Origins of the Industrial revolution

Paragraph 1

The Industrial Revolution, the wave of technological, economic and social changes that helped produce what we know as modern Europe, arose among back-country English cottage craftspeople in the early 1700s and fundamentally restructured industry. First, human hands were replaced by machines in the fashioning of finished products, rendering the word manufacturing (made by hand) technically obsolete. No longer would the weaver sit at a hand loom and painstakingly produce each piece of cloth. Instead, large mechanical looms were invented to do the job faster and more economically. Second, human power gave way to various forms of inanimate power. The machines were driven by water power, the burning of fossil fuels, and later by hydroelectricity and the energy of the atom. Men and women, once the proud producers of fine handmade goods, became tenders of machines. Within a century and a half of its beginnings, this economic revolution had greatly altered industrial activity.

1. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or eave out essential information.

A. A wave of changes in modem Europe fundamentally restructured the lives of English craftspeople

B. The Industrial Revolution, which restructured industry in Europe began among English craftspeople in the early 1700s

C. Major technological, economic and social changes in back country England produced the Industrial Revolution

D. The Industrial Revolution introduced many technological, economic and social changes

2. The word "inanimate" in the passage is closest in meaning to

A. superior

B. energy-saving

C. nonliving

D. newly invented

3. According to paragraph 1, the industrial Revolution resulted in all of the following **EXCEPT**

A. a reduction in the production of handmade goods

B. an increase in the pride workers took in making the goods they produced

C. the development of faster ways of making certain products

D. the use of nonhuman sources of power

Paragraph 2

The initial breakthrough came in the secondary, or manufacturing sector. More exactly, it occurred in the British cotton textile industry, centered at that time in the district of Lancashire in western England. At first the changes were modest and on a small scale. Mechanical looms were invented, and flowing water, long used as a source of power by local grain millers, was harnessed to drive the looms During this stage, manufacturing industries remained largely rural, diffusing to sites where rushing streams could be found, especially waterfalls and rapids. Later in the eighteenth century the invention of the steam engine provided a better source of power, and a shift away from water-powered machines occurred. In the United States, too, the first factories were textile plants.

Paragraph 3

Metallurgy was also affected. Traditionally, metal industries had been small-scale, rural enterprises, carried on in small forges (fireplaces where metals were heated and shaped) situated near ore deposits. Forests provided charcoal for the smelting process in which ores were melted and fused. The chemical changes that occurred in the making of steel remained mysterious even to the people who made steel, and much ritual superstition and ceremony were associated with steelmaking techniques had changed little in 2,500 years. The Industrial Revolution radically altered all this. In the eighteenth century, a series of inventions by iron makers allowed the old traditions, techniques, and rituals of steelmaking to be swept away and replaced with scientific, large-scale industry. Coke, nearly pure carbon derived from high-grade coal, was substituted for charcoal in the smelting process. Large blast furnaces replaced the forge, and efficient rolling mills took the place of hammer and anvil. Mass production of steel resulted, and the new industrial order was built of steel. Other manufacturing industries made similar transitions and entirely new types arose, such as machine-

making.

4. Why does the author state that "The chemical changes that occurred in the making of steel remained mysterious even to the people who made steel, and much ritual superstition and ceremony were associated with steelmaking"?

A. To show how traditional manufacturers doubted the effectiveness of scientific methods of improving steel production

B. To contrast the superstitious nature of traditional steelmaking to its scientific focus during the Industrial Revolution

C. To argue that rural steelmaking forges were the local community centers of rituals and ceremonies

D. To point out that the chemical changes required for steelmaking required that coke not coal be used in the smelting process

5. Paragraph 3 supports which of the following statements about the impact of the industrial Revolution on metal industries?

A. New kinds of metal were discovered with the help of newly invented machines

B. Steel production dramatically increased as a result of improved industrial techniques

C. Iron makers learned how to use charcoal in the smelting process

D. The old traditions, techniques, and rituals were applied to new inventions

Paragraph 4

Primary industries-those that gather or extract raw materials-were also revolutionized. The first to feel the effects of the new technology was coal mining. The adoption of the steam engine necessitated huge amounts of coal to fire the boilers and the conversion to coke in the smelting process further increased the demand for coal. Fortunately, Great Britain had large coal deposits. New mining techniques and tools were invented, so that coal mining became a large-scale, mechanized activity. Coal, heavy and bulky, was difficult to transport. As a result, manufacturing industries began flocking to the coalfields in order to be near the supply. Similar modernization occurred in the mining of iron ore, copper, and other metals needed by rapidly growing industries.

6. According to paragraph 4.one reason why coal mining was revolutionized was that

A. some countries, like Great Britain, had a shortage of coal deposits

B. large quantities of coal were needed to run the newly invented steam engines

C. coal was easier to mine than most other materials

D. manufacturers needed different types of coal that were suitable for the new industries

7. According to paragraph 4, why did manufacturers move closer to coalfields?

A. Coalfields were usually near large cities, where the supply of workers was greater

B. Transportation routes had not yet reached remote mining areas

C. Coal was too heavy to be easily transported to other places

D. Coalfields also contained other metals needed by manufacturers

Paragraph 5

The Industrial Revolution also affected the tertiary (service) sector, most notably in the form of rapid bulk transportation. The traditional wooden sailing ships gave way to steel vessels driven by steam engines, canals were built, and the British-invented railroad came on the scene. The principal stimulus that led to these transportation breakthroughs was the need to move raw materials and finished products from one place to another, both cheaply and quickly. The impact of the Industrial Revolution would have been minimized had not the distribution of goods and services also been improved, it is no accident that the British, creators of the Industrial Revolution, also invented the railroad, initiated the first large-scale canal construction and revolutionized the shipbuilding industry.

8. The word "distribution" in the passage is closest in meaning to

A. marketing

B. production

C. quality

D. delivery

Paragraph 1

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in the early 1700s and fundamentally restructured industry. ■ First, human hands were replaced by machines in the fashioning of finished products, rendering the word manufacturing (made by hand) technically obsolete. ■ No longer would the weaver sit at a hand loom and painstakingly produce each piece of cloth. Instead, large mechanical looms were invented to do the job faster and more economically. Second, human power gave way to various forms of inanimate power. ■ The machines were driven by water power, the burning of fossil fuels, and later by hydroelectricity and the energy of the atom. Men and women, once the proud producers of fine handmade goods, became tenders of machines. Within a century and a half of its beginnings, this economic revolution had greatly altered industrial activity. ■

9. Look at the four squares [■] that indicate where the following sentence could be added to the passage. Where would the sentence best fit?

The changes mainly involved production methods and power sources.

10. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some answer choices do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

The industrial Revolution began in Great Britain in the early 1700s and fundamentally restructured the European economy.

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Answer choices

A. Rural people began performing simple mechanical tasks to produce goods and scientific advances resulted in the development of new sources of power.

B. The mining of raw materials such as coal was made easier by techniques and modernized equipment.

C. Industries that involved taking metals and other minerals from the ground were less influenced by the Industrial Revolution than were other sectors such as manufacturing and service.

D. Craftspeople in metal industries resisted newly introduced industrial techniques because these new techniques conflicted with their ritual and traditions.

E. The Industrial Revolution depended on the rapid distribution of goods, which led to improved systems of transportation.

F. The Industrial Revolution introduced new technological methods for building canals, resulting in the revolutionizing of the shipbuilding industry.

词汇伴侣

第一段

Industrial Revolution 工业革命	technological adj.技术的；科技的
cottage n.小屋	craftspeople n.工匠
render v. 致使，使成为	obsolete adj.淘汰的；废弃的；过时的
painstakingly adv.煞费苦心的	hydroelectricity n.水电
inanimate adj.无生命的；单调的	atom n.原子

第二段

initial adj.最初的	cotton textile n.棉纺织品
scale n.规模	loom n.织布机
miller n.磨坊主	harness v.利用
diffuse v.传播；普及	rapid n.急流

第三段

metallurgy n.冶金术	enterprises n.企业
forge n.铁匠铺	ore deposit n.矿床
superstition n.迷信	charcoal n.木炭

alter v.改变	substitute v.代替；取代
furnace n.焚化炉	anvil n.铁钻

第四段

extract v.提取；提炼	revolutionize v.革命化
adoption n.采用	necessitate v.使…成为必需
boiler n.锅炉	conversion n.转变；转化
bulky adj.庞大的；笨重的	flock v.聚集

第五段

tertiary adj.第三的	notably adv.尤其是
vessel n.容器	canal n.运河
bulk transportation 整批运输	principal adj.主要的
stimulus n.刺激；促进因素	minimize v.减少