**Energy Survey**

*You will answer questions concerning your general knowledge of Energy and Energy conservation. For each question, you may write “I don’t know” as your choice. Carefully consider each question before you answer.*

1. Which one of the following is most responsible for contributing to the severity of our energy problems? a) Federal government b) b) oil companies c) government of oil exporting countries d) utility companies e) consumers f) environmentalists

2. Who should take most of the responsibility for solving the countries energy problems?

a) Federal government b) oil companies c) government of oil exporting countries d) utility companies e) consumers f) environmentalists

3. When you travel one-half mile or less (to go to the store, the post office, your neighbor, etc.), how do you usually go? a) drive or ride in a car b) walk c) ride a bike d) ride a bus e) taxi f) other

4. If you commuted alone to work 50 miles every day and wanted to save gasoline, which of the following ways would save the most gasoline?

a) carpooling b) buy/drive a car that gets 20 miles per gallon rather than one that gets 15 miles per gallon c) drive 55 miles per hour rather than 65 miles per hour

5. At about what speed does the average automobile get the most miles per gallon of gasoline? a) 15-30 miles per hour b) 40-55 miles per hour

 c) 60-75 miles per hour d) 0 miles per hour

6. Which one of the following has the greatest effect on the amount of gasoline a car uses?

a) weight of the vehicle b) the amount of air pressure in the tires c) the kind of gasoline one uses d) a clean oil and air filter e) clean spark plugs

7. Which one of these will produce the most light for the same amount of electricity?

a) 60 watt fluorescent tube

b) 60 watt regular (incandescent) bulb

c) 60 watt LED

8. Which are the most efficient and cost effective?
a) incandescent bulbs b) fluorescent bulbs c) LED bulbs

1. List A-C on your answer sheet and use the following choices to answer question A-C: calorie, KW-hr (kilowatt-hour), watt, horsepower, BTU:
2. In which unit is electricity usually bought and sold?
3. What unit usually expresses food energy?
4. Which unit measures the rate at which a light bulb uses electrical energy?

10. Which one of the following sources provides the largest percentage of energy used in the United States? a) crude oil b) coal c) natural gas d) water (hydroelectric power) e) nuclear energy

11. List D-H on your answer sheet and use the following choices to answer questions D-H: coal, petroleum, plutonium, uranium, solar energy:

1. Which energy source is most radioactive?
2. In the long run, which is the largest potential source of energy?
3. What energy exports from the east are the largest in the world?
4. Which energy source is most likely to run out first at our current level of usage?
5. Which energy source is used by “breeder”?

12. The largest fossil fuel energy reserves in the United States are reserves of which one of the following? a) natural gas b) coal c) crude oil d) tar sands

13. Which of the following now uses the largest share of the United States energy supply?

a) homes b) transportation c) industry d) commercial building s(schools, stores, offices, etc.)

14. Technology has advanced beyond any human expectations … therefore, TRUE or FALSE: eventually it will be possible to convert all energy released by burning a fuel to useful work.

15. Approximately what percentage of the oil consumed by the United States is imported from foreign countries? a) 1% to 10% b) 10% to 30% c) 30% to 60% d) 60% to 100%

16. During the past 20 years, to which one of the following energy sources has the federal government allocated the greatest amount of research and developmental funds?

a) coal b) petroleum c) solar d) nuclear e) wind f) hydroelectric

17. Which one of the following requires the least energy to move one ton of freight per mile? a) truck b) train c) airplane d) helicopter

18. During the past 25 years, on which one of the following forms of transportation has the federal government spent the least amount of money for improvement?

a) air b) rail c) highway

19. TRUE or FALSE: People with lower incomes generally spend a larger percentage of their total income on energy than people with higher incomes.

20. In the United States, about what percentage of all the energy consumed each year is consumed in the home for heating, cooling, lighting, appliances, etc.

a) 1% b) 10% c) 20% d) 55% e) 90%

21. Which one of the following consumes the most energy in the average American home in a year? a) refrigerating food b) heating water c) cooking food d) drying clothing e) lighting the home

22. Which appliance consumes the most energy for the same amount of usage? a) color television b) vacuum cleaner c) electric clothes dryer d) washing machine

23. The United States has approximately 6% of the world’s people. About what percentage of the total amount of energy consumed on the earth in a year does the United States consume?

a) 6% b) 15% c) 30% d) 70%

24. List A-F on your answer sheet. Rate the following in order from most effective to least effective in terms of saving the most energy.

1. weather stripping and caulking doors and windows
2. insulating the walls of your home
3. installing 6 inches of insulation in an uninsulated attic
4. closing fireplace dampers
5. buying and maintaining a more efficient heating system

25. In 1980, the United States used 6.2 billion barrels of oil. Forty percent of that was imported, and 60% was produced in the U.S. If we had continued importing and using oil at that rate, about how many years of oil supply did experts estimate are left in the United States?

a) 10 years b) 50 years c) 150 years

26. Which one of the following energy sources is the largest producer of electrical energy for the United States? a) falling water b) nuclear energy c) coal d) oil e) natural gas

27. In the United States, most electricity is produced in power plants owned by: a) major oil companies b) federal government c) utility corporations d) cities and towns

28. Which one of the following does not use a fossil fuel (coal, oil, natural gas) as a raw material? a) glass b) plastic c) nylon d) ammonia fertilizer e) asphalt

29. List A-F on you answer sheet and answer “yes” or “no” to whether you would be willing to have each of the following energy producers built within 25 miles of your home?

1. coal burning power plant
2. nuclear power plant
3. solar energy collectors
4. coal gasification / cogeneration plant
5. dam with hydroelectric plant
6. large windmills (up to 300 feet tall)

30. Some people think that the solution to coal, natural gas and oil is to switch over to electricity. In other words, if we run out of gas and oil we can just switch over to electric cars. Why isn’t this valid thinking? a) most electricity is produced from coal, natural gas and coal b) if we switch over to electricity many people will lose their jobs c) electricity is too expensive d) this is a good idea

31. List G-K on your answer sheet. For each statement, write whether you feel this idea would “**S**” = significantly save energy (up to $100 or more annually), “**I**” = insignificantly save energy, OR “**W**” = wastes energy

1. In the winter, turn the thermostat to 68° during the day and 60° at night.
2. Turn off the air conditioner in your home when your home is unoccupied for more than two hours.
3. Set the air conditioner at 78° instead of 72°.
4. Use portable electric heaters for added heat in oil or natural gas homes.
5. Set the hot water heater thermostat at 140° F instead of 150° F.

Energy Conservation Survey Answer Key

1. no correct answer … discussion
2. no correct answer … discussion
3. no correct answer … discussion
4. (a) car pool
5. (b) 40 mph
6. (a) weight of the vehicle
7. (a) 40 Watt fluorescent tube
8. (b) one 200 Watt bulb
9. a. Kw-hr (kiloWatt-hour)
10. calorie
11. Watt
12. (a) crude oil
13.
14. plutonium
15. solar energy
16. petroleum
17. petroleum
18. plutonium
19. (b) coal
20. (c) industry
21. false
22. (c) 30 to 60 %
23. (d) nuclear
24. (b) train
25. (b) rail
26. true
27. (b) 10%
28. (b) heating water
29. (c) electric dryer
30. (c) 30%
31. E, C, D, A, B
32. (b) 50 years
33.

(c) coal 🡪 US

(d) oil 🡪 NY state

1. (c) utility corporations
2. (a) glass
3. class discussion … consider the plants near you
4. (a) most electricity is produced from oil, coal, natural gas (fossil fuels)
5.

G. significant savings

H. significant savings

I. significant savings

J. waste

K. significant savings