TEMA: 0159 COMMERCIAL PILOT - (CH. 6) WEATHER

COD PREG:	PREGUNTA:	RPTA:
PREG20080383	Of the following, which is accurate regarding turbulence associated with thunderstorms?	C
OPCION A:	Outside the cloud, shear turbulence can be encountered 50 miles laterally from a severe storm.	
OPCION B:	Shear turbulence is encountered only inside cumulonimbus clouds or within a 5-mile radius of them.	
OPCION C:	Outside the cloud, shear turbulence can be encountered 20 miles laterally from a severe storm.	
PREG20080384	If airborne radar is indicating an extremely intense thunderstorm echo, this thunderstorm should be avoided by a distance of at least	A
OPCION A:	20 miles.	
OPCION B:	10 miles.	
OPCION C:	5 miles.	
PREG20080386	Which statement is true concerning squall lines?	C
OPCION A:	They form slowly, but move rapidly.	
OPCION B:	They are associated with frontal systems only.	
OPCION C:	They offer the most intense weather hazards to aircraft.	
PREG20080388	What visible signs indicate extreme turbulence in the thunderstorms?	C
OPCION A:	Base of the clouds near the surface, heavy rain, and hail.	
OPCION B:	Low ceiling and visibility, hail, and precipitation static.	
OPCION C:	Cumulonimbus clouds, very frequent lightning, and roll clouds.	
PREG20080387	Select the true statement pertaining to the life cycle of a thunderstorm.	B
OPCION A:	Updrafts continue to develop throughout the dissipating stage of a thunderstorm.	
OPCION B:	The beginning of rain at the Earth's surface indicates the mature stage of the thunderstorm.	
OPCION C:	The beginning of rain at the Earth's surface indicates the dissipating stage of the thunderstorm.	
PREG20080382	The most severe weather conditions, such as destructive winds, heavy hail, and tornadoes, are generally associated with	B
OPCION A:	slow-moving warm fronts which slope above the tropopause.	
OPCION B:	squall lines.	
OPCION C:	fast-moving occluded fronts.	
PREG20080385	Which statement is true regarding squall lines?	C
OPCION A:	They are always associated with cold fronts.	

OPCION B:	They are slow in forming, but rapid in movement.	
OPCION C:	They are nonfrontal and often contain severe, steady-state thunderstorms.	

PREG20080381	Hail is most likely to be associated with	B
OPCION A:	cumulus clouds.	
OPCION B:	cumulonimbus clouds.	
OPCION C:	stratocumulus clouds.	

PREG20080375	Convective currents are most active on warm summer afternoons when winds are	A
OPCION A:	light.	
OPCION B:	moderate.	
OPCION C:	strong.	

PREG20080379	Which situation would most likely result in freezing precipitation? Rain falling from air which has a temperature of	C
OPCION A:	32°F or less into air having a temperature of more than 32°F.	
OPCION B:	0°C or less into air having a temperature of 0°C or more.	
OPCION C:	more than 32°F into air having temperature of 32°F or less.	

PREG20080378	During departure, under conditions of suspected low-level wind shear, a sudden decrease in headwind will cause	A
OPCION A:	a loss in airspeed equal to the decrease in wind velocity.	
OPCION B:	a gain in airspeed equal to the decrease in wind velocity.	
OPCION C:	no change in airspeed, but groundspeed will decrease.	

PREG20080377	During an approach, the most important and most easily recognized means of being alerted to possible wind shear is monitoring the	C
OPCION A:	amount of trim required to relieve control pressures.	
OPCION B:	heading changes necessary to remain on the runway centerline.	
OPCION C:	power and vertical velocity required to remain on the proper glidepath.	

PREG20080376	When flying low over hilly terrain, ridges, or mountain ranges, the greatest potential danger from turbulent air currents will usually be encountered on the	B
OPCION A:	leeward side when flying with a tailwind.	
OPCION B:	leeward side when flying into the wind.	
OPCION C:	windward side when flying into the wind.	

PREG20080374	GIVEN: Winds at 3,000 feet AGL ..... 30 kts Surface winds ..... Calm While on approach for landing under clear skies with convective turbulence a few hours after sunrise, one should	A
OPCION A:	increase approach airspeed slightly above normal to avoid stalling.	
OPCION B:	keep the approach airspeed at or slightly below normal to compensate for floating.	
OPCION C:	not alter the approach airspeed, these conditions are nearly ideal.	

PREG20080373	If a temperature inversion is encountered immediately after takeoff or during an approach to a landing, a potential hazard exists due to	A
OPCION A:	wind shear.	
OPCION B:	strong surface winds.	
OPCION C:	strong convective currents.	

PREG20080389	Which weather phenomenon signals the beginning of the mature stage of a thunderstorm?	A
OPCION A:	The start of rain.	
OPCION B:	The appearance of an anvil top.	
OPCION C:	Growth rate of clouds is maximum.	

PREG20080380	Which statement is true concerning the hazards of hail?	C
OPCION A:	Hail damage in horizontal flight is minimal due to the vertical movement of hail in the clouds.	
OPCION B:	Rain at the surface is a reliable indication of no hail aloft.	
OPCION C:	Hailstones may be encountered in clear air several miles from a thunderstorm.	

PREG20080390	What feature is normally associated with the cumulus stage of a thunderstorm?	B
OPCION A:	Roll cloud.	
OPCION B:	Continuous updraft.	
OPCION C:	Beginning of rain at the surface.	

PREG20080405	The conditions most favorable to wave formation over mountainous areas are a layer of	A
OPCION A:	stable air at mountaintop altitude and a wind of at least 20 knots blowing across the ridge.	
OPCION B:	unstable air at mountaintop altitude and a wind of at least 20 knots blowing across the ridge.	
OPCION C:	moist, unstable air at mountaintop altitude and a wind of less than 5 knots blowing across the ridge.	

PREG20080392	What minimum distance should exist between intense radar echoes before any attempt is made to fly between these thunderstorms?	C
OPCION A:	20 miles.	
OPCION B:	30 miles.	
OPCION C:	40 miles.	

PREG20080372	Low-level wind shear may occur when	B
OPCION A:	surface winds are light and variable.	
OPCION B:	there is a low-level temperature inversion with strong winds above the inversion.	
OPCION C:	surface winds are above 15 knots and there is no change in wind direction and windspeed with height.	

PREG20080409	Frost covering the upper surface of an airplane wing usually will cause	B
OPCION A:	the airplane to stall at an angle of attack that is higher than normal.	
OPCION B:	the airplane to stall at an angle of attack that is lower than normal.	
OPCION C:	drag factors so large that sufficient speed cannot be obtained for takeoff.	

PREG20080408	One of the most dangerous features of mountain waves is the turbulent areas in and	A
OPCION A:	below rotor clouds.	
OPCION B:	above rotor clouds.	
OPCION C:	below lenticular clouds.	

PREG20080407	A strong wind shear can be expected	C
OPCION A:	in the jetstream front above a core having a speed of 60 to 90 knots.	
OPCION B:	if the 5°C isotherms are spaced between 7° to 10° of latitude.	
OPCION C:	on the low-pressure side of a jetstream core where the speed at the core is stronger than 110 knots.	

PREG20080406	Which type of jetstream can be expected to cause the greater turbulence?	B
OPCION A:	A straight jetstream associated with a low-pressure trough.	
OPCION B:	A curving associated with a deep low-pressure trough.	
OPCION C:	A jetstream occurring during the summer at the lower latitudes.	

PREG20080404	The strength and location of the jet stream is normally	A
OPCION A:	weaker and farther north in the summer.	
OPCION B:	stronger and farther north in the winter.	
OPCION C:	stronger and farther north in the summer.	

PREG20080403	During the winter months in the middle latitudes, the jet stream shifts toward the	B

OPCION A:	north and speed decreases.	
OPCION B:	south and speed increases.	
OPCION C:	north and speed increases.	

PREG20080402	The jet stream and associated clear and air turbulence can sometimes be visually identified in flight by	B
OPCION A:	dust or haze at flight level.	
OPCION B:	long streaks or cirrus clouds.	
OPCION C:	a constant outside air temperature.	

PREG20080401	A common location of clear air turbulence is	A
OPCION A:	in an upper trough on the polar side of a jet stream.	
OPCION B:	near a ridge aloft on the equatorial side of a high-pressure flow.	
OPCION C:	south of an east/west oriented high-pressure ridge in its dissipating stage.	

PREG20080400	Which feature is associated with the tropopause?	B
OPCION A:	Constant height above the Earth.	
OPCION B:	Abrupt change in temperature lapse rate.	
OPCION C:	Absolute upper limit of cloud formation.	

PREG20080399	With respect to advection fog, which statement is true?	C
OPCION A:	It is slow to develop, and dissipates quite rapidly.	
OPCION B:	It forms almost exclusively at night or near daybreak.	
OPCION C:	It can appear suddenly during day or night, and it is more persistent than radiation fog.	

PREG20080398	In what ways do advectin fog, radiation fog, and steam for differ in their formation or location?	A
OPCION A:	Radiation fog is restricted to land areas; advection fog is most common along coastal areas; steam fog forms over a water surface.	
OPCION B:	Advection fog deepens as windspeed increases up to 20 knots; steam fog requires calm or very light wind; radiation fog forms when the ground or water cools the air by radiation.	
OPCION C:	Steam fog forms from moist air moving over a colder surface; advection fog requires cold air over a warmer surface; radiation fog is produced by radiational cooling of the ground.	

PREG20080397	What lifts advection fog into low stratus clouds?	C
OPCION A:	Nighttime cooling.	
OPCION B:	Dryness of the underlying land mass.	
OPCION C:	Surface winds of approximately 15 knots or stronger.	

PREG20080396	Advection fog has drifted over a coastal airport during the day. What may tend to dissipate or lift this fog into low stratus clouds?	C

OPCION A:	Nighttime cooling.	
OPCION B:	Surface radiation.	
OPCION C:	Wind 15 knots or stronger.	

PREG20080395	A situation most conducive to the formation of advection fog is	B
OPCION A:	a light breeze moving colder air over a water surface.	
OPCION B:	an air mass moving inland from the coastline during the winter.	
OPCION C:	a warm, moist air mass settling over a cool surface under no-wind conditions.	

PREG20080394	Which is true regarding the use of airborne weather-avoidance radar for the recognition of certain weather conditions?	A
OPCION A:	The radarscope provides no assurance of avoiding instrument weather conditions.	
OPCION B:	The avoidance of hail is assured when flying between and just clear of the most intense echoes.	
OPCION C:	The clear area between intense echoes indicates that visual sighting of storms can be maintained when flying between the echoes.	

PREG20080393	Which in-flight hazard is most commonly associated with warm fronts?	C
OPCION A:	Advection fog.	
OPCION B:	Radiation fog.	
OPCION C:	Precipitation-induced fog.	

PREG20080391	During the life cycle of a thunderstorm, which stage is characterized predominately by downdrafts?	C
OPCION A:	Mature.	
OPCION B:	Developing.	
OPCION C:	Dissipating.	

PREG20080371	Hazardous wind shear is commonly encountered	C
OPCION A:	near warm or stationary frontal activity.	
OPCION B:	when the wind velocity is stronger than 35 knots.	
OPCION C:	in areas of temperature inversion and near thunderstorms.	

PREG20080370	What is an important characteristic of wind shear?	C
OPCION A:	It is present at only lower levels and exists in a horizontal direction.	
OPCION B:	It is present at any level and exists in only a vertical direction.	
OPCION C:	It can be present at any level and can exist in both a horizontal and vertical direction.	

PREG20080369	Fog produced by frontal activity is a result of saturation due to	C
OPCION A:	nocturnal cooling.	
OPCION B:	adiabatic cooling.	

OPCION C:	evaporation of precipitation.	

PREG20080348	If clouds form as a result of very stable, moist air being forced to ascend a mountain slope, the clouds will be	C
OPCION A:	cirrus type with no vertical development or turbulence.	
OPCION B:	cumulus type with considerable vertical development and turbulence.	
OPCION C:	stratus type with little vertical development and little or no turbulence.	

PREG20080347	What is the approximate base of the cumulus clouds if the temperature at 2,000 feet MSL is 10°C and the dewpoint is 1°C?	C
OPCION A:	3,000 feet MSL.	
OPCION B:	4,000 feet MSL.	
OPCION C:	6,000 feet MSL.	

PREG20080346	When conditionally unstable air with high-moisture content and very warm surface temperature is forecast, one can expect what type of weather?	C
OPCION A:	Strong updrafts and stratonimbus clouds.	
OPCION B:	Restricted visibility near the surface over a large area.	
OPCION C:	Strong updrafts and cumulonimbus clouds.	

PREG20080345	Ice pellets encountered during flight are normally evidence that	C
OPCION A:	a cold front has passed.	
OPCION B:	there are thunderstorms in the area.	
OPCION C:	freezing rain exists at hiher altitudes.	

PREG20080344	What is indicated if ice pellets are encountered at 8,000 feet?	A
OPCION A:	Freezing rain at higher altitude.	
OPCION B:	You are approachig an area of thunderstorms.	
OPCION C:	You will encounter hail if you continue your flight.	

PREG20080343	Ice pellets encountered during flight normally are evidence that	B
OPCION A:	a warm front has passed.	
OPCION B:	a warm front is about to pass.	
OPCION C:	there are thunderstorms in the area.	

PREG20080342	Moisture is added to a parcel of air by	C
OPCION A:	sublimation and condensation.	
OPCION B:	evaporation and condensation.	
OPCION C:	evaporation and sublimation.	

PREG20080349	What determines the structure or type of clouds which will form as a result of air being forced to ascend?	B

OPCION A:	The method by which the air is lifted.	
OPCION B:	The stability of the air before lifting occurs.	
OPCION C:	The relative humidity of the air after lifting occurs.	

PREG20080341	Virga is best described as	A
OPCION A:	streamers of precipitation trailing beneath clouds which evaporates before reaching the ground.	
OPCION B:	wall cloud torrents trailing beneath cumulonimbus clouds which dissipate before reaching the ground.	
OPCION C:	turbulent areas beneath cumulonimbus clouds.	

PREG20080339	Which is true regarding high- or low-pressure systems?	B
OPCION A:	A high-pressure area or ridge is an area of rising air.	
OPCION B:	A low-pressure area or trough is an area of rising air.	
OPCION C:	Both high- and low-pressure areas are characterized by descending air.	

PREG20080338	Which is true with respect to a high- or low-pressure system?	C
OPCION A:	A high-pressure area or ridge is an area of rising air.	
OPCION B:	A low-pressure area or trough is an area of descending air.	
OPCION C:	A high-pressure area or ridge is an area of descending air.	

PREG20080337	What prevents air from flowing directly from high-pressure areas to low-pressure areas?	A
OPCION A:	Coriolis force.	
OPCION B:	Surface friction.	
OPCION C:	Pressure gradient force.	

PREG20080336	With regard to windflow patterns shown on surface analysis charts; when the isobars are	C
OPCION A:	close together, the pressure gradient force is slight and wind velocities are weaker.	
OPCION B:	not close together, the pressure gradient force is greater and wind velocities are stronger.	
OPCION C:	close together, the pressure gradient force is greater and wind velocities are stronger.	

PREG20080335	Why does the wind have a tendency to flow parallel to the isobars above the friction level?	A
OPCION A:	Coriolis force tends to counterbalance the horizontal pressure gradient.	
OPCION B:	Coriolis force acts perpendicular to a line connecting the highs and lows.	
OPCION C:	Friction of the air with the Earth deflects the air perpendicular to the pressure gradient.	

PREG20080333	Which conditions are favorable for the formation of a surface based temperature inversion?	A
OPCION A:	Clear, cool nights with calm or light wind.	
OPCION B:	Area of unstable air rapidly transferring heat from the surface.	
OPCION C:	Broad areas of cumulus clouds with smooth, level bases at the same altitude.	

PREG20080332	Every physical process of weather is accompanied by or is the result of	A
OPCION A:	a heat exchange.	
OPCION B:	the movement of air.	
OPCION C:	a pressure differential.	

PREG20080340	Which is true regarding actual air temperature and dewpoint temperature spread? The temperature spread	B
OPCION A:	decreases as the relative humidity decreases.	
OPCION B:	decreases as the relative humidity increases.	
OPCION C:	increases as the relative humidity increases.	

PREG20080350	Refer to the excerpt from the following METAR report: KTUS.....08004KT 4SM HZ.....26/04 A2995 RMK RAE36 At approximately what altitude AGL should bases of convective-type cumuliform clouds be expected?	B
OPCION A:	4,400 feet.	
OPCION B:	8,800 feet.	
OPCION C:	17,600 feet.	

PREG20080334	What causes wind?	C
OPCION A:	The Earth's rotation.	
OPCION B:	Air mass modification.	
OPCION C:	Pressure differences.	

PREG20080352	Which would decrease the stability of an air mass?	A
OPCION A:	Warming from below.	
OPCION B:	Cooling from below.	
OPCION C:	Decrease in water vapor.	

PREG20080351	What are the characteristics of stable air?	B
OPCION A:	Good visibility; steady precipitation; stratus clouds.	
OPCION B:	Poor visibility; steady precipitation; stratus clouds.	
OPCION C:	Poor visibility; intermittent precipitation; cumulus clouds.	

PREG20080368	The conditions necessary for the formation of cumulonimbus clouds are a lifting action and	C
OPCION A:	unstable, dry air.	
OPCION B:	stable, moist air.	
OPCION C:	unstable, moist air.	

PREG20080366	Which is true regarding a cold front occlusion? The air ahead of the warm front	B
OPCION A:	is colder than the air behind the overtaking cold front.	
OPCION B:	is warmer than the air behind the overtaking cold front.	
OPCION C:	has the same temperature as the air behind the overtaking cold front.	

PREG20080365	Which is a characteristic typical of a stable air mass?	C
OPCION A:	Cumuliform clouds.	
OPCION B:	Showery precipitation.	
OPCION C:	Continuous precipitation.	

PREG20080364	Which is a characteristic of stable air?	C
OPCION A:	Cumuliform clouds.	
OPCION B:	Excellent visibility.	
OPCION C:	Restricted visibility.	

PREG20080363	When an air mass is stable, which of these conditions are most likely to exist?	C
OPCION A:	Numerous towering cumulus and cumulonimbus clouds.	
OPCION B:	Moderate to severe turbulence at the lower levels.	
OPCION C:	Smoke, dust, haze, etc., concentrated at the lower levels with resulting poor visibility.	

PREG20080362	A moist, unstable air mass is characterized by	B
OPCION A:	poor visibility and smooth air.	
OPCION B:	cumuliform clouds and showery precipitation.	
OPCION C:	stratiform clouds and continuous precipitation.	

PREG20080361	What is a characteristic of stable air?	A
OPCION A:	Stratiform clouds.	
OPCION B:	Fair weather cumulus clouds.	
OPCION C:	Temperature decreases rapidly with altitude.	

PREG20080367	Which are characteristics of a cold air mass moving over a warm surface?	B
OPCION A:	Cumuliform clouds, turbulence, and poor visibility.	
OPCION B:	Cumuliform clouds, turbulence, and good visibility.	

OPCION C:	Stratiform clouds, smooth air, and poor visibility.	

PREG20080359	The formation of either predominantly stratiform or predominantly cumuliform clouds is dependent upon the	B
OPCION A:	source of lift.	
OPCION B:	stability of the air being lifted.	
OPCION C:	temperature of the air being lifted.	

PREG20080358	The presence of standing lenticular altocumulus clouds is a good indication of	B
OPCION A:	lenticular ice formation in calm air.	
OPCION B:	very strong turbulence.	
OPCION C:	heavy icing conditions.	

PREG20080357	Which cloud types would indicate convective turbulence?	C
OPCION A:	Cirrus clouds.	
OPCION B:	Nimbostratus clouds.	
OPCION C:	Towering cumulus clouds.	

PREG20080356	The conditions necessary for the formation of stratiform clouds are a lifting action and	B
OPCION A:	unstable, dry air.	
OPCION B:	stable, moist air.	
OPCION C:	unstable, moist air.	

PREG20080355	Which would increase the stability of an air mass?	B
OPCION A:	Warming from below.	
OPCION B:	Cooling from below.	
OPCION C:	Decrease in water vapor.	

PREG20080360	Which combination of weather-producing variables would likely result in cumuliform-type clouds, good visibility, and showery rain?	B
OPCION A:	Stable, moist air and orographic lifting.	
OPCION B:	Unstable, moist air and orographic lifting.	
OPCION C:	Unstable, moist air and no lifting mechanism.	

PREG20080353	From which measurement of the atmosphere can stability be determined?	B
OPCION A:	Atmospheric pressure.	
OPCION B:	The ambient lapse rate.	
OPCION C:	The dry adiabatic lapse rate.	

PREG20080354	What type weather can one expect from moist, unstable air, and very warm surface temperatures?	C

OPCION A:	Fog and low stratus clouds.
OPCION B:	Continuous heavy precipitation.
OPCION C:	Strong updrafts and cumulonimbus clouds.