TEMA: 0626 ATP-RTC - Meteorology and Weather Services - Chap.8

COD PREG:	PREGUNTA:	RPTA:
PREG20098121	What is a difference between an air mass thuderstorm and a steady-state thunderstorm?	B
OPCION A:	Air mass thunderstorms produce precipitation which falls outside of the updraft	
OPCION B:	Air mass thunderstorm downdrafts and precipitation retard and reverse the updrafts	
OPCION C:	Steady-state thunderstorms are associated with local surface heating	
PREG20098122	Which type storms are most likely to produce funnel clouds or tornadoes?	B
OPCION A:	Air mass thunderstorms	
OPCION B:	Cold front or squall line thunderstorms	
OPCION C:	Storms associated with icing and supercooled water	
PREG20098124	Which conditions are necessary for the formation of upslope fog?	A
OPCION A:	Moist, stable air being moved over gradually rising ground by a wind	
OPCION B:	A clear sky, little or no wind, and 100 percent relative humidity	
OPCION C:	Rain falling through stratus clouds and a 10 to 25-knot wind moving the precipitation up the slope	
PREG20098125	How are haze layers cleared or dispersed?	B
OPCION A:	By convective mixing in cool night air.	
OPCION B:	By wind or the movement of air.	
OPCION C:	By evaporation similar to the clearing of fog.	
PREG20098145	Which action is recommended if jetstream turbulence is encountered with a direct headwind or tailwind?	C
OPCION A:	Increase airspeed to get out of the area quickly.	
OPCION B:	Change course to fly on the polar side of the jetstream.	
OPCION C:	Change altitude or course to avoid a possible elongated turbulent area.	
PREG20098127	Which type cloud is associated with violent turbulence and a tendency toward the production of funnel clouds?	A
OPCION A:	Cumulonimbus mamma	
OPCION B:	Standing lenticular	
OPCION C:	Stratocumulus	
PREG20098128	A clear area in a line of thundestorm echoes on a radar scope indicates	C
OPCION A:	the absence of clouds in the area.	
OPCION B:	an area of no convective turbulence.	

OPCION C:	an area where precipitation drops are not detected.	

PREG20098129	When flying over the top of a severe thunderstorm, the cloud should be overflown by at least	A
OPCION A:	1,000 feet for each 10 knots windspeed	
OPCION B:	2,500 feet	
OPCION C:	500 feet above any moderate to severe turbulence layer	

PREG20098130	What type weather change is to be expected in an area where frontolysis is reported?	B
OPCION A:	The frontal weather is becoming stronger	
OPCION B:	The front is dissipating	
OPCION C:	The front is moving at a faster speed	

PREG20098132	Which atmospheric factor causes rapid movement of surface fronts?	A
OPCION A:	Upper winds blowing across the front.	
OPCION B:	Upper low located directly over the surface low.	
OPCION C:	The cold front overtaking and lifting the warm front.	

PREG20098146	Which action is recommended regarding an altitude change to get out of jetstream turbulence?	A
OPCION A:	Descend if ambient temperature is falling	
OPCION B:	Descend if ambient temperature is rising	
OPCION C:	Maintain altitude if ambient temperature is not changing	

PREG20098154	Where are jetstreams normally located?	B
OPCION A:	In areas of strong low pressure systems in the stratosphere	
OPCION B:	At the tropopause where intensified temperature gradients are located	
OPCION C:	In a single continuous band, encircling the Earth, where there is a break between the equatorial and polar tropopause	

PREG20098148	Turbulence encountered above 15,000 feet AGL, not associated with cloud formations, should be reported as	C
OPCION A:	convective turbulence.	
OPCION B:	high altitude turbulence.	
OPCION C:	clear air turbulence.	

PREG20098165	(Refer to Figure 149.) What is the forecast temperature at ATL for the 3,000 foot level?	C
OPCION A:	+6°C	
OPCION B:	+6° F	
OPCION C:	Not reported	

PREG20098166	What is indicated on the Weather Depiction Chart by a continuous smooth line enclosing a hatched geographic area?	C
OPCION A:	The entire area has ceilings less than 1,000 feet and/or visibility less than 3 miles	
OPCION B:	More than 50 percent of the area enclosed by the smooth line is predicted to have IFR conditions	
OPCION C:	Reporting stations within the enclosed area are all showing IFR conditions at the time of the report	
PREG20098167	The horizontal wind shear, critical for turbulence (moderate or greater) per 150 miles is	B
OPCION A:	18 knots or less	
OPCION B:	greater than 18 knots	
OPCION C:	not a factor, only vertical shear is a factor	
PREG20098168	A severe thunderstorm is one in which he surface wind is	A
OPCION A:	50 knots or greater and/or surface hail is 3/4 inch or more in diameter.	
OPCION B:	55 knots or greater and/or surface hail is 1/2 inch or more in diameter.	
OPCION C:	45 knots or greater and/or surface hail is 1 inch or more in diameter.	
PREG20098169	A squall is a sudden increase of at least 16 knots in average wind speed to a sustained speed of	B
OPCION A:	24 knots or more for at least 1 minute	
OPCION B:	22 knots or more for at least 1 minute	
OPCION C:	20 knots or more for at least 1 minute	
PREG20098170	A calm wind that is forecast, in the international Terminal Aerodrome Forecast (TAF) is encoded as	B
OPCION A:	VRB00KT	
OPCION B:	00000KT	
OPCION C:	00003KT	
PREG20098171	In the International Terminal Aerodrome Forecast (TAF), a variable wind direction is noted by "VRB" where the three digit direction usually appears. A calm wind appears in the TAF as	C
OPCION A:	00003KT	
OPCION B:	VRB00KT	
OPCION C:	00000KT	
PREG20098172	KFTW UA/OV DFW/TM 1645/FL100/TP PA30/SK SCT031-TOP043/BKN060-TOP085/OVC097-TOPUNKN/WX FV00SM RA/TA 07 This pilot report to Fort Worth (KFTW) indicates	C

OPCION A:	the aircraft is in light rain	
OPCION B:	that the top of the ceiling is 4,300 feet	
OPCION C:	the ceiling at KDFW is 6,000 feet	

PREG20098173	The prevailing visibility in the following METAR is METAR KFSM 131756Z AUTO 00000KT M1/4SM R25/0600V 1000FT-RA FG VV004 06/05 A2989 RMK AO2 $	A
OPCION A:	less than 1/4 statute mile	
OPCION B:	measured 1/4 statute mile	
OPCION C:	a mean (average) of 1/4 statute mile	

PREG20098174	The VV001 in the following METAR indicates METAR KFSM 131756Z AUTO 00000KT M1/4SM R25/0600V1000FT - RA FG VV001 A2989 RMK AO2 VIS 3/4 RWY19 CHINO RWY19$	B
OPCION A:	an observer reported the vertical visibility as 100 feet	
OPCION B:	a 100 foot indefinite ceiling	
OPCION C:	the variability value is 100 feet	

PREG20098118	Where can the maximum hazard zone caused by wind shear associated with a thunderstorm be found?	C
OPCION A:	in front of the thunderstorm cell (anvil side) and on the southwest side of the cell	
OPCION B:	Ahead of the roll cloud or gust front and directly under the anvil cloud	
OPCION C:	On all sides and directly under the thunderstorm cell	

PREG20098164	(Refer to Figure 149.) What will be the wind and temperature trend for a DSM LIT SHV flight at 12,000 feet?	A
OPCION A:	Windspeed decrease	
OPCION B:	Temperature decrease	
OPCION C:	Wind direction shift from northwest to southeast	

PREG20098147	Clear air turbulence (CAT) associated with a mountain wave may extend as far as	B
OPCION A:	1,000 miles or more downstream of the mountain	
OPCION B:	5,000 feet above the tropopause	
OPCION C:	100 miles or more upwind of the mountain	

PREG20098163	(Refer to Figure 145.) The peak wind at KAMA was reported to be from 320° true at 39 knots	A
OPCION A:	which occurred at 1743Z	
OPCION B:	with gusts to 43 knots	
OPCION C:	with .43 of an inch liquid precipitation since the last report	

PREG20098161	What type turbulence should be reported when it momentarily causes slight, erratic changes in altitude and/or attitude, one-third to two-thirds of the time?	C
OPCION A:	Occasional light chop.	
OPCION B:	Moderate chop.	
OPCION C:	Intermittent moderate turbulence.	

PREG20098149	A strong wind shear can be expected	A
OPCION A:	on the low pressure side of a 100-knot jetstream core	
OPCION B:	where the horizontal wind shear is 15 knots, in a distance equal to 2.5° longitude	
OPCION C:	if the 5°C isotherms are spaced 100 NM or closer together	

PREG20098150	What is a likely location of clear air turbulences?	A
OPCION A:	in a upper trough on the polar side of a jetstream	
OPCION B:	Near a ridge aloft on the equatorial side of a high pressure flow	
OPCION C:	Downstream of the equatorial side of a jetstream	

PREG20098151	Where do the maximum winds associated with the jetstream usually occur?	A
OPCION A:	in the vicinity of breaks in the tropopause on the polar side of the jef core	
OPCION B:	Below the jet core where a long straight stretch of the jetstream is located	
OPCION C:	On the equatorial side of the jetstream where moisture has formed cirriform clouds	

PREG20098152	Which type jetstream can be expected to cause the greater turbulence?	C
OPCION A:	A straight jetstream associated with a high pressure ridge.	
OPCION B:	A jetstream associated with a wide isotherm spacing.	
OPCION C:	A curving jetstream associated with a deep low pressure trough.	

PREG20098153	What weather feature occurs at altitude level near the tropopause?	A
OPCION A:	Maximum winds and narrow wind shear zones	
OPCION B:	Abrupt temperature increase above the tropopause	
OPCION C:	Thin layers of cirrus (ice crystal) clouds at the tropopause level.	

PREG20098155	METAR KFSO 031053Z VRB02KT 7SM MIFG SKC 15/14 A3012 RMK SLP993 6/// T01500139 56012 In the above METAR, the SLP993 6/// indicates	B
OPCION A:	sea level pressure 999.3 hectopascals which in the last 6 hours has dropped 4 hectopascals	
OPCION B:	sea-level pressure 999.3 hectopascals and an indeterminable amount of precipitation has ocurred over the last 3 hours	

OPCION C:	sea-level pressure 999.3 hectopascals and in the last 6 hours that four-tenths of an inch of precipitation has fallen	

PREG20098156	Weather conditions expected to occur in the vicinity of the airport, but not at the airport, are denoted by the letters "VC." When VC appears in a Terminal Aerodrome Forecast, it covers a geographical area of	A
OPCION A:	a 5 to 10 statute mile radius from the airport	
OPCION B:	a 5 mile radius of the center of a runway complex	
OPCION C:	10 miles of the station originating the forecast	

PREG20098157	What weather is predicted by the term VCTS in a Terminal Aerodrome Forecast?	A
OPCION A:	Thunderstorms are expected in the vicinity	
OPCION B:	Thunderstorms may occur over the station and within 50 miles of the station	
OPCION C:	Thunderstorms are expected between 5 and 25 miles of the runway complex	

PREG20098158	If squalls are reported at the destination airport, what wind conditions existed at the time?	B
OPCION A:	Sudden increases in windspeed of at least 15 knots, to a sustained wind speed of 20 knots, lasting for at least 1 minute	
OPCION B:	A sudden increase in wind speed of at least 16 knots, the speed rising to 22 knots or more for 1 minute or longer	
OPCION C:	Rapid variation in wind direction of at least 20° and changes in speed of at least 10 knots between peaks and lulls	

PREG20098159	What type turbulence should be reported when it causes slight, rapid, and somewhat rhythmic bumpiness without appreciable changes in attitude or altitude, less than one-third of the time?	A
OPCION A:	Occasional light chop	
OPCION B:	Moderate turbulence	
OPCION C:	Moderate chop	

PREG20098160	What type turbulence should be reported when it causes changes in altitude and/or attitude more than two-thirds of the time, with the aircraft remaining in positive control at all times?	B
OPCION A:	Continuous severe chop.	
OPCION B:	Continuous moderate turbulence.	
OPCION C:	Intermittent moderate turbulence.	

PREG20098162	What conditions are indicated on a Weather Depiction Chart?	A
OPCION A:	Actual sky cover, visibility restrictions, and type of precipitation at reporting stations	
OPCION B:	Forecast ceilings and visibilities over a large geographic area	
OPCION C:	Actual en route weather conditions between reporting stations	

PREG20098117	What feature is normally associated with the cumulus stage of a thunderstorm?	C
OPCION A:	Beginning of rain at the surface.	
OPCION B:	Frequent lightning.	
OPCION C:	Continuous updraft.	

PREG20098123	When advection fog has developed, what may tend to dissipate or lift the fog into low stratus clouds?	B
OPCION A:	Temperature inversion.	
OPCION B:	Wind stronger than 15 knots.	
OPCION C:	Surface radiation.	

PREG20098115	Which weather phenomenon signals the beginning of the mature stage of a thunderstorm?	B
OPCION A:	The appearance of an anvil top.	
OPCION B:	The start of rain at the surface.	
OPCION C:	Growth rate of the cloud is at its maximum.	

PREG20098075	(Refer to Figure 144.) What effect will a microburst encounter have upon the aircraft in position 3?	C
OPCION A:	Decreasing headwind	
OPCION B:	Increasing tailwind	
OPCION C:	Strong downdraft	

PREG20098076	(Refer to Figure 144.) What effect will a microburst encounter have upon the aircraft in position 4?	A
OPCION A:	Strong tailwind	
OPCION B:	Strong updraft	
OPCION C:	Significant performance increase	

PREG20098077	(Refer to Figure 144.) How will the aircraft in position 4 be affected by a microburst encounter?	B
OPCION A:	Performance increasing with a tailwind and updraft	
OPCION B:	Performance decreasing with a tailwind and downdraft	
OPCION C:	Performance decreasing with a headwind and downdraft	

PREG20098078	What is the expected duration of an individual microburst?	C
OPCION A:	Two minutes with maximum winds lasting approximately 1 minute	
OPCION B:	One microburst may continue for as long as 2 to 4 hours	
OPCION C:	Seldom longer than 15 minutes from the time the burst strikes the ground until dissipation	

PREG20098074	(Refer to Figure 144.) When penetrating a microburst, which aircraft will experience an increase in performance without a change in pitch or power?	C
OPCION A:	3	
OPCION B:	2	
OPCION C:	1	

PREG20098079	What is a characteristic of the troposphere?	B
OPCION A:	It contains all the moisture of the atmosphere.	
OPCION B:	There is an overall decrease of temperature with an increase of altitude.	
OPCION C:	The average altitude of the top of the troposphere is about 6 miles.	

PREG20098081	What characterizes a ground-based inversion?	C
OPCION A:	Convection currents at the surface.	
OPCION B:	Cold temperatures.	
OPCION C:	Poor visibility.	

PREG20098082	What feature is associated with a temperature inversion?	A
OPCION A:	A stable layer of air.	
OPCION B:	An unstable layer of air.	
OPCION C:	Air mass thunderstorms.	

PREG20098083	When does minimum temperature normally occur during a 24-hour period?	A
OPCION A:	After sunrise	
OPCION B:	About 1 hour before sunrise	
OPCION C:	At midnight	

PREG20098084	Which area or areas of the Northern Hemisphere experience a generally east to west movement of weather systems?	B
OPCION A:	Arctic only	
OPCION B:	Arctic and subtropical	
OPCION C:	Subtropical only	

PREG20098080	What is the primary cause of all changes in the Earth's weather?	A
OPCION A:	Variations of solar energy at the Earth's surface	
OPCION B:	Changes in air pressure over the Earth's surface	
OPCION C:	Movement of air masses from moist areas to dry areas	

PREG20098073	(Refer to Figure 144.) If involved in a microburst encounter, in which aircraft positions will the most severe downdraft occur?	C
OPCION A:	4 and 5	
OPCION B:	2 and 3	

OPCION C:	3 and 4	
PREG20098072	An aircraft that encounters a headwind of 45 knots, within a microburst, may expect a total shear across the microburst of	C
OPCION A:	40 knots	
OPCION B:	80 knots	
OPCION C:	90 knots	
PREG20098071	Maximum downdrafts in a microburst encounter may be as strong as	C
OPCION A:	8,000 ft/min	
OPCION B:	7,000 ft/min	
OPCION C:	6,000 ft/min	
PREG20098060	What is the expected duration of an individual microburst?	C
OPCION A:	Two minutes with maximum winds lasting approximately 1 minute	
OPCION B:	One microburst may continue for as long as 2 to 4 hours	
OPCION C:	Seldom longer than 15 minutes from the time the burst strikes the ground until dissipation	
PREG20098061	Which INITIAL cockpit indications should a pilot be aware of when a headwind shears to a calm wind?	C
OPCION A:	Indicated airspeed decreases, aircraft pitches up, and altitude decreases.	
OPCION B:	Indicated airspeed increases, aircraft pitches down, and altitude increases.	
OPCION C:	Indicated airspeed decreases, aircraft pitches down, and altitude decreases.	
PREG20098062	Which condition would INITIALLY cause the indicated airspeed and pitch to increase and the sink rate to decrease?	C
OPCION A:	Sudden decrease in a headwind component.	
OPCION B:	Tailwind which suddenly increases in velocity.	
OPCION C:	Sudden increase in a headwind component.	
PREG20098063	Which INITIAL cockpit indications should a pilot be aware of when a constant tailwind shears to a calm wind?	C
OPCION A:	Altitude increases; pitch and indicated airspeed decrease	
OPCION B:	Altitude, pitch, and indicated airspeed decrease	
OPCION C:	Altitude, pitch, and indicated airspeed increase	
PREG20098064	What is the recommended technique to counter the loss of airspeed and resultant lift from wind shear?	C
OPCION A:	Lower the pitch attitude and regain lost airspeed.	

OPCION B:	Avoid overstressing the aircraft, "pitch to airspeed", and apply maximum power.	
OPCION C:	Maintain, or increase, pitch attitude and accept the lower-than-normal airspeed indications.	

PREG20098065	Which wind-shear condition results in a loss of airspeed?	B
OPCION A:	Decreasing headwind or tailwind	
OPCION B:	Decreasing headwind and increasing tailwind	
OPCION C:	Increasing headwind and decreasing tailwind	

PREG20098066	Which wind-shear condition results in an increase in airspeed?	C
OPCION A:	Increasing tailwind and decreasing headwind.	
OPCION B:	Increasing tailwind and headwind.	
OPCION C:	Decreasing tailwind and increasing headwind.	

PREG20098067	Which is the definition of "severe wind shear"?	B
OPCION A:	Any rapid change of horizontal wind shear in excess of 25 knots; vertical shear excepted.	
OPCION B:	Any rapid change in wind direction or velocity which causes airspeed changes greater than 500 ft/min.	
OPCION C:	Any change of airspeed greater than 20 knots which is sustained for more than 20 seconds or vertical speed changes in excess of 100 ft/min.	

PREG20098068	Doppler wind measurements indicate that the windspeed change a pilot may expect when flying through the peak intensity of a microburst is approximately	C
OPCION A:	15 knots	
OPCION B:	25 knots	
OPCION C:	45 knots	

PREG20098069	Which airplane performance characteristics should be recognized during takeoff when encountering a tailwind shear that increases in intensity?	A
OPCION A:	Loss of, or diminished, airspeed performance	
OPCION B:	Decreased takeoff distance	
OPCION C:	Increased climb performance immediately after takeoff	

PREG20098070	Thrust is being managed to maintain desired indicated airspeed and the glide slope is being flown. Which characteristics should be observed when a tailwind shears to a constant headwind?	B
OPCION A:	PITCH ATTITUDE: Increases. VERTICAL SPEED: Increases. INDICATED AIRSPEED: Decreases, then increases to approach speed.	
OPCION B:	PITCH ATTITUDE: Increases. VERTICAL SPEED: Decreases. INDICATED AIRSPEED: Increases, then decreases.	

OPCION C:	PITCH ATTITUDE: Decreases. VERTICAL SPEED: Decreases. INDICATED AIRSPEED: Decreases, then increases to approach speed.	

PREG20098085	At lower levels of the atmosphere, friction causes the wind to flow across isobars into a low because the friction	A
OPCION A:	decreases windspeed and Coriolis force	
OPCION B:	decreases pressure gradient force	
OPCION C:	creates air turbulence and raises atmospheric pressure	

PREG20098087	Where is the usual location of a thermal low?	C
OPCION A:	Over the arctic region.	
OPCION B:	Over the eye of a hurricane.	
OPCION C:	Over the surface of a dry, sunny region.	

PREG20098086	What is a feature of air movement in a high pressure area?	B
OPCION A:	Ascending from the surface high to lower pressure at higher altitudes	
OPCION B:	Descending to the surface and then outward	
OPCION C:	Moving outward from the high at high altitudes and into the high at the surface	

PREG20098089	What temperature condition is indicated if precipitation in the form of wet snow occurs during flight?	A
OPCION A:	The temperature is above freezing at flight altitude	
OPCION B:	The temperature is above freezing at higher altitudes	
OPCION C:	There is an inversion with colde air below	

PREG20098105	Which process causes adiabatic cooling?	A
OPCION A:	Expansion of air as it rises.	
OPCION B:	Movement of air over a colder surface.	
OPCION C:	Release of latent heat during the vaporization process.	

PREG20098106	When saturated air moves downhill, its temperature increases	B
OPCION A:	at a faster rate than dry air because of the release of latent heat.	
OPCION B:	at a slower rate than dry air because vaporization uses heat.	
OPCION C:	at a slower rate than dry air because condensation releases heat.	

PREG20098107	Which condition is present when a local parcel of air is stable?	A
OPCION A:	The parcel of air resists convection	
OPCION B:	The parcel of air cannot be forced uphill	
OPCION C:	As the parcel of air moves upward, its temperature becomes warmer than the surrounding air	

PREG20098108	Convective clouds which penetrate a stratus layer can produce which threat to instrument flight?	C
OPCION A:	Freezing rain	
OPCION B:	Clear air turbulence	
OPCION C:	Embedded thunderstorms	

PREG20098109	Which type clouds are indicative of very strong turbulence?	B
OPCION A:	Nimbostratus	
OPCION B:	Standing lenticular	
OPCION C:	Cirrocumulus	

PREG20098110	What is the feature of a stationary front?	C
OPCION A:	The warm front surface moves about half the speed of the cold front surface.	
OPCION B:	Weather conditions are a combination of strong cold front and strong warm front weather.	
OPCION C:	Surface winds tend to flow parallel to the frontal zone.	

PREG20098116	During the life cycle of a thunderstorm, which stage is characterized predominately by downdrafts?	B
OPCION A:	Cumulus	
OPCION B:	Dissipating	
OPCION C:	Mature	

PREG20098111	Which event usually occurs after an aircraft passes through a front into the colder air?	C
OPCION A:	Temperature/dewpoint spread decreases.	
OPCION B:	Wind direction shifts to the left.	
OPCION C:	Atmospheric pressure increases.	

PREG20098112	What minimum thickness of cloud layer is indicated if precipitation is reported as light or greater intensity?	A
OPCION A:	4,000 feet thick	
OPCION B:	2,000 feet thick	
OPCION C:	A thickness which allows the cloud tops to be higher than the freezing level	

PREG20098113	Which condition produces weather on the lee side of a large lake?	A
OPCION A:	Warm air flowing over a colder lake may produce fog	
OPCION B:	Cold air flowing over a warmer lake may produce advection fog	
OPCION C:	Warn air flowing over a cool lake may produce rain showers	

PREG20098114	How can the stability of the atmosphere be determined?	A

OPCION A:	Ambient temperature lapse rate.	
OPCION B:	Atmospheric pressure at various levels.	
OPCION C:	Surface temperatures/dewpoint spread.	

PREG20098088	Freezing rain encountered during climb is normally evidence that	B
OPCION A:	a climb can be made to a higher altitude without encountering more than light icing	
OPCION B:	a layer of warmer air exists above	
OPCION C:	ice pellets at higher altitudes have changed to rain in the warmer air below	

PREG20098103	What is indicated about an air mass if the temperature remains unchanged or decreases slightly as altitude is increased?	C
OPCION A:	The air is unstable.	
OPCION B:	A temperature inversion exists.	
OPCION C:	The air is stable.	

PREG20098104	What weather condition occurs at the altitude where the dewpoint lapse rate and the dry adiabatic lapse rate converge?	A
OPCION A:	Cloud bases form	
OPCION B:	Precipitation starts	
OPCION C:	Stable air changes to unstable air	

PREG20098101	What is the result when water vapor changes to the liquid state while being lifted in a thunderstorm?	A
OPCION A:	Latent heat is released to the atmosphere.	
OPCION B:	Latent heat is transformed into pure energy.	
OPCION C:	Latent heat is absorbed from the surrounding air by the water droplet.	

PREG20098090	What is an important characteristic of wind shear?	C
OPCION A:	It is primarily associated with the lateral vortices generated by thunderstorms.	
OPCION B:	It usually exists only in the vicinity of thunderstorms, but may be found near a strong temperature inversion.	
OPCION C:	It may be associated with either a wind shift or a windspeed gradient at any level in the atmosphere.	

PREG20098091	What condition produces the most frequent type of ground-or surface-based temperature inversion?	C
OPCION A:	The movement of colder air under warm air or the movement of warm air over cold air.	
OPCION B:	Widespread sinking of air within a thick layer aloft resulting in heating by compression.	
OPCION C:	Terrestrial radiation on a clear, relatively calm night.	

PREG20098092	Which term applies when the temperature of the air changes by compression or expansion with no heat added or removed?	C
OPCION A:	Katabatic.	
OPCION B:	Advection.	
OPCION C:	Adiabatic.	

PREG20098102	What is a feature of supercooled water?	B
OPCION A:	The water drop sublimates to an ice particle upon impact	
OPCION B:	The unstable water drop freezes upon striking an exposed object	
OPCION C:	The temperature of the water drop remains at 0°C until it impacts a part of the airframe, then clear ice accumulates	

PREG20098094	Isobars on a surface weather chart represent lines of equal pressure	B
OPCION A:	at the surface	
OPCION B:	reduced to sea level	
OPCION C:	at a given atmospheric pressure altitude	

PREG20098093	What is the approximate rate unsaturated air will cool flowing upslope?	A
OPCION A:	3°C per 1,000 feet.	
OPCION B:	2°C per 1,000 feet.	
OPCION C:	4°C per 1,000 feet.	

PREG20098096	How does Coriolis force affect wind direction in the Southern Hemisphere?	A
OPCION A:	Causes clockwise rotation around a low	
OPCION B:	Causes wind to flow out of a low toward a high	
OPCION C:	Has exactly the same effect as in the Northern Hemisphere	

PREG20098097	Which weather condition is defined as an anticyclone?	B
OPCION A:	Calm	
OPCION B:	High pressure area	
OPCION C:	COL	

PREG20098098	Which conditions result in the formation of frost?	C
OPCION A:	The temperature of the collecting surface is at or below freezing and small droplets of moisture are falling	
OPCION B:	Dew collects on the surface and then freezes because the surface temperature is lower than the air temperature	
OPCION C:	Temperature of the collecting surface is below the dewpoint and the dewpoint is also below freezing	

PREG20098099	What condition is indicated when ice pellets are encountered during flight?	B
OPCION A:	Thunderstorms at higher levels	

OPCION B:	Freezing rain at higher levels	
OPCION C:	Snow at higher levels	

PREG20098100	When will frost most likely form on aircraft surfaces?	A
OPCION A:	On clear nights with stable air and light winds	
OPCION B:	On overcast nights with freezing drizzle precipitation	
OPCION C:	On clear nights with convective action and a small temperature / dewpoint spread	

PREG20098095	At which location does Coriolis force have the least effect on wind direction?	C
OPCION A:	At the poles	
OPCION B:	Middle latitudes (30° to 60°)	
OPCION C:	At the Equator	

PREG20098135	Under what conditions would clear air turbulence (CAT) most likely be encountered?	A
OPCION A:	When constant pressure charts show 20-knot isotachs less than 60 NM apart	
OPCION B:	When constant pressure charts show 60-knot isotachs less than 20 NM apart	
OPCION C:	When a sharp trough is moving at a speed less than 20 knots	

PREG20098136	What action is recommended when encountering turbulence due to a wind shift associated with a sharp pressure frough?	A
OPCION A:	Establish a course across the trough	
OPCION B:	Climb or descend to a smoother level	
OPCION C:	Increase speed to get out of the trough as soon as possible	

PREG20098137	In comparison to an approach in a moderate headwind, which is an indication of a possible wind shear due to a decreasing headwing when descending on the glide slope?	B
OPCION A:	Less power is required.	
OPCION B:	Higher pitch attitude is required.	
OPCION C:	Lower descent rate is required.	

PREG20098138	What condition is necessary for the formation of structural icing in flight?	C
OPCION A:	Supercooled water drops	
OPCION B:	Water vapor	
OPCION C:	Visible water	

PREG20098139	Which type precipitation is an indication that supercooled water is present?	B

OPCION A:	Wet snow	
OPCION B:	Freezing rain	
OPCION C:	Ice pellets	

PREG20098141	What is the lowest cloud in the stationary group associated with a mountain wave?	A
OPCION A:	Rotor cloud	
OPCION B:	Standing lenticular	
OPCION C:	Low stratus	

PREG20098142	Where is the normal location of the jetstream relative to surface lows and fronts?	A
OPCION A:	The jetstream is located north of the surface systems	
OPCION B:	The jetstream is located south of the low and warm front	
OPCION C:	The jetstream is located over the low and crosses both the warm front and the cold front	

PREG20098143	Which type frontal system is normally crossed by the jetstream?	C
OPCION A:	Cold fron and warm front	
OPCION B:	Warm front	
OPCION C:	Occluded front	

PREG20098144	Which type clouds may be associated with the jetstream?	B
OPCION A:	Cumulonimbus cloud line where the jetstream crosses the cold front	
OPCION B:	Cirrus clouds on the equatorial side of the jetstream	
OPCION C:	Cirrostratus cloud band on the polar side and under the jetstream	

PREG20098134	What weather difference is found on each side of a "dry line"?	B
OPCION A:	Extreme temperature difference	
OPCION B:	Dewpoint difference	
OPCION C:	Stratus versus cumulus clouds	

PREG20098140	Which is a necessary condition for the occurence of a low-level temperature inversion wind shear?	B
OPCION A:	The temperature differential between the cold and warm layers must be at least 10°C.	
OPCION B:	A calm or light wind near the surface and a relatively strong wind just above the inversion.	
OPCION C:	A wind direction difference of at least 30° between the wind near the surface and the wind just above the inversion.	

PREG20098133	In which meteorological conditions can frontal waves and low pressure areas form?	B
OPCION A:	Warm fronts or occluded fronts.	

OPCION B:	Slow-moving cold fronts or stationary fronts.	
OPCION C:	Cold front occlusions.	

PREG20098126	Which feature is associated with the tropopause?	C
OPCION A:	Absence of wind and turbulence	
OPCION B:	Absolute upper limit of cloud formation	
OPCION C:	Abrupt change of temperature lapse rate	

PREG20098131	Which weather condition is an example of a nonfrontal instability band?	A
OPCION A:	Squall line	
OPCION B:	Advective fog	
OPCION C:	Frontogenesis	

PREG20098119	Atmospheric pressure changes due to a thunderstorm will be al the lowest value	B
OPCION A:	during the downdraft and heavy rain showers.	
OPCION B:	when the thunderstorm is approaching.	
OPCION C:	immediately after the rain showers have stopped.	

PREG20098120	Why are downdrafts in a mature thunderstorm hazardous?	A
OPCION A:	Downdrafts are kept cool by cold rain which tends to accelerate the downward velocity	
OPCION B:	Downdrafts converge toward a central location under the storm after striking the surface	
OPCION C:	Downdrafts become warmer than the surrounding air and reverse into an updraft before reaching the surface	