

Energy Quiz

Want to have some fun and learn at the same time. This is not a test. You don't have to pass it and it won't give you a grade. It will just help you learn or find out how much you remember from what you have already read on this website or from other sources of information.

Some questions require you to think of an answer. The same ideas can be worded in many different ways so don't worry if your idea or answer isn't exactly the same as the answer provided on this website.

Other answers ask you to choose and answer from a number of choices. Circle the answer you believe is correct and then check on the answers to find out if you were right.

Questions:

1. **What is energy?**
2. **What sector of our society consumes the most energy?**
a. transport b. commerce c. residential d. industry
3. **Can you name the two main forms of energy?**
4. **Can energy be created or destroyed?**
a. Yes b. No
5. **Most energy conversions produce ...**
a. motion b. sound c. heat d. light
6. **Where does all our energy in the world come from?**
a. food b. sun c. fossil fuels d. inside the earth

7. What produces the sun's energy?

8. What does "photo" mean in words like photosynthesis, photovoltaic and photograph?
a. light b. picture c. energy d. colour
9. What happens when light hits a surface?
a. reflected b. absorbed c. both reflected and absorbed
10. How do plants get their energy?

11. Where did the energy of your body ultimately come from?

12. Electricity consumption is measured in ...
a. amperes b. volts c. kilowatt-hours d. watts
13. The kilowatt is equal to...
a. 10 watts b. 100 watts c. 1000 watts d. one million watts
14. What is electricity?

15. How do most Australian electricity power plants get their energy?
a. water b. electricity c. fossil fuels d. wind

16. Where does coal come from?

17. What are the advantages of using coal for electricity production?

- a. Australia has large reserves of coal
- b. low cost of fuel produces cheap electricity
- c. electricity can be produced when needed
- d. all of these

18. What are the disadvantages of using coal?

19. The energy in fossil fuels such as coal is stored as...

- a. chemical energy
- b. electrical energy
- c. thermal energy
- d. nuclear energy

20. What does renewable energy mean?

21. What sort of renewable energy electricity is available in Australia?

- a. coal
- b. nuclear
- c. wind, solar, hydro and bioenergy
- d. all of these

22. What types of energy can solar panels utilise?

- a. heat and light
- b. chemical
- c. wind
- d. mechanical

23. What are solar panels that produce electricity called?

24. What is the greenhouse effect?

25. Which type of electricity consumption uses the most energy?

- a. lighting
- b. heating water
- c. heating and cooling rooms
- d. refrigeration

26. What are three things you need to help heat your house with the Sun in the winter but keep it cool in the summer?

27. What can we do to reduce the greenhouse effect?

28. Compared to incandescent light bulbs, fluorescent bulbs

- a. use more energy
- b. use less energy
- c. use the same amount of energy
- d. make people want to use more electricity

Answers:

1. Energy is needed to do "work". It is needed for any physical movement, to make devices such as appliances and cars function, to keep the house warm, to cook food, etc.
2. d. Industry
3. Potential Energy is stored energy and Kinetic Energy is energy of movement. A rolling ball has "kinetic" or moving energy. A ball sitting on the table has "potential" or stored energy.
4. b. No
5. c. heat
6. b. sun
7. The sun is immensely hot and dense which causes the atoms in its gases to undergo nuclear fusions. The fusion of hydrogen molecules to form helium molecules releases huge amounts of thermal and radiant energy.
8. a. light
9. c. both reflected and absorbed
10. From the sun's light energy through the process of photosynthesis.
11. From the chemical energy in our food which has been passed through the food web from plants and the sun's light energy.
12. c. kilowatt-hours
13. c. 1000 watts
14. Moving electrons
15. c. fossil fuels
16. Ancient plants and animals which were buried and underwent changes over millions of years to form fossil fuels.
17. d. all of these
18. Coal as a fossil fuel will not last forever. Burning coal produces pollutants which cause acid rain. Burning coal produces carbon dioxide and other greenhouse gases which are contributing to global warming.
19. a. chemical energy
20. Any source of energy that doesn't consume the finite resources of the Earth and can be easily and quickly replenished. Includes Solar, Wind, Hydro and Bioenergy.
21. c. wind, solar, hydro and bioenergy
22. a. heat and light
23. Photovoltaic arrays
24. It is the accumulation of gases such as carbon dioxide in our atmosphere, which stops the sun's heat escaping out into space.
25. c. heating and cooling rooms
26. Insulation, deciduous shade trees, correct orientation, verandahs and other shade structures, curtains.
27. Use less electricity. Use energy sources which don't release greenhouse gases to make electricity.
28. b. use less energy