

**NATS101 (44) S05 Sample Quiz 2****Multiple Choice**

*Identify the letter of the choice that best completes the statement or answers the question and fill in the corresponding "bubble" on the attached sheet. There are two Extra Credit questions on every quiz.*

- \_\_\_\_\_ 1. During the afternoon the greatest temperature difference between the surface air and the air several meters above occurs on a
- clear, calm afternoon.
  - clear, windy afternoon.
  - cloudy, calm afternoon.
  - cloudy, windy afternoon.
- \_\_\_\_\_ 2. In summer, humid regions typically have \_\_\_\_\_ daily temperature ranges and \_\_\_\_\_ maximum temperatures than drier regions.
- smaller, lower
  - smaller, higher
  - larger, lower
  - larger, higher
- \_\_\_\_\_ 3. One would expect the *lowest* temperatures to be found next to the ground on a
- clear, damp, windy night.
  - cloudy night.
  - clear, dry, calm night.
  - clear, dry, windy night.
  - rainy night.
- \_\_\_\_\_ 4. At what time during a 24-hour day would a radiation temperature inversion best be developed?
- at sunset
  - near sunrise
  - at noon
  - toward the end of the morning
  - between 2 and 5 pm when the air temperature reaches a maximum
- \_\_\_\_\_ 5. The total mass of water vapor stored in the atmosphere represents about one \_\_\_\_\_ supply of the world's precipitation.
- day's
  - week's
  - month's
  - year's
- \_\_\_\_\_ 6. As the air temperature increases, the air's capacity for water vapor
- increases.
  - decreases.
  - remains constant.
  - is unrelated to air temperature and can either increase or decrease.
- \_\_\_\_\_ 7. A high water vapor pressure indicates
- a relatively large number of water vapor molecules in the air.
  - a relatively small number of water vapor molecules in the air.
  - a relatively high rate of evaporation.
  - an abundant supply of condensation nuclei in the air.

Name: \_\_\_\_\_

ID: A

- \_\_\_\_\_ 8. If very cold air is brought indoors and warmed with no change in its moisture content, the saturation vapor pressure of this air will \_\_\_\_\_ and the relative humidity of this air will \_\_\_\_\_.  
a. increase, increase  
b. decrease, decrease  
c. increase, decrease  
d. decrease, increase
- \_\_\_\_\_ 9. With which set of conditions below would you expect wet laundry hanging outdoors on a clothesline to dry most quickly?

	<b>Air Temperature (° F)</b>	<b>Relative Humidity</b>	<b>Wind Speed</b>
a.	60	75%	20 MPH
b.	40	75%	20
c.	60	50%	20
d.	40	50%	10
e.	60	75%	10

- \_\_\_\_\_ 10. The name given to a towering cloud that has *not* fully developed into a thunderstorm is  
a. cumulus humilis.  
b. cumulus congestus.  
c. cumulonimbus.  
d. altocumulus.
- \_\_\_\_\_ 11. A low, lumpy cloud layer that appears in rows, patches or rounded masses would be classified  
a. nimbostratus.  
b. stratus.  
c. cumulus.  
d. altocumulus.  
e. stratocumulus.
- \_\_\_\_\_ 12. A dim, watery sun visible through a gray sheet-like cloud layer is often a good indication of \_\_\_\_\_ clouds.  
a. stratocumulus  
b. cirrostratus  
c. cumulonimbus  
d. altostratus  
e. nimbostratus
- \_\_\_\_\_ 13. Which cloud type is composed of ice crystals and can cause a halo to form around the sun or moon?  
a. altostratus  
b. stratus  
c. nimbostratus  
d. cirrostratus  
e. angelitus
- \_\_\_\_\_ 14. Which of the following will decrease in a rising parcel of air?  
a. relative humidity  
b. absolute humidity  
c. specific humidity  
d. all of the above

- \_\_\_\_\_ 15. The rate at which the actual air temperature changes with increasing height above the surface is referred to as the
- environmental lapse rate.
  - dry adiabatic rate.
  - moist adiabatic rate.
  - thermocline.
- \_\_\_\_\_ 16. If an air parcel is given a small push upward and it falls back to its original position, the atmosphere is said to be
- stable.
  - unstable.
  - isothermal.
  - neutral.
  - adiabatic.
- \_\_\_\_\_ 17. Most thunderstorms do not extend very far into the stratosphere because the air in the stratosphere is
- unstable.
  - stable.
  - too cold.
  - too thin.
  - too dry.
- \_\_\_\_\_ 18. Which of the following is found in the greatest concentration in the mixed ice and water phase region of a cold cloud?
- ice crystal nuclei
  - ice crystals
  - supercooled water droplets
  - graupel particles
- \_\_\_\_\_ 19. Ice nuclei may be
- ice crystals
  - certain clay minerals
  - bacteria in decaying plant leaf material
  - all of the above
- \_\_\_\_\_ 20. Clouds in the tropics tend to move from east to west. Consequently, which rhyme best describes a rainbow seen in the tropics?
- rainbow at the break of dawn/ means, of course, the rain is gone
  - rainbow at the break of day/ means that the rain is on the way
  - rainbow with a setting sun/ means that sailors can have some fun
  - rainbow in the morning/ means that sailors should take warning
- \_\_\_\_\_ 21. **EXTRA CREDIT**  
The bending of light that occurs when it enters and passes *through* a substance of different density is called
- diffraction.
  - reflection.
  - refraction.
  - scattering.
- \_\_\_\_\_ 22. **EXTRA CREDIT**  
A ring of light encircling the sun or moon could be either
- a rainbow or a halo.
  - a halo or a sundog.
  - a halo or a corona.
  - a sundog or a crepuscular ray.

**NATS101 (44) S05 Sample Quiz 2**  
**Answer Section**

**MULTIPLE CHOICE**

1. ANS: A
2. ANS: A
3. ANS: C
4. ANS: B
5. ANS: B
6. ANS: A
7. ANS: A
8. ANS: C
9. ANS: C
10. ANS: B
11. ANS: E
12. ANS: D
13. ANS: D
14. ANS: B
15. ANS: A
16. ANS: A
17. ANS: B
18. ANS: C
19. ANS: D
20. ANS: A
21. ANS: C
22. ANS: C