

Chapter 08
Energy and Civilization: Patterns of Consumption

Multiple Choice Questions

1. The controlled use of fire was the first use of energy in a form other than
 - A. wood.
 - B. water.
 - C. biomass.
 - D. wind.

2. The shift from using wood as a source of fuel to coal was caused
 - A. by a decline in local supplies of wood.
 - B. the start of World War I.
 - C. an increase in wood prices.
 - D. a decrease in coal prices.

3. The remains of plants, animals, and microorganisms is commonly referred to as
 - A. wood.
 - B. compost.
 - C. fossil fuel.
 - D. organic fuel.

4. OPEC began in September of
 - A. 1990.
 - B. 1960.
 - C. 1975.
 - D. 2001.

5. In 2008 world oil prices reached over

- A. \$60 per barrel.
- B. \$80 per barrel.
- C. \$100 per barrel.
- D. \$140 per barrel.

6. The principal use of oil during the first 60 years of production was

- A. kerosene.
- B. gasoline.
- C. heating oil.
- D. lubricating oil.

7. Which country is NOT a member of OPEC?

- A. Nigeria
- B. U.S.
- C. Saudi Arabia
- D. Kuwait

8. When Iraq invaded Kuwait in 1990,

- A. oil prices rose.
- B. oil prices dropped.
- C. oil supply rose.
- D. oil demand dropped.

9. The sharp decline in U.S. oil consumption in 1973 and 1979 was the result of

- A. mandatory conservation.
- B. a drop in reserves.
- C. OPEC price increase.
- D. war with Kuwait.

10. How much of the world's oil reserve is controlled by OPEC?

- A. 100%
- B. 29%
- C. 50%
- D. 78%

11. Since 1970, oil prices were at their highest following production cuts by what three countries?

- A. Norway, United Kingdom, and Nigeria
- B. Iraq, Iran, and United Arab Emirates
- C. Kuwait, Iran, and Libya
- D. Nigeria, Ecuador, and Peru

12. What percent of the world's oil production is controlled by OPEC countries?

- A. 20%
- B. 40%
- C. 60%
- D. 80%

13. Electricity is both a way that energy is consumed and a way that it is

- A. supplied.
- B. divided.
- C. subdivided.
- D. None of these are correct.

14. In order for a nation to participate in the Industrial Revolution, they had to have

- A. an automobile industry.
- B. a source of coal.
- C. a source of electricity.
- D. a source of wood.

15. Which country has the highest per capita energy use for transportation?

- A. India
- B. Mexico
- C. Japan
- D. United States

16. The price of a liter of gasoline is determined by

- A. the cost of processing crude oil into gasoline.
- B. the cost of purchasing crude oil.
- C. state and federal taxes.
- D. All of these are correct.
- E. Only the cost of processing crude oil into gasoline and state and federal taxes are correct.

17. Transcontinental pipelines that are currently used to transport natural gas were originally constructed

- A. to transport potable water.
- B. by Chinese immigrants during the Civil War.
- C. to transport oil during World War II.
- D. to transport gasoline for the automobile industry.

18. Choose the correct historical sequence of fuel use in the U.S. from 1800 to the present.

- A. wood, coal, oil, gas
- B. coal, wood, gas, oil
- C. wood, oil, coal, gas
- D. oil, wood, coal, gas

19. The first transfer of energy on Earth occurs

- A. during respiration.
- B. within the molten core.
- C. during photosynthesis.
- D. None of these are correct.

20. What was the chief reason for people to leave farms and move to urban areas during the 1800s?

- A. several years of drought
- B. low market prices for farm products
- C. factories required a supply of labor
- D. None of these are correct.

21. Which of the following did the U.S. government finance during World War II?

- A. natural gas pipeline
- B. oil transport pipeline
- C. off shore oil wells
- D. All of these are correct.

22. Which of the following consumer goods is responsible for creating jobs, increasing energy consumption, and altering people's lifestyle?

- A. television
- B. prefabricated housing
- C. automobile
- D. electric appliances

23. Almost all electrical energy is produced as a result of

- A. burning fossil fuels.
- B. nuclear power.
- C. hydroelectric power.
- D. geothermal power.

24. About 80% of China's population use what type of fuel to produce energy?

- A. oil
- B. biomass
- C. coal
- D. natural gas

25. What type of currently available car engine is the only one with zero emissions?

- A. gasoline powered
- B. methanol powered
- C. solar powered
- D. electric

26. What percent of electricity in the United States is generated by nuclear power plants?

- A. 20%
- B. 40%
- C. 60%
- D. 80%

27. Which of the following is a renewable method to generate electricity?

- A. geothermal
- B. hydroelectric
- C. wind
- D. All of the above.

28. How many years does it take spent nuclear fuel rods to reach safe levels of radioactivity?

- A. 1,000
- B. 10,000
- C. 100,000
- D. 1 billion

29. In what state has the Goshute tribe applied for a site license to store 40,000 metric tons of nuclear waste for 40 years on their reservation?

- A. Ohio
- B. Utah
- C. Montana
- D. North Dakota

30. During what season of the year is the demand for gasoline highest in the United States?

- A. summer
- B. fall
- C. winter
- D. spring

31. Over half of world energy is consumed by 25 countries who are members of

- A. OPEC.
- B. CITES.
- C. EU.
- D. OECD.

32. Energy consumption in the United States dropped in 1973 and 1979 because of

- A. significant price increases by OPEC.
- B. a drop in price by OPEC.
- C. government tax incentives to conserve energy.
- D. the introduction of new solar powered cars.

33. Biomass such as _____ is used by much of the developing world as its energy source.

- A. coal
- B. oil
- C. wood
- D. gasoline

Which of the following best matches the description?

34. Remains of plants, animals, and microorganisms that lived millions of years ago.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

35. Plant material accumulated in swamps and was ultimately converted to coal.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
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36. Cartel of oil-exporting countries.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

37. If produced from water has zero-emissions but is highly explosive.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

38. Period in history when machinery replaced human labor.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

39. Obtained nearly all of their energy from collecting plants and hunting animals.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

40. Made from natural gas or renewable resources; requires only modest change in engine.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

41. Total amount of goods and services produced by a nation.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

42. Burns 80% cleaner than gasoline but requires heavy, bulky tanks.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

43. Twenty-five countries that consume over half the world's energy.

- A. OPEC
- B. fossil fuels
- C. hunter-gatherer
- D. OECD
- E. methanol
- F. Industrial Revolution
- G. gross domestic product
- H. Carboniferous period
- I. hydrogen fuel cell
- J. compressed natural gas

True / False Questions

44. Fossil fuels are liquid deposits of iron ore found only in sedimentary rock formations.

45. Fossil fuels replaced wood as the primary source of energy in developed nations.

46. The first fossil fuel to be used by man was oil which was followed by coal.

47. During the Carboniferous period, conditions in the world were conducive to the formation of large deposits of fossil fuels.

48. The higher the price of energy, the more expensive goods and services become.

49. Almost all electric energy is produced as a result of the burning of fossil fuels.
50. The Industrial Revolution began in the United States and spread to Europe in the late nineteenth century.
51. There is an inverse relationship between the amount of energy used and the complexity of civilizations.
52. Heavy use of wood during early civilization led to shortages of trees.
53. World War II greatly increased the energy demand for manufacturing and transportation.
54. Analysts predict that the worldwide demand for energy will decrease in the future.
55. Since 1999 oil prices have become increasingly volatile, in part due to an increase in demand from the rise of industrialization in China and India.
56. A constant supply of energy is required by all living things to maintain life.

57. All organisms require a constant input of energy.

58. Peat furnished most of the energy and construction materials for early civilization.

59. There has been a major decrease in the use of natural gas for home heating and industrial purposes in the United States.

60. Approximately 17% of the energy used in a typical household is used to heat water.

61. In North America roughly 5% of the world's population consumes 40% of the gasoline produced in the world by private automobile use.

62. OPEC plays a leading role in the development of world oil prices.

63. World oil prices for a barrel of crude have never exceeded \$50 per barrel.

64. There is no correlation between the industrial revolution and social economic changes.

65. The invention of the automobile dramatically increased the demand for oil products.

66. Some countries have passed regulations to convince motorists to use other transportation means by requiring the drivers to pay fees.

67. Many cities around the globe have attempted to reduce the congestion from automobiles by enacting various regulations to encourage use of more efficient public transit.

68. The STARS project functions to allow the automobile industry to optimize fuel consumption in new cars to reduce carbon dioxide emissions.