



- 1 The average height of the tropopause at 50°N is about
 - A 14 km
 - B 16 km
 - C 11 km
 - D 8 km

- 2 In the lower part of the stratosphere the temperature
 - A is almost constant
 - B decreases with altitude
 - C increases with altitude
 - D increases at first and decreases afterward

- 3 The environmental lapse rate in an actual atmosphere
 - A has a fixed value of 0.65°C/100m
 - B has a fixed value of 2°C/1000 FT
 - C varies with time
 - D has a fixed value of 1°C/100m

- 4 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 Elevation of the airfield and the temperature at MSL
 - C Temperature at the airfield
 - D Elevation of the airfield

- 5 In what hPa range is an upper weather chart for FL 340 situated?
 - A 500 - 400 hPa
 - B 600 - 500 hPa
 - C 300 - 200 hPa
 - D 400 - 300 hPa

- 6 An aircraft is flying at FL 180 in the northern hemisphere with a crosswind from the left. Which of the following is correct concerning its true altitude ?
 - A It increases
 - B It decreases
 - C Without knowing temperatures at FL 180 this question can not be answered.
 - D It remains constant

- 7 For a similar pressure gradient, the geostrophic wind speed will be
 - A greater at 60°N than at 30°N
 - B greater at 30°N than at 60°N
 - C equivalent to gradient wind \pm thermal component
 - D the same at all latitudes north or south of 15°



- 8 Between which latitudes are you most likely to find the subtropical high-pressure belt ?
- A 25° - 35°.
 - B 10° - 15°.
 - C 35° - 55°.
 - D 55° - 75°.
- 9 Friction between the air and the ground results in the northern hemisphere in:
- A backing of the wind and decrease 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 increase of wind speed at the surface.
 - D veering of the wind and increase of wind speed at the surface.
- 10 The sea breeze is a wind from the sea
- A that reaches up to the tropopause in daytime
 - B occurring only in the lower layers of the atmosphere in daytime
 - C occurring only in mid-latitudes and in daytime
 - D blowing at night in mid-latitudes
- 11 The core of the polar front jet stream is usually located in the
- A polar air above the tropopause
 - B tropical air below the tropopause
 - C tropical air above the tropical tropopause
 - D polar air below the tropopause
- 12 When and where is an easterly jet stream likely to be encountered ?
- A In summer from south-east Asia extending over southern India to central Africa.
 - B In winter along the Russian coast facing the Arctic ocean.
 - C In summer from the Middle East extending over the southern part of the Mediterranean to southern Spain.
 - D Throughout the year to the south of the Azorian high.
- 13 Dew point is defined as
- A the lowest temperature at which evaporation will occur for a given pressure
 - B the temperature to which moist air must be cooled to become saturated at a given pressure
 - C the temperature below which the change of state in a given volume of air will result in the absorption of latent heat
 - D the lowest temperature to which air must be cooled in order to reduce the relative humidity
- 14 Supercooled droplets can occur in
- A precipitation but not in clouds
 - B clouds but not in fog
 - C clouds, fog and precipitation
 - D clouds but not in precipitation



- 15** A moist but unsaturated parcel of air becomes saturated by
- A** lifting the parcel to a higher level
 - B** lowering the parcel to a lower level
 - C** moving the parcel to an area with lower pressure and equal temperature
 - D** moving the parcel to an area with higher pressure and equal temperature
- 16** Which of the following processes within a layer of air may lead to the building of CU and CB clouds?
- A** Frontal lifting within stable layers.
 - B** Subsidence.
 - C** Radiation.
 - D** Convection.
- 17** A cumulonimbus cloud at mid-latitudes in summer contains
- A** ice crystals and water droplets but never supercooled water droplets
 - B** only ice crystals
 - C** only water droplets
 - D** ice crystals, water droplets and supercooled water droplets
- 18** Which of the following circumstances most favour the development of radiation fog?
- A** Advection of very cold air over much warmer sea
 - B** Maritime tropical air flowing over cold sea
 - C** Warm moist air at the windward side of a mountain
 - D** Moist air over land during clear night with little wind
- 19** 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 temperatures of 5°C ?
- A** Frontal fog
 - B** Steam fog
 - C** Radiation fog
 - D** Advection fog
- 20** Which one of the following types of cloud is most likely to produce heavy precipitation ?
- A** ST.
 - B** SC.
 - C** CS.
 - D** NS.
- 21** Precipitation in the form of showers occurs from
- A** convective clouds
 - B** stratified clouds
 - C** cirro-type clouds
 - D** clouds containing only ice crystals



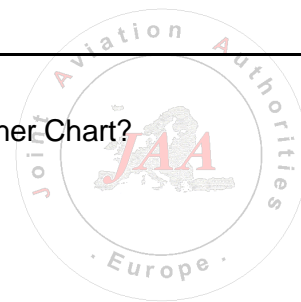
- 22** In which air mass are extremely low temperatures encountered?
- A** Arctic maritime air.
 - B** Tropical continental air.
 - C** Polar maritime air.
 - D** Polar continental air.
- 23** Which of the following conditions are you most likely to encounter when approaching an active warm front at medium to low level ?
- A** Low cloud base and poor visibility.
 - B** Severe thunderstorms at low altitude.
 - C** Extreme turbulence and severe lightning striking the ground.
 - D** High cloud base, good surface visibility, and isolated thunderstorms.
- 24** (For this question use annex A)
The cloud type most applicable to most of square 3B is
- A** NS
 - B** AS
 - C** CS
 - D** SC
- 25** Which of the following describes a warm occlusion?
- A** The air mass behind the front is more unstable than the air mass ahead of the front
 - B** The coldest air mass is ahead of the original warm front
 - C** The warmer air mass is ahead of the original warm front
 - D** The air mass ahead of the front is drier than the air mass behind the front
- 26** In which approximate direction does the centre of a non-occluded frontal depression move?
- A** In the direction of the sharpest pressure increase.
 - B** In the direction of the isobars behind the cold front.
 - C** In the direction of the warm sector isobars.
 - D** In the direction of the isobars ahead of the warm front.
- 27** What surface weather is associated with a stationary high pressure region over land in the winter?
- A** The possibility of snow showers.
 - B** NS with continuous rain.
 - C** Thunderstorms.
 - D** A tendency for fog and low ST.
- 28** The Hurricane season is mainly from
- A** April until July.
 - B** January until April.
 - C** October until January.
 - D** July until November.



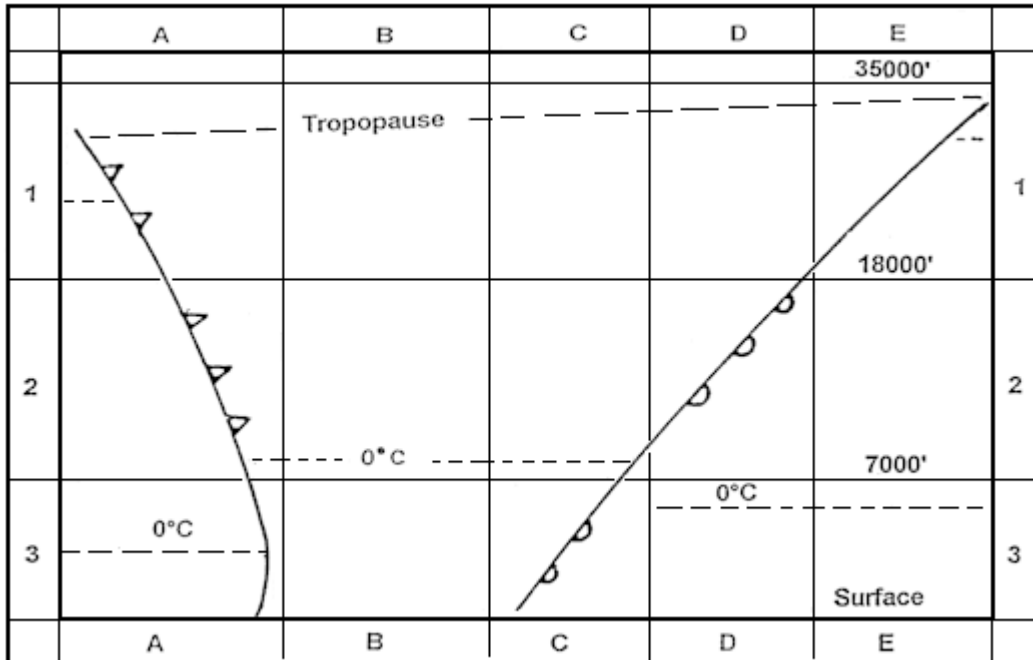
- 29 Which one of the following statements is correct concerning the movement of the ITCZ in the region of West Africa?
- A It oscillates during the year between the Equator and 10 degrees North.
 - B It oscillates during the year between 10 degrees North and 10 degrees South.
 - C It reaches its maximum southerly position of 5° S in January
 - D It reaches its maximum northerly position of 15° - 20° N in July
- 30 What name is given to the low level wind system between the subtropical high pressure belt and the equatorial trough of low pressure (ITCZ) ?
- A Trade winds.
 - B Doldrums.
 - C Westerly winds.
 - D Monsoon.
- 31 The transition from SW to NE monsoon in India occurs in
- A December, January, February
 - B February, March, April
 - C September, October, November
 - D July, August, September
- 32 What weather is prevalent in easterly waves?
- A Frontal weather.
 - B Clear skies.
 - C Continuous rain.
 - D Thunderstorms and rain.
- 33 A strong, dry and warm downslope wind, produced by prior enforced ascent of air over hills or mountains is known as a
- A Mistral
 - B Bora
 - C Foehn
 - D Scirocco
- 34 The most dangerous icing conditions are encountered in
- A icy clouds at high levels.
 - B supercooled precipitation.
 - C zones where the air temperature is below -15°C.
 - D unstable clouds at medium levels.
- 35 What is the effect of a strong low level inversion ?
- A It promotes vertical wind shear.
 - B It promotes extensive vertical movement of air.
 - C It prevents vertical wind shear.
 - D It results in good visual conditions near the surface.



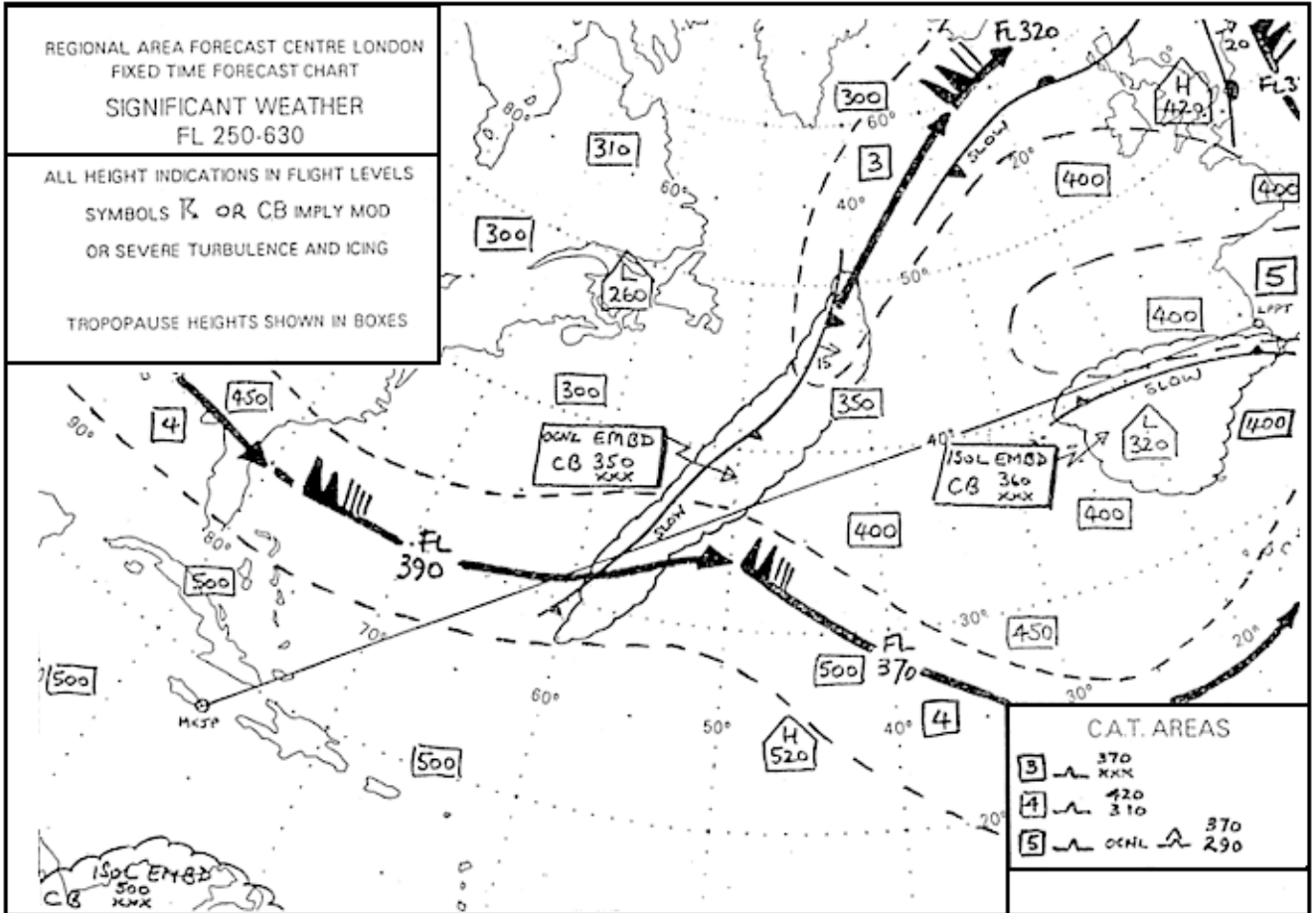
- 36 In which stage of the life cycle of a single thunderstorm cell occur both up- and downdrafts simultaneously?
- A Mature stage
 - B Cumulus stage
 - C Dissipating stage
 - D In all stages
- 37 In Central Europe when is the greatest likelihood for thunderstorms due to warm updrafts?
- A Mid - afternoon.
 - B Around midnight.
 - C Early morning.
 - D Late morning.
- 38 A microburst phenomenon can arise in the
- A downdraught of a cumulonimbus at the formation stage.
 - B updraught of a cumulonimbus at the growth stage.
 - C downdraught of a cumulonimbus at the mature stage.
 - D updraught of a cumulonimbus at the mature stage.
- 39 You intend to carry out a VFR flight over the Alps, on a fine and hot summer day. What is the best time of day to conduct this flight?
- A Early evening.
 - B Afternoon.
 - C Mid-day.
 - D Morning.
- 40 The cloud base, reported in the METAR, is the height above
- A mean sea level
 - B airfield level
 - C the highest terrain within a radius of 8 km from the observation station
 - D the pressure altitude of the observation station at the time of observation
- 41 (For this question use annex B)
The height of the tropopause at 38°N 19°W is
- A FL 420
 - B FL 360
 - C FL 400
 - D FL 320
- 42 Which constant pressure altitude chart is standard for FL 390?
- A 500 hPa
 - B 700 hPa
 - C 200 hPa
 - D 300 hPa



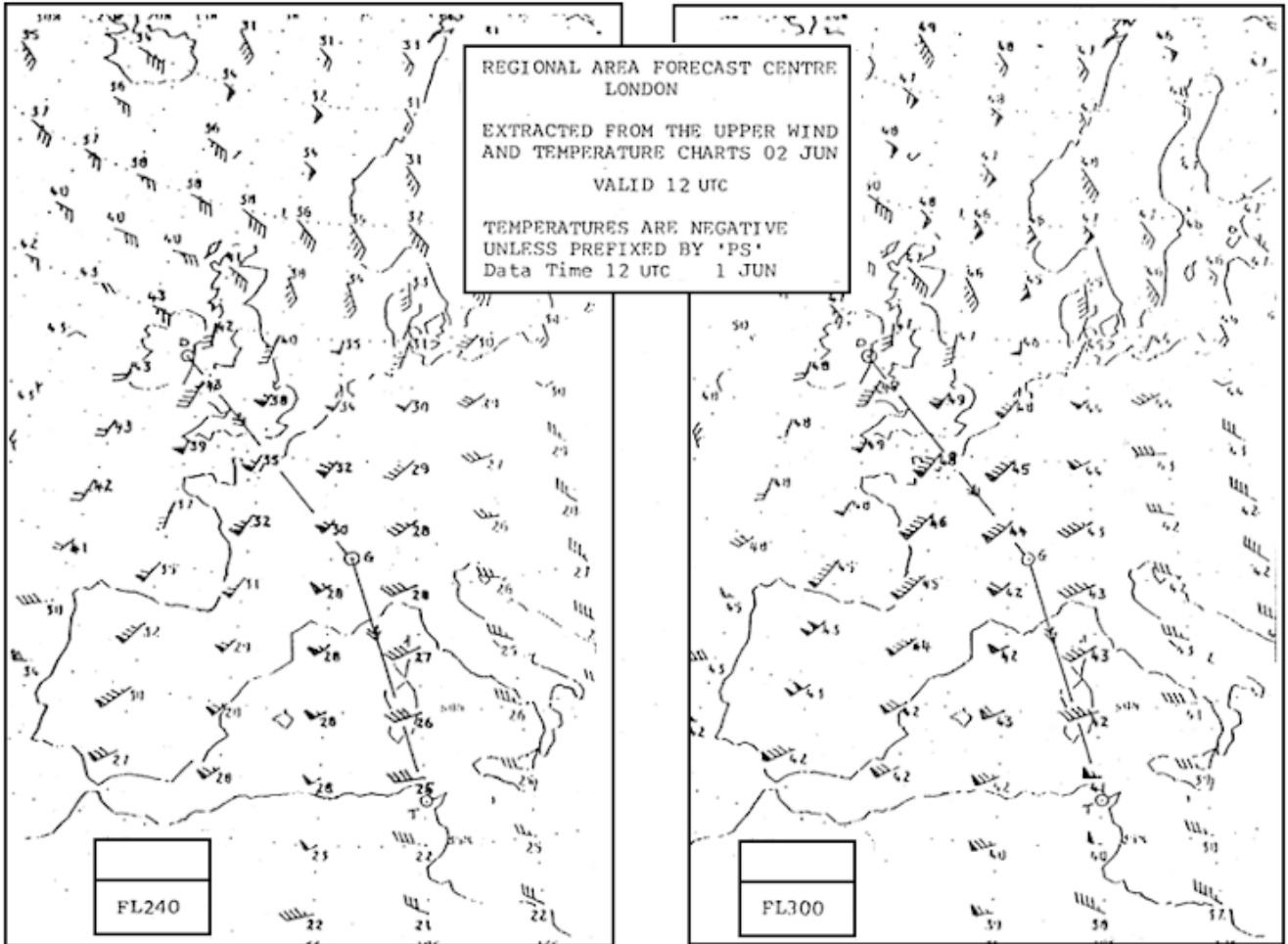
- 43** How are well separated CB clouds described on the Significant Weather Chart?
- A** OCNL CB.
 - B** EMBD CB.
 - C** FRQ CB.
 - D** ISOL CB.
- 44** Which of the following weather reports is a warning of conditions that could be potentially hazardous to aircraft in flight ?
- A** TAF.
 - B** SPECI.
 - C** ATIS.
 - D** SIGMET.
- 45** Which of the following weather reports could be, in accordance with the regulations, abbreviated to "CAVOK"?
- A** 24009KT 6000 RA SCT010 OVC030 12/11 Q1007 TEMPO 4000 =
 - B** 15003KT 9999 BKN100 17/11 Q1024 NOSIG =
 - C** 04012G26KT 9999 BKN030 11/07 Q1024 NOSIG =
 - D** 29010KT 9999 SCT045TCU 16/12 Q1015 RESHRA NOSIG =
- 46** (For this question use annex C)
The mean wind that may be expected to affect the route segment from the coast of SE England to Geneva at FL 270 is
- A** 240/90
 - B** 220/70
 - C** 245/55
 - D** 270/70
- 47** (For this question use annex D)
Which of these statements is true?
- A** The front to the east of Paris (LFPO) is moving south
 - B** Turbulence is likely to be encountered at FL 400 over Malaga (LEMG)
 - C** Local snow and severe aircraft icing can be expected over Germany
 - D** Freezing level above London (EGLL) is higher than FL 065



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