

**1- Clouds, fog, or dew will always form when**

- A. water vapor condenses.
- B. water vapor is present.
- C. relative humidity reaches 100 percent.

*As water vapor condenses or sublimates on condensation nuclei, liquid or ice particles begin to grow. Some condensation nuclei have an affinity for water and can induce condensation or sublimation even when air is almost, but not completely, saturated.*

*Answer (B) is incorrect because the presence of water vapor does not result in clouds, fog, or dew unless condensation occurs. Answer (C) is incorrect because it is possible to have 100% humidity without the occurrence of condensation, which is necessary for clouds, fog, or dew to form.*

**2- If an unstable air mass is forced upward, what type clouds can be expected?**

- A. Stratus clouds with little vertical development.
- B. Stratus clouds with considerable associated turbulence.
- C. Clouds with considerable vertical development and associated turbulence.

*When unstable air is forced upward, the disturbance grows. Any resulting cloudiness shows extensive vertical development.*

**3- The suffix 'nimbus,' used in naming clouds, means**

- A. a cloud with extensive vertical development.
- B. a rain cloud.
- C. a middle cloud containing ice pellets.

*The prefix 'nimbo-' or suffix '-nimbus' means rain cloud.*

**4- Clouds are divided into four families according to their**

- A. outward shape.
- B. height range.
- C. composition.

*For identification purposes, clouds are divided into four families: high clouds, middle clouds, low clouds, and clouds with extensive vertical development.*

**5- What clouds have the greatest turbulence?**

- A. Towering cumulus.
- B. Cumulonimbus.
- C. Nimbostratus.

*Cumulonimbus are the ultimate manifestation of instability. They are vertically-developed clouds of large dimensions with dense boiling tops, often crowned with thick veils of dense cirrus (the anvil). Nearly the entire spectrum of flying hazards are contained in these clouds including violent turbulence.*