

Thermodynamics - Temperature and Pressure

⚠ This is a preview of the draft version of the quiz

Started: Nov 4 at 9:38am

Quiz Instructions

Question 1

1 pts

Which of the following is a description of heat?

- a bunch of collisions between the molecules of two different objects
- the average kinetic energy of a substance
- energy that moves from an object of higher temperature to an object of lower temperature
- the total kinetic energy of a substance

Question 2

1 pts

Which of these does NOT describe absolute zero?

- the lowest temperature possible

the temperature at which all motion of molecules ceases

0 K

the temperature at which gases freeze

Question 3

1 pts

Convert the following temperature from Celsius to Kelvin.

60 °C

Question 4

1 pts

Convert the following temperature from Celsius to Kelvin.

100°C

Question 5**1 pts**

Convert the following temperature from Celsius to Kelvin.

-200°C

Question 6**1 pts**

Convert the following temperature from Kelvin to Celsius.

25 K

Question 7**1 pts**

Convert the following temperature from Kelvin to Celsius.

714 K

Question 8**1 pts**

Convert the following temperature from Kelvin to Celsius.

355 K

Question 9**1 pts**

Situation 1: A piece of ice is placed into a glass of room temperature water.

Situation 2: A marshmallow is held above the flames of a fire.

Situation 3: You touch a metal handrail and it feels cold.

In situation 1, heat flows from _____ to _____.

- the piece of ice; the water
- the ice; the system
- the water; the piece of ice

- the water; the environment

Question 10**1 pts**

Situation 1: A piece of ice is placed into a glass of room temperature water.

Situation 2: A marshmallow is held above the flames of a fire.

Situation 3: You touch a metal handrail and it feels cold.

The heat will flow to _____, _____ and _____ for the situations above.

- ice, marshmallow, hand
- water, marshmallow, handrail
- water, marshmallow, hand
- ice, marshmallow, handrail

Question 11**1 pts**

A piston is used to compress a gas inside a cylinder. Which of the following statements is true?

- Work was done on the system so it is positive.
- Work was done by the system so it is negative.

- Work was done by the system so it is positive.
- Work was done on the system so it is negative.

Question 12**1 pts**

Which of the following devices would be most useful in finding the change in the average kinetic energy of the molecules in a substance?

- a force sensor
- a microscope
- a thermometer
- a volumetric flask

Question 13**1 pts**

A gas in a closed container is heated. Which of the following changes would you expect?

- the number of molecules of gas increases
- the temperature of the gas will decrease
- the molecules of the gas gain kinetic energy

- the molecules of the gas will collide less frequently

Question 14**1 pts**

Convert 37°C to Kelvin.

Question 15**1 pts**

Convert 373K to degree Celsius.

Question 16**1 pts**

A beaker of water is heated from 280K to 295K. What is the change in temperature of the water in degrees Celsius?

Question 17**1 pts**

The human body maintains a constant temperature of 98.6 degrees Fahrenheit. What is normal body temperature in degrees Celsius?

Question 18**1 pts**

Water freezes at 32 F or 0 C. What is the significance of 0K?

- This is where Celsius and Fahrenheit scales converge.
- This is where water boils.
- This is absolute zero.
- This is where water freezes.

Quiz saved at 9:38am

