

Heat Transfer – Multiple Choice

Name

- Which of the following is **not** a method of heat transfer?
 - Conduction
 - Active Transport
 - Convection
 - Radiation
- Heat transfer by conduction
 - is not possible from human beings to their environment.
 - does not occur from light bulbs – they are too bright.
 - requires some sort of material to facilitate the heat transfer.
 - (a) and (b) and (c).
 - None of the above.
- Which of the following is the best conductor of heat?
 - air
 - water
 - plastic
 - aluminum
- Which of the following is the worst conductor of heat in the group?
 - air
 - plastic
 - a vacuum
 - aluminum
- The fact that, in general, liquids and gases expand when heated gives rise to
 - convection currents in fluids due to changing masses.
 - convection currents in fluids due to changing densities.
 - heat transfer by conduction.
 - convection currents in fluids due to constant temperatures.
- In which of the following can convection currents be set up?
 - air
 - plastic
 - a vacuum
 - aluminum
- The process by which aquatic life forms at the bottom of the ocean can get the oxygen they need to live is related to heat transfer by
 - conduction.
 - radiation.
 - convection.
 - none of these; aquatic life does not require oxygen.

8. Convection currents can be caused by
- a) weather patterns.
 - b) unequal heating of the earth's surface.
 - c) thermal expansion.
 - d) (b) and (c) but not (a).
 - e) (a) and (b) and (c).
9. The predominant method of heat transfer that causes a pot of water to boil is
- a) conduction.
 - b) radiation.
 - c) convection.
 - d) boiling.
10. The process by which a pot of water on your electric stove **starts** to heat is
- a) conduction.
 - b) radiation.
 - c) convection.
 - d) evaporation.
11. The method through which the entire pot of water boils on that hot stove is
- a) conduction.
 - b) radiation.
 - c) convection.
 - d) evaporation.
12. This type of heat transfer can occur in a vacuum:
- a) Conduction.
 - b) Radiation.
 - c) Convection.
 - d) Blackbody.
13. Heat transfer by radiation
- a) is not possible from human beings to their environment.
 - b) does not occur from light bulbs – they are too bright.
 - c) does not require any material between the radiator and the object receiving the radiation.
 - d) none of the above.
14. If a thermos bottle was not “silvered” on its surfaces, it would be able to transfer heat by
- a) conduction.
 - b) convection.
 - c) radiation.
 - d) it would not be able to transfer heat at all.