TEMA: 0119 ATP - (CHAP. 08) METEOROLOGY AND WEATHER SERVICES

COD PREG:	PREGUNTA:	RPTA:
PREG20078714	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 jet 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 jestream where moisture has formed cirriform clouds.	
PREG20078712	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.	
PREG20078713	What is likely location of clear air turbulence?	A
OPCION A:	In an 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.	
PREG20078715	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.	
PREG20078716	What weather feature occurs at altitude levels 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.	
PREG20078717	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	
PREG20078704	Which is a necessary condition for the occurrence 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.	

PREG20078711	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.	

PREG20078703	Which type of icing is associated with the smallest size of water droplet similar to that found in low-level stratus clouds?	C
OPCION A:	Clear ice.	
OPCION B:	Frost ice.	
OPCION C:	Rime ice.	

PREG20078734	Which type weather conditions are covered in the Convective SIGMET	A
OPCION A:	Embedded thunderstorms, lines of thunderstorms, and thunderstorms with 3/4-inch hail or tornadoes.	
OPCION B:	Cumulonimbus clouds with tops above the tropopause and thunderstorms with 1/2-inch hail or funnel clouds.	
OPCION C:	Any thunderstorm with a severity level of VIP 2 or more	

PREG20078735	The purpose of diluting ethylene glycol deicing fluid with water in non-precipitation conditions is to	B
OPCION A:	raise the eutectic point.	
OPCION B:	decrease the freeze point.	
OPCION C:	increase the minimum freezing point (onset of crystallization).	

PREG20078753	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.	

PREG20078685	Which type storms are most likely to produce funnel clouds or tornadoes?	B
OPCION A:	Air mass thunderstorms.	
OPCION B:	Cold front or squall linde thuunderstorms.	
OPCION C:	Storms associated with icing and supercooled water.	

PREG20078640	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.	

PREG20078683	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.	

PREG20078634	Fig. 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.	

PREG20078635	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.	

PREG20078636	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.	

PREG20078637	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.	

PREG20078638	What characterizes a ground-based inversion?	C
OPCION A:	Convection currents at the surface.	
OPCION B:	Cold temperatures.	
OPCION C:	Poor visibility.	

PREG20078639	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.	

PREG20078641	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	

PREG20078684	What is a difference between an air mass thunderstorm 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.	

PREG20078643	Which type wind flows downslope becoming warmer and dryer?	C
OPCION A:	Land breeze.	
OPCION B:	Valley wind.	
OPCION C:	Katabatic wind.	

PREG20078644	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.	

PREG20078645	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.	

PREG20078646	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.	

PREG20078692	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 a severe turbulence layer.	

PREG20078701	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.	

PREG20078687	Which conditions are necessary for the formation of upslope fog?	A
OPCION A:	Moist, stable air behind 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.	

PREG20078688	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.	

PREG20078689	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.	

PREG20078690	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.	

PREG20078691	A clear area in a line of thunderstorm 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.	

PREG20078718	What is the single source reference that contains information regarding volcanic eruption, turbulence, and icing conditions for a specific region?	B
OPCION A:	Weather Depiction Chart	
OPCION B:	In flight weather advisories	
OPCION C:	Area forecast	

PREG20078702	Which type precipitation is an indication that supercooled water is present?	B

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

PREG20078693	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.	

PREG20078695	Which atmospheric factor cause 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.	

PREG20078696	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.	

PREG20078697	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.	

PREG20078698	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.	

PREG20078699	What action is recommended when encountering turbulence due to a wind shift associated with a sharp pressure trough?	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.	

PREG20078700	In comparison to an approach in a moderate headwind, which is an indication of a possible wind shear due to a decreasing headwindwhen 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.	

PREG20078694	Which weather condition is an example of a nonfrontal instability band?	A
OPCION A:	Squall line.	
OPCION B:	Advective fog.	
OPCION C:	Frontogenesis.	

PREG20078719	Which primary source contains information regarding the expected weather at the destination airport, at the ETA?	C
OPCION A:	Low-Level Prog Chart.	
OPCION B:	Radar Summary and Weather Depiction Charts.	
OPCION C:	Terminal Aerodrome Forecast.	

PREG20078730	METAR KHRO 131753Z 09007KT 7SM FEW020 BKN040 30/27 A3001. SPECI KHRO 131815Z 13017G26KT 3SM +TSRA SCT020 BKN045TCU 29/24 A2983 RMK RAB12 WS TKO LDG RW14R FRQ LTGICCG VC. What change has taken place between 1753 and 1815 UTC at Harrison (KHRO)?	B
OPCION A:	The ceiling lowered and cumulonimbus clouds developed.	
OPCION B:	Thundershowers began at 12 minutes past the hour.	
OPCION C:	Visibility reduced to IFR conditions.	

PREG20078721	Which are the only cloud types forecast in the Terminal Aerodrome Forecast?	B
OPCION A:	Altocumulus.	
OPCION B:	Cumulonimbus.	
OPCION C:	Stratocumulus.	

PREG20078740	Snow on top of deicing or anti-icing fluids	B
OPCION A:	need not be considered as adhering to the aircraft.	
OPCION B:	must be considered as adhering to the aircraft.	
OPCION C:	must be considered as adhering to the aircraft, but a safe takeoff can be made as it will blow off.	

PREG20078741	Freezing Point Depressant (FPD) fluid residue on engine fan or compressor blades	C
OPCION A:	can increase performance and cause stalls or surges.	
OPCION B:	could cause FDP vapors to enter the aircraft but would have no affect on engine thrust or power.	

OPCION C:	can reduce engine performance and cause surging and/or compressor stalls.	

PREG20078742	The adverse effects of ice, snow, or frost on aircraft performance and flight characteristics include decreased lift and	C
OPCION A:	increased thrust.	
OPCION B:	a decreased stall speed.	
OPCION C:	an increased stall speed.	

PREG20078743	Test data indicate that ice, snow, or frost having a thickness and roughness similar to medium or coarse sandpaper on the leading edge and upper surface of a wing can	B
OPCION A:	reduce lift by as much as 40 percent and increase drag by 30 percent.	
OPCION B:	reduce lift by as much as 30 percent and increase drag by 40 percent.	
OPCION C:	increase drag and reduce lift by as much as 40 percent.	

PREG20078744	What is the effect of Freezing Point Depressant (FPD) fluid residue on engine fan or compressor blades?	C
OPCION A:	could cause FPD vapors to enter the aircraft but would have no affect on engine thrust or power.	
OPCION B:	It can increase performance and cause stalls or surges.	
OPCION C:	It can reduce engine performance and cause surging and/or compressor stalls.	

PREG20078745	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.	

PREG20078739	Test data indicate that ice, snow, or frost having a thickness and roughness similar to medium or coarse sandpaper on the leading edge and upper surface of a wing can	C
OPCION A:	reduce lift by as much as 40 percent and increase drag by 30 percent.	
OPCION B:	increase drag and reduce lift by as much as 40 percent.	
OPCION C:	reduce lift by as much as 30 percent and increase drag by 40 percent.	

PREG20078746	A severe thunderstorm is one in which the surface wind is	A
OPCION A:	50 knots 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.	

PREG20078748	A squall line is a sudden increase of at least 15 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 2 minutes.	
OPCION C:	20 knots or more for at least 1 minute.	

PREG20078749	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.	

PREG20078750	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.	

PREG20078751	On the constant pressure analysis chart, aircraft and satellite observations are used in the analysis over areas of sparse data. An aircraft observation is plotted using	B
OPCION A:	a station circle at the aircraft location.	
OPCION B:	a square at the aircraft location.	
OPCION C:	a star at the aircraft location.	

PREG20078752	The prevailing visibility in the following METAR is METAR KFSM 131756Z AUTO 00000KT M1/4SM R25/0600V1000FT -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.	

PREG20078686	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.	

PREG20078747	On the constant pressure analysis chart, satellite and aircraft observations are used in the analysis over areas of sparse data. A satellite observation is plotted using	C
OPCION A:	a station circle at the cloud top location.	
OPCION B:	a square at the cloud top location.	
OPCION C:	a star at the cloud top location.	

PREG20078720	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.	

PREG20078738	Freezing Point Depressant (FPD) fluids used for deicing	B
OPCION A:	provide ice protection during flight.	
OPCION B:	are intended to provide ice protection on the ground only.	
OPCION C:	on the ground, cause no performance degradation during takeoff.	

PREG20078736	Which procedure increases holding time when deicing/anti-icing an airplane using a two-step process?	A
OPCION A:	Heated Type 1 fluid followed by cold Type 2 fluid.	
OPCION B:	Cold Type 2 fluid followed by hot Type 2 fluid.	
OPCION C:	Heated Type 1 or 2 fluid followed by cold Type 1 fluid.	

PREG20078722	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.	

PREG20078723	What type turbulence should be reported when it causes 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.	

PREG20078724	What type turbulence should be reported when it momentarily causes slight, erratic chnages 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 light turbulence.	

PREG20078725	Fig. 145 What was the local Central Standard Time of the Aviation Routine Weather Report at Austin (KAUS)?	A
OPCION A:	11:53 a.m.	
OPCION B:	5:53 p.m.	

OPCION C:	10:53 p.m.	

PREG20078647	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 colder air below.	

PREG20078633	Fig. 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.	

PREG20078632	Fig. 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.	

PREG20078631	Ref. 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.	

PREG20078630	Ref. 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.	

PREG20078616	What is the expected duration of an individual microburst?	C
OPCION A:	Five minutes with maximum winds lasting approximately 2 to 4 minutes.	
OPCION B:	One microburst may continue for as long as an hour.	
OPCION C:	Seldom longer than 15 minutes from the time the burst strikes the ground until dissipation.	

PREG20078617	Maximum downdrafts in a microburst encounter may be as strong as	C
OPCION A:	1,500 ft/min.	

OPCION B:	4,500 ft/min.	
OPCION C:	6,000 ft/min.	

PREG20078618	An aircraft that encounters a headwind of 40 knots, within a microburst, may expect a total shear across the microburst of	B
OPCION A:	40 knots.	
OPCION B:	80 knots.	
OPCION C:	90 knots.	

PREG20078619	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.	

PREG20078620	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.	

PREG20078621	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.	

PREG20078648	What term describes an elongated area of low pressure?	A
OPCION A:	Trough.	
OPCION B:	Ridge.	
OPCION C:	Hurricane or typhon.	

PREG20078622	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.	

PREG20078624	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.	

PREG20078625	Which is a 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 15 knots or vertical speed changes greater than 500 ft/min.	
OPCION C:	Any rapid change of airspeed greater than 20 knots which is sustained for more than 20 seconds or vertical speed changes in ecxess of 100 ft/min.	

PREG20078626	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.	

PREG20078627	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: Increases. VERTICAL SPEED: Increases. INDICATED AIRSPEED: Decreases, then increases to approach speed.	

PREG20078628	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.	

PREG20078629	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.	

PREG20078623	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.	

PREG20078649	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.	

PREG20078642	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.	

PREG20078651	Where is a common location for an inversion?	B
OPCION A:	At the tropopause.	
OPCION B:	In the stratosphere.	
OPCION C:	At the base of cumulus clouds.	

PREG20078670	Which type clouds are indicative of very strong turbulence?	B
OPCION A:	Nimbostratus.	
OPCION B:	Standing lenticular.	
OPCION C:	Cirrocumulus.	

PREG20078671	What is a feature of a stationary front?	C
OPCION A:	The warm fron 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.	

PREG20078672	Which event usually occurs after an aircraft passes through a fron into the colder air?	C
OPCION A:	Temperature/dewpoint spread decreases.	
OPCION B:	Wind direction shifts to the left.	
OPCION C:	Atmospheric pressure increases.	

PREG20078673	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.	

PREG20078674	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:	Warm air flowing over a cool lake may produce rain showers.	

PREG20078650	What information from the control tower is indicated by the following transmission? "SOUTH BOUNDARY WIND ONE SIX ZERO AT TWO FIVE, WEST BOUNDARY WIND TWO FOUR ZERO AT THREE FIVE".	C
OPCION A:	A downburst is located at the center of the airport.	
OPCION B:	Wake turbulence exists on the west side of the active runway.	
OPCION C:	There is a possibility of wind shear over or near the airport.	

PREG20078676	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.	

PREG20078677	During the life cycle of a thunderstorm, which stage is characterized predominately by downdrafts?	B
OPCION A:	Cumulus.	
OPCION B:	Dissipating.	
OPCION C:	Mature.	

PREG20078678	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.	

PREG20078679	What is indicated by the term "embedded thunderstorms"?	C
OPCION A:	Severe thunderstorms are embedded in a squall line.	
OPCION B:	Thunderstorms are predicted to develop in a stable air mass.	
OPCION C:	Thunderstorms are obscured by other types of clouds.	

PREG20078680	Where do squall lines most often develop?	B
OPCION A:	In an occluded front.	
OPCION B:	Ahead of a cold front.	
OPCION C:	Behind a stationary front.	

PREG20078681	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.	

PREG20078682	Atmospheric pressure changes due to a thunderstorm will be at 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.	

PREG20078669	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.	

PREG20078668	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.	

PREG20078675	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 temperature/dewpoint spread.	

PREG20078666	Which process causes adiabatic cooling?	A
OPCION A:	Expansion of air as it raises.	
OPCION B:	Movement of air over a colder surface.	
OPCION C:	Release of latent heat during the vaporization process.	

PREG20078667	When saturated air moves downhill, its temperature increases	B
OPCION A:	at a faster 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.	

PREG20078652	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.	

PREG20078653	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.	

PREG20078654	What is the approximate rate unsaturated air will cool flowing upslope?	A
OPCION A:	3° per 1,000 feet.	
OPCION B:	2° per 1,000 feet.	
OPCION C:	4° per 1,000 feet.	

PREG20078656	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.	

PREG20078657	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.	

PREG20078658	Which weather condition is defined as an anticyclone?	B
OPCION A:	Calm.	
OPCION B:	High pressure area.	
OPCION C:	COL.	

PREG20078655	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	

PREG20078660	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.	

PREG20078659	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.	

PREG20078664	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.	

PREG20078663	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.	

PREG20078665	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.	

PREG20078661	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.	

PREG20078706	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.	

PREG20078707	Which type frontal system is normally crossed by the jetstream?	C
OPCION A:	Cold front and warm front.	
OPCION B:	Warm front.	
OPCION C:	Occluded front.	

PREG20078708	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.	

PREG20078709	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 occurs to fly on the polar side of the jetstream.	
OPCION C:	Change altitude or course to avoid a possible elongated area.	

PREG20078705	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.	

PREG20078710	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.	

PREG20078726	Ref. Figure 145 The peak wind at KAMA was reported to be from 320º true at 39 knots.	A
OPCION A:	wich ocurred at 1743Z	
OPCION B:	with gusts to 43 knots	
OPCION C:	with 43 of an inch liquid precipitation since the last report	

PREG20078727	SPECI KGLS 131802Z 10012G21KT 060V140 2SM+SHRA SCT005BKN035 OVC050CB24/23 A2980 RMK RAB57 WS TKO RW09L WSHFT 58 FROPA. This SPECI report at Galveston (KGLS) indicates which condition?	B
OPCION A:	Wind steady at 100° magnetic at 12 knots, gusts to 21.	
OPCION B:	Precipitation started at 57 after the hour.	
OPCION C:	5,000 feet overcast with towering cumulus.	

PREG20078737	Which is an effect of ice, snow, or frost formation on an airplane?	A
OPCION A:	Increased stall speed	
OPCION B:	Increased pitchdown tendencies	
OPCION C:	Increased angle of attack for stalls	

PREG20078728	METAR KMAF 131756Z 02020KT 12SM BKN025 OVC250 27/18 A3009 RMK RAE44. Which weather condition is indicated by this METAR report at Midland (KMAF)?	A
OPCION A:	Rain of unknown intensity ended 16 minutes before the hour.	
OPCION B:	The ceiling was at 25,000 feet MSL.	
OPCION C:	Wind was 020° magnetic at 20 knots.	

PREG20078729	METAR KSPS 131757Z 09014KT 6SM -RA SCT025 OVC090 24/22 A3005. SPECI KSPS 131820Z 01025KT 3SM +RA FC OVC015 22/21 A3000. Which change took place at Wichita Falls (KSPS) between 1757 and 1820 UTC?	C
OPCION A:	The rain became lighter.	
OPCION B:	Atmospheric pressure increased.	
OPCION C:	A funnel cloud was observed.	

PREG20078731	A PROB40 (PROBability) HHhh group in an International Terminal Aerodrome Forecast (TAF) indicates the probability of	A
OPCION A:	thunderstorms or other precipitation.	
OPCION B:	precipitation or low visibility.	
OPCION C:	thunderstorms or high wind.	

PREG20078732	Fig. 147 At which time is IFR weather first predicted at Lubbock (KLBB)?	A
OPCION A:	0100Z.	
OPCION B:	2100Z.	
OPCION C:	0400Z.	

PREG20078733	Vertical wind shear can be determined by comparing winds on vertically adjacent constant pressure charts. The vertical wind shear that is critical for probability of turbulence is	B
OPCION A:	4 knots or greater per 1,000 feet.	
OPCION B:	6 knots or more pre 1,000 feet	
OPCION C:	greater than 8 knots per 1,000 feet	

PREG20078662	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.	