

Multiple Choice

11.1 Temperature and Thermal Energy 21.

The temperature difference of 1 K is the same as

- a. 1 degree Celsius
- b. 1 degree Fahrenheit
- c. 273.15 degrees Celsius
- d. 273.15 degrees Fahrenheit

22.

What is the preferred temperature scale used in scientific laboratories?

- a. celsius
- b. fahrenheit
- c. kelvin
- d. rankine

11.2 Heat, Specific Heat, and Heat Transfer 23.

Which phase of water has the largest specific heat?

- a. solid
- b. liquid
- c. gas

24.

What kind of heat transfer requires no medium?

- a. conduction
- b. convection
- c. reflection
- d. radiation

25.

Which of these substances has the greatest specific heat?

- a. copper
- b. mercury
- c. aluminum
- d. wood

26.

Give an example of heat transfer through convection.

- a. The energy emitted from the filament of an electric bulb
- b. The energy coming from the sun
- c. A pan on a hot burner
- d. Water boiling in a pot

11.3 Phase Change and Latent Heat 27.

What are the SI units of latent heat?

- a. J/kg
- b. J.kg
- c. J/cal
- d. cal/kg

28.

Which substance has the largest latent heat of fusion?

- a. gold
- b. water
- c. mercury
- d. tungsten

29.

In which phase changes does matter undergo a transition to a more energetic state?

- a. freezing and vaporization
- b. melting and sublimation
- c. melting and vaporization
- d. melting and freezing

30.

A room has a window made from thin glass. The room is colder than the air outside. There is some condensation on the glass window. On which side of the glass would the condensation most likely be found?

- a. Condensation is on the outside of the glass when the cool, dry air outside the room comes in contact with the cold pane of glass.
- b. Condensation is on the outside of the glass when the warm, moist air outside the room comes in contact with the cold pane of glass.
- c. Condensation is on the inside of the glass when the cool, dry air inside the room comes in contact with the cold pane of glass.
- d. Condensation is on the inside of the glass when the warm, moist air inside the room comes in contact with the cold pane of glass.