Test your energy IQ

Just how much do you know about the energy factor in your home?

One way to find out is by taking this home energy quiz. It's an entertaining way to test your energy IQ, and possibly increase your knowledge of home energy issues. Encourage family members to join in a little friendly competition to see who has the best knowledge of home energy issues.

If you pass the quiz with flying colours, chances are you're already living in an energy-efficient home. You are also fully aware of such benefits as reduced heating costs and increased comfort.

If your results aren't so great, don't despair! You should learn enough from the quiz to take the first important steps toward making your home more energy-efficient. Inexpensive measures such as caulking, weatherstripping and extra insulation usually pay for themselves quickly, and you'll enjoy the benefits for years to come.

For free information on any of the subjects covered in this quiz, simply write to the Residential Energy Management Division, Energy, Mines and Resources Canada, 580 Booth St., Ottawa, Ontario K1A 0E4.

1) In the average Canadian home, the area of greatest energy loss is the:
   a) attic
   b) doors and windows
   c) basement
   d) air leaks throughout the building
   e) walls

2) After space-heating, which of the following accounts for the largest portion of your energy consumption?
   a) major appliances
   b) lighting
   c) water heating
   d) minor appliances

3) How often should your heating appliance (furnace or boiler) be serviced?
   a) after every heating season
   b) before every heating season
   c) about every other year
   d) when you notice decreased performance or have problems with the system.

4) The filter in a forced-air furnace should be cleaned or replaced:
   a) whenever it is dirty, but at least once a month during the heating season
   b) once a year after the heating season is over
   c) every six months or so

5) Condensation (the release of water vapour from the air) occurs when warm air comes into contact with a cold surface. Too much condensation in a home can result in:
   a) rotting of wooden window frames, sills and trim
   b) wet, compacted insulation with reduced thermal resistance values
   c) peeling, mouldy paint and wall finishes
   d) rotting of the building's structural materials
   e) all of the above
   f) none of the above

6) The first step to take to reduce condensation problems in a house during winter is to:
   a) buy a dehumidifier and run it constantly until the problem disappears
   b) limit the amount of moisture produced in your home
   c) open windows slightly, even in the winter, for a few hours each day

7) The main reason for having a conventional fireplace is to:
   a) enhance the aesthetics of a room
   b) supplement the primary heating system
   c) heat the entire house
   d) help reduce the amount of energy used by the primary heating system

8) When insulating a basement wall that has a history of major moisture problems, you should:
   a) use a waterproof insulation material
   b) install a heavy-duty moisture barrier
   c) insulate from the outside
   d) not insulate until the moisture problem has been eliminated

True or false?

9) An insulation material's ability to keep the heat in your home is based solely on its thickness. One millimetre of any type of insulation will always insulate as well as one millimetre of another.

10) Installing extra insulation is always the first step you should take to improve the energy efficiency of your home.

11) Hot air rises, so insulating the attic will make a house energy-efficient.

12) To remedy condensation problems, the earth floor of a crawl space should always be left uncovered so that it can dry out naturally.

13) Windows typically account for 10-25 per cent of a house's heat loss.

14) Caulking and weatherstripping materials are all the same. Any one type can seal the different joints in your house as well as another, so it makes sense to buy the least costly product.

15) It is important to seal the sill plate (the joint where the house frame meets the foundation wall) because this area can be responsible for a large part of the total air leakage in a house.

16) If weatherstripping is properly applied to doors and windows, the unit cannot be opened.

17) For each degree you set your thermostat above 20°C (on a 24-hour basis), your fuel consumption will increase an average of five per cent.

ANSWERS

Score one point for each correct answer. More importantly, remember that each question you have answered incorrectly may be costing you money!

1. d)
2. c) After space-heating costs, water heating accounts for the largest portion of your energy consumption. In fact, water heating uses more energy than all of your lights and appliances combined.
3. b) Annual servicing prior to the heating season is the best way to ensure safe and efficient operation of your heating system.
4. a) This will help the furnace deliver heated air to all the rooms in your house.
5. e) If untreated, large amounts of condensation can result in all of these problems.
6. b) Simple measures such as cooking with lids on your pots and avoiding hanging wet clothes to dry indoors will reduce moisture production in your house. Opening windows can help reduce condensation, but this isn't a practical solution because of the vast amount of heated air it wastes.
7. a) Fireplaces can enhance the aesthetics of a room tremendously. However, they cannot serve as effective primary or supplementary heat sources, and often cause the primary heating system to work harder than if the fireplace wasn't operating.
8. d) Concrete basement walls with moisture problems should be insulated only *after* the problem has been eliminated and the wall thoroughly dampproofed.
9. False. A material's thermal resistance value, or ability to resist heat flow, is measured in RSI (metric) or R (imperial). The higher the RSI or R value, the better the material insulates. In some cases, one millimetre of one type of insulation can have a higher thermal resistance value than two millimetres of another material.

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