job opportunities. In 1911, more than half of the workers in the Bombay cotton industries came from the district of Ratnagiri.
- Most of the mill workers returned to their villages during the period of harvests.
- Later, many workers from the United Provinces (roughly present Uttar Pradesh) travelled great distances to Bombay and Calcutta in search of employment opportunities.
- However, getting jobs was always difficult. The companies employed a jobber to recruit the workers. Thus, the jobber became an influential person. At times, jobber began to demand money from workers in lieu for providing jobs to them.

Industrial Growth in India

- Many European agencies traded in plantations, mining businesses and export of raw materials (indigo, jute and cotton) to Europe.
- Indian businessmen avoided competing with Manchester goods which flooded the Indian markets.
- The beginning of the Swadeshi and Boycott movements gave a huge impetus to Indian industries. Because the export of Indian yarn to China declined, the industries began to manufacture cloth in India.
- During the First World War, when British mills began to manufacture war materials and the exports from Manchester declined, the Indian industries flourished as they had vast home markets to supply their goods.



HISTORY | THE AGE OF INDUSTRIALISATION

- Further, the Indian industries supplied jute bags, cloth for army uniforms, tents, leather boots and many other items to the war front. The industrial production in India boomed during the war period.

Small Scale Industries

- More than half of the industries in 1911 were located in Bombay and Calcutta. There were small-scale production units, workshops and household units which were functioning all over the country.
- In the twentieth century, the handloom production expanded because of the following reasons:
 - Weavers used new technology for weaving clothes. Many weavers were using looms with the fly shuttle which increased a worker's productivity. Many other technological innovations also helped the weavers to compete with the mill produce.
 - Weavers manufactured both coarse and fine cloth. While the coarse cloth was bought by the poor, the fine cloth was bought by the rich. The sale of fine cloth such as Benarasi sarees did not decline even during famines as the rich could still afford to buy these.
 - Mills also could not imitate special designs such as sarees with woven borders.
- Weavers continued to make cloth though they were not a prosperous class and they often lived hard lives.

Creating Markets for Goods

- Advertisements are an important tool for marketing and selling goods in the markets.
- Manchester cloth which came into the Indian markets had the label 'Made in Manchester'. This was to make consumers confident of the quality of the produce which they were purchasing.
- Labels also carried images which appealed to the people to buy the goods.

The images of Indian gods and goddesses were used by the manufacturers to sell products. This was done to give divine approval to goods being sold.

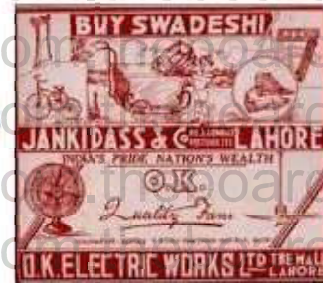


- By the late nineteenth century, many manufacturers were printing calendars to increase the popularity of their products. Besides the images of the advertised products, these calendars had images of gods, important and renowned personalities and royal figures. They were hung in houses, offices and shops.

HISTORY | THE AGE OF INDUSTRIALISATION

- Advertisements gradually became a tool for selling Indian products and began to carry nationalistic messages such as 'Use Swadeshi goods'.

Indian manufacturers advertised their products by giving a nationalist message. Advertisements became a vehicle of nationalist message of Swadeshi.

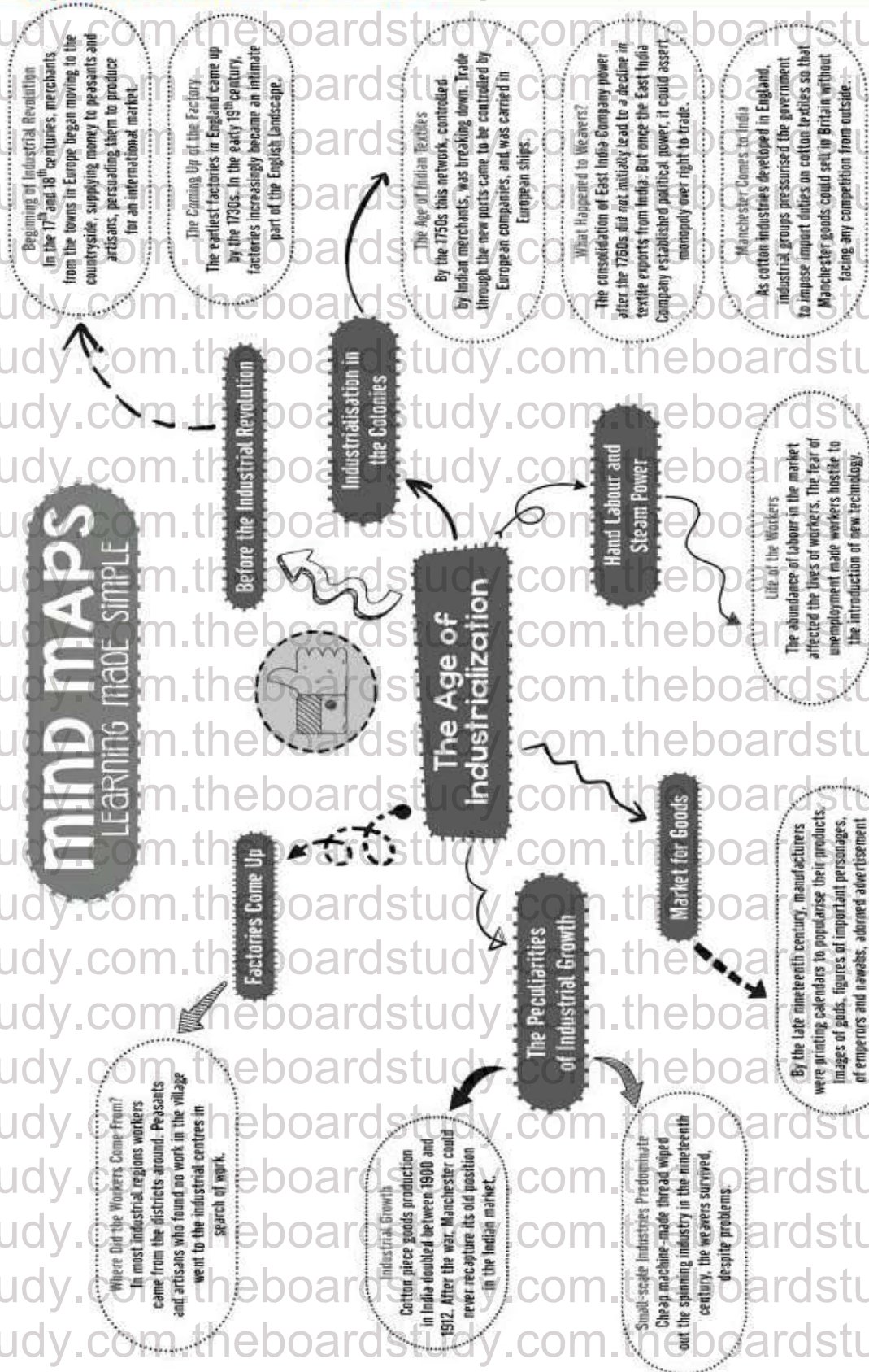


At the end we can say that in the 19th century, the era of industrialisation was based on advanced technological developments and establishment of several industries. However, small scale and handloom industries were still an important part of this period.

HISTORY | THE AGE OF INDUSTRIALISATION

THE AGE OF INDUSTRIALIZATION

MIND MAPS LEARNING MADE SIMPLE



Important Questions

Multiple Choice questions-

1. **Question:** Who set up the first Indian Jute Mill in Calcutta?

- (a) G.D. Birla
- (b) Seth Hukumchand
- (c) Jamsetjee Nusserwanjee Tata
- (d) Dwarkanath Tagore

2. **Question:** A fuller's job is to

- (a) pick up wool
- (b) sort wool according to its fibre
- (c) gather cloth by pleating
- (d) carry wool to the spinner

3. **Question:** Which of the following countries faced labour shortage in the nineteenth century?

- (a) America
- (b) Britain
- (c) France
- (d) Germany

4. **Question:** The ports of Surat and Hoogly decayed in the

- (a) sixteenth century
- (b) seventeenth century
- (c) eighteenth century
- (d) nineteenth century

5. **Question:** The first cotton mill in India was established in

- (a) Madras
- (b) Calcutta
- (c) Gujarat
- (d) Bombay

6. **Question:** Dwarkanath Tagore was a/an

- (a) philanthropist
- (b) educationist
- (c) social reformer
- (d) industrialist

7. **Question:** Why did the weavers suffer from a problem of raw cotton?

- (a) The cotton crop perished
- (b) Raw cotton exports increased
- (c) Local markets shrank

HISTORY | THE AGE OF INDUSTRIALISATION

(d) Export market collapsed

8. Question: In Victorian Britain the upper classes- aristocratic class and bourgeoisie preferred handmade goods because:

- (a) they were made from imported material.
- (b) the handmade goods came to symbolize refinement and class.
- (c) they were better finished.
- (d) only upper class could afford the expensive items.

9. Question: By late 19th century why did the British manufacturers print calendars for advertisements?

- (a) Indian people were fond of using calendars in their houses.
- (b) Unlike newspapers and magazines, calendars were used even by people who did not know how to read or write.
- (c) It was cheaper to advertise goods through calendars.
- (d) It used to add beauty to the room.

10. Question: Which of the following innovations helped the weavers in increasing productivity and compete with mill sector?

- (a) Spining jenny
- (b) Fly shuttle
- (c) Cotton Gin
- (d) Roller

11. Question: What do you mean by 'Gomastha'?

- (a) An officer of the Company who acted as a go-between the Company and Indian traders
- (b) An officer of the East India Company who looked after the textile trade
- (c) A paid servant of the Company who supervised weavers, collected supplies and examined the quality of the cloth
- (d) None of these

12. Question: According to historians, who was the typical worker in the mid-nineteenth century?

- (a) Craftsperson and labourer
- (b) Machine operator
- (c) Unskilled labour
- (d) None of these

13. Question: What do you mean by Carding?

- (a) In spinning
- (b) In weaving
- (c) In which cotton or wool fibres are prepared for spinning
- (d) In which finishing of cloth is done

14. Question: Who was the Staplers and Fullers?

HISTORY | THE AGE OF INDUSTRIALISATION

- (a) Gathers cloth by pleating
- (b) Sorts wool according to its fibre
- (c) Both a and b
- (d) None of these

15. Question: What was the reason behind new merchants could not set up business in the towns in Europe?

- (a) The rules became barrier
- (b) Scarcity of product to start any business
- (c) The powerful trade guilds and urban crafts made it difficult
- (d) None of these

Very Short:

1. What was the title of the picture on the cover page of music book published by E.T. Pauli, a popular music publisher ?
2. State any one reason why during the phase of proto-industrialisation the merchants could not expand production within towns ?
3. In the seventeenth and eighteenth century in the countryside why the peasants readily agreed to work for the merchants ? State any one reason.
4. Who was a stapler ?
5. Who is a Fuller ?
6. What is Carding ?
7. What was the first symbol of new era in England ?
8. By whom the cotton mill was created ?
9. Why did the technological changes occur slowly in Britain ? Give one reason.
10. Who produced the steam engine ? Who improved it ?

Short Questions:

1. How did the East India Company ensure a regular supply of goods for export ? Mention any two steps taken by the company.
2. Who was 'sepoy' ?
3. Mention any one reason that led to clashes between weavers and gomasthas.
4. What did Henry Patullo, a company official, say about Indian textiles ?
5. In India by 1850s and in subsequent years as the imports of cotton goods increased, which two problems were faced by the weavers in India ?
6. When and where was the first cotton mill established in India ?
7. Which mill was started in Kanpur in the 1860s ?
8. Name a few leading early Indian entrepreneurs of India in the 19th century.

HISTORY | THE AGE OF INDUSTRIALISATION

9. Name any two European Managing Agencies which till the First World War controlled a large sector of Indian industries.
10. Generally from where did the workers come from to work in factories ?

Long Questions:

1. **Question:** What does publisher E.T. Pauli want to convey by the picture 'Dawn of the Century' on the cover page of his music book ?
2. **Question:** What was proto-industrialisation ? Explain the importance of proto-industrialisation.
3. **Question:** In the seventeenth century Europe, the peasants and artisans in the country-side readily agreed to work for merchants. Explain.
4. **Question:** How did the cotton factories become an intimate part of English landscape in the early 19th century ?
5. **Question:** Describe the main features of the pace of industrial change in Britain in the nineteenth century.

Assertion Reason Questions:

1. **Directions:** - In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both statements carefully and choose the correct answer from the below:
 - (a) Both A and R are true, and R is the correct explanation of the assertion
 - (b) Both A and R are true, and R is not the correct explanation of the assertion
 - (c) A is true but R is false
 - (d) A is False but R is true

Assertion (A): In the 20th century, handloom cloth production expanded steadily.

Reason (R): This was partly because of technological changes

2. **Directions:** - In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both statements carefully and choose the correct answer from the below:
 - (a) Both A and R are true, and R is the correct explanation of the assertion
 - (b) Both A and R are true, and R is not the correct explanation of the assertion
 - (c) A is true but R is false
 - (d) A is False but R is true

Assertion (A): In most industrial regions, workers came from the districts around.

Reason (R): Peasants and Artisans who found no work in the village went to the industrial centres search of work

Case Study Questions:

HISTORY | THE AGE OF INDUSTRIALISATION

1. Will Thorne is one of those who went in search of seasonal work, loading bricks, and doing odd jobs. He describes how jobseekers walked to London in search of work: 'I had always wanted to go to London, and my desire ... as stimulated by letters from an old workmate ... who was now working at the Old Kent Road Gas Works ... I finally decided to go ... in November 1881. With two friends I started out to walk the journey, filled with the hope that we would be able to obtain employment, when we get there, with the kind assistance of my friend ... we had little money when we started, not enough to pay for our food and lodgings each night until we arrived in London. Some days we walked as much as twenty miles and other days less. Our money was gone at the end of the third day ... For two nights we slept out – once under a haystack and once in an old farm shed ... On arrival in London, we tried to find ... my friend ... but ... were unsuccessful. Our money was gone, so there was nothing for us to do but to walk around until late at night and try to find someplace to sleep. We found an old building and slept in it that night. The next day, Sunday, late in the afternoon, we got to the Old Kent Gas Works and applied for work. To my great surprise, the man we had been looking for was working at the time. He spoke to the foreman, and I was given a job.'

i. **What was the status of human labour in Britain? Select the best suitable option from the following with reference to the context.**

- (a) There was limited number of workers.
- (b) There was no shortage of labour.
- (c) Labour had to be imported.
- (d) There was uneven distribution of labour.

ii. **What kinds of production demanded seasonal labour? Identify the best suitable option from the following.**

- (a) Steel and iron
- (b) Cotton and textiles
- (c) Handmade goods
- (d) Bookbinders and printers

iii. **What was the possibility of getting a job with abundance of labour in cities such as London? With reference to the above context, infer the appropriate option.**

- (a) Jobs were given on the basis of merit system.
- (b) Jobs were given who were registered with a particular factory.
- (c) A job depended on existing networks of friendship and kin relations in a factory.
- (d) All of the above

iv. **What were the problems workers faced during the Industrialisation? Identify the best suitable option from the following.**

- (a) Migration from one place to another in search of suitable job.
- (b) Spending nights under bridges or in night shelters.

HISTORY | THE AGE OF INDUSTRIALISATION

- (c) Preferences given to the unskilled labour in the industries.
- (d) Both (a) and (b)

v. Which of the following aspect is correct regarding the given source? Identify the correct option

- (a) It is extracted from 'Comers and Goers'.
- (b) It is quoted by Raphael Samuel.
- (c) It shows the realities of the Victorian City.
- (d) All of the above

ANSWER KEY

MCQ:

1. Answer: (b) Seth Hukumchand
2. Answer: (c) gather cloth by pleating
3. Answer: (a) America
4. Answer: (b) seventeenth century
5. Answer: (b) Calcutta
6. Answer: (d) industrialist
7. Answer: (b) Raw cotton exports increased
8. Answer: (b) the handmade goods came to symbolize refinement and class.
9. Answer: (b) Unlike newspapers and magazines, calendars were used even by people who did not know how to read or write.
10. Answer: (b) Fly shuttle
11. Answer: (c) A paid servant of the Company who supervised weavers, collected supplies and examined the quality of the cloth.
12. Answer: (a) Craftsperson and labourer
13. Answer: (c) In which cotton or wool fibres are prepared for spinning
14. Answer: (c) Both a and b
15. Answer: c. The powerful trade guilds and urban crafts made it difficult

Very Short Answer:

1. Answer:

The title was 'Dawn of the Century'.

2. Answer:

In towns urban crafts and trade guilds were very powerful. They trained crafts people, maintained control over production, regulated competition and prices, and

HISTORY | THE AGE OF INDUSTRIALISATION

restricted the entry of new people into the trade.

3. Answer:

Many peasants had small plots of land which could not provide work for all members of the household.

4. Answer:

A person who 'staples' or sorts wool according to its fibre.

5. Answer:

A person who 'fulls' or gathers cloth by pleating.

6. Answer:

The process in which fibres, such as cotton or wool, are prepared prior to spinning.

7. Answer:

Cotton.

8. Answer:

Richard Arkwright.

9. Answer:

Technological changes occurred slowly in Britain because it was expensive and merchants and industrialists were cautious about using it.

10. Answer:

The steam engine was produced by Newcomen. It was improved by James Watt.

Short Answer:

1. Answer:

- I. It appointed a paid servant called the gomastha to supervise weavers, collect supplies and examine the quality of cloth.
- II. Those weavers who had taken advances from the Company could not take cloth to any other trader.

2. Answer:

This was how the British pronounced the word Sipahi, meaning an Indian soldier in the service of the British.

3. Answer:

The gomasthas were outsiders, with no long-term social link with the village. They acted arrogantly, marched into villages with sepoys and peons, and punished weavers for

HISTORY | THE AGE OF INDUSTRIALISATION

delays in supply – often beating and flogging them.

4. Answer:

Henry Patullo, a company official said that the demand for Indian textiles could never reduce, since no other nation produced goods of the same quality.

5. Answer:

- I. Their export market collapsed.
- II. The local market shrank due to import of Manchester goods.

6. Answer:

The first cotton mill came up in Bombay in 1854.

7. Answer:

Elgin Mill.

8. Answer:

- I. Dwarkanath Tagore
- II. Dinshaw Petit
- III. Jamsetjee Nusserwanjee Tata
- IV. Seth Hukumchand.

9. Answer:

- I. Bird Heiglers and Co.
- II. Jardine Skinner and Co.

10. Answer:

In most industrial regions workers came from the districts around e.g., the mills of Kanpur got most of their textile workers from the villages within the district of Kanpur.

Long Answer:

1. Answer:

Publisher E.T. Pauli wants to convey the ideas as mentioned below :

- I. Glorification of machines and technology.
- II. At the center of the picture is a goddess-like figure, the angel of progress, bearing the flag of the new century. She is gently perched on a wheel with wings, symbolising time.
- III. Her (Goddess) flight is taking her into the future. Floating about behind her, are the signs of progress – railway, camera, machines, printing press and factory. This figure thus gives us a triumphant account of the modern world that is associated with rapid technological change and innovations, machines, factories,

HISTORY | THE AGE OF INDUSTRIALISATION

railways and steam ships and computers.

2. Answer:

(a) Proto-industrialisation – This was the early phase of industrialisation in Europe and England when there was large-scale industrial production for an international market. This was not based on factories. Many historians refer to this phase of industrialisation as proto-industrialisation.

(b) The features of proto-industrialisation were as mentioned below :

- I. It was a decentralised system of production. It was part of a network of commercial exchanges.
- II. Control of production was in the hand of merchants.
- III. Goods were produced by a vast number of producers working in their family farms, not in factories.
- IV. Whole of the family was involved. It allowed peasants a fuller use of their family labour resources.
- V. At each stage of production – spinning, dying etc., 20 to 25 workers were employed by each merchant. This meant that each clothier was controlling hundreds of workers.
- VI. By working for the merchants, workers could remain in the countryside and continue to cultivate their small plots. Income from proto-industrial production supplemented their income from cultivation.

3. Answer:

- 1) In the seventeenth and eighteenth centuries, merchants from the towns in Europe began moving to the countryside, supplying money to peasants and artisans, persuading them to produce for an international market. With the expansion of world trade and the acquisition of colonies in different parts of the world, the demand for goods began growing. In the countryside poor peasants and artisans readily agreed to work for the merchants due to the reasons as mentioned below :
- 2) This was a time when open fields were disappearing and commons were being enclosed.
- 3) Poor peasants and cottagers who had earlier depended on common lands for their survival, gathering their firewood, berries, vegetables, hay and straw, had to now look for alternative sources of income.
- 4) Many had tiny plots of land which could not provide work for all members of the household.

In view of the above factors when merchants came around and offered advances to produce goods for them, peasants and artisans readily agreed to work for them.

HISTORY | THE AGE OF INDUSTRIALISATION

4. Answer:

The causes for increase in the import of raw cotton were as given below :

- 1) In the late eighteenth century in England a number of cotton factories had been set up.

It was the first symbol of new era of cotton. Its production boomed in the late nineteenth century. In 1760 Britain was importing 2.5 million pounds of raw cotton to feed its cotton industry. By 1787 this import soared to 22 million pounds.

- 2) There were number of inventions in production process i.e., carding, twisting and spinning. These changes or inventions enabled each worker to produce more. It also made possible to produce more stronger threads and yarn.

- 3) Creation of cotton mill : Till then the cloth production was being done within households. Later Richard Arkwright created the cotton mill. Earlier cloth production was carried in the countryside within village households. But now all the processes i.e., spinning, weaving and dyeing etc., could be done in a mill under one roof and management.

- 4) This allowed a more careful supervision over the production process, a watch over quality, and the regulation of labour.

As a result of above, in the early nineteenth century, factories increasingly became an integral part of the English landscape. New mills were visible everywhere. These were result of the new technology. The contemporaries were dazzled. They concentrated their attention on the mills, almost forgetting the by lanes and the workshops where production still continued.

5. Answer:

The main features of the pace of industrial change were as mentioned below :

- 1) The most dynamic industries in Britain were clearly cotton and metals.
- 2) Growing at a rapid pace, cotton was the leading sector in the first phase of industrialisation up to the 1840s.
- 3) After cotton, the iron and steel industry led the way because with the expansion of railways, the demand for iron and steel increased rapidly. By 1873 Britain was exporting iron and steel worth about 77 million double the value of its cotton export.
- 4) The new industries could not easily displace traditional industries.
- 5) (a) Ordinary and small innovations were the basis of growth in many non-mechanised sectors such as food processing, building, pottery glass work, tanning, furniture making and production of implements.
- 6) Technology changes occurred slowly as these were expensive and their repair was too costly

HISTORY | THE AGE OF INDUSTRIALISATION

Assertion Reason Answer:

1. (a) Both A and R are true, and R is the correct explanation of the assertion.
2. (a) Both A and R are true, and R is the correct explanation of the assertion.

Case Study Answer:

1. i (b) There was no shortage of labour.
ii (d) Bookbinders and printers
iii (c) A job depended on existing networks of friendship and kin relations in a factory.
iv (d) Both (a) and (b)
v (d) All of the above