

## ANSWERS AND EXPLANATIONS

### 1. What conditions are necessary for the formation of thunderstorms?

- A. High humidity, lifting force, and unstable conditions.
- B. High humidity, high temperature, and cumulus clouds.
- C. Lifting force, moist air, and extensive cloud cover.

*For a cumulonimbus cloud or thunderstorm to form, the air must have:*

1. Sufficient water vapor,
2. An unstable lapse rate, and
3. An initial upward boost (lifting) to start the storm process in motion.

### 2. Thunderstorms reach their greatest intensity during the

- A. mature stage.
- B. downdraft stage.
- C. cumulus stage.

*All thunderstorm hazards reach their greatest intensity during the mature stage.*

### 3. Thunderstorms which generally produce the most intense hazard to aircraft are

- A. squall line thunderstorms.
- B. steady-state thunderstorms.
- C. warm front thunderstorms.

*A squall line is a non-frontal, narrow band of active thunderstorms. The line may be too long to easily detour and too wide and severe to penetrate. It often contains severe steady-state thunderstorms and presents the single, most intense weather hazard to aircraft.*

### 4. A nonfrontal, narrow band of active thunderstorms that often develop ahead of a cold front is known as a

- A. prefrontal system.
- B. squall line.
- C. dry line.

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