

- 1) A "greenhouse" works because:
  - A) of the difference in the solar constant.
  - B) all greenhouses face south and into the maximum angle of solar energy.
  - C) short wave lengths of energy pass through the glass but longer ones can't.
  - D) the windows of the greenhouse only allow green light wavelengths to pass through.
  
- 2) The pressure gradient force is proportional to:
  - A) the slope of the isobars.
  - B) the change in temperature expressed in Kelvin degrees.
  - C) the change in air density.
  - D) the speed necessary to achieve hydrostatic equilibrium.
  
- 3) The "stratosphere" warms because of:
  - A) the injection of moisture by meteors.
  - B) the injection of moisture by high-flying jet aircraft.
  - C) the interaction of ozone and ultraviolet light.
  - D) dust and dirt deposited by volcanoes.
  
- 4) The dew point temperature:
  - A) tells us how cold the air is.
  - B) tells us how moist the air is.
  - C) can be larger or smaller than the air temperature.
  
- 5) Hydrostatic equilibrium occurs when:
  - A) the force of gravity and the vertical pressure gradient both act to push air downward.
  - B) large air masses are moving either up or down.
  - C) the force of gravity and the vertical pressure gradient both act to push air upward.
  - D) the force of gravity and the vertical pressure gradient have equal value and oppose each other.
  
- 6) Of the following planets, which has the most massive atmosphere?
  - A) Mars
  - B) Earth
  - C) Venus

- 7) Which of the following will increase in a rising parcel of air?
- A) saturation vapor pressure.
  - B) relative humidity.
  - C) air temperature.
- 8) Water vapor in the atmosphere is an important source of:
- A) ozone pollution.      B) sunlight.
  - C) carbon dioxide.      D) heat.
- 9) Anticyclones:
- A) have clockwise winds in the Northern Hemisphere.
  - B) have air spiraling into them near the surface.
  - C) are associated with subgeostrophic winds.
- 10) If the air temperature remains constant, evaporating water into the air will \_\_\_\_\_ the dew point and \_\_\_\_\_ the relative humidity.
- A) increase, increase.
  - B) increase, decrease.
  - C) decrease, decrease.
  - D) decrease, increase.
- 11) If object A is at 400 K, and object B is at 800 K, then the radiation intensity of object A will be this amount of that the radiation intensity of object B:
- A) one-fourth.      B) one-sixteenth.
  - C) one-eighth.      D) one-half.
- 12) The highest temperatures are typically found in the:
- A) stratosphere.      B) troposphere.
  - C) mesosphere.      D) thermosphere.

## Answer

- 1) C
- 2) A
- 3) C
- 4) B
- 5) D
- 6) C
- 7) B
- 8) D
- 9) A
- 10) A
- 11) B
- 12) D

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