

9. Quito, Ecuador is on the equator and is not a coastal city. It has an annual mean temperature of only 13 degrees Centigrade. What is the likely cause for this low annual mean temperature?
10. How does the daily march of temperature on a completely overcast day compare with that on a cloudless, sunny day? Explain your answer.
11. Examine figure 3-14 and explain why Yangon's monthly mean temperature for April is higher than the July monthly mean.
12. Answer the following questions about world temperature distribution (you may wish to refer to January and July isotherm maps).
- Isotherms generally trend east-west. Why?

14. Although the intensity of incoming solar radiation is greatest at local noon, the warmest part of the day is most often in mid-afternoon. Why? Use figure 3-20 to explain your answer.

15. List at least three factors that contribute to the urban heat island (see box 3-4).

16. The magnitude of the daily temperature range can vary significantly from place to place and from time to time. List and describe at least three factors that might cause such variations.

17. Describe how each of the following thermometers work:

a. Liquid in glass –

b. Maximum –

c. Minimum –

d. Bimetal strip –

e. Thermistor –

18. What is a thermograph? Which one of the thermometers listed in question 17 is commonly used in the construction of a thermograph?

19. In addition to having an accurate thermometer, which other factors must be considered to obtain a meaningful air temperature reading?

20. What is meant by the terms ‘steam point’ and ‘ice point’? What values are given these points on each of the three thermometers scales given in this chapter.

21. Why is it not possible to have a negative value when using the Kelvin temperature scale?

22. When heating and cooling degree-day totals for different places are examined to compare fuel consumption, what important assumption is made?

23. How are growing degree days calculated? For what purpose is this index used?

24. Define the following terms by using the web site at www.rsffa.com, go to Meteorology link and play the hangman game.

- a. absolute zero –
- b. annual mean temperature –
- c. annual temperature range –
- d. bimetal strip –
- e. Celsius Scale –
- f. cooling degree-days –
- g. Fahrenheit Scale –
- h. growing degree-days –

- i. heating degree-days –
- j. isotherm –
- k. absolute scale –
- l. liquid-in-glass thermometer –
- m. maximum thermometer –
- n. minimum thermometer –
- o. specific heat –
- p. thermistor –
- q. thermograph –
- r. thermometer --