

- 5 \* At which of the following temperatures does pure water exist in the liquid state under normal conditions?  
 (a)  $4^{\circ}\text{F}$  (b)  $25^{\circ}\text{F}$  (c)  $122^{\circ}\text{F}$  (d)  $300^{\circ}\text{F}$
- 6 Which of the following represents the smallest change in temperature?  
 (a) From  $100^{\circ}\text{C}$  to  $110^{\circ}\text{C}$   
 (b) From 100 K to 110 K  
 (c) From  $100^{\circ}\text{F}$  to  $110^{\circ}\text{F}$   
 (d) The change in temperature is the same in all three cases.
- 7 If the value of the temperature of a body on the Fahrenheit scale is double the value of its temperature on the Celsius scale, then the temperature of the body on the Celsius scale equals .....  
 (a)  $50^{\circ}\text{C}$  (b)  $100^{\circ}\text{C}$  (c)  $160^{\circ}\text{C}$  (d)  $273^{\circ}\text{C}$
- 8 When the temperature of a body changes from  $50^{\circ}\text{F}$  to 280 K, the internal energy of the body .....  
 (a) decreases (b) increases  
 (c) doesn't change (d) can't be determined
- 9 \* An increase in the temperature of an object on the Celsius scale by  $100^{\circ}\text{C}$  corresponds to an increase on the Fahrenheit scale by .....  
 (a)  $100^{\circ}\text{F}$  (b)  $180^{\circ}\text{F}$  (c)  $212^{\circ}\text{F}$  (d)  $273^{\circ}\text{F}$
- 10 The temperature decreases as ascending through the troposphere by .....  
 (a)  $3.6^{\circ}\text{F}$  every 1000 m (b)  $1^{\circ}\text{C}$  every 100 m  
 (c)  $1.8^{\circ}\text{C}$  every 100 m (d)  $11.7^{\circ}\text{F}$  every 1000 m
- 11 \* If the temperature at a certain location on the Earth's surface is  $78^{\circ}\text{F}$ , then at an altitude of 2000 m above the Earth's surface above that location, it becomes .....  
 (a)  $42.9^{\circ}\text{F}$  (b)  $54.6^{\circ}\text{F}$  (c)  $66.3^{\circ}\text{F}$  (d)  $70.8^{\circ}\text{F}$
- 12 Which of the following heat transfer mechanisms relies on the movement of parts of the substance to transfer heat?  
 (a) Convection. (b) Conduction.  
 (c) Radiation. (d) Conduction and radiation.
- 13 The heat transfer mechanism from the Sun to the Earth is .....  
 (a) radiation and conduction (b) convection and conduction  
 (c) radiation only (d) convection only
- 14 The transfer of heat in the form of electromagnetic waves occurs in .....  
 (a) thermal conduction (b) thermal convection  
 (c) thermal radiation (d) all of the previous
- 15 When you hold ice cubes, the heat is transferred .....  
 (a) from your hand to the ice by convection  
 (b) from your hand to the ice by conduction  
 (c) from the ice to your hand by convection  
 (d) from the ice to your hand by conduction