

5.5 Technology of the Industrial Age

Name: _____ Class: _____ Date: _____ **Total: 13 marks**

KEY WORDS second industrial revolution 第二次工业革命 • railroads 铁路 • steamships 蒸汽船
• telegraph 电报 • internal combustion engine 内燃机

Objective

Build the skills to explain **industrial technology** 工业技术.

You must be able to:

- state what the new machines made possible
- state the CED's claim about energy
- name the four products of the second industrial revolution
- state what railroads, steamships and the telegraph made possible

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Machines

The development of machines, **including steam engines and the internal combustion engine**, made it possible to take advantage of **both existing and vast newly discovered resources of energy stored in fossil fuels, specifically coal and oil**.

■ Energy

The fossil fuels revolution greatly increased the energy available to human societies. This is the CED's most sweeping single sentence in the unit: not a new product but a new quantity of power.

■ Second industrial revolution

New methods in the production of **steel, chemicals, electricity and precision machinery** during the second half of the 19th century.

■ Transport and communication

Railroads, steamships and the telegraph **made exploration, development and communication possible in interior regions globally, which led to increased trade and migration.** Interiors, not coasts, is the point.

2 Practice

2.1 State the CED's claim about fossil fuels and energy. [2]

2.2 Name the four products of the second industrial revolution. [2]

2.3 Railroads, steamships and the telegraph reached interiors.

(a) State the three things they made possible there. [3]

(b) State the two consequences. [1]

3 Exam-style questions

3.1 The CED's sweeping claim is that the fossil fuels revolution [1]

- | | |
|---|---|
| A | B |
| C | D |
- A reduced available energy
B greatly increased the energy available to human societies
C had no effect on energy
D applied only to Europe

3.2 The transport and communication technologies mattered especially for [1]

- | | |
|---|---|
| A | B |
| C | D |
- A coastlines
B interior regions
C islands only
D deserts only

3.3 A railway reaches a region that had been three weeks from the coast.

(a) State what becomes possible. [1]

(b) Explain the connection to migration. [2]
