Student Pilot Glider Quiz

Weather

Which types of clouds form as a result of rising moist air?

- ☐ Stratus
- ☐ Cumulus
- ☐ Lenticular
- ☐ Cirrus
- ☐ Electron

A METAR is:

A. An hourly weather report usually at an airport
B. A forecast for an area around an airport
C. A **met**eorological **a**lert for significant weather hazards affecting a **r**egion

Which of the following is a correct interpretation of this hourly weather report:
KRNM 292153Z 29006G15KT 10SM SCT080 27/16 A2994 RMK AO2

A. wind blowing toward 290° at 6 mph gusts to 15 knots, 10 miles visibility with strato-cumulus clouds covering 80%, temperature 27°F dew point 16°F
B. Issued on the 29th at 006 GMT winds avg 15 knots 1000 foot ceiling with scattered clouds covering 80%, peak winds from 270 at 16 knots
C. wind from the northwest at 6 knots gusting to 15 knots, 10 statute miles visibility, scattered clouds at 8000 feet above sea level, temperature 27°C, dewpoint 16°C, airport barometric pressure 29.94 inches, automatically generated
D. wind from the northwest at 6 knots gusting to 15 knots, 10 statute miles visibility, scattered clouds at 8000 feet above ground level, temperature 27°C, dewpoint 16°C, altimeter setting 29.94 inches, automatically generated

A TAF is:

A. A turbulence alert forecast
B. A Terminal Aerodrome Forecast (forecast for one airport) for use within 5 NM
C. A Terminal Area Forecast covering a 25 NM radius around the reporting airport

A rain shaft coming from a tall cumulus cloud:

A. Is generally not a hazard, though the water droplets may degrade the performance of the airfoil
B. Is generally not a hazard as long as it's still in the Virga (rain not reaching the ground) form
C. Can be indicative of significant downdrafts and strong shifting winds when it reaches the surface

The adiabatic lapse rate is:

A. The degrees per thousand feet that a parcel if air will cool as it rises (e.g., within a thermal)
B. The degrees per thousand feet that a parcel if air will warm as it descends
C. The average temperature change with altitude as would be measured by a weather balloon
D. The rate the air cools without solar radiation (as the day lapses)
E. Both A and B
F. I have no clue

Moist air is less dense (i.e., lighter) than dry air:

A. False:- water is heavier than air, duh. Dry air rises when surrounded by moist air.
B. True: a water molecule weighs less than the average air molecule. Moist air rises when surrounded by dry air.
C. Moisture content has no effect on air density if the air pressure and temperature are equal

"Cloud Suck" is:

A. Not a real thing
B. A commentary on the quality of the soaring clouds
C. A phenomenon where the updraft close under a cumulus cloud can be so strong that the glider is unable to descend fast enough to avoid being sucked into the cloud
D. A phenomenon where clouds are pulled (sucked) into a narrow convergence between mountains indicating potentially violent windshear and downdrafts on the lee side of the convergence zone.