8876. The tropopause is a level at which:

A – vertical currents are strongest
B – water vapour content is greatest
C – pressure remains constant
D – temperature ceases to fall with increasing height

Ref: all

Ans: D

8889. The tropopause is lower;

A – south of the equator than north of it
B – in summer than winter in moderate latitudes
C – over the North pole than over the equator
D – over the equator than over the South Pole

Ref: all

Ans: C

10050. What is the approximate composition of the dry air by volume in the troposphere?

A – 21% oxygen, 78% nitrogen, and the rest other gases
B – 10% oxygen, 89% nitrogen, and the rest other gases
C – 88% oxygen, 9% nitrogen, and the rest other gases
D – 50% oxygen, 40$ nitrogen and the rest other gases

Ref: all

Ans: A

10055. In which layer is most of the atmospheric humidity concentrated?

A – Troposphere
B – Tropopause
C – Stratosphere
D – Stratopause

Ref: all

Ans: A

10825. Which one of the following statement applies to the tropopause?

A – It is, by definition, a temperature inversion
B – It is, by definition, an isothermal layer
C – It indicates a strong temperature lapse rate
D – It separates the troposphere from the stratosphere

Ref: all

Ans: D

10846. The average height of the tropopause at 50oN is about:

A – 14 km
B – 8 km
C – 11 km
D – 16 km

Ref: all

Ans: C

10851. The troposphere:

A – has a greater vertical extent above the equator than above the poles
B – contains all oxygen of the stratosphere
C – is the separation layer between the stratosphere and atmosphere
D – reaches the same height at all latitudes

Ref: all

Ans: A

10855. How does the height of the tropopause normally vary with latitude in the northern hemisphere?

A – It remains constant throughout the year
B – It remains constant from north to south
C – It increases from south to north
D – It decreases from south to north

Ref: all

Ans: D

24425. Which of the following statements concerning the tropopause is correct?

A – The temperature of the tropopause at the equator and at the poles is equal
B – The temperature remains constant above and below the tropopause
C – The temperature of the tropopause at the equator is higher than at the poles
D – The temperature lapse rate changes abruptly at the tropopause

Ref: all

Ans: D

24440. Which statement concerning the tropopause is correct?

A – The temperature at the tropopause is approximately -80°C over the Poles and approximately -40°C over the equator
B – Above the tropopause no clear air turbulence occurs
C – in the ICAO standard atmosphere the tropopause lies higher over the Poles than over the equator
D – The layer just above the tropopause is absolutely stable

Ref: all

Ans: D

050-01-02 Temperature

8808. Which is true of the temperature at the tropopause?

A – It is higher in polar regions than in equatorial regions
B – It is higher in equatorial regions than in polar regions
C – It is highest in middle latitudes
D – There is no significant difference with change of latitude

Ref: all

Ans: A

8810. Several physical processes contribute to atmospheric warming. Which of the following contribute the most?

A – Absorption and evaporation
B – Solar radiation and conduction
C – Absorption and vaporisation
D – Convection and condensation

Ref: all

Ans: D

10802. The temperature at FL 160 is -22ºC. What will the temperature be at FL 90 if the ICAO standard lapse rate is applied?

A - -4ºC
B - -8ºC
C – 0ºC
D - +4ºC

Ref: all

Ans: B

10812. The temperature at FL 140 is -12ºC. What will the temperature be at FL 110 if the ICAO standard lapse rate is applied:

A - -9ºC
B - -18ºC
C - -6ºC
D - -15ºC

Ref: all

Ans: C

10820. The temperature at FL 80 is +6ºC. What will the temperature be at FL 130 if the ICAO standard lapse rate is applied?

A - +2ºC
B - -6ºC
C – 0ºC
D - -4ºC

Ref: all

Ans: D

10839. The diurnal variation in temperature is largest when the sky is:

A – clear and winds are strong
B – clear and winds are weak
C – overcast and winds are weak
D – overcast and winds are strong

Ref: all

Ans: B

10127. What is the vertical temperature lapse rate, up to 11 km, in the standard ICAO atmosphere?

A – 2ºC per 1000m
B – 4.5ºC per 1000m
C – 3ºC per 1000m
D – 6.5ºC per 1000m

Ref: all

Ans: D

10136. A 200 hPa pressure altitude level can vary in height. In temperate regions which of the following average heights is applicable?

A – FL 50
B – FL 300
C – FL 100
D – FL 390

Ref: all

Ans: D

10736. A 300 hPa pressure level can vary in height. In temperate regions which of the following average heights is applicable?

A – FL 100
B – FL 390
C – FL 300
D – FL 50

Ref: all

Ans: C

19763. If you are flying at FL 100 in an air mass that is 10ºC warmer than a standard atmosphere, what is the outside temperature likely to be?

A - +15ºC
B - +5ºC
C - -10ºC
D - -15ºC

Ref: all

Ans: B

8870. An aircraft is flying at FL 180 on the northern hemisphere with a crosswind from the left. Which of the following is correct concerning its true altitude?=

A – It remains constant
B – It increases
C – It decreases
D – Without knowing temperatures at FL 180 this question cannot be answered

Ref: all

Ans: C

8875. In order to calculate QFE from QNH, which of the following must be known?

A – Elevation and the temperature at the airfield
B – Temperature at the airfield
C – Elevation of the airfield and the temperature at MSL
D – Elevation of the airfield

Ref: all

Ans: D

8879. If the QNH at Locarno (200 metres above sea level) is 1025 hPa, what is the approximate QFE?

A – 1005 hPa
B – 995 hPa
C – 1000 hPa
D – 1025 hPa

Ref: all

Ans: C

10030. You are flying at FL 200. Outside air temperature is -40°C and the pressure at sea level is 1033 hPa. What is the true altitude?

A – 20660 feet
B – 19310 feet
C – 21740 feet
D – 18260 feet

Ref: all

10101. You intend to overfly a mountain range. The recommended minimum flight altitude is, according to the aviation chart, 15000 ft/AMSL. The air mass that you will fly through is on average 15oC warmer than the standard atmosphere. The altimeter is set to QNH (1023 hPa). At what altimeter reading will you effectively be at the recommended minimum flight altitude?

A – 15900 ft
B – 13830 ft
C – 14370 ft
D – 14100 ft

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: D

10113. QNH is defined as:

A – The pressure at MSL obtained using the standard atmosphere
B – The pressure at MSL, obtained using the actual conditions
C – QFE reduced to MSL using the actual conditions
D – QFE reduced to MSL using the standard atmosphere

Ref: all

Ans: D

10124. At which pressure and temperature conditions may you safely assume that the minimum usable flight level at least lies at the same height, as the minimum safe altitude?

A – In a cold low pressure region
B – At a temperature greater than or equal to that of the ISA and where the QNH is greater than or equal to 1013 hPa
C – At a temperature less than or equal to that of the ISA and where the QNH is less than 1013 hPa
D – In a warm high pressure region

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: B

10799. In order to reduce QFE to QNH, which of the following item(s) must be known?

A – Elevation of the airfield and the temperature at the airfield
B – Temperature at the airfield
C – Elevation of the airfield and the temperature at MSL
D – Elevation of the airfield

Ref: all

Ans: D

10803. After landing at an aerodrome (aerodrome elevation 1715 ft), the altimeter indicates an altitude of 1310 ft. The altimeter is set to the pressure value of 1013 hPa. What is the QNH at this aerodrome?

A – 1015 hPa
B – 1028 hPa
C – 1013 hPa
D – 998 hPa

Ref: all

Ans: B

10808. What information is required to convert a minimum safe altitude into a lowest usable flight level?

A – Lowest value of QNH and the highest negative temperature deviation from ISA
B – Highest value of QNH and the highest negative temperature deviation from ISA
C – Highest value of QNH and the highest positive temperature deviation from ISA
D – Lowest value of QNH and the lowest negative temperature deviation from ISA

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: A

10873. During a flight at FL 100 from Marseille (QNH 1012 hPa) to Palma de Mallorca (QNH 1015 hPa), an aircraft remains at a constant true altitude. The reason for this is that:

A – the air at Marseille is colder than that at Palma de Mallorca
B – the altimeters are erroneous, and need to be tested
C – the air at Marseille is warmer than that at Palma de Mallorca
D – one of the two QNH values may be incorrect

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: C

10876. During a flight over the sea at FL 100 from Marseille (QNH 1016 hPa) to Palma de Mallorca (QNH 1016 hPa), the true altitude is constantly decreasing. What is the probable reason for this?

A – One of the QNH values must be wrong
B – The air at Marseille is warmer than that at Palma de Mallorca
C – The altimeter is faulty
D – The aircraft is being blown off track to the left

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: B

10881. You plan a flight over a mountain range at a true altitude of 15000 ft/AMSL. The air is on an average 15°C colder than ISA, the pressure at sea level is 1003 hPa. What indication must the altimeter (setting 1013.2 hPa) read?

A – 15690 ft
B – 16230 ft
C – 14370 ft
D – 13830 ft

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: B

15812. What is the relationship, if any, between QFE and QNH at an airport situated 50 ft below sea level?

A – QFE equals QNH
B – No clear relationship exists
C – QFE is greater than QNH
D – QFE is smaller than QNH

Ref: all

Ans: C

15824. The QNH at an airfield located 200 metres above sea level is 1022 hPa. The air temperature is not available. What is the QFF?

A – Less than 1022 hPa
B – It is not possible to give a definitive answer
C – More than 1022 hPa
D – 1022 hPa

Ref: all

Ans: B

15825. If the QNH at Locarno (200 metres above sea level) is 1016 hPa, what is the approximate QFE? (Assume 1 hPa = 8m)

A – 1005 hPa
B – 990 hPa
C – 995 hPa
D – 1000 hPa

Ref: all

Ans: B

15826. An aircraft is flying over the sea at FL120, with a true altitude of 12000 feet, local QNH is 1013 hPa. What assumption, if any, can be made about the air mass in which the aircraft is flying?

A – It is warmer than ISA
B – There is insufficient information to come to any conclusion
C – Its average temperature is the same as ISA
D – It is colder than ISA

Ref: all

Ans: C

15827. During the climb after takeoff, the altimeter setting is adjusted at the transition altitude. If the local QNH is 966 hPa, what will happen to the altimeter reading during the resetting procedure?

A – It will decrease
B – It will remain the same
C – It is not possible to give a definitive answer
D – It will increase

16521. You are flying at a constant altitude according to your altimeter. Your altimeter setting is unchanged. Which of the following interact to give a minimum a true altitude?

1) Flying from an area of low pressure to that of an area of high pressure
2) Flying from an area of high pressure to that of an area of low pressure
3) Flying from a warm air mass to a cold air mass
4) Flying from a cold air mass to a warm air mass

A – 1, 3
B – 2, 4
C – 1, 4
D – 2, 3

Ref: all

Ans: D

16522. You are flying over an airport at an indicated altitude of 5600 ft. Airport elevation = 2785 ft. The altimeter is set at the correct aerodrome QNH value of 993 hPa and the instrument error is zero, you are crossing the airport at a height above ground of:
(standard pressure setting = 1013 hPa, 1 hPa = 30 ft)

A – 5000 ft
B – 5600 ft
C – 2815 ft
D – 2215 ft

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: C

16523. Your pressure altimeter is set at 1000 hPa. You have been cleared to join the traffic circuit at 2600 ft and received current QNH = 1010 hPa. You join the circuit at 2600 ft but forget to reset your altimeter. Other aircraft with correct altimeter settings indicating 2600 ft in the circuit will, compared to you, be flying:

A – 300 ft above
B – 300 ft below
C – 100 ft above
D – 100 ft below

Ref: AIR: atpl, ir; HELI: atpl, ir

24273. Given:
Altimeter setting: 1013.2 hPa
Altimeter reading: 5000 ft
Outside air temperature at 5000 ft: +5°C
QFE: 958 hPa
QNH: 983 hPa

What is the true height of the aeroplane above the aerodrome?

A – 4325 ft
B – 4190 ft
C – 3515 ft
D – 4865 ft

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: C

24280. If the QFE, QNH and QFF of an airport have the same value,

A – the 1013.25 hPa level must be at MSL
B – the conditions must be as in the ISA
C – the airport must be at MSL and the conditions must be as in the ISA
D – the airport must be at MSL

Ref: all

Ans: D

24313. Pressure altitude is obtained by:

A – setting the altimeter to QFF pressure
B – correcting the altimeter for temperature deviation from ISA
C – setting the altimeter to a station pressure which has been corrected to sea level
D – setting the altimeter to standard sea level pressure

Ref: all

Ans: D

8952. The wind tends to follow the contour lines (isohypses) above the friction layer because:

A – the coriolis force tends to balance with the horizontal pressure gradient force
B – contour lines are lines that connect points with the same wind speed in the upper air
C – the coriolis force acts perpendicular on a line that connects high and low pressure system
D – the friction of the air with the earth's surface gives the airflow a diversion perpendicular to the gradient force

Ref: all

Ans: A

8953. During periods of prolonged clear skies associated with anti-cyclonic conditions, the:

A – surface wind speed tends to be highest during the early afternoon
B – surface wind speed tends to be highest at night
C – angle between isobars and surface wind direction tends to be greatest in the early afternoon
D – wind tends to back from early morning until early afternoon

Ref: all

Ans: A

8963. (Refer to figure 05-10)
Which air mass and cloud depiction matches the routing A-B?

A – 2
B – 3
C – 4
D – 1

Ref: all

Ans: B

10697. When isobars, for an area in the mid-latitudes on a weather map, are close together, the wind is most likely to be:

A – strong
B – blowing perpendicular to the isobars
C – changing direction rapidly
D – light

Ref: all

Ans: A

10698. Select the true statement concerning isobars and wind flow patterns around high and low-pressure systems that are shown on a surface weather chart?

A – When the isobars are close together, the pressure gradient force is greater and wind velocities are stronger
B – Surface winds flow perpendicular to the isobars
C – Isobars connect contour lines of equal temperature
D – When the isobars are far apart, crest of standing waves may be marked by stationary lenticular clouds

Ref: all

Ans: A

10701. Which forces are balanced with geostrophic winds?

A – Pressure gradient force, coriolis force
B – Friction force, pressure gradient force, coriolis force
C – Pressure gradient force, coriolis force, centrifugal force
D – Pressure gradient force, centrifugal force, friction force

Ref: all

Ans: A

10719. An aircraft flying in the southern hemisphere at 2000 feet, has to turn to the right in order to allow for drift. In which direction, relative to the aircraft, is the centre of low pressure?

A – To the left
B – Behind
C – In front
D – To the right

Ref: all

Ans: C

10777. Where are you likely to find the strongest winds close to the ground?

A – At the centre of a high pressure system
B – At the centre of a low pressure system
C – In the transition zone between two air masses
D – Where there is little variation in pressure over a large area during the winter months

Ref: all

Ans: C

15863. The geostrophic wind depends on:

A – density, earth's rotation, geographic latitude
B – earth's rotation, geographic latitude, centripetal force
C – geographic latitude, centripetal force, height
D – centripetal force, height, pressure gradient

Ref: all

Ans: A

15865. The geostrophic wind speed is directly proportional to the:

A – density of the air
B – horizontal pressure gradient
C – curvature of isobars
D – sine of latitude

Ref: all

Ans: B

15866. Geostrophic wind:

A – always increases with increasing height
B – veers with height if cold air is advected in the northern hemisphere
C – is perpendicular to the horizontal pressure gradient force
D – is directly proportional to the density of the air

Ref: all

Ans: C

10599. Friction between the air and the ground results in the northern hemisphere in:

A – backing of the wind and increase of wind speed at the surface
B – veering of the wind and decrease of wind speed at the surface
C – backing of the wind and decrease of wind speed at the surface
D – veering of the wind and increase of wind speed at the surface

Ref: all

Ans: C

10621. A high pressure area (shallow pressure gradient) covers an area of the Mediterranean Sea and its nearby airport. What surface wind direction is likely at the airport on a sunny afternoon?

A – Parallel to the coastline
B – Land to sea
C – Variable
D – Sea to land

Ref: all

Ans: D

10641. In the northern hemisphere a pilot flying at 1000 ft AGL directly towards the centre of a low pressure area, will find the wind blowing from:

A – about 45 degrees to the right of directly ahead
B – right and behind
C – left and behind
D – directly ahead

Ref: all

Ans: C

10658. The most frequent wind direction in a valley caused by thermal effects is toward the:

A – valley during daylight hours
B – mountain at night
C – mountain during daylight hours
D – valley during daylight as much as at night

Ref: all

Ans: C

10662. The sea breeze is a wind from the sea:

A – blowing at night in mid latitudes
B – that reaches up to the tropopause in daytime
C – occurring only in the lower layers of the atmosphere in daytime
D – occurring only in mid latitudes and in day time

Ref: all

Ans: C

10681. When otherwise calm and clear conditions exist a station on the shore of a large body of water will experience wind:

A – continually from land to water
B – from the water in daytime and from the land at night
C – continually from water to the land
D – from the land in day time and from the water at night

Ref: all

Ans: B

10684. An aircraft is approaching under visual flight rules an airfield whose runway is parallel to the coast. When down wind over the sea, the airfield is on the right. What wind effect should be anticipated on final approach and landing during a sunny afternoon?

A – Cross wind from the left
B – Cross wind from the right
C – Tailwind
D – Headwind

Ref: all

Ans: B

10726. A mountain breeze (katabatic wind) blows:

A – down the slope during the night
B – up the slope during the day
C – down the slope during the day
D – up the slope during the night

Ref: all

Ans: A

10186. Super cooled droplets are always:

A – large and at a temperature below freezing
B – small and at a temperature below freezing
C – at a temperature below freezing
D – at a temperature below -60ºC

Ref: AIR: atpl, ir; HELI: all

Ans: C

10189. Which of the following changes of state is known as sublimation?

A – Solid direct to liquid
B – Solid direct to vapour
C – Liquid direct to solid
D – Liquid direct to vapour

Ref: AIR: atpl, ir; HELI: all

Ans: B

050-03-03 Adiabatic processes

9003. What is the dry adiabatic lapse rate per 1000 ft?

A – 1.5ºC
B – 2.0ºC
C – 3.0ºC
D – 3.5ºC

Ref: AIR: atpl, ir; HELI: all

Ans: C

9005. If the surface temperature is 15ºC, then the temperature at 10000 ft in a current of ascending unsaturated air is:

A – 5ºC
B – 0ºC
C - -15ºC
D - -5ºC

Ref: AIR: atpl, ir; HELI: all

Ans: C

9171. Altostratus clouds are classified as:

A – convective clouds
B – low level clouds
C – high level clouds
D – medium level clouds

Ref: all

Ans: D

9185. Which of the following clouds may extend into more than one layer?

A – Stratus
B – Nimbostratus
C – Altocumulus
D – Cirrus

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: B

9186. Which of the following cloud is classified as low level cloud?

A – ST
B – CS
C – AS
D – CC

Ref: all

Ans: A

9189. Which types of clouds are typical evidence of stable air conditions?

A – ST, AS
B – CU, CB
C – NS, CU
D – CB, CC

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: A

9191. Fall-streaks or virga are:

A – water or ice particles falling out of a cloud that evaporate before reaching the ground
B – strong down draughts in the polar jet stream, associated with jet streaks
C – gusts associated with a well developed Bora
D – strong katabatic winds in mountainous areas and accompanied by heavy precipitation

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: A

9193. Convective clouds are formed:

A – in stable atmosphere
B – in unstable atmosphere
C – in summer during the day only
D – in mid latitudes only

Ref: AIR: atpl, ir; HELI: atpl, ir

Ans: B

9194. (Refer to figure 050-02)
Which one of the displayed cloud forms is representative of a cumulonimbus capillatus?

A – D
B – A
C – B
D – C

Ref: all

Ans: A

9196. Strongly developed cumulus clouds are an indication of:

A – the presence of a low level inversion
B – instability in the atmosphere
C – the presence of warm air aloft
D – poor surface visibility

Ref: AIR: atpl, ir; HELI: all

Ans: B

16553. Altostratus (AS) and Nimbostratus (NS) are easily confused. How do you distinguish between them?

A – The cloud base is higher in AS and precipitation, if any, is light
B – Precipitation falls from AS but not from NS
C – Steady precipitation from AS
D – The sun can be seen through NS

Ref: all

Ans: A

16554. Which one of the following cloud types gives steady rain or snowfall?

A – Altostratus
B – Nimbostratus
C – Cirrostratus
D – Cumulonimbus

Ref: all

Ans: B

16612. The presence of altocumulus lenticularis is a sign of:

A – severe instability
B – anabatic winds
C – katabatic winds
D – lee waves

Ref: AIR: atpl, ir; HPC1: atpl, ir

Ans: D

24114. (Refer to figure 050-66)
The cloud most likely to be experienced in square 1E is:

A – CS
B – C1
C – AS
D – CB

Ref: all

Ans: B

24129. (Refer to figure 050-58)
The cloud type most applicable to square 1E is:

A – CS
B – CB
C – NS
D – SC

Ref: all

Ans: A

24130. (Refer to figure 050-58)
The cloud type most applicable to square 2C is:

A – CS
B – AS
C – CB
D – CU

Ref: all

Ans: B

24131. (Refer to figure 050-58)
The cloud type most applicable to square 2B is:

A – ST
B – CS
C – CB
D – SC

Ref: all

Ans: C

24209. A cumulus congestus is:

A – a remnant of a CB
B – a cumulus that is of great vertical extent
C – a cumulus with little vertical development
D – a cumulus that only occurs in association with the ITCZ

Ref: all

Ans: B

9119. At what time of day, or night, is radiation fog most likely to occur?

A – At sunset
B – Shortly after sunrise
C – Late evening
D – Shortly after midnight

Ref: all

Ans: B

9123. The range of wind speed in which radiation fog is most likely to form is:

A – above 15 kt
B – between 10 and 15 kt
C – between 5 and 10 kt
D – below 5 kt

Ref: all

Ans: D

9124. When does frontal fog, also known as mixing fog, occur?

A – When very humid warm air meets with dry cold air
B – When very humid warm air meets with very humid cold air
C – When very humid cold air meets with dry warm air
D – When very dry cold air meets with very dry warm air

Ref: all

Ans: B

9130. Freezing fog consists of:

A – frozen water droplets
B – super cooled water droplets
C – frozen minute snow flakes
D – ice crystals

Ref: all

Ans: B

10212. Which type of fog is likely to form when air having temperature of 15°C and dew point of 12°C blows at 10 knots over a sea surface having temperature of 5°C?

A – Radiation fog
B – Advection fog
C – Steam fog
D – Frontal fog

Ref: all

Ans: B

10218. Which of the following weather conditions favour the formation of radiation fog?

A – Light wind, little or no cloud, moist air
B – Light wind, extensive cloud, dry air
C – Light wind, extensive cloud, moist air
D – Strong wind, little or no cloud, moist air

Ref: all

Ans: A

10241. Advection fog can be formed when:

A – cold moist air flows over warmer water
B – cold moist air flows over a warmer surface
C – warm moist air flows over a warmer surface
D – warm moist air flows over a colder surface

Ref: all

Ans: D

10242. Under which of these conditions is radiation fog most likely to form?

A – Very dry air
B – Little or no cloud
C – Strong surface winds
D – Very low temperatures

Ref: all

Ans: B

16582. Conditions favourable for the development of radiation fog (FG) are:

A – high relative humidity, no cloud
B – high relative humidity, little or no cloud
C – high relative humidity, little or no cloud, a strong sea breeze
D – high relative humidity, little or no cloud, little wind (2-8 kts or calm)

Ref: all

Ans: D

16583. Which of the following statements is true?

A – Radiation fog only forms on a clear night with no wind
B – Radiation fog only forms in valleys (the katabatic effect)
C – Radiation fog only forms when the air is very dry and there is an inversion
D – Radiation fog cannot form over the sea

Ref: all

Ans: D

16584. Radiation fog can be dispersed by:

A – insulation
B – strong winds
C – replacement of moist air by drier air
D – all of the above

Ref: all

Ans: D

16585. Advection fog is caused by:

A – dry air over a cold surface
B – cold air over a warm moist surface
C – air, cooler by at least 10ºC, moving over a moist surface
D – none of the above

Ref: all

Ans: C

050-05-02 Types of precipitation

9202. Freezing precipitation occurs:

A – only in the precipitation of a warm front
B – only in the precipitation of a cold front
C – mainly in the form of freezing rain or freezing drizzle
D – mainly in the form of freezing hail or freezing snow

Ref: all

Ans: C

9204. What type of cloud can produce hail showers?

A – CS
B – NS
C – CB
D – AC

Ref: all

Ans: C

9206. With what type of cloud is SR precipitation most commonly associated?

A – CC
B – AS
C – ST
D – CB

Ref: all

Ans: D

9207. From what type of cloud does drizzle fall?

A – Stratus
B – Altostratus
C – Cumulus
D – Cirrostratus

Ref: all

Ans: A

9221. What type of clouds are associated with snow showers?

A – Nimbostratus
B – Cumulus and altostratus
C – Altostratus and stratus
D – Cumulus and cumulonimbus

Ref: all

Ans: D

9222. Large hail stones:

A – only occur in thunderstorms of mid latitudes
B – are typically associated with severe thunderstorms
C – are entirely composed of clear ice
D – only occur in frontal thunderstorms

Ref: all

Ans: B

9223. Precipitation in the form of showers occurs mainly from:

A – clouds containing only ice crystals
B – stratified clouds
C – cirro-type clouds
D – convective clouds

Ref: all

Ans: D

9224. What type of clouds are associated with rain showers?

A – Nimbostratus
B – Towering cumulus and altostratus
C – Altostratus and stratus
D – Towering cumulus and cumulonimbus

Ref: all

Ans: D

9255. In Zurich during a summer day the following weather observations were taken:

160450Z 23015KT 3000 + RA SCT008 SCT020 OVC030 13/12 Q1010 NOSIG =
160650Z 25008KT 6000 SCT040 BKN090 18/14 Q1010 RERA NOSIG =
160850Z 25006KT 8000 SCT040 SCT100 19/15 Q1009 NOSIG =
161050Z 24008KT 9999 SCT040 SCT100 21/15 Q1008 NOSIG =
161250Z 23012KT CAVOK 23/16 Q1005 NOSIG =
161450Z 23016KT 9999 SCT040 BKN090 24/17 Q1003 BECMG 25020G40KT TS =
161650Z 24018G35KT 3000 +TSRA SCT006 BKN015CB 18/16 Q1002 NOSIG =
161850Z 28012KT 9999 SCT030 SCT100 13/11 Q1005 NOSIG =

What do you conclude based on these observations?

A – A cold front passed the station early in the morning and a warm front during late afternoon
B – A warm front passed the station early in the morning and a cold front during late afternoon
C – A trough line passed the station early in the morning and a warm front during late afternoon
D – Storm clouds due to warm air came close to and grazed the station

Ref: all

Ans: B

9258. Which of the following conditions are you most likely to encounter when approaching an active warm front at medium to low level?

A – Severe thunderstorms at low altitude
B – Low cloud base and poor visibility
C – Extreme turbulence and severe lightning striking the ground
D – High cloud base, good surface visibility, and isolated thunderstorms

Ref: all

Ans: B

24210. A gust front is:

A – normally encountered directly below a thunderstorm
B – formed by the cold air outflow from a thunderstorm
C – characterised by heavy lightning
D – another name for a cold front

Ref: all

Ans: B

24218. A stationary observer in the northern hemisphere is situated in front of a depression. The centre of the depression passes from west to east and south of the observer. For this observer the wind:

A – backs
B – veers
C – initially veers, then backs
D – initially backs, then veers

Ref: all

Ans: A

24241. An occlusion has the characteristics of a warm front when:

A – the cold air behind is colder than the cold air ahead
B – the cold air behind is warmer than the cold air ahead
C – the cold air behind is lifted by the warm air
D – the cold air ahead is lifted

Ref: all

Ans: B

24242. An occlusion is called a warm occlusion when the cold air:

A – at the rear of the occlusion is colder than the cold air ahead, with the warm air at a higher altitude
B – ahead of the surface position of the occlusion is only at a higher altitude
C – at the rear of the occlusion is colder than the cold air ahead
D – at the rear of the occlusion is less cold that the cold air ahead, with the warm air at a higher altitude

Ref: all

Ans: D

24324. The air mass in the warm sector of a polar front is:

A – arctic air
B – polar air
C – tropical air
D – equatorial air

Ref: all

Ans: C

24326. The arctic front is the boundary between:

A – arctic air and tropical air
B – polar air and tropical air
C – cold polar air and less cold polar air
D – polar air and arctic air

Ref: all

Ans: D

24330. The first clouds are thin, wispy cirrus, followed by sheets of cirrus and cirrostratus, and altostratus. The sun is obscured as the altostratus thickens and drizzle or rain begins to fall. The cloud base is lowering as Nimbostratus arrives. These phenomena:

A – warm front
B – cold front
C – trade wind front
D – sea breeze front

Ref: all

Ans: A

24332. The following sequence of clouds is observed at an airport; cirrus, cirrostratus, altostratus, nimbostratus. This is typical for:

A – the passage of a squall line
B – the passage of a cold front
C – anti-cyclonic weather
D – the passage of a warm front

Ref: all

Ans: D

24443. Which statement is correct for a warm occlusion?

A – The warm front overtakes the cold front
B – The cold front becomes a front aloft
C – The warm front becomes a front aloft
D – Both fronts become fronts aloft

Ref: all

Ans: B

24206. A blocking anti-cyclone in the northern hemisphere is:

A – quasi stationary/situated between 50°N and 70°N/a cold anti-cyclone
B – a warm anti-cyclone/quasi stationary/situated between 50°N and 70°N
C – situated between 50°N and 70°N/a cold anti-cyclone/steering depressions
D – a cold anti-cyclone/steering depressions/situated over Scandinavia

Ref: all

Ans: B

24263. During summer an anti-cyclone covers the British isles giving mainly clear skies. At 0600 UTC a south coast airfield in Southern England reports a surface wind of 350/06. The coastline at the airfield perimeter is aligned in an east/west direction. During:

A – back to NW and strengthen by mid afternoon
B – become southerly to south westerly and increase in velocity by afternoon
C – increase from the north by mid morning becoming calm towards evening
D – veer to easterly before becoming calm by the afternoon

Ref: all

Ans: B

24399. When flying at 5000 feet in the northern hemisphere over plains (flat country) with an anti-cyclone on the left and a depression on the right, the wind will be:

A – from the right
B – from the left
C – a head wind
D – a tail wind

Ref: all

Ans: C

24457. You are flying in the northern hemisphere at 2000 ft over a flat country area. An anti-cyclone is ahead of you and a depression is behind you. The wind affecting you, will be:

A – from your right
B – from your left
C – from ahead
D – from behind

Ref: all

Ans: A

9395. What is encountered during the summer, over land, in the centre of a cold air pool?

A – Nothing (CAVOK)
B – Strong westerly winds
C – Fine weather CU
D – Showers and thunderstorms

Ref: all

Ans: D

9407. A trough of low pressure on a surface synoptic chart is an area of:

A – divergence and subsidence
B – convergence and widespread ascent
C – divergence and widespread ascent
D – convergence and subsidence

Ref: all

Ans: B

9408. Extensive cloud and precipitation is often associated with a non-frontal thermal depression because of:

A – surface divergence and upper level convergence causing widespread descent of air in the depression
B – surface convergence and upper level divergence causing widespread descent of air in the depression
C – surface convergence and upper level divergence causing widespread ascent of air in the depression
D – surface divergence and upper level convergence causing widespread ascent of air in the depression

Ref: all

Ans: C

9412. Which is true of a typical non-frontal thermal depression?

A – It forms over the ocean in summer
B – It forms over land in summer
C – It forms over the ocean in winter
D – It forms over land in winter

Ref: all

Ans: B

Ans: D

9388. The region of the globe where the greatest number of tropical revolving storms occur is:

A – the northern Indian ocean, affecting India, Sri Lanka and Bangladesh
B – the Caribbean sea, affecting the West Indies, Mexico and the south east coastline of the USA
C – the south western Indian ocean, affecting Madagascar, Mauritius and the island of Reunion
D – the north west Pacific, affecting Japan, Taiwan, Korea and the Chinese coastline

Ref: AIR: atpl; HELI: atpl, cpl

Ans: D

9400. (Refer to figure 050-18)
The arrows labelled "U" represent the tracks of tropical revolving storms which occur mainly from:

A – January to March and are called willy willies
B – July to October and are called typhoons
C – May to July and are called cyclones
D – December to April and are called tornadoes

Ref: AIR: atpl; HELI: atpl, cpl

Ans: B

9402. Which statement is true for hurricanes in the North Atlantic?

A – From the earth's surface up to the tropopause the core is warmer than its surroundings
B – They intensify rapidly after landfall
C – The diameter is 50-500m
D – Their greatest frequency of occurrence is in winter

Ref: AIR: atpl; HELI: atpl, cpl

Ans: A

9490. What name is given to the low level wind system between the sub-tropical high pressure belt and the equatorial trough of low pressure (ITCZ)?

A – Doldrums
B – Westerly winds
C – Monsoon
D – Trade winds

Ref: AIR: atpl; HELI: atpl, cpl

Ans: D

9519. Weather conditions at Bombay during early July are mainly influenced by the

A – NE monsoon and the proximity of the ITCZ
B – SW monsoon
C – passage of frontal system generated in the south Indian ocean
D – high incidence of tropical revolving storms originating in the Persian Gulf

Ref: AIR: atpl; HELI: atpl, cpl

Ans: B

9523. What weather is prevalent in the zone of easterly waves?

A – Thunderstorms and rain
B – Continuous rain
C – Clear skies
D – Frontal weather

Ref: AIR: atpl; HELI: atpl, cpl

Ans: A

10297. During July flights from Bangkok (13ºN – 100ºE) to Karachi (25ºN – 67ºE) experience an average tailwind component of 22 kt. In January the same flights, also operating at FL 370, have an average head wind of 50 kt. What is the reason for this difference?

A – The flights happen to be in the area of the polar front jet stream
B – The flights during the summer encountered, by chance, very unusual, favourable conditions
C – The flights in January encountered, by chance, very unusual, adverse conditions
D – The wind components correspond to the seasonal change of the regional wind system

Ref: AIR: atpl; HELI: atpl, cpl

Ans: D

9527. What is the strong relatively cold katabatic wind, blowing down the northern Adriatic coast, mainly during the winter and spring called?

A – Mistral
B – Ghibli
C – Bora
D – Scirocco

Ref: all

Ans: C

9747. What is the reason for seasonal changes in climate?

A – Because the Earth's spin axis is inclined to the plane of its orbit round the Sun
B – Because the distance between the Earth and the Sun varies over a year
C – Because the Earth's orbital speed round the Sun varies according to the time of the year
D – Because of the difference between the Tropical Year and the Calendar Year

Ref: all

Ans: A

9808. At what times of the year does the length of the hours of daylight change most rapidly?

A – Spring Equinox and Autumn Equinox
B – Summer Solstice and Winter Solstice
C – Spring Equinox and Summer Solstice
D – Autumn Equinox and Winter Solstice

Ref: all

Ans: A

10301. A strong, dry and warm katabatic wind, produced by prior enforced ascent of air over hills or mountains is known as a:

A – Bora
B – Harmattan
C – Mistral
D – Foehn

Ref: all

Ans: D

25621. (Refer to figure 050-20)
Considering Melbourne (C) in July, the weather is predominantly influenced by the zone of:

A – sub-tropical high pressure, with the occasional passage of fronts originating in the adjacent zone of westerly waves
B – Antarctic high pressure due to the absence of any protective land mass between south Australia and Antarctica
C – disturbed temperate low pressure, bringing an almost continuous succession of fronts resulting in strong winds, low cloud and rain
D – equatorial low pressure due to the proximity of the inter-tropical convergence zone over central Australia

Ref: AIR: atpl; HELI: atpl, cpl

Ans A

25631. Between which latitudes are you most likely to find the region of travelling low pressure systems during summer?

A – 45° – 75°
B – 35° – 45°
C – 15° – 25°
D – 10° – 15°

Ref: all

Ans: A

25635. What is the surface visibility most likely to be in a warm sector of maritime tropical air during a summer afternoon in western Europe?

A – Very poor (less than 1 km)
B – Moderate (several km)
C – Very good (greater than 50 km)
D – Good (greater than 10 km)

Ref: all

Ans: B

050-09 FLIGHT HAZARDS

050-09-01 Icing

9536. Large super cooled water drops, which freeze on impact on an airplane form:

A – rime ice
B – clear ice
C – hoar frost
D – cloudy ice

Ref: AIR: atpl, ir; HELI: all

Ans: B

9537. In which of these cloud types can icing be virtually ruled out?

A – CU
B – SC
C – NS
D – C1

Ref: all

Ans: D

9541. You have been flying for some time in dense layered cloud. The outside air temperature is -25°C. Which of the following statements is true?

A – If you do not have weather radar on board there is no need to worry, as CB is unlikely to form in such cloud
B – Severe airframe icing is quite likely under these conditions
C – Severe airframe icing is unlikely under these conditions
D – In a dense layered cloud icing is unlikely also at an outside air temperature of -5°C

Ref: all

Ans: C

9595. A small super cooled cloud droplet that collides with an airfoil will most likely:

A – freeze immediately and create rime ice
B – freeze immediately and create clear ice
C – travel back over the wing, creating rime ice
D – travel back over the wing, creating clear ice

Ref: all

Ans: A

9604. While descending through a cloud cover at high level, a small amount of a white and rough powder like contamination is detected along the leading edge of the wing. This contamination is called:

A – Clear ice
B – Rime ice
C – Mixed ice
D – Frost

Ref: AIR: atpl, ir; HELI: all

Ans: B

9608. In which of the following situations is an aircraft most susceptible to icing?

A – Level flight below a rain producing cloud when OAT is below zero degrees C
B – Flying in dense cirrus clouds
C – Level flight in snowfall below a nimbostratus layer
D – Flying in heavy drizzle

Ref: all

Ans: A

9612. Which one of the following statements concerning the formation of aircraft icing is most correct?

A – Risk for icing increases when cloud temperature decreases well below minus 12 degrees C
B – Greatest risk of icing conditions is experienced in cirrus clouds
C – A cloud consisting of both super cooled cloud droplets and ice crystals produces aircraft icing
D – Probability of icing increases when dry snow starts to fall from a cloud

Ref: all

Ans: C

10376. Atmospheric soundings give the following temperature profile: 3000 ft 15ºC 6000 ft 8ºC 10000 ft 1ºC 14000 ft -6ºC 18000 ft -14ºC 24000 ft -26ºC. At which of the following flight levels is the risk for aircraft icing, in cloud, greatest?

A – FL 80
B – FL 150
C – FL 180
D – FL 220

Ref: all

Ans: B

10377. Clear ice forms as a result of:

A – super cooled water droplets spreading during the freezing process
B – water vapour freezing to the aircraft
C – ice pellets splattering on the aircraft
D – super cooled droplets freezing on impact

Ref: AIR: atpl, ir; HELI: all

Ans: A

10378. Rime ice forms through the freezing on to aircraft surfaces of:

A – water vapour
B – large super cooled water drops
C – small super cooled water drops
D – snow

Ref: AIR: atpl, ir; HELI: all

Ans: C

10379. How does a pilot react to heavy freezing rain at 2000 ft/AGL, when he is unable to de-ice nor land?

A – He turns back before the aircraft loses manoeuvrability
B – He descends to the warm air layer below
C – He ascends to the cold air layer above
D – He continues to fly at the same altitude

Ref: all

Ans: A

24286. In mature CB's the probability of severe icing, according to meteorological rules, is greatest in the following temperature range:

A - -23°C to -40°C
B - +5°C to 0°C
C – 0°C to -23°C
D - -40°C to -60°C

Ref: all

Ans: C

24298. In which conditions would you most likely encounter clear icing, and how would it normally appear?

A – Cumuliform clouds, small water droplets, temperatures between -20°C and 25°C. Appears transparent and tends to take the shape of the surface on which it freezes
B – Stratiform clouds, small water droplets, temperatures between -10°C and –20°C. Appears granular and tends to accumulate forward into the air stream
C – Cumuliform clouds, large water droplets, temperatures between 0°C and –15°C. Appears smooth and tends to spread back over an aircraft wing
D – Stratiform clouds, large water droplets, temperatures level below freezing. Appears opaque and builds forward from leading surface into a sharp edge

Ref: all

Ans: C

24354. The formation of glaciee on the leading edges of an aircraft is most likely to be caused by the:

A – relatively slow freezing of small super cooled water droplets and ice crystals
B – instantaneous freezing of small super cooled water droplets
C – instantaneous freezing of large super cooled water droplets and snow crystals
D – relatively slow freezing of large super cooled water droplets

Ref: all

Ans: D

10342. The most dangerous low level wind shears are encountered:

A – when strong ground inversions are present and near thunderstorms
B – in areas with layered clouds and wind speeds higher than 35 kts
C – during any period when wind speed is greater than 35 kt and near valleys
D – near valleys and at the windward side of mountains

Ref: all

Ans: A

10356. Low level wind shear is likely to be greatest….

A – at the condensation level when there is a stong surface friction
B – at the condensation level when there is no night radiation
C – at the top of the friction layer
D – at he top of a marked surface-based inversion

Ref: all

Ans: D

10417. Low level vertical wind shear can be expected during the night:

A – and early morning only in summer
B – in unstable atmospheres
C – and early morning only in winter
D – in association with radiation inversions

Ref: all

Ans: D

10431. What is the effect of a strong low level inversion?

A – It results in good visual conditions
B – It promotes extensive vertical movement of air
C – It prevents vertical wind shear
D – It promotes vertical wind shear

Ref: all

Ans: D

10383. Aircraft struck by lightning may sometimes get considerable damage and at least temporarily the manoeuvring of the aircraft will be made more difficult. Which one of the following statements is correct?

A – An aircraft has in the atmosphere the same qualities as a “Faradays Cage”, which means that struck of lightning seldom occurs. But if it happens, the result will be an occasional engine failure. The crew may get a shock
B – An aircraft made by metal has a certain capacity to attract a lightning, but the lightning will follow the surface and therefore no damage will be caused
C – Aircraft made by composite material may get severe damage, the crew may be blinded and temporarily lose the hearing
D – Aircraft made by composite material cant conduct a lightning and will therefore very seldom be struck

Ref: all

Ans: C

10385. During the life cycle of a thunderstorm, which stage is characterised predominantly by down drafts?

A – Dissipating stage
B – Cumulus stage
C – Mature stage
D – Anvil stage

Ref: all

Ans: A

10394. What feature is normally associated with the initial stage of a thunderstorm?

A – Frequent lightning
B – Roll cloud
C – Continuous updraft
D – Rain or hail at the surface

Ref: all

Ans: C

24261. Convective weather phenomena include:

A – heavy showers, lightning strikes, hail, mist, squalls, light rain over a large area
B – thunderstorms, tornadoes, hail, haze, wind gusts, advection fog
C – thunderstorms, hail, tornadoes, wind gusts, heavy showers, lightning strikes
D – hail, lightning strikes, wind lulls, squalls, stratocumulus, low level wind maximum

Ref: all

Ans: C

24299. In which of the following situations is the probability for severe thunderstorms the highest?

A – Advection of continental cold air over a warm land surface
B – Advection of warm air over a cold land surface
C – Advection of maritime cold air over a warm sea surface
D – Advection of maritime warm air over a cold sea surface

Ref: all

Ans: C

24358. Thunderstorms are often preceded by:

A – Altostratus
B – Nimbostratus
C – Altocumulus Castellanus
D – Altocumulus Lenticularis

Ref: all

Ans: C

24367. What is a down burst?

A – A concentrated downdraft with high speeds and a lower temperature than the surrounding air
B – A concentrated downdraft with high speeds and a higher temperature than the surrounding air
C – An extremely strong wind gust in a tropical revolving storm
D – A small low pressure system where the wind circulates with very high speeds

Ref: all

Ans: A

24424. Which of the following statements about lightnings and lightning strikes is correct?

A – The aircraft is temporarily part of the lightning trajectory
B – Spherical lightnings often penetrate into aircraft
C – Lightning strikes always cause heavy damage
D – Compasses and electronics are always affected

Ref: all

Ans: A

24436. Which one of the following can provide the initial lifting leading to air mass thunderstorms?

A – Advection of cold air over a warm sea
B – Mountain waves
C – Advection of warm air over a cold sea
D – Low level wind shear

Ref: all

Ans: A

24445. Which statement is correct for microbursts?

A – They only develop below convective clouds with heavy rain
B – The diameter of the affected area on the surface does not exceed 4 km
C – They occur in the tropics only
D – Their downdraft is warmer than the surroundings

Ref: all

Ans: B

24455. With the development of a thunderstorm, at what stage will there be only updraughts of air?

A – Anvil stage
B – Mature stage
C – Initial stage
D – Dissipating stage

Ref: all

Ans: C

24356. The visibility transmitted in a METAR is:

A – given by transmissometer when the visibility is below 1500 metres
B – the maximum determined by a meteorologist in a 360º scan at the horizon
C – the lowest observed in a 360º scan from the meteorological station
D – measured by an observer counting the number of lights visible on the runway

Ref: all

Ans: C

24362. What does the code R24R/P1500 mean?

A – Snow clearance in progress on RWY 24 right, useable runway length 1500 metres
B – RVR RWY 24 right below 1500 metres
C – RVR RWY 24 right above 1500 metres
D – RVR RWY 24 right 1500 metres

Ref: all

Ans: C

24374. What is the best approximation for the wind speed at flight level 250?

A – By simple interpolation of wind information available from the 500 and 300 hPa charts
B – By interpolation of the wind information available from the 500 and 300 hPa charts, while also considering the maximum wind information found on the Significant Weather Chart
C – By reading wind direction and speed from the 500 hPa chart
D – By reading wind direction and speed from the 300 hPa chart

Ref: all

Ans: B

24132. (Refer to figure 050-55)
The pressure system at position “D” is a:

A – secondary low
B – col
C – trough of low pressure
D – ridge of high pressure

Ref: all

Ans: B

24136. (Refer to figure 050-18)
The dotted line designated “Z” represents the:

A – mean position of the inter-tropical convergence zone (ITCZ) during July
B – mean position of the inter-tropical convegency zone (ITCZ) during January
C – northerly limit of the sub-tropical jet stream during July
D – northerly limit of the SE trade winds during January

Ref: all

Ans: A

24137. (Refer to figure 050-18)
The dotted line labelled “Y” represents the:

A – axis of the sub-tropical jet stream during January
B – mean position of the inter-tropical convergence zone (ITCZ) during January
C – mean position of the inter-tropical convergence zone (ITCZ) during July
D – axis of the equatorial jet stream during July

Ref: all

Ans: B

24138. (Refer to figure 050-22)
The weather most likely to be experienced at position “R” is:

A – overcast with drizzle and hill fog
B – early morning fog lifting to low stratus
C – increasing amounts of AS and NS – heavy rain
D – fine and warm at first – AC castellanus and CB in late afternoon with thunderstorms

Ref: all

Ans: D

24144. (Refer to figure 050-25)
The air mass affecting position “R” is most likely to be:

A – Maritime tropical
B – Continental polar
C – Continental tropical
D – Maritime polar

Ref: all

Ans: D

24145. (Refer to figure 050-27)
For an aircraft at FL 80, ahead of the front in square 2D, the expected flight conditions are:

A – IMC in cumuliform cloud, moderate turbulence with a risk of rime icing
B – overcast skies, moderate to heavy turbulence with the possibility of thunderstorms
C – below AS type cloud, generally smooth air with light precipitation
D – high C1 and CS type cloud, light turbulence and poor visibility

Ref: all

Ans: C

24146. (Refer to figure 050-27)
For an aircraft at FL 40, approaching the front (square 3C) from the direction of square 2D, a potential hazard exists before reaching the front in the form of:

A – clear ice accretion to the airframe
B – severe turbulence associated with CB
C – severe turbulence and wind shear
D – severe down drafts from subsiding air

Ref: all

Ans: A

25627. (Refer to figure 050-13)
An aircraft is flying from Point A to Point B on the upper leel contour chart. The altimeter setting is 1013.2 hPa. Which of these statements is correct?

A – Wind speed at A is higher than at B
B – The true altitude will be higher at B than at A
C – The true altitude will be higher at A than at B
D – Wind speed at Paris is higher than at B

Ref: all

Ans: C

25628. (Refer to figure 050-46)
Which airport is most likely to have radiation fog in the coming night?

A – ESSA
B – ENGM
C – EKCH
D – LSZH

Ref: all

Ans: d

25629. (Refer to figure 050-89)
If you are flying from Zurich to Shannon at FL 340, where will your cruising altitude be?

A – Constantly in the troposphere
B – Constantly in the stratosphere
C – First in the troposphere and later in the stratosphere
D – In the stratosphere for part of time

Ref: all

Ans: B

050-10-03 Information for flight planning

9628. Runway visual range can be reported in:

A – a TAF
B – a METAR
C – a SIGMET
D – both a TA and a METAR

Ref: all

Ans: B

9632. You receive the following METAR:
LSGG 0750Z 00000KT 0300 R05/0700N FG VV001 M02/M02 Q1014 NOSIG= What will be the RVR at 0900 UTC?

A – 300 m
B – The RVR is unknown, because the NOSIG does not refer to RVR
C – 700 m
D – 900 m

Ref: all

Ans: B

9633. When will the surface wind in a METAR record a gust factor?

A – When gusts are at least 10 knots above the mean wind speed
B – When gusts are at least 15 knots above the mean wind speed
C – With gusts of at least 25 knots
D – With gusts of at least 35 knots

Ref: all

Ans: A

9637. Which of the following weather reports could be, in accordance with the regulations, abbreviated to CAVOK?

A – 29010KT 9999 SCT045TCU 16/12 Q1015 RESHRA NOSIG=
B – 24009KT 6000 RA SCT010 OVC030 12/11 Q1007 TEMPO 4000=
C – 15003KT 9999 BKN900 17/11 Q1024 NOSIG=
D – 04012G26KT 9999 BKN030 11/07 Q1024 NOSIG=

Ref: all

Ans: C

9639. The follwing weather report EDDM 241332 VRB03KT 1500 HZ OVC004 BECMG 1517 00000KT 0500 FG VV002 TEMPO 2022 0400 FG VV001 is a:

A – METAR
B – 24 hour TAF
C – SPECI
D – 9 hour TAF

Ref: all

Ans: D

9661. Compare the following TAF and VOLMET reports for Nice:
TAF 240716 VRB02KT CAVOK = 0920Z 13012KT 8000 SCT040CB BKN100 20/18 Q1015 TEMPO TS=
What can be concluded from the differences between the two reports:

A – That the weather in Nice after 0920 is also likely to be as predicted in the TAF
B – That the weather conditions at 0920 were actually predicted in the TAF
C – That the weather at Nice is clearly more volatile than the TAF could have predicted earlier in the morning
D – That the VOLMET speaker has got his locations mixed up, because there is no way the latest VOLMET report could be so different from the TAF

Ref: all

Ans: C

9662. What units are used to report vertical wind shear?

A – kt
B – kt/100 ft
C – m/100 ft
D – m/sec

Ref: all

Ans: B

9665. (Refer to figure 030-70)
In what height range and at what intensity could you encounter turbulence in CAT area nº2?

A – From FL 220 to FL 400, moderate
B – From FL 240 to FL 370, light
C – From below FL 130 to FL 270, light
D – From FL 250 to FL 320, moderate

Ref: all

Ans: A

9674. Refer to the TAF for Amsterdam airport:

FCNL31 281500 EHAM 281601 14010KT 6000 –RA SCT025 BECMG 1618 12015G25KT SCT008 BKN013 TEMPO 1823 3000 RA BKN005 OVC010 BECMG 2301 25020KT 8000 NSW BKN020=
Flight from Bordeaux to Amsterdam, ETA 2100 UTC. What is the minimum visibility forecast for ETA Amsterdam?

A – 5 km
B – 3 km
C – 5 NM
D – 6 km

Ref: all

Ans: B

9675. How may the correct wind speed be found, for a level, which is between two upper air chart levels? (eg. Wind at FL 250, when the 500 hPa and the 300 hPa chart are available)

A – By interpolation of the wind information available from the two charts while also considering the maximum wind information found on the Significant Weather Chart
B – By simple interpolation of wind information available from the two charts
C – By reading wind direction and speed from the next higher chart
D – By reading wind direction and speed from the 300 hPa chart

Ref: all

Ans: A

9676. (Refer to figure 050-86)
If you are flying from Zurich to London at FL 220, what conditions can you expect at cruising altitude?

A – Overcast nimbo layered cumulonimbus
B – Individual cumulonimbus
C – Scattered towering cumulus
D – Scattered castellanus

Ref: all

Ans: B

10445. In the weather briefing room during the pre-flight phase of a passenger flight from Zurich to Rome, you examine the following weather reports of pressing importance at the time:

EINN SHANNON 2808 sigmet 2 valid 0800/1100 loc sev turb fcst einn fir blw ft 050 south of 53n wkn=
LIMM MILANO 2809 sigmet 2 valid 0900/1500 mod sev cat btn fl 250 and fl 430 fcst limm fir stnr nc=
EGLL LONDON 2808 sigmet nr01 valid 0800/1200 for London fir isol cb embd in lyr cloud fcst tops fl 300 btn 52n and 54n east of 002e sev ice sev turb ts also fcst move wkn=

Which decision is correct?

A – You show no further interest in these reports, since they do nt concern the route to be flown
B – Because of the expected turbulence you select a flight level below FL 250
C – Owing to these reports and taking into account the presence of heavy thunderstorms at planned FL 310 you select a higher flight level (FL 370)
D – You cancel the flight since the expected dangerous weather conditions along the route would demand too much of the passengers

Ref: all

Ans: B

10446. (Refer to figure 050-100)
Assuming a normal vertical temperature gradient, at what altitude will the freezing level above Tunis be found?

A – FL 100
B – FL 20
C – FL 180
D – FL 260

Ref: all

Ans: A

10463. A pilot is warned of severe icing at certain flight levels by information supplied in:

A – TAF and SIGMET
B – TAF and METAR
C – METAR and SIGMET
D – SWC and SIGMET

Ref: all

Ans: D

10470. Refer to the TAF for Zurich Airport:
TAF LSZH 250716 00000KT 0100 FG VV001 BECMG 0810 0800 VV002 BECMG 1012 23005KT 2500 BKN005 TEMPO 1316 6000 SCT007=
Which of these statements best describes the weather that can be expected at 1200 UTC?

A – Meteorological visibility 6 kilometers, cloudbase 500 feet, wind speed 5 knots
B – Meteorological visibility 800 metres, wind from 230o, cloud base 500 feet
C – Meteorological visibility 800 metres, vertical visibility 200 feet calm
D – Meteorological visibility 2.5 kilometres, cloud base 500 feet, wind speed 5 knots

Ref: all

Ans: D

10471. Which of the following phenomena can product a risk of aqua planning?

A – SA
B – FG
C – BCFG
D - +RA

Ref: all

Ans: D

10495. (Refer to figure 050-90)
Which of these statements is true?

A – Turbulence is likely to be encountered at FL 410 over Madrid
B – Freezing level above Madris is higher than FL 120
C – The front to the north of London is moving south
D – Scattered thunderstorms can be expected over France

Ref: all

Ans: D

10499. Refer to the following TAF extract:
BECMG 1821 2000 BKN004 PROB30 BECMG 2124 0500 FG VV001

What does the abbreviation PROB30 mean?

A – Probability of 30%
B – Conditions will last for at least 30 minutes
C – The cloud ceiling should lift to 3000 ft
D – Change expected in less than 30 minutes

Ref: all

Ans: A

10500. Refer to TAF below:
EGBB 261812 28015G25KT 9999 SCT025 TEMPO 1822 29018G35KT 5000 SHRASN BKN010CB PROB30 TEMPO 1821 1500 TSGR BKN008CB BECMG 2124 26010KT

From the TAF above you can assume that visibility at 2055Z in Birmingham (EGBB) will be:

A – not less than 1.5 km but could be in excess of 10 km
B – a maximum of 5 km
C – a minimum of 1.5 km and a maximum of 5 km
D – more than 10 km

Ref: all

Ans: A

10521. Which of the statements is true concerning equal lines?

A – Severe squall lines always move from north west to south east
B – Severe squall lines only occur in the tropics
C – For severe squall lines a TAF is issued
D – For severe squall lines a SIGMET is issued

Ref: all

Ans: D

10525. (Reer to figure 050-109)
Select from the map the average wind for the route Athens – Geneva at FL 160:

A – 240/40
B – 210/25
C – 260/45
D – 050/35

Ref: all

Ans: A

10529. Refer to the following TAF for Zurich:

LSZH 261019 20018G30KT 9999 –RA SCT050 BKN080 TEMPO 23012KT 6000 –DZ BKN015 BKN030 BECMG 1518 23020G35KT 4000 RA OVC010=

The lowest visibility forecast at ETA Zurich 1430 UTC is:

A – 6 NM
B – 6 km
C – 4 km
D – 10 km

Ref: all

Ans: B

10557. Refer to the following TAF extract:

BECMG 1821 2000 BKN004 PROB30 BECMG 2124 0500 FG VV001
What does the BECMG data indicate for the 18 to 21 hour time frame?

A – The new conditions are achieved between 1800 and 2100 UTC
B – A quick change to new conditions between 1800 UTC and 1900 UTC
C – Many short term changes in the original weather
D – Many long term changes in the original weather

Ref: all

Ans: A

10578. (Refer to figure 050-46)
On which airport do you expect the development of the following weather situation?

TAF 1322 24014G32KT 4000 +TSRA SCT005 BKN015 BKN020CB
BECMG 1416 29012KT 9999 BKN030TCU SCT100 TEMPO 8000 SHRA
BKN025TCU BECMG 1922 27012KT 9999 SCT030 OVC220=

A – ESSA
B – EINN
C – LSZH
D – EKCH

Ref: all

Ans: B

15804. Refer to the TAF for Bordeaux airport.
FCFR31 281400 LFBD 1524 26015KT 9999 SHRA BKN020 TEMPO 1620
26020G30KT 8000 +SHRA BKN015CB PROB30 TSRA=

Flight Lisbon to Bordeaux, ETA 1800 UTC. What type of precipitation is forecast on the approach to Bordeaux?

A – Light drizzle and fog
B – Moderate snow showers
C – Heavy rain showers
D – Continuous moderate rain

Ref: all

Ans: C

24176. (Refer to figure 050-36)
At which airport, is the following weather development taking place?

TAF 060600Z 060716 25006KT 8000 BKN240 BECMG 0710 OVC200 BECMG 1013 23010KT 8000 OVC100 BECMG 1316 23014KT 6000 RA SCT030 OVC050=

A – LFPO
B – EDDL
C – LOWW
D – LEMD

Ref: all

Ans: B

24187. (Refer to figure 050-04)
To which aerodrome is the following TAF most applicable?

TAF 230900Z 231019 24014KT 6000 SCT030 BKN100 TEMPO 1113 5020G38KT 2500 +TSRA SCT008 BKN025CB BECMG 1315 28012KT 9999 SCT025 TEMPO 1617 5000 SHRA BKN020

A – EKCH
B – LFPG
C – LEMD
D – LOWW

Ref: all

Ans: D

24252. Below is the forecast for the destination of a flight whose ETA is 2030 UTC.
TAF YUDO 120600Z 121206 17010KT 3000 SCT005 BECMG 1820 RB03KT BCFG SKC BECMG 2022 0300 FG VV002=

What can be said about the destination airport at 2030 UTC if CAT II ILS inimum:

A – Open the whole night because 300 m of visibility corresponds to at least 900m RVR
B – Still open until 2200 UTC because the weather change is not completed before 2200 UTC
C – Has to be considered as closed
D – Still open because the decrease of the visibility below the CAT II minima will be a little bit later than 2030 UTC

Ref: all

Ans: C

24389. What surface wind is forecast for 2200 UTC?

EDDF 272200Z 280624 VRB05KT 4000 BR SCT005 OVC013 BECMG 1314 9000 SHRA OVC 015 PROB40 TEMPO 1416 VRB15G25KT 1600 TSRA OVC010CB BECMG 1618 26010KT BKN030 BECMG 2122 CAVOK

A – 260º / 10 kt
B – Variable / 05 kt
C – Variable / 15 to 25 kt
D – Calm

Ref: all

Ans: A

24390. What surface wind is forecast for ETA 1700 UTC at Kingston?

MKJP 160430Z 160606 36010KT 9999 FEW025CB BECMG1315 14020G34KT FEW015CB SCT025 PROB30 TEMPO 1720 6000 +SHRA SCT010 BKN015CB BECMG 2301 34010KT FEW025=

A – 360º / 10 kt
B – 140º / 20 kt gusts 34 kt
C – 340º / 10 kt
D – 140º / 27 kt

Ref: all

Ans: B

24391. What type of meteorological hazard to safe flight is most likely to be experienced during the final approach to Geneva (ETA 1200 UTC)?

TAF LSGG 020900Z 021019 18007KT 9999 SCT020 BKN100 BECMG 1114 8000 RA SCT010 OVC020 PROB30 TEMPO 1018 VRB10G25KT TSRA

A – Anabatic winds
B – Roll cloud associated with standing waves
C – Radiation fog
D – Low level wind shear

Ref: all

Ans: D

24417. Which of the following phenomena has to be mentioned in a SIGMET?

A – Strong inversion
B – Heavy duststorm
C – Thick fog
D – Snow and ice on the runway

Ref: all

Ans: B

25577. (Refer to figure 050-106)

The following TAF applies best to which aerodrome? 19010KT 8000 RA BKN014 TEMPO 1518 4000 RADZ BKN010

A – EBBR
B – LOWW
C – MADRID
D – PARIS

Ref: all

Ans: A

25590. (Refer to figure 050-36)
Which weather situation do you expect for EGLL at 1150 UTC?

A – 28015KT 8000 SCT10[illegible] BKN200 21/07 Q1002 NOSIG=
B – 32002KT 3000 OBSC006 16/12 Q1024 TEMPO 8000=
C – 28006KT 4000 =TSRA SCT012 BKN030CB 19/14 Q1022 BECMG NSW=
D – 17016G28KT 2500 +RA BKN009 OVC 018 12/10 Q0994 BECMG 8000=

Ref: all

Ans: D