

Name _____

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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) In comparing the three scales of temperature, the temperature divisions on the _____ scale and the _____ scale are both larger than the divisions on the _____ scale.
- A) Celsius, Kelvin, Fahrenheit
 - B) Kelvin, Fahrenheit, Celsius
 - C) Celsius, Fahrenheit, Kelvin
 - D) None of the above: the divisions are equal on all three scales.

Answer: A

- 2) The sky is blue because of:
- A) absorption.
 - B) reflection.
 - C) rayleigh scattering.
 - D) mie scattering.
 - E) refraction.

Answer: C

- 3) Hydrostatic equilibrium occurs when:
- A) the force of gravity and the vertical pressure gradient both act to push air upward.
 - 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 downward.
 - D) the force of gravity and the vertical pressure gradient have equal value and oppose each other.

Answer: D

- 4) Of the following planets, which has the largest greenhouse effect in its atmosphere?
- A) Earth
 - B) Venus
 - C) Mars

Answer: B

- 5) The highest temperatures are typically found in the:
- A) thermosphere.
 - B) troposphere.
 - C) stratosphere.
 - D) mesosphere.

Answer: A

- 6) Mercury barometer readings must be corrected for all of the following factors, except:
- A) changes in the acceleration of gravity with latitude.
 - B) temperature.
 - C) elevation above sea level.
 - D) moisture content of the air.

Answer: D

- 7) The Stefan-Boltzmann law:
- A) does not apply to black bodies.
 - B) demonstrates that a cooler body will radiate with greater intensity than will a hotter body.
 - C) is derived from Wien's law.
 - D) gives energy intensities in watts per square meter.

Answer: D

- 8) The maximum concentrations of ozone are found in the:
- A) ionosphere.
 - B) mesosphere.
 - C) troposphere.
 - D) stratosphere.

Answer: D

- 9) This is the most abundant gas in the atmosphere:
- A) oxygen.
 - B) nitrogen.
 - C) water vapor.
 - D) carbon dioxide.

Answer: B

10) Which of the following has the shortest wavelength?

- A) visible radiation
- B) gamma radiation
- C) ultraviolet radiation
- D) microwave radiation

Answer: B