

CHAPTER 20

The Industrial Revolution and its Impact on European Society

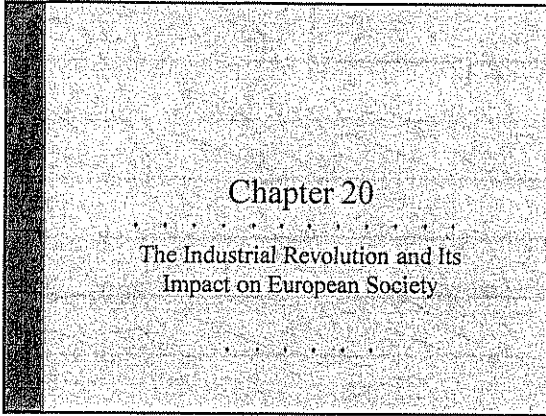
Please staple the following items, IN THIS ORDER, behind this cover sheet:

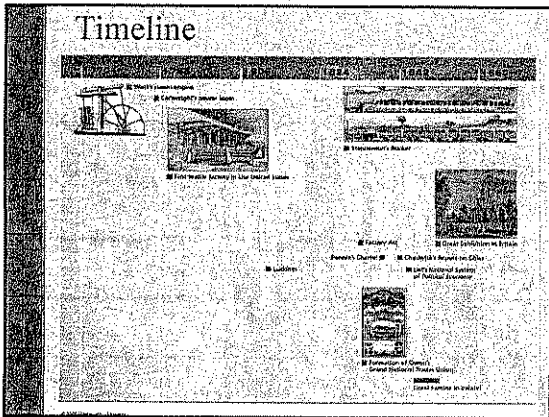
1. * Lecture Notes
2. * Chapter Vocabulary
3. * Chapter Questions
4. * Chapter Review Packet

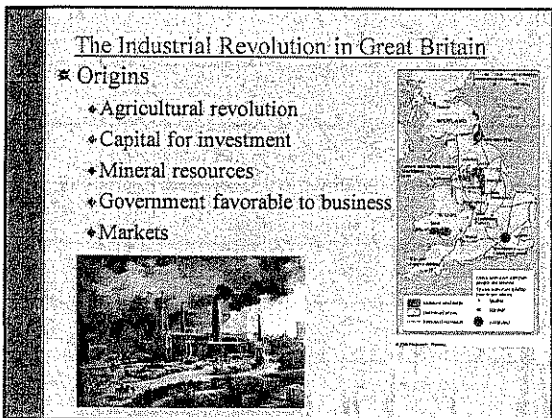
* = MANDATORY

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5. Other Assignments = OPTIONAL - (essay questions, graded maps, charts, graphs, etc.)

Name _____ Date _____ Period _____

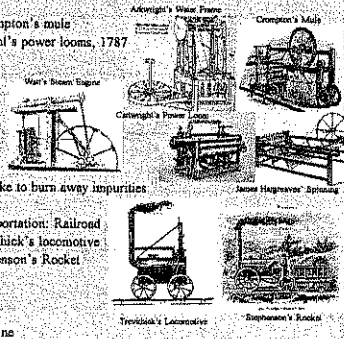






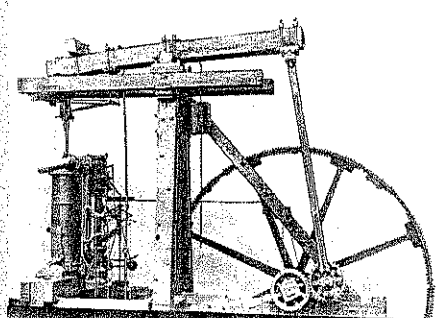
Technological Changes and New Forms of Industrial Organization

- Cotton Industry
 - Water frame, Crompton's mule
 - Edmund Cartwright's power looms, 1787
- The Steam engine
 - Coni
 - James Watt (1736-1819)
- The Iron Industry
 - Puddling, using coke to burn away impurities
- A Revolution in Transportation: Railroad
 - Richard Trevithick's locomotive
 - George Stephenson's Rocket
- The Industrial Factory
 - Factory laborers
 - Time-work discipline

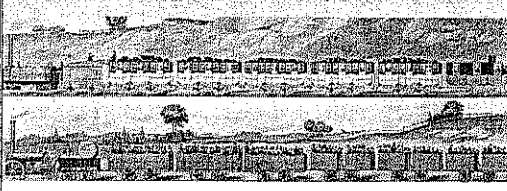


Labels in image: Arkwright's Water Frame, Crompton's Mule, Watt's Steam Engine, Cartwright's Power Loom, James Hargreaves' Spinning, Trevithick's Locomotive, Stephenson's Rocket

A Boulton and Watt Steam Engine



Railroad Line from Liverpool to Manchester



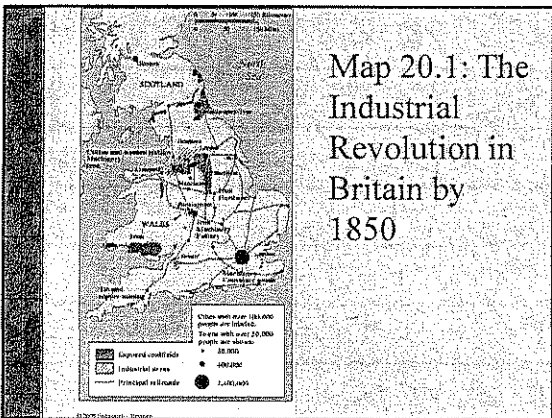
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The Great Exhibition: Britain in 1851

- ✦ Crystal Palace
 - ◆ Covered 19 acres, 100,000 exhibits
- ✦ Great Exhibition
 - ◆ Displayed Britain's wealth
- ✦ Britain: "workshop, banker, and trader of the world"

An engraving of the Crystal Palace, a massive structure made of glass and iron. It is situated in a park-like setting with trees and a large crowd of people gathered around it. The building's unique architecture is a landmark of the Industrial Revolution.



The Pace of Industrialization on the Continent

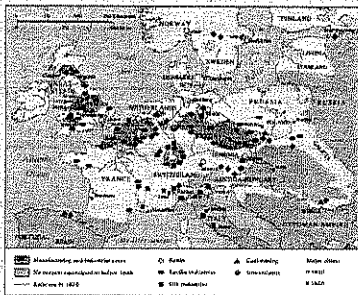
- ✦ Obstacles to Rapid Industrialization
 - Lack of a transportation system
 - Upheavals of war
 - Traditional habits of business
 - Lack of technical education
- ✦ Spurs to Industrialization
 - Borrowing of techniques and practices
 - Government support
 - Joint-stock investment banks

The Spread of Industrialization

- ✦ Centers of Continental Industrialization
 - Cotton manufacturing
 - Belgium
 - France
 - Germany
 - Impact of the steam engine
 - Iron and coal for heavy industry in Germany and France
- ✦ The Industrial Revolution in the United States
 - Borrowing from Britain
 - Samuel Slater
 - Transportation network
 - Labor

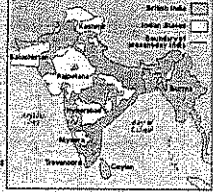


Map 20.2: The Industrialization of Europe by 1850



Limiting the Spread of Industrialization in the Nonindustrialized World


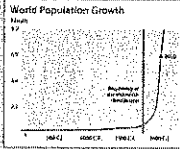
- Deliberate policy to prevent growth of mechanized industry
- Eastern Europe remained largely rural and agricultural
- India spinners and handloom weavers were put out of work



British India in 1858

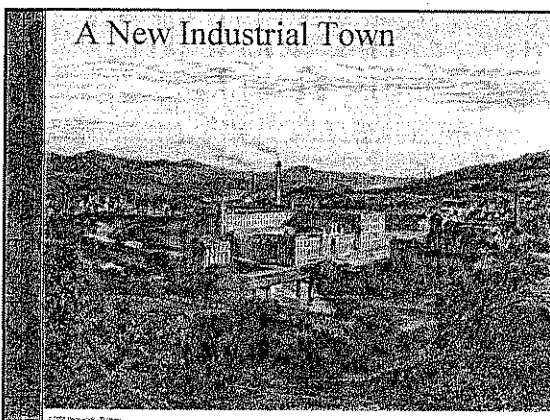
The Social Impact of the Industrial Revolution

- Population Growth
 - Decline of the death rate
- The Great Hunger
 - Irish population growth
 - Reliance on the potato
 - Potato crop fails, 1845-1851
- Emigration
- The Growth of Cities
 - Rapid, unplanned, growth
- Urban Living Conditions in the Early Industrial Revolution
 - Cities and suburbs
 - Sanitary conditions
 - Crowding
 - Adulteration of food
- Urban Reformers
 - Edwin Chadwick (1800-1890)
 - Use of drainage
 - Piped water

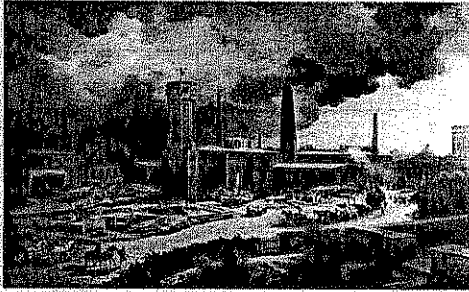


World Population Growth

An urban tenement



Industrial cities, in reality, looked a bit more like this...



New Social Classes: The Industrial Middle Class

- The New Industrial Entrepreneurs
 - ◆ Challenges of industrialization
 - ◆ Diverse social origins
 - ◆ Members of dissenting religious minorities prominent
 - ◆ Participation of aristocrats in Britain
- Significance
 - ◆ Rise of the new business aristocracy



New Social Classes: Workers in the Industrial Age



- Factory workers a minority of the working class
- Artisans and Craftspeople: largest group of urban workers in the first half of the century
- Working Conditions
 - ◆ Cotton mills
 - ◆ Coal mines
 - ◆ Child labor
 - ◆ Pauper apprentices
 - ◆ Women
 - ◆ Factory Acts
 - Factory Act of 1833
 - Women and children
- Standards of Living
 - ◆ Fluctuations of wages and prices
 - ◆ Consumption
 - ◆ Periodic overproduction and unemployment



Efforts at Change


Efforts at Change: The Workers

- Robert Owen (1771-1858), Utopian Socialism
- Trade unionism
- Luddites
- The People's Charter




Efforts at Change: Reformers and Government

- Factory acts, 1802-1819
- Factory Act of 1833
- Coal Mines Act, 1842



A Trade Union Membership Card



Utilize the chapter readings, the textbook glossary, index, a dictionary, or any other helpful resource to help you identify, define, describe, or explain the following people, terms, words or phrases. When identifying people (1) include the dates of their life. e.g.: Charles VII (1422-1461) and (2) include a description of their importance (ideas, inventions, leadership/political qualities, famous artistic works, etc.).

- Section 1 pg. 562 (The Industrial Revolution in Great Britain)
- Section 2 pg. 570 (The Spread of Industrialization)
- Section 3 pg. 576 (The Social Impact of the Industrial Revolution)

Section 1

1. Industrial Revolution
2. Agricultural Revolution
3. Cotton Industry
4. Canals
5. Richard Arkwright's Water Frame
6. James Hargreaves' Spinning Jenny
7. Samuel Crompton's Mule
8. Hand-Loom Weavers and the Cottage System
9. Coal and Coke
10. James Watt and the Rotary Engine
11. Henry Cort and Puddling
12. Richard Trevithick
13. George Stephenson's *Rocket*
14. Railroads
15. The Factory
16. Factory Discipline
17. Great Exhibition of 1851

18. The Crystal Palace

Section 2

19. Tariffs

20. Joint-Stock Investment Banks

21. Credit Mobilier and the Kreditanstalt

22. The American System

23. Steamboats

24. India's Cotton Cloth Production

Section 3

25. Ireland and the Potato

26. The Great Famine

27. Suburbs

28. Britain's Poor Law Commission

29. Edwin Chadwick

30. Cholera

31. Bourgeoisie

32. The Old and New Elites

33. Working Class

34. Child Labor

35. Domestic Servants

36. Trades Unions

37. Robert Owen

38. The Grand National Consolidated Trades Union

39. The Amalgamated Society of Engineers

40. Luddites

41. Chartism and the People's Charter

42. The London Workingmen's Association

43. Factory Acts

44. Ten Hours Act of 1847

45. Coal Mines Act of 1842

4. PRIMARY SOURCE DOCUMENT QUESTION – “Discipline in the New Factories” (pg. 568)

- (1) As seen in this document, what impact did factories have on the lives of workers? (2) To what extent have such “rules” determined much of modern industrial life? (3) How is your life marked by the historical development of such rules? (4) Are today’s workers still only “hands” in the opinion of many employers?

1.

2.

3.

4.

5. MAP EXERCISE - "The Industrial Revolution in Britain by 1850." MAP 20.1. (pg. 567)

- (1) What is the relationship between areas of industrialization and major population centers? (2) How important was the railroad to Britain’s industrial development and why?

1.

2.

Section 2

6. How did the Industrial Revolution spread from Great Britain to the Continent and the United States, and how did industrialization in those areas differ from British industrialization?

7. (1) Discuss the role of government in the industrial development of the Western world. (2) What were ways that government encouraged industrialization and how did it attempt to check its excesses? (3) Are modern day efforts to curb industrial excesses the same or different from what they were in the early nineteenth century?

1.

2.

3.

8. MAP EXERCISE - The Industrialization of Europe by 1850. MAP 20.2. (pg. 572)

(1) What are the possible geographic and non-geographic reasons why continental industrialization was centered in north and Northwestern Europe rather than in the eastern and southeastern regions of the continent? (2) What is the relationship, if any, between peasant emancipation and industrialization? (3) Between urbanization and industrialization?

1.

2.

3.

9. PRIMARY SOURCE DOCUMENT QUESTION – “S-t-e-a-m-b-o-a-t A-Coming” (pg. 575)

(1) How does this document illustrate the impact of the transportation revolution on daily life in the United States? (2) In particular, how important was the steamboat to the economic and social development of the United States? (3) Is Mark Twain romanticizing his account of life on the Mississippi from his remembered past? (4) If so, why, and where in his account do you find evidence that he has idealized his past?

1.

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Section 3

10. PRIMARY SOURCE DOCUMENT QUESTION – “The Great Irish Famine” (pg. 577)

(1) Discuss the impact of the great Irish Famine on the Irish people and upon the broader Atlantic world, including the United States. (2) How were the industrial societies of Britain, the United States, and other nations affected by this disaster? (3) Why didn't the British government do more to alleviate the impact of the famine?

1.

2.

3.

11. How are changes in population growth and the development of urbanization related to the Industrial Revolution?

12. List the effects the Industrial Revolution had upon the following areas:

<u>Area/Topic</u>	<u>Effects of the Industrial Revolution</u>
Urban Life	
Social Classes	
Family Life	
Standards of Living	

13. What were working conditions like in the early decades of the Industrial Revolution, and what efforts were made to improve them?

CONDITIONS:

IMPROVEMENTS:

14. PRIMARY SOURCE DOCUMENT QUESTION – “Child Labor: Discipline in the Textile Mills” (pg. 582)

(1) What kind of working conditions did children face in the mills during the early Industrial Revolution? (2) What were the benefits of child labor to the employers? (3) Why not employ just adults? (4) Why did entrepreneurs permit such conditions and such treatment of children? (5) Is the problem of child labor still with the world today? (6) Why or why not? If so, where?

1.

2.

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4.

5.

6.

15. PRIMARY SOURCE DOCUMENT QUESTION – “Child Labor: The Mines” (pg. 583)

(1) Why was it claimed that working in the coal-mines was worse even than labor in the cotton mills and factories? (2) Other than cheaper wages, what might be the advantage to using young children in mines? (3) What were the possible reasons it took until 1842 to get legislation pertaining to child labor in the mines, and then it only prohibited the employment of boys under the age of ten?

1.

2.

3.

16. PRIMARY SOURCE DOCUMENT QUESTION – “Political Demands of the Chartist Movement” (pg. 586)

(1) What were the political demands of the Chartists? (2) Would universal suffrage, or having the vote, have significantly improved the plight of the workers? (3) If so, how? If not, why not? (4) Judging by this document, how did the Industrial Revolution shape the political ambitions and interests of the laboring classes in England?

1.

2.

3.

4.

CHAPTER TWENTY

THE INDUSTRIAL REVOLUTION AND ITS IMPACT ON EUROPEAN SOCIETY

Name: _____
Period: _____
Date: _____
Graded by: _____

Score: _____/50

Chapter Outline

- I. Industrial Revolution in Great Britain
 - A. Origins and Causes
 1. Capital for Investment
 2. Early entrepreneurs
 3. Mineral Resources
 4. Government Favorable to Business
 5. Supply of Markets
 - B. Technological Changes and New Forms of Industrial Organization
 1. Cotton Industry's Power Looms
 2. James Watt's Steam Engine
 3. Iron Industry
 4. Revolution in Transportation
 - a. Richard Trevithick's Locomotive
 - b. George Stephenson's *Rocket*
 5. Industrial Factory
 - C. Great Exhibition of 1851
 1. Leadership of Prince Albert
 2. Britain as Industrial Leader
- II. Spread of Industrialism
 - A. What Limited Its Spread
 1. Lack of Transportation Systems
 2. Traditional Habits of Business
 3. Upheaval of Wars
 4. Lack of Technical Education
 - B. What Encouraged Its Spread
 1. Entrepreneurs with Technical and Business Skills
 2. Technical Schools
 3. Government Support
 4. Joint-Stock Investment Banks
 - C. Centers of Continental Industrialization
 1. Belgium
 2. France
 3. Germany
 - D. Industrial Revolution in the United States
 1. Building of a System of Transportation
 2. A Labor Supply from Rural New England
 3. The Capital-Intensive Pattern
 - E. Limiting Industrialism in the Non-industrial World

- III. Social Impact of the Industrial Revolution
 - A. Population Growth and the Great Hunger
 - B. Growth of Cities
 - 1. Irresponsible and Irresponsive Governments
 - 2. Wretched Sanitary Conditions
 - 3. Adulteration of Food
 - 4. Reforms of Edwin Chadwick
 - C. New Industrial Middle Class
 - 1. Out of Mercantile Trades
 - 2. Out of Dissenting Religious Minorities
 - 3. To a New Elite
 - D. New Working Class
 - 1. Laborers
 - 2. Servants
 - 3. Working Conditions
 - a. In the Mines
 - b. Pauper Apprentices
 - c. Child Labor
 - d. Women Workers
 - e. Factory Acts At Last
 - E. Standards of Living for Workers
 - 1. Wild Fluctuations of Wages and Prices
 - 2. Periodic Overproduction and Unemployment
 - F. Worker Efforts at Change
 - 1. Robert Owen's Utopian Socialism
 - 2. Trade Unions
 - 3. Luddite Attacks on Machinery
 - 4. Chartism's Petition to Parliament
 - G. Government Efforts at Change
 - 1. Factory Act of 1833
 - 2. Coal Mines Act of 1842

Chapter Summary

The Industrial Revolution that came first to Britain and then to the Continent of Europe changed the political and social order of Western people fully as much as the religious revolution called the Reformation, the intellectual revolution of the Enlightenment, or the political revolutions that followed the French Revolution. In many ways it changed the lives of the common worker more than the previous revolutions.

The Industrial Revolution started in Britain, where inventions, organizational skills, and natural resources combined to remake the countryside and the cities. It spread after a generation to the continent, particularly to places that had the same natural resources and organizational systems as Britain's, and by the middle of the nineteenth century had redefined society. The Great Exhibition of 1851 in London demonstrated the achievements but did not point out the human suffering that accompanied those achievements.

The social impact of the Industrial Revolution is still being observed and assessed. A tremendous growth in city populations, the creation of a new middle class and a working class, an ever increasing gap in earnings and quality of life between owners and workers all helped to make the modern age what it has been for a century—for better and for worse. The most striking losers in this new age were for many decades the children who were literally "used up" to supply labor for factories.

Eventually reaction came. The workers themselves, however limited their powers might be, began calling for more rights to determine their work and lives; and social reformers made the case of the workers so articulately that at last governments had to respond. The class struggle of modern times was underway.

Learning Objectives

1. Be able to explain why Britain was the first nation to be industrialized and how it was accomplished.
2. Trace the spread of the industrial revolution onto the continent of Europe and to the United States and show how it differed from country to country.
3. Explain how industrialization affected population growth and life in cities.
4. Describe the effect industrialization had on class structures and the new ways of life for each of the new classes.
5. Outline the various plans of reform offered by people concerned with the working and living conditions of urban laborers and what happened to each plan.

Glossary of Names and Terms

1. **Capital:** liquid assets (usually cash) which can readily be moved from place to place and invested in new forms of enterprise.
2. **Edmund Cartwright:** inventor of the power loom, which increased the production of cloth and precipitated the British industrial revolution.
3. **The Rocket:** the first locomotive used on the first public railway line, invented by George Stephenson and in full operation by the 1830s.
4. **Great Exhibition:** the first "world's fair," held in Kensington in 1851 to demonstrate the industrial might and superiority of Great Britain.
5. **Darmstadt Bank:** the main German version of the joint-stock corporation, which used the savings of small investors to open new businesses.
6. **Great Famine:** the human tragedy in Ireland when in 1845 the potato crop failed and over a million people starved.
7. **Edwin Chadwick:** secretary of the British Poor Law Commission who headed a study of living conditions in urban slums.
8. **Robert Owen:** factory owners and utopian reformer who created cooperative rather than competitive working communities.
9. **Luddites:** skilled craftsmen of the British midlands who physically attacked the machines they felt were taking away their jobs.
10. **Chartism:** the British movement that petitioned Parliament in the 1840s to grant universal male suffrage and the elimination of property qualifications for Parliamentary membership.

Match These Words with Their Definitions:

- | | |
|---------------------------|-------------------------------------------------------------------------------------------|
| 1. Edmund Cartwright | A. Site of the Great Exhibition of 1851 |
| 2. James Watt | B. Site of Germany's rich coal resources |
| 3. George Stephenson | C. Lawyer who championed the cause of the urban poor |
| 4. Crystal Palace | D. Inventor of the power weaving loom |
| 5. Friedrich List | E. Inventor of the steam engine |
| 6. <i>Crédit Mobilier</i> | F. Advocate of rapid industrialization and the use of tariffs |
| 7. <i>Kreditanstalt</i> | G. Industrial joint stock corporation of Vienna |
| 8. Ruhr Valley | H. His <i>Rocket</i> was the first locomotive used on a public railway line |
| 9. Edwin Chadwick | I. Industrial joint stock corporation of Paris |
| 10. Robert Owen | J. Cotton magnate and social reformer whose ideas contributed to the trade union movement |

Choose the Correct Answer:

1. The Industrial Revolution in Britain was in large part inspired by
 - a. the urgent need to solve severe urban poverty.
 - b. the failure of the cottage industry system.
 - c. entrepreneurs who sought and accepted new manufacturing methods and inventions.
 - d. the great industrial success of the century before in Holland and France.
 - e. mandates from royal officials such as Prince Albert.

2. The British industrial entrepreneur Richard Arkwright
 - a. typified the well born, educated entrepreneurs of the Industrial Revolution.
 - b. invented the water frame spinning machine.
 - c. perfected the Crompton Mule.
 - d. invented the steam locomotive.
 - e. became a leading Member of Parliament.

3. James Watt invented the steam engine as a way to
 - a. pump water from mines.
 - b. weave cloth more efficiently.
 - c. demonstrate his theories of motion.
 - d. run the new locomotives.
 - e. heat the Houses of Parliament.

-
4. The work ethic needed for efficient industrial production was taught as a religious virtue most noticeably in the
 - a. Catholic monasteries of northern England.
 - b. Lutheran gymnasia of western Germany.
 - c. Jewish synagogues of Poland.
 - d. Methodist meeting houses of the English midlands.
 - e. Polytechnic institutes of the London area.

 5. In the eighteenth century Britain's cotton industry
 - a. could not keep pace with French textile production.
 - b. was responsible for creating the first modern factories.
 - c. declined due to the lack of technical innovations.
 - d. went bankrupt due to gains in synthetic fiber production.
 - e. built plants in several European cities.

 6. The importance of railroads to the Industrial Revolution lay in the way they
 - a. led to British supremacy in civil and mechanical engineering.
 - b. increased the size of markets and the price of goods in those markets.
 - c. brought an end to joint-stock companies.
 - d. ended the need for domestically produced coal.
 - e. enabled plant owners to live outside cities and commute to work.

 7. The factory system and the values on which it was based were
 - a. condemned by evangelical preachers as "unchristian."
 - b. similar to those of the earlier cottage industry.
 - c. successfully challenged by representatives of the working class.
 - d. what relegated workers to lives of severe discipline and drudgery.
 - e. proven to be inefficient and ineffective.

 8. The Great Exhibition of 1851
 - a. showed how the Industrial Revolution had achieved human domination over nature.
 - b. displayed Britain's industrial wealth and might to the world.
 - c. was housed in the Crystal Palace, itself a tribute to British engineering skills.
 - d. was the brainchild of Prince Albert.
 - e. all of the above

 9. Industry on the continent differed from that in Britain because it
 - a. used the private capital of rich individuals.
 - b. used investments from joint-stock banks.
 - c. invested in the latest equipment and most productive techniques.
 - d. considered technical schools unnecessarily expensive.
 - e. had a less dependable work force.

10. The Industrial Revolution in the United States
 - a. never matched Britain's due to the lack of a system of internal transportation.
 - b. employed large numbers of women in factories, especially in textile mills.
 - c. utilized a labor-intensive system with many skilled workers.
 - d. was limited mainly to the southern states.
 - e. had less effect on social habits than that in Europe.

11. American industrialists overcame the problem of the country's vast size by
 - a. building factories in every county of every state.
 - b. manufacturing products that could be sold near factories.
 - c. building roads, canals, and railroads.
 - d. reducing tariffs between states.
 - e. encouraging rapid urbanization.

12. American factory owners invested heavily in machinery because
 - a. women and children were unable to do manual work.
 - b. of the typically American fascination with gadgets.
 - c. a skilled work force could use machines effectively.
 - d. the American work force was largely unskilled.
 - e. they were so much richer than their British counterparts.

13. In 1842 Edwin Chadwick published a landmark study of British
 - a. poverty and urged greater sanitation.
 - b. industrial profits and urged more mercantilism.
 - c. schools and urged more instruction in ethics.
 - d. fires and urged the use of asbestos in new housing.
 - e. factory efficiency and urged shorter work hours.

14. The European population explosion of the nineteenth century
 - a. can be explained by increased birthrates.
 - b. was largely caused by the general disappearance of famine.
 - c. was due to the absence of emigration.
 - d. occurred despite the return of major epidemic diseases.
 - e. was centered in the southern and eastern parts of the continent.

15. Mine workers during the industrial revolution
 - a. were the best paid of common laborers.
 - b. often moved up to jobs in factories.
 - c. could be identified by their physical deformities.
 - d. were the first to form recognized unions.
 - e. appeared as heroes in early novels.

16. Which of these statements applies to European urban life in the early nineteenth century?
- Government intervention often prevented consumer fraud and food contamination.
 - Healthier living conditions accounted for the increase in the urban population.
 - Homes of urban workers were on the whole much nicer than those of farmers.
 - Filthy sanitary conditions were exacerbated by the refusal of city authorities to take responsibility or action.
 - As many people returned to the countryside each year as came into the cities.
17. The harsh treatment of children in the workplace during the early Industrial Revolution
- toughened and strengthened them physically for their adult lives.
 - was not out of line with the brutal treatment of children in general.
 - did not occur in mining because children were too small to work there.
 - was often prevented by parish officials who employed children as pauper apprentices.
 - increased after the Factory Act of 1833.
18. Before 1870 women's wages in textile mills were
- roughly the same as men's wages.
 - paid directly to their husbands.
 - half or less that of men's wages.
 - paid only in food and clothing
 - dependent upon their productivity.
19. The Luddites
- received strong support from the people they represented in Parliament.
 - physically attacked machines they believed adversely affected their livelihood.
 - were the lowest paid of unskilled workers in Great Britain.
 - represented the first successful labor movement on the continent.
 - were arrested and imprisoned for their crimes.
20. The "people's charter" demanded
- the right of all adult men to vote.
 - that members of Parliament be paid for their services.
 - the elimination of all property qualifications to run for office.
 - annual sessions of Parliament.
 - all of the above

Complete the Following Sentences:

- Britain led the Industrial Revolution because it had deposits of _____ and _____, because it had abundant _____, and because of its small _____.
- The cotton industry was pushed forward dramatically by the water frame spinning machine of Richard _____ and the power loom of Edmund _____.
- Richard Trevithick pioneered the use of the steam-powered _____, but George Stephenson's _____ was the first used on a public line.

4. The Great Exhibition of 1851, held in the _____ in _____, demonstrated that _____ led the world in industry.
5. Germany eventually played a major role in the industrial revolution because of _____ deposits in the _____ Valley of the _____.
6. In Ireland, where _____ peasants rented from absentee British _____ landlords, a mid-century _____ crop failure led to massive _____.
7. As secretary for the _____ Commission, Edwin Chadwick blamed urban diseases on _____ impurities and called for reforms in _____.
8. Children were extensively used in factories because of their small _____, because they were easily _____ to work, and because they were a _____ supply of labor.
9. The People's Charter of 1838 demanded universal suffrage for _____, that Members of Parliament be _____, and that Parliament meet _____.
10. The Factory Acts passed between 1802 and 1819 limited child labor to _____ hours a day, forbade hiring of children under _____, and required that children be taught _____ and _____ during work hours.

Place the Following in Chronological Order and Give Dates:

- | | |
|-----------------------------------------------|----|
| 1. Victoria and Albert's Great Exhibition | 1. |
| 2. People's Charter promulgated | 2. |
| 3. Cartwright invents the power loom | 3. |
| 4. Watt invents the rotary steam engine | 4. |
| 5. Ten Hours Act | 5. |
| 6. Trevithick first uses the steam locomotive | 6. |
| 7. Luddites attack machines | 7. |

CHAPTER 20

THE INDUSTRIAL REVOLUTION AND ITS IMPACT ON EUROPEAN SOCIETY

EXAMINATION QUESTIONS

Essays:

1. Why did the Industrial Revolution begin in Great Britain?
2. Discuss and trace the role of the factory in the early Industrial Revolution. What made the factory system possible? What impact did it have on the lives of workers, especially on women and children?
3. Compare and contrast the patterns of industrialization in continental Europe and the United States with those of Great Britain.
4. Discuss the role of government in the industrial development of the Western world. What were ways that government encouraged industrialization and how did it attempt to check its excesses? Are modern day efforts to curb industrial excesses the same or different from what they were in the early nineteenth century?
5. How are changes in population growth and the development of urbanization related to the Industrial Revolution?
6. Discuss the impact of the early Industrial Revolution upon the family, the role of women, and the living and working conditions of the industrial workers?
7. What efforts did workers make to ameliorate the harsh working conditions of the early Industrial Revolution? How successful were they?
8. Assume that you are a small landowner who lost his land due to economic changes in the British countryside. In a brief essay, explain your changed position and lifestyle as you and your family move to Manchester to gain employment in one of the new factories.
9. Discuss the concept of the 'middle-class' and its relation to the Industrial Revolution.
10. "The 'working-class' is a product of the Industrial Revolution." Discuss.

Identifications:

1. Industrial Revolution
2. agricultural revolution
3. cotton industry
4. canals
5. Richard Arkwright's water frame
6. James Hargreaves' spinning jenny
7. Samuel Crompton's mule
8. hand-loom weavers and the cottage system
9. coal and coke
10. James Watt and the rotary engine

11. Henry Cort and puddling
12. Richard Trevithick
13. George Stephenson's *Rocket*
14. railroads
15. the factory
16. factory discipline
17. Great Exhibition of 1851
18. the Crystal Palace
19. tariffs
20. joint-stock investment banks
21. Credit Mobilier and the Kreditanstalt
22. the American system
23. steamboats
24. India's cotton cloth production
25. Ireland and the potato
26. the Great Famine
27. suburbs
28. Britain's Poor Law Commission
29. Edwin Chadwick
30. cholera
31. bourgeoisie
32. the old and new elites
33. working class
34. child labor
35. domestic servants
36. trades unions
37. Robert Owen
38. the Grand National Consolidated Trades Union
39. the Amalgamated Society of Engineers
40. Luddites
41. Chartism and the People's Charter
42. the London Workingmen's Association
43. factory acts
44. Ten Hours Act of 1847
45. Coal Mines Act of 1842