

Exercise walk-through

Technology of the Industrial Age ■ 5.5

eXercise

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

Method — 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.**

Method — 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.

Method — Second industrial revolution

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

Method — 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.

Practice 2.1 ■ 2 marks

State the CED's claim about fossil fuels and energy.

Solution 2.1

Worked steps

machines made it possible to use energy stored in coal and oil **B1**; the fossil fuels revolution greatly increased the energy available to human societies **B1**.

Practice 2.2 ■ 2 marks

Name the four products of the second industrial revolution.

Solution 2.2

Method: Second industrial revolution

Worked steps

steel; chemicals; electricity; precision machinery **B2**.

Practice 2.3 ■ 3 marks

Railroads, steamships and the telegraph reached interiors.

- (a) State the three things they made possible there.
- (b) State the two consequences.

Solution 2.3

Method: Transport and communication

Worked steps

(a) exploration; development; communication **B3**. (b) increased trade and migration **B1**.

Exam-style 3.1 ■ 1 mark

The CED's sweeping claim is that the fossil fuels revolution

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

Solution 3.1

Method: Energy

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

Worked steps

- B. the CED's own sentence.**

Exam-style 3.2 ■ 1 mark

The transport and communication technologies mattered especially for

A coastlines

B interior regions

C islands only

D deserts only

Solution 3.2

Method: Transport and communication

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



Worked steps

- B. interior regions.

Exam-style 3.3 ■ 1 mark

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

- (a) State what becomes possible.
- (b) Explain the connection to migration.

Solution 3.3

Method: Transport and communication

Worked steps

(a) bulk goods can be moved to and from the region economically **B1**. (b) people can move there and return **B1**, so labour follows the route as goods do **B1**.