

Name _____

- 1) The mixing ratio has the most in common with this measure of water vapor:
- A) relative humidity.
 - B) specific humidity.
 - C) saturation vapor pressure.
 - D) absolute humidity.

Answer: B

- 2) The relative humidity can increase or decrease even though the water vapor content doesn't change because:
- A) relative humidity is directly dependent on cloud cover.
 - B) water vapor is a locally conservative property of the atmosphere.
 - C) relative humidity is temperature dependent.
 - D) relative humidity is tied to the amount of dry air present in the sample considered.

Answer: C

- 3) An inversion:
- A) implies that a layer of air is unstable.
 - B) has no significance as far as a meteorologist is concerned.
 - C) indicates that a layer of air is stable.
 - D) means that a layer of air is overturning.

Answer: C

- 4) This occurs when a mountain range forces air to rise:
- A) localized convective lifting.
 - B) orographic lifting.
 - C) convergence.
 - D) frontal lifting.

Answer: B

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- 5) Stratocumulus clouds are considered:
- A) high clouds.
 - B) clouds with extensive vertical development.
 - C) low clouds.
 - D) middle clouds.

Answer: C

- 6) Absolutely stable air:
- A) has a wet adiabatic lapse rate that is greater than the environmental lapse rate.
 - B) will have a positive buoyancy.
 - C) is typically warmer than its surroundings.
 - D) needs a push to rise, but will continue rising once it starts moving.

Answer: A

- 7) Raindrops fall to the ground when:
- A) they are at least five times the size of a cloud droplet.
 - B) they reach a large enough terminal velocity for both their size and the distance between them and the ground.
 - C) the coalescence rate exceeds that of the collision rate.
 - D) they are able to catch a fast-moving downdraft.

Answer: B

- 8) During the formation of snow, the atmospheric temperature profile is:
- A) below freezing in the upper part of the atmosphere.
 - B) above freezing in the middle part of the atmosphere.
 - C) almost entirely below freezing.
 - D) below freezing in the lower part of the atmosphere.
 - E) none of the above

Answer: C

9) High clouds:

- A) have a fairly large water content.
- B) are composed of ice crystals.
- C) include altostratus clouds.
- D) have a typical ceiling around 4500 meters.

Answer: B

10) Inversions:

- A) are characterized by an increase in temperature with altitude.
- B) are typically unstable.
- C) increase the positive buoyancy of most air masses that enter them.
- D) have no significant effect on fog formation.

Answer: A