
TEMA: 0159	COMMERCIAL PILOT - (CH. 6) WEATHER	
COD_PREG: PREGUNTA:		RPTA:
5301	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.	
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5304	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.	
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5310	What causes wind?	C
OPCION A:	The Earth's rotation.	
OPCION B:	Air mass modification.	
OPCION C:	Pressure differences.	
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5312	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.	
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5314	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.	
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5315	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.	
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5317	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.	
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5318	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.	
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5320	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.	
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5322	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.	
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5323	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.	
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5324	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.	
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5325 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.	

5326 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.	

5327 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.	

5328 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.	

5329 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.	

5330 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.	

5331 Refer to the excerpt from the following METAR report:	B
KTUS.....08004KT 4SM HZ.....26/04 A2995 RMK RAE36	
At approximately what altitude AGL should bases of convective-type cumuliform clouds be expected?	
OPCION A: 4,400 feet. OPCION B: 8,800 feet. OPCION C: 17,600 feet.	

5332 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.	

5333 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.	

5334 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.	

5335 What type weather can one expect from moist, unstable air, and very warm surface temperatures?	C
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OPCION A: Fog and low stratus clouds.

OPCION B: Continuous heavy precipitation.

OPCION C: Strong updrafts and cumulonimbus clouds.

5336 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.

5337 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.

5338 Which cloud types would indicate convective turbulence?

C

OPCION A: Cirrus clouds.

OPCION B: Nimbostratus clouds.

OPCION C: Towering cumulus clouds.

5339 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.

5340 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.

5341 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.

5342 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.

5343 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.

5344 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.

5345 Which is a characteristic of stable air?

C

OPCION A: Cumuliform clouds.

OPCION B: Excellent visibility.

OPCION C: Restricted visibility.

5346 Which is a characteristic typical of a stable air mass?

C

OPCION A: Cumuliform clouds.

OPCION B: Showery precipitation.

OPCION C: Continuous precipitation.

5347	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.	
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5348	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.	
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5349	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.	
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5350	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.	
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5351	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.	
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5352	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.	
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5353	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.	
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5354	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.	
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5355	GIVEN:	A
	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	
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.	
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5356	Convective currents are most active on warm summer afternoons when winds are	A
OPCION A:	light.	
OPCION B:	moderate.	
OPCION C:	strong.	
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5357	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.

5358 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.

5359 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.

5360 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.

5361 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.

5362 Hail is most likely to be associated with B

OPCION A: cumulus clouds.
OPCION B: cumulonimbus clouds.
OPCION C: stratocumulus clouds.

5363 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.

5365 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.

5366 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.

5367 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.

5368 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.

5369 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.

5370	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.	
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5371	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.	
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5372	During the life cycle of a thunderstorm, which stage is characterized predominately by downdrafts?	C
OPCION A:	Mature.	
OPCION B:	Developing.	
OPCION C:	Dissipating.	
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5373	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.	
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5374	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.	
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5375	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.	
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5376	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.	
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5377	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.	
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5378	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.	
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5379	In what ways do advection fog, radiation fog, and steam fog 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.	
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5380	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.

5381 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.

5382 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.

5383 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.

5384 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.

5385 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.

5393 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.

5447 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.

5448 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.

5450 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.

5739 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.
