

Examination Center DGAC

Examination Date _____

Name _____

Firstname _____

Birthday _____

- 1 The 0° isotherm is forecast to be at FL 50. At what FL would you expect a temperature of -6° C? (1.00 P.)
- [A] FL 20
 - [B] FL 110
 - [C] FL 80
 - [D] FL 100

- 2 What positions are connected by isobars on the surface weather chart? (1.00 P.)
- [A] Positions with the same temperature at a given level
 - [B] Positions with the same wind velocity at a given level
 - [C] Positions with the same air pressure at a given level
 - [D] Positions with the same relative pressure heights

- 3 What is the main cause for the formation of a polar front jet stream? (1.00 P.)
- [A] The pressure difference, close to the ground, between a high over the Azores and a low over Iceland
 - [B] The varied elevations of the tropopause in the polar front region
 - [C] The north-south horizontal temperature gradient at the polar front
 - [D] Strong winds in the upper atmosphere

- 4 Which jet stream is connected with a surface front system? (1.00 P.)
- [A] The subtropical jet stream
 - [B] The easterly jet stream
 - [C] The equatorial jet stream
 - [D] The polar front jet stream

- 5 At approximately what flight level is the subtropical jet stream found? (1.00 P.)
- [A] FL 400
 - [B] FL 500
 - [C] FL 200
 - [D] FL 300

- 6 A parcel of moist but not saturated air rises due to adiabatic effects. Which of the following changes ? (1.00 P.)
- [A] Absolute humidity
 - [B] Relative humidity
 - [C] Specific humidity
 - [D] Mixing ratio

- 7 In which of the following changes of state is latent heat released ? (1.00 P.)
- [A] Solid to liquid
 - [B] Solid to gas
 - [C] Gas to liquid
 - [D] Liquid to gas
- 8 How are high level condensation trails formed that are to be found occasionally behind jet aircraft ? (1.00 P.)
- [A] Only through unburnt fuel in the exhaust gases
 - [B] In conditions of low humidity, through the particles of soot contained in the exhaust gases
 - [C] Through a decrease in pressure, and the associated adiabatic drop in temperature at the wing tips while flying through relatively warm but humid air
 - [D] Through water vapour released during fuel combustion

- 9 What process in an air mass leads to the creation of wide spread NS and AS cloud coverage? (1.00 P.)
- [A] Sinking
 - [B] Lifting
 - [C] Radiation
 - [D] Convection process

10 Which of the following cloud is classified as low level cloud ? (1.00 P.)

[A] AS

[B] ST

[C] CS

[D] CC

- 11 In which of the following conditions is moderate to severe airframe icing most likely to be encountered? (1.00 P.)
- [A] In Nimbostratus cloud
 - [B] Below the freezing level in clear air
 - [C] In clear air above the freezing level
 - [D] Within cloud of any type
- 12 What flying conditions are normally encountered when flying in cirrus clouds? (1.00 P.)
- [A] Average horizontal visibility more than 1000 m; nil icing.
 - [B] Average horizontal visibility less than 500 m; light to moderate icing.
 - [C] Average horizontal visibility less than 500 m; nil icing.
 - [D] Average horizontal visibility more than 1000 m; light to moderate rime ice.

- 13 Which of the following is most likely to lead to the dissipation of radiation fog ?
(1.00 P.)
- [A] A build up of a high pressure area resulting in adiabatic warming associated with a sinking air mass
 - [B] A marked decrease in wind velocity close to the ground
 - [C] Ground cooling caused by radiation during the night
 - [D] A marked increase in wind velocity near the ground

- 14 Which of the following conditions is most likely to lead to the formation of steam fog (arctic smoke)? (1.00 P.)
- [A] The coastal region of the sea cools at night
 - [B] Warm air moving over cold water
 - [C] The sea is warmed by strong radiation from the sun
 - [D] Cold air moving over warm water

- 15 How does freezing rain develop? (1.00 P.)
- [A] Through melting of snow grains
 - [B] Rain falls through a layer where temperatures are below 0°C
 - [C] Through melting of ice crystals
 - [D] Snow falls through a layer where temperatures are above 0°C
- 16 What type of cloud can produce hail showers? (1.00 P.)
- [A] CB
 - [B] NS
 - [C] CS
 - [D] AC

- 17 In which of the following regions does polar maritime air originate ? (1.00 P.)
- [A] East of Greenland
 - [B] Baltic Sea
 - [C] Black Sea
 - [D] Region of British Isles

- 18 In which of the following situations can freezing rain be encountered ? (1.00 P.)
- [A] Ahead of a cold front in the summer
 - [B] Behind a warm front in the summer
 - [C] Ahead of a cold front in the winter
 - [D] Ahead of a warm front in the winter
- 19 How do air masses move at a warm front ? (1.00 P.)
- [A] Warm air overrides a cold air mass
 - [B] Warm air undercuts a cold air mass
 - [C] Cold air overrides a warm air mass
 - [D] Cold air undercuts a warm air mass

- 20 What type of precipitation would you expect at an active unstable cold front?
(1.00 P.)
- [A] Freezing rain
 - [B] Light to moderate continuous rain
 - [C] Drizzle
 - [D] Showers associated with thunderstorms
-
- 21 What is the relative movement of the two air masses along a cold front ? (1.00 P.)
- [A] Warm air pushes over a cold air mass
 - [B] Warm air pushes under a cold air mass
 - [C] Cold air pushes under a warm air mass
 - [D] Cold air slides over a warm air mass

- 22 What cloud cover is typical for a wide warm sector of a polar front depression over Central Europe in the summer ? (1.00 P.)
- [A] Fair weather CU
 - [B] Sky clear
 - [C] ST with drizzle
 - [D] BKN CU and CB

- 23 Which of the following describes a warm occlusion? (1.00 P.)
- [A] The air mass ahead of the front is drier than the air mass behind the front
 - [B] The warmer air mass is ahead of the original warm front
 - [C] The coldest air mass is ahead of the original warm front
 - [D] The air mass behind the front is more unstable than the air mass ahead of the front
- 24 When do cold occlusions occur most frequently in Europe? (1.00 P.)
- [A] Winter
 - [B] Summer
 - [C] Winter and spring
 - [D] Autumn and winter

- 25 In which main direction does a polar front depression move? (1.00 P.)
- [A] Across the front towards the north
 - [B] Across the front towards the south
 - [C] Along the front towards the east
 - [D] Along the front towards the west

26

What change in pressure, will occur at point A, during the next hour? (1.00 P.)

Siehe Anlage 1

- [A] A rise in pressure
- [B] A drop in pressure
- [C] Irregular fluctuations
- [D] Approximately constant pressure

- 27 What is the most likely cause of a lack of clouds at higher levels in a stationary high? (1.00 P.)
- [A] Instability
 - [B] Divergence at higher levels
 - [C] Rising air
 - [D] Sinking air

- 28 On which coast of North America, is the danger of tropical revolving storms the greatest? (1.00 P.)
- [A] N coast
 - [B] NE coast
 - [C] SE coast
 - [D] W coast

- 29 Where, during a flight from Marseille to Dakar, in July, may the ITCZ be encountered? (1.00 P.)
- [A] At the latitudes of Gibraltar
 - [B] In the vicinity of Dakar
 - [C] At the latitudes of Algeria
 - [D] Near the Canary Islands
- 30 Which wind systems converge on the ITCZ, when it lies at the equator? (1.00 P.)
- [A] SW monsoon and NW trade winds
 - [B] SW monsoon and NW monsoon
 - [C] NW monsoon and SW trade winds
 - [D] SE trade winds and NE trade winds

- 31 From which direction do the trade winds blow, in the southern hemisphere? (1.00 P.)
- [A] SE
 - [B] NE
 - [C] SW
 - [D] N

- 32 What weather conditions in the region of the Alps would you expect with Foehn from south? (1.00 P.)
- [A] Heavy airframe icing conditions on the northern side of the Alps
 - [B] Heavy clear air turbulence on the southern side of the Alps
 - [C] Clouds, on the southern sides of passes in the Alps
 - [D] Strong north winds on the southern side of the Alps

- 33 Under which conditions would you expect the heaviest clear ice accretion to occur in a CB? (1.00 P.)
- [A] Between -2°C and -15°C
 - [B] Between -20°C and -30°C
 - [C] Between -30°C and -40°C
 - [D] Close to the freezing level
- 34 Clear ice forms on an aircraft by the freezing of: (1.00 P.)
- [A] water vapour
 - [B] snow
 - [C] large supercooled water drops
 - [D] small supercooled water drops

35 What weather conditions would you expect at a squall line? (1.00 P.)

- [A] Fog
- [B] Strong whirlwinds reaching up to higher levels
- [C] Thunderstorms
- [D] Continuous heavy rain

- 36 What is the approximate maximum diameter of a the area affected by damaging winds at the surface caused by a microburst ? (1.00 P.)
- [A] 4 km
 - [B] 400 m
 - [C] 20 km
 - [D] 50 km

- 37 In general, the visibility during rainfall compared to during drizzle is (1.00 P.)
- [A] greater
 - [B] in rain - below 1 km, in drizzle - more than 2 km
 - [C] the same
 - [D] less

38 Which weather chart gives information about icing ? (1.00 P.)

- [A] Significant weather chart
- [B] 500 hPa chart
- [C] 700 hPa chart
- [D] Surface chart

39

Which of the following symbols represents a squall line? (1.00 P.)

Siehe Anlage 2

[A] Symbol 2

[B] Symbol 3

[C] Symbol 4

[D] Symbol 1

- 40 In which weather report would you expect to find information about icing conditions on the runway? (1.00 P.)
- [A] GAFOR
 - [B] METAR
 - [C] TAF
 - [D] SIGMET
- 41 Within a short interval, several flight crews report that they have experienced strong clear air turbulence in a certain airspace. What is the consequence of these reports? (1.00 P.)
- [A] The competent aviation weather office will issue a SIGMET
 - [B] The competent aviation weather office will issue a storm warning
 - [C] The airspace in question, will be temporarily closed
 - [D] The competent aviation weather office will issue a SPECI

42

Over Madrid, what intensity of turbulence and icing is forecast at FL 200 ? (1.00 P.)

Siehe Anlage 3

- [A] Moderate turbulence, moderate icing
- [B] Severe turbulence, moderate icing
- [C] Moderate turbulence, light icing
- [D] Severe turbulence, severe icing

43

Which airport, at 1200 UTC, has the lowest probability of precipitation? (1.00 P.)

Siehe Anlage 4

- [A] EFHK
- [B] ESSA
- [C] LSZH
- [D] ENFB

44

Over Paris at what height would you expect to find the tropopause according to the map? (1.00 P.)

Siehe Anlage 5

- [A] FL 300
- [B] FL 330
- [C] FL 150
- [D] FL 280

45

What is the optimum flight level between Rome and Paris according to the significant weather chart ?(refer to the attachment) (1.00 P.)

Siehe Anlage 6

[A] FL 340

[B] FL 160

[C] FL 360

[D] FL 220

46

Flight Zurich to Rome, ETD 1600 UTC, ETA 1800 UTC. At what flight level would you first expect to encounter clear air turbulence on the climb out from Zurich? (1.00 P.)

Siehe Anlage 7

[A] FL 220

[B] FL 140

[C] FL 320

[D] FL 160

47

What is the approximate height of the tropopause between Keflavik and Helsinki? (1.00 P.)

Siehe Anlage 8

[A] FL 350

[B] FL 320

[C] FL 360

[D] FL 300

48

You are flying from Munich to Amsterdam. Which of the following flight levels would you choose in order to avoid turbulence and icing? (1.00 P.)

Siehe Anlage 9

- [A] FL 320
- [B] FL 140
- [C] FL 260
- [D] FL 180

49

In what height range and at what intensity could you encounter turbulence in CAT area n°2? (1.00 P.)

Siehe Anlage 10

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

50

At what flight level is the jet stream core that is situated over northern Scandinavia ? (1.00 P.)

Siehe Anlage 11

- [A] FL 360
- [B] FL 300
- [C] FL 330
- [D] FL 280

51

At which position could you encounter thunderstorms, and what is the maximum height of the CB clouds? (1.00 P.)

Siehe Anlage 12

- [A] Position C, FL 200.
- [B] Position A, FL 200.
- [C] Position B, FL 270.
- [D] Position D, FL 290.

52

At what approximate flight level is the tropopause over Frankfurt? (1.00 P.)

Siehe Anlage 13

- [A] FL 350
- [B] FL 240
- [C] FL 330
- [D] FL 300

53

Select from the map the wind for the route Zurich - London at FL 280. (1.00 P.)

Siehe Anlage 14

- [A] 040/60
- [B] 160/90
- [C] 220/60
- [D] 250/80

54

The temperature at FL 330 overhead London will be (1.00 P.)

Siehe Anlage 15

[A] -33°C

[B] -39°C

[C] -45°C

[D] -57°C

55

The front labelled "Z" in the attached diagram is a? (1.00 P.)

Siehe Anlage 16

- [A] Cold occlusion
- [B] Cold front
- [C] Warm occlusion
- [D] Warm front

56

What name is given to the jet stream lying over North Africa (B) ? (1.00 P.)

Siehe Anlage 17

- [A] Equatorial jet stream
- [B] Arctic jet stream
- [C] Sub-tropical jet stream
- [D] Polar front jet stream

- 57 Flight Lisbon to Bordeaux, ETA 1800 UTC. At ETA Bordeaux what is the lowest quoted visibility forecast ?

TAF LFBD 281400Z 281524 26015KT 9999 SHRA BKN020 TEMPO 1620
26020G30KT 8000 +SHRA BKN015CB PROB30 TSRA = (1.00 P.)

- [A] 8 NM
- [B] 10 NM
- [C] 8 km
- [D] 10 or more km

58

What wind is forecast at FL 390 over Paris ? (1.00 P.)

Siehe Anlage 18

[A] 030/40

[B] 240/20

[C] 190/40

[D] 210/40

59

What is the average temperature at FL 160 between Oslo and Paris ? (1.00 P.)

Siehe Anlage 19

[A] -23°C

[B] -25°C

[C] -15°C

[D] -19°C

60

What is the temperature deviation in degrees Celsius, from the ICAO Standard Atmosphere overhead Frankfurt ? (1.00 P.)

Siehe Anlage 20

[A] ISA -2°C

[B] ISA -13°C

[C] ISA +2°C

[D] ISA +13°C

61

What is the speed of the front located over France ? (1.00 P.)

Siehe Anlage 21

[A] 25 kt

[B] 15 kt

[C] 30 kt

[D] 10 kt

62

Flight Munich to London. What is the direction and maximum speed of the jet stream affecting the route between Munich and London ? (1.00 P.)

Siehe Anlage 22

[A] 220° / 120 kt

[B] 050° / 120 kt

[C] 050° / 120 km/h

[D] 230° / 120 m/sec

- 63 Flight from Bordeaux to Amsterdam, ETA 2100 UTC. What is the minimum visibility forecast for ETA Amsterdam ?

TAF EHAM 281500Z 281601 14010KT 6000 -RA SCT025 BECMG 1618
12015G25KT SCT008 BKN013 TEMPO 1823 3000 RA BKN005 OVC010
BECMG 2301 25020KT 8000 NSW BKN020 = (1.00 P.)

- [A] 5 NM
- [B] 5 km
- [C] 6 km
- [D] 3 km

64

Over Amsterdam, what amount and general type of cloud would you expect at FL 160 ? (1.00 P.)

Siehe Anlage 23

- [A] Mainly 5 to 8 oktas of stratiform cloud in layers
- [B] 5 to 7 oktas towering cumuliform cloud and with moderate turbulence
- [C] Isolated cumulonimbus only
- [D] 4 oktas broken cumulus

65

To what extent is Munich covered by clouds ? (1.00 P.)

Siehe Anlage 24

- [A] 5 to 8 oktas
- [B] 1 to 4 oktas
- [C] 3 to 5 oktas
- [D] 5 to 7 oktas

- 66 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: (1.00 P.)
- [A] the air at Marseille is warmer than that at Palma de Mallorca.
 - [B] the altimeters are erroneous, and need to be tested.
 - [C] the air at Marseille is colder than that at Palma de Mallorca.
 - [D] one of the two QNH values may be incorrect.

- 67 At what time of the year are typhoons most likely to occur over the southern islands of Japan? (1.00 P.)
- [A] January to May.
 - [B] September to January.
 - [C] July to November.
 - [D] May to July.

68 What units are used to report vertical wind shear? (1.00 P.)

[A] m/100 FT.

[B] m/sec.

[C] kt/100 FT.

[D] kt.

- 69 Which of the following weather reports is a warning of conditions that could be potentially hazardous to aircraft in flight ? (1.00 P.)
- [A] SIGMET.
 - [B] ATIS.
 - [C] SPECI.
 - [D] TAF.
- 70 In which of the following circumstances is a SIGMET issued ? (1.00 P.)
- [A] Fog or a thunderstorm at an aerodrome.
 - [B] Severe mountain waves.
 - [C] A sudden change in the weather conditions contained in the METAR.
 - [D] Clear ice on the runways of an aerodrome.

- 71 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 15°C 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? (1.00 P.)
- [A] 14100 FT.
 - [B] 15900 FT.
 - [C] 13830 FT.
 - [D] 14370 FT.

72 Rime ice forms through the freezing onto aircraft surfaces of (1.00 P.)

- [A] small supercooled water drops.
- [B] large supercooled water drops.
- [C] snow.
- [D] water vapour.

- 73 How does a pilot react to heavy freezing rain at 2000 FT/AGL, when he is unable to deice, nor land? (1.00 P.)
- [A] He ascends to the cold air layer above.
 - [B] He continues to fly at the same altitude.
 - [C] He descends to the warm air layer below.
 - [D] He turns back before the aircraft loses manoeuvrability.

74 050-039.jpg

What name is given to the jet stream lying across India (A) ? (1.00 P.)

Siehe Anlage 25

- [A] Equatorial jet stream.
- [B] Polar front jet stream.
- [C] Arctic jet stream.
- [D] Sub-tropical jet stream.

- 75 An aircraft is flying through the polar front jet stream from south to north, beneath the core. How would the OAT change, in the northern hemisphere, during this portion of the flight? (1.00 P.)
- [A] It increases.
 - [B] It first increases, then decreases.
 - [C] It remains constant.
 - [D] It decreases.

76 What is the average height of the arctic jet stream core? (1.00 P.)

[A] 30000 FT.

[B] 40000 FT.

[C] 50000 FT.

[D] 20000 FT .

- 77 What is the approximate ratio between height and width for a jet stream cross section? (1.00 P.)
- [A] 1/1000
 - [B] 1/1
 - [C] 1/100
 - [D] 1/10

- 78 Which jet stream blows all year round, over the northern hemisphere? (1.00 P.)
- [A] The arctic jet stream.
 - [B] The subtropical jet stream.
 - [C] The equatorial jet stream.
 - [D] The polar night jet stream.
- 79 What is the average height of the jet core within a polar front jet stream? (1.00 P.)
- [A] 30000 FT.
 - [B] 50000 FT.
 - [C] 20000 FT.
 - [D] 40000 FT.

- 80 An aircraft is flying from south to north, above the polar front jet stream, at FL 400 in the southern hemisphere. What change, if any, in temperature will be experienced ? (1.00 P.)
- [A] It decreases.
 - [B] It decreases and then increases.
 - [C] It stays the same.
 - [D] It increases.
- 81 A wind speed of 350 kt within a jet stream core should be world-wide regarded as: (1.00 P.)
- [A] not possible.
 - [B] possible but a very rare phenomenon.
 - [C] not unusual in polar regions.
 - [D] a common occurrence.

- 82 Does the following report make sense?
METAR HKEL 182320Z VRB02KT 5000 MIFG 02/02 Q1015 NOSIG (1.00 P.)
- [A] The report would never be seen, because shallow fog is not reported when the visibility is more than 2 km.
 - [B] The report is nonsense, because it is impossible to observe a visibility of 5 km if shallow fog is reported.
 - [C] The report is not possible, because, with a temperature of 2°C and a dew point of 2°C there must be uniform fog.
 - [D] The report is possible, because shallow fog is defined as a thin layer of fog below eye level.

- 83 An aircraft over Western Europe is crossing a jet stream 2500 FT below its core at right angles. While crossing, the outside temperature is increasing. The prevailing wind is (1.00 P.)
- [A] headwind.
 - [B] from the left.
 - [C] tailwind.
 - [D] from the right

84

To which aerodrome is the following TAF most applicable ?

TAF 230900Z 231019 24014KT 6000 SCT030 BKN100 TEMPO 1113
25020G38KT 2500 +TSRA SCT008 BKN025CB BECMG 1315 28012KT 9999
SCT025 TEMPO 1517 5000 SHRA BKN020 BECMG 1719 27008KT 9999
SCT030 (1.00 P.)

Siehe Anlage 26

[A] EKCH

[B] LFPG

[C] LEMD

[D] LOWW

- 85 What name is given to the low level wind system between the subtropical high pressure belt and the equatorial trough of low pressure (ITCZ) ? (1.00 P.)
- [A] Trade winds.
 - [B] Monsoon.
 - [C] Doldrums.
 - [D] Westerly winds.

- 86 In which zone of a polar front jet stream is the strongest CAT to be expected ?
(1.00 P.)
- [A] Exactly in the centre of the core.
 - [B] About 12000 FT above the core.
 - [C] On the polar air side of the core.
 - [D] On the tropical air side of the core.

- 87 What is the minimum speed for a wind to be classified as a jet stream? (1.00 P.)
- [A] 50 kt.
 - [B] 70 kt.
 - [C] 60 kt.
 - [D] 100 kt.
- 88 A wind sounding in the region of a polar front jet stream gives the following wind profile (Northern hemisphere).
- 900hPa 220/20kt
800hPa 220/25kt
700hPa 230/35kt
500hPa 260/60kt
400hPa 280/85kt
300hPa 300/100kt
250hPa 310/120kt
200hPa 310/80kt
- Which system is the jet stream associated with? (1.00 P.)
- [A] With a ITCZ.
 - [B] With a warm front.
 - [C] With an easterly wave.
 - [D] With a cold front.

89 Where is the most dangerous zone in a tropical revolving storm? (1.00 P.)

- [A] Anywhere in the eye.
- [B] In the wall of clouds around the eye.
- [C] In the centre of the eye.
- [D] About 600 km away from the eye.

- 90 What is the most significant difference between an equatorial jet stream and all the other jet streams ? (1.00 P.)
- [A] Vertical dimension.
 - [B] Horizontal dimension.
 - [C] Wind direction.
 - [D] Wind speed.
- 91 Which of the following types of jet streams can be observed all year round? (1.00 P.)
- [A] Arctic jet stream / subtropical jet stream.
 - [B] Subtropical jet stream / polar front jet stream.
 - [C] Equatorial jet stream / arctic jet stream.
 - [D] Equatorial jet stream / polar front jet stream.

- 92 Tropical revolving storms do not occur in the southeast Pacific and the south Atlantic because (1.00 P.)
- [A] of the strong southeast wind.
 - [B] there is no coriolis force present.
 - [C] the southeast trade winds cross over into the northern hemisphere.
 - [D] of the low water temperature.

- 93 Refer to the following TAF extract:
BECMG 1821 2000 BR BKN004 BECMG 2124 0500 FG VV001
What visibility is forecast for 2400 UTC? (1.00 P.)
- [A] Between 500 m and 2000 m.
 - [B] 2000 m.
 - [C] 500 m.
 - [D] Between 0 m and 1000 m.
- 94 Refer to the following TAF extract:
BECMG 1821 2000 BR BKN004 BECMG 2124 0500 FG VV001
What does the abbreviation "VV001" mean? (1.00 P.)
- [A] Vertical visibility 100 FT.
 - [B] RVR greater than 100 m.
 - [C] Vertical visibility 100 m.
 - [D] RVR less than 100 m.

- 95 What is the main energy source of a tropical revolving storm? (1.00 P.)
- [A] The equatorial jet stream.
 - [B] Cold air advancing from temperate latitudes.
 - [C] Temperature difference between equatorial low pressure trough and subtropical high pressure belt.
 - [D] Latent heat released from condensing water vapour.

- 96 Which of the following meteorological phenomenon indicates upper level instability which may lead to thunderstorm development ? (1.00 P.)
- [A] Halo.
 - [B] Red cirrus.
 - [C] AC lenticularis.
 - [D] AC castellanus.
- 97 Isolated thunderstorms of a local nature are generally caused by (1.00 P.)
- [A] thermal triggering.
 - [B] frontal lifting (warm front).
 - [C] frontal lifting (cold front).
 - [D] frontal occlusion.
- 98 Which thunderstorms move forward the fastest? (1.00 P.)
- [A] Thermal thunderstorms.
 - [B] Thunderstorms formed by lifting processes.
 - [C] Frontal thunderstorms.
 - [D] Orographic thunderstorms.

- 99 What does the term METAR signify? (1.00 P.)
- [A] A METAR is a flight forecast, issued by the meteorological station several times daily.
 - [B] A METAR signifies the actual weather report at an aerodrome and is generally issued in half-hourly intervals.
 - [C] A METAR is a landing forecast added to the actual weather report as a brief prognostic report.
 - [D] A METAR is a warning of dangerous meteorological conditions within a FIR.
- 100 How long from the time of observation is a TREND in a METAR valid? (1.00 P.)
- [A] 2 hours.
 - [B] 30 minutes.
 - [C] 9 hours.
 - [D] 1 hour.

- 101 A zone of strong convection currents is encountered during a flight. In spite of moderate gust you decide to continue the flight. What are your precautionary measures? (1.00 P.)
- [A] Decrease the speed / try to climb above the zone of convective currents if aircraft performance parameters allow.
 - [B] Decrease the speed / try to descend below the zone of convective currents.
 - [C] Increase the speed / try to descend below the zone of convective currents.
 - [D] Increase the speed / try to climb above the zone of convective currents if aircraft performance parameters allow.

- 102 At which altitude, at temperate latitudes, may hail be expected in connection with a CB? (1.00 P.)
- [A] From the ground up to about FL 100.
 - [B] From the ground up to a maximum of FL 450.
 - [C] From the base of the clouds up to about FL 200.
 - [D] From the ground up to about FL 200.

103 What is a downburst? (1.00 P.)

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

- 104 What is a SPECI? (1.00 P.)
- [A] An aerodrome forecast issued every 9 hours.
 - [B] A warning of meteorological dangers at an aerodrome, issued only when required.
 - [C] A routine aerodrome weather report issued every 3 hours.
 - [D] A special aerodrome weather report, issued when a significant change of the weather conditions have been observed.
- 105 Refer to the following TAF extract:
BECMG 1821 2000 BR BKN004 BECMG 2124 0500 FG VV001
What does the "BECMG" data indicate for the 18 to 21 hour time frame? (1.00 P.)
- [A] A quick change to new conditions between 1800 and 1900 UTC.
 - [B] The new conditions are achieved between 1800 and 2100 UTC
 - [C] Many short term changes in the original weather.
 - [D] Many long term changes in the original weather.
- 106 Refer to the following TAF extract:
BECMG 1821 2000 BR BKN004 BECMG 2124 0500 FG VV001
What does the abbreviation "BKN004" mean? (1.00 P.)
- [A] 1 - 4 oktas, ceiling 400 m.
 - [B] 4 - 8 oktas, ceiling 400 m.
 - [C] 5 - 7 oktas, ceiling 400 FT.
 - [D] 1 - 4 oktas, ceiling 400 FT.
- 107 Refer to the following TAF extract;
BECMG 1821 2000 BR BKN004 PROB30 TEMPO 2124 0500 FG VV001
What does the abbreviation "PROB30" mean? (1.00 P.)
- [A] The cloud ceiling should lift to 3000 FT.
 - [B] Conditions will last for at least 30 minutes.
 - [C] Change expected in less than 30 minutes.
 - [D] Probability of 30%.

- 108 Where, as a general rule, is the core of the polar front jet stream to be found?
(1.00 P.)
- [A] In the tropical air mass.
 - [B] In the polar air mass.
 - [C] Just above the warm-air tropopause.
 - [D] Just below the cold-air tropopause.

109 How long does a typical microburst last? (1.00 P.)

- [A] Less than 1 minute.
- [B] 1 to 2 hours.
- [C] About 30 minutes.
- [D] 1 to 5 minutes.

- 110 You cross a jet stream in horizontal flight at approximately right angles. While crossing, in spite of a strong wind of 120 kt, you notice the temperature barely changes. Which of the following statements is correct ? (1.00 P.)
- [A] You assume the front associated with the jet stream to be very weak with practically no temperature difference between the two air masses.
 - [B] Since the result of such readings seems impossible, you will have the instruments tested after landing.
 - [C] This phenomenon is absolutely normal as you are crossing the jet core.
 - [D] This phenomenon does not surprise you at all, since normally no large temperature differences are possible at these heights.

111 The Hurricane season is mainly from (1.00 P.)

- [A] July until November.
- [B] April until July.
- [C] January until April.
- [D] October until January.

112 In which month does the humid monsoon in India start? (1.00 P.)

- [A] In March.
- [B] In December.
- [C] In October.
- [D] In June.

- 113 At about what geographical latitude as average is assumed for the zone of prevailing westerlies? (1.00 P.)
- [A] 80°N.
 - [B] 30°N.
 - [C] 10°N.
 - [D] 50°N.

- 114 During July flights from Bangkok (13°N - 100°E) to Karachi (25°N - 67°E) experience an average tailwind component of 22 kt. In January the same flights, also operating at FL 370, have an average headwind of 50 kt. What is the reason for this difference? (1.00 P.)
- [A] The flights in January encountered, by chance, very unusual, adverse wind conditions.
 - [B] The wind components correspond to the seasonal change of the regional wind system.
 - [C] The flights during the summer encountered, by chance, very unusual, favourable conditions.
 - [D] The flights happen to be in the area of the polar front jet stream.

- 115 What jet streams are likely to be crossed during a flight from Stockholm to Rio de Janeiro (23°S) at FL 350 in July ? (1.00 P.)
- [A] A polar front jet stream followed by one or two subtropical jet streams.
 - [B] One subtropical jet stream.
 - [C] A polar front jet stream followed by a subtropical jet stream and later, a second polar front jet stream.
 - [D] A subtropical jet stream followed by a polar front jet stream.
- 116 While crossing a jet stream at right angles in Western Europe (3000 FT below its core) and OAT is decreasing, what would be the prevailing wind? (1.00 P.)
- [A] Crosswind from the right
 - [B] Crosswind from the left
 - [C] A tailwind.
 - [D] A headwind.

- 117 What is normally the most effective measure to reduce or avoid CAT effects?
(1.00 P.)
- [A] Increase of speed.
 - [B] Change of course.
 - [C] Decrease of speed.
 - [D] Change of flight level.

- 118 Which area of a polar front jet stream in the northern hemisphere has the highest probability of turbulence? (1.00 P.)
- [A] Looking downstream, the area to the right of the core.
 - [B] Above the core in the boundary between warm and cold air.
 - [C] In the core of the jet stream.
 - [D] Looking downstream, the area to the left of the core.

- 119 Atmospheric soundings give the following temperature profile:
3000 FT +15°C
6000 FT +8°C
10000 FT +1°C
14000 FT -6°C
18000 FT -14°C
24000 FT -26°C
At which of the following flight levels is the risk for aircraft icing, in cloud, greatest? (1.00 P.)
- [A] FL 150
 - [B] FL 80
 - [C] FL 180
 - [D] FL 220
- 120 On the approach, the surface temperature is given as -5°C. The freezing level is at 3000 FT/AGL. At 4000 FT/AGL, there is a solid cloud layer from which rain is falling.
According to the weather briefing, the clouds are due to an inversion caused by warm air sliding up and over an inclined front. Would you expect icing? (1.00 P.)
- [A] No, absolutely no icing will occur.
 - [B] No, flights clear of cloud experience no icing.
 - [C] Yes, between ground level and 3000 FT/AGL.
 - [D] Yes, but only between 3000 and 4000 FT/AGL.

- 121 In an air mass with no clouds the surface temperature is 15°C and the temperature at 1000 m/AGL is 13°C. This layer of air is: (1.00 P.)
- [A] unstable
 - [B] stable
 - [C] a layer of heavy turbulence
 - [D] conditionally unstable

- 122 In the lower part of the stratosphere the temperature (1.00 P.)
- [A] decreases with altitude
 - [B] is almost constant
 - [C] increases at first and decreases afterward
 - [D] increases with altitude

123 How are the air masses distributed in a cold occlusion ? (1.00 P.)

- [A] The coldest air behind and the warm air in front of the occlusion; the less cold air mass is above ground level.
- [B] The coldest air in front of and the warm air behind the occlusion; the less cold air is above ground level.
- [C] The coldest air mass behind and the less cold air in front of the occlusion; the warm air mass is above ground level.
- [D] The coldest air in front of and the less cold air is behind the occlusion; the warm air mass is above ground level.

- 124 If a saturated air mass descends down a slope its temperature increases at (1.00 P.)
- [A] a lower rate than in dry air, as condensation gives out heat.
 - [B] a higher rate than in dry air, as it gives up latent evaporation heat.
 - [C] the same rate as if the air mass were dry.
 - [D] a lower rate than in dry air, as evaporation absorbs heat.

125 What characterizes a stationary front ? (1.00 P.)

- [A] The surface wind usually has its direction parallel to the front
- [B] The weather conditions that it originates is a combination between those of an intense cold front and those of a warm and very active front
- [C] The warm air moves at approximately half the speed of the cold air
- [D] The surface wind usually has its direction perpendicular to the front

- 126 The most likely reason for radiation fog to dissipate or become low stratus is:
(1.00 P.)
- [A] increasing surface wind speed.
 - [B] surface cooling.
 - [C] an increasingly stable atmosphere.
 - [D] a low level temperature inversion.

- 127 The geostrophic wind is greater than the gradient wind around a low pressure system because the (1.00 P.)
- [A] coriolis force opposes to the centrifugal force
 - [B] centrifugal force is added to the pressure gradient
 - [C] centrifugal force opposes the pressure gradient
 - [D] coriolis force is added to the pressure gradient
- 128 The geostrophic wind is less than the gradient wind around an anticyclone because the (1.00 P.)
- [A] centrifugal force opposes the pressure gradient
 - [B] coriolis effect opposes the centrifugal force
 - [C] centrifugal force is added to the pressure gradient
 - [D] effect of coriolis is added to friction
- 129 An aircraft is flying in the southern hemisphere at low altitude (less than 2000 feet) and going directly away from a centre of low pressure. What direction, relative to the aircraft, does the wind come from ? (1.00 P.)
- [A] From the right and slightly on the nose
 - [B] From the right and slightly on the tail
 - [C] From the left and slightly on the nose
 - [D] From the left and slightly on the tail

- 130 What is the difference between radiation fog and advection fog ? (1.00 P.)
- [A] Radiation fog forms only on the ground, advection fog only on the sea.
 - [B] Radiation fog forms due to night cooling and advection fog due to daytime cooling.
 - [C] Radiation fog is formed by surface cooling in a calm wind. Advection fog is formed by evaporation over the sea.
 - [D] Radiation fog forms due to surface cooling at night in a light wind. Advection fog forms when warm humid air flows over a cold surface.

- 131 Frontal depressions can be assumed to move in the direction of the 2000 feet wind (1.00 P.)
- [A] at the apex of the wave
 - [B] in front of the warm front
 - [C] in the warm sector
 - [D] behind the cold front

- 132 What types of cloud will you meet flying towards a warm front ? (1.00 P.)
- [A] Extensive areas of fog. At some 100 km from the front NS begin
 - [B] At some 500 km from the front, groups of CB, later at some 250 km thickening AS
 - [C] At some 500 km AS, later CS and at some 80 km before the front CB
 - [D] At some 800 km CS, later AS, and at some 300 km NS until the front

- 133 A frontal depression passes through the airport. What form of precipitation do you expect ? (1.00 P.)
- [A] Continuous rain or snow during 6 hours until the warm front arrives. The precipitation stops for several hours within the warm sector. On the arrival of the cold front, showers within a couple of hours.
 - [B] Showers during some 2 hours until the warm front arrives. Drizzle in the warm sector within 12 hours. Rain or snow on the passage of the cold front.
 - [C] Continuous rain or snow while the frontal wave passes for a period of some 24 hours.
 - [D] Rain or snow during about 12 hours until the warm front arrives. Within the warm sector the rain increases. Improvement on the passage of the cold front.

134 What characteristic is associated with a temperature inversion ? (1.00 P.)

- [A] Instability
- [B] Clear ice
- [C] Area of active storms
- [D] Stability

- 135 In the lower layers of the atmosphere due to friction the wind changes direction towards the low pressure area because: (1.00 P.)
- [A] wind speed decreases and therefore coriolis force decreases
 - [B] the pressure gradient increases
 - [C] turbulence is formed and pressure increases
 - [D] turbulence is formed and pressure decreases

- 136 The most frequent wind direction in a valley caused by thermal effects is toward the: (1.00 P.)
- [A] mountain at night.
 - [B] valley during daylight as much as at night.
 - [C] valley during daylight hours.
 - [D] mountain during daylight hours.

- 137 The isobars drawn on a surface weather chart represent lines of equal pressure (1.00 P.)
- [A] at a determined density altitude
 - [B] reduced to sea level
 - [C] at height of observatory
 - [D] at flight level

- 138 What conditions are most likely to lead to the formation of hill fog? (1.00 P.)
- [A] Humid stable air mass, wind blowing towards the hills.
 - [B] High relative humidity and an unstable air mass
 - [C] Clear skies, calm or light winds, with relatively low humidity
 - [D] Precipitation which is lifted by the action of moderate winds striking the range

- 139 How does temperature vary with increasing altitude in the ICAO standard atmosphere below the tropopause? (1.00 P.)
- [A] Remains constant
 - [B] Increases
 - [C] At first it increases and higher up it decreases
 - [D] Decreases

140 Which cloud type may indicate the presence of severe turbulence ? (1.00 P.)

- [A] Cirrocumulus
- [B] Nimbostratus
- [C] Stratocumulus
- [D] Altocumulus lenticularis

- 141 Which of the following conditions are most favourable to the formation of mountain waves? (1.00 P.)
- [A] Unstable air at mountain top altitude and a wind at least 20 knots blowing across the mountain ridge.
 - [B] Moist unstable air at mountain top and wind of less than 5 knots blowing across the mountain ridge.
 - [C] Either stable or unstable air at mountain top and a wind of at least 30 knots blowing parallel to the mountain ridge.
 - [D] Stable air at mountain top altitude and a wind at least 20 knots blowing across the mountain ridge.

- 142 An aircraft is approaching a cold front from the warm air mass side at FL 270 and experiencing moderate to severe turbulence. A jet stream is forecast to be at FL 310. The shortest way to get out of this turbulence is by: (1.00 P.)
- [A] Descending
 - [B] Turn right
 - [C] Maintain FL 270
 - [D] Climbing

- 143 The jetstream and associated clear air turbulence can sometimes be visually identified in flight by (1.00 P.)
- [A] a constant outside air temperature
 - [B] long streaks of cirrus clouds.
 - [C] dust or haze at high level
 - [D] a high-pressure centre at high level

- 144 During the winter months in mid-latitudes in the northern hemisphere, the polar front jet stream moves toward the (1.00 P.)
- [A] north and speed increases
 - [B] south and speed increases
 - [C] north and speed decreases
 - [D] south and speed decreases

- 145 What causes surface winds to flow across the isobars at an angle rather than parallel to the isobars ? (1.00 P.)
- [A] Greater density of the air at the surface
 - [B] Greater atmospheric pressure at the surface
 - [C] Coriolis force
 - [D] Surface friction

- 146 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 ? (1.00 P.)
- [A] Frontal fog
 - [B] Steam fog
 - [C] Advection fog
 - [D] Radiation fog

- 147 In addition to a lifting action, what are two other requirements necessary for thunderstorm formation ? (1.00 P.)
- [A] Stable conditions and low atmospheric pressure
 - [B] Unstable conditions and high atmospheric pressure
 - [C] Unstable conditions and high moisture content
 - [D] Stable conditions and high moisture content

- 148 If you have to fly through a warm front when freezing level is at 10000 feet in the warm air and at 2000 feet in the cold air, at which altitude is the probability of freezing rain the lowest ? (1.00 P.)
- [A] 12000 feet
 - [B] 9000 feet
 - [C] 5000 feet
 - [D] 3000 feet

- 149 From the following TAF you can assume that visibility at 2055Z in Eldoret (HKEL) will be:
HKEL 261000Z 261812 28015G25KT 9999 SCT025 TEMPO 1822
29018G35KT 5000 SHRA BKN010CB PROB30 TEMPO 1821 1500 TSGR
BKN008CB BECMG 2224 26010KT (1.00 P.)
- [A] a minimum of 1,5 km and a maximum of 5 km.
[B] not less than 1,5 km but could be in excess of 10 km.
[C] more than 10 km
[D] a maximum 5 km.

- 150 What prevents air from flowing directly from high-pressure areas to low-pressure areas ? (1.00 P.)
- [A] Katabatic force
 - [B] Surface friction
 - [C] The pressure gradient force
 - [D] Coriolis force

- 151 Select the true statement concerning isobars and wind flow patterns around high- and low-pressure systems that are shown on a surface weather chart. (1.00 P.)
- [A] When the isobars are far apart, crest of standing waves may be marked by stationary lenticular clouds.
 - [B] Surface winds flow perpendicular to the isobars.
 - [C] When the isobars are close together, the pressure gradient force is greater and wind velocities are stronger.
 - [D] Isobars connect contour lines of equal temperature.

- 152 What type of fog is most likely to form over flat land during a clear night, with calm or light wind conditions ? (1.00 P.)
- [A] Steam.
 - [B] Radiation.
 - [C] Orographic.
 - [D] Advection.

- 153 In which environment is aircraft structural ice most likely to have the highest rate of accretion ? (1.00 P.)
- [A] Freezing rain.
 - [B] Snow.
 - [C] Stratus clouds.
 - [D] Cirrus clouds.

- 154 The presence of ice pellets at the surface is evidence that (1.00 P.)
- [A] freezing rain occurs at a higher altitude
 - [B] a warm front has passed
 - [C] there are thunderstorms in the area
 - [D] a cold front has passed

155 Continuous updraughts occur in a thunderstorm during the (1.00 P.)

- [A] dissipating stage.
- [B] initial stage.
- [C] mature stage.
- [D] period in which precipitation is falling.

156 Thunderstorms reach their greatest intensity during the (1.00 P.)

- [A] mature stage.
- [B] dissipating stage.
- [C] period in which precipitation is not falling.
- [D] cumulus stage.

157 The most dangerous form of airframe icing is (1.00 P.)

- [A] clear ice.
- [B] rime ice.
- [C] hoar frost.
- [D] dry ice.

- 158 The degree of clear air turbulence experienced by an aircraft is proportional to the (1.00 P.)
- [A] intensity of vertical and horizontal wind shear
 - [B] stability of the air
 - [C] intensity of the solar radiation
 - [D] height of the aircraft

- 159 In an intense trough of low pressure over Iceland during wintertime the weather likely to be experienced is: (1.00 P.)
- [A] strong wind with subsidence at low levels
 - [B] light wind, good visibility and a high cloud ceiling
 - [C] strong wind shear, convection and snow showers
 - [D] strong wind associated with an almost clear sky

- 160 The temperature at FL 80 is +6°C. What will the temperature be at FL 130 if the ICAO standard lapse rate is applied ? (1.00 P.)
- [A] -6°C
 - [B] +2°C
 - [C] 0°C
 - [D] -4°C
- 161 The temperature at FL 110 is -5°C. What will the temperature be at FL 50 if the ICAO standard lapse rate is applied ? (1.00 P.)
- [A] +7°C
 - [B] +3°C
 - [C] -3°C
 - [D] 0°C
- 162 The temperature at FL 160 is -22°C. What will the temperature be at FL 90 if the ICAO standard lapse rate is applied ? (1.00 P.)
- [A] +4°C
 - [B] -4°C
 - [C] -8°C
 - [D] 0°C
- 163 A temperature of +15°C is recorded at an altitude of 500 metres above sea level. If the vertical temperature gradient is that of a standard atmosphere, what will the temperature be at the summit of a mountain, 2500 metres above sea level? (1.00 P.)
- [A] +4°C
 - [B] -2°C
 - [C] +2°C
 - [D] 0°C

- 164 How would you characterise an air temperature of -15°C at the 700 hPa level over western Europe? (1.00 P.)
- [A] Low
 - [B] Within $\pm 5^{\circ}\text{C}$ of ISA
 - [C] 20°C below standard
 - [D] High
- 165 How would you characterise an air temperature of -30°C at the 300 hPa level over western Europe? (1.00 P.)
- [A] Low
 - [B] High
 - [C] Very low
 - [D] Within $\pm 5^{\circ}\text{C}$ of ISA
- 166 How would you characterise an air temperature of -55°C at the 200 hPa level over western Europe? (1.00 P.)
- [A] Very high
 - [B] High
 - [C] Within $\pm 5^{\circ}\text{C}$ of ISA
 - [D] Low

167 What is the technical term for an increase in temperature with altitude? (1.00 P.)

- [A] Subsidence
- [B] Adiabatic
- [C] Advection
- [D] Inversion

168 The station pressure used in surface weather charts is (1.00 P.)

[A] QNE

[B] QFF

[C] QNH

[D] QFE

169 Which FL corresponds with the 300 hPa pressure level ? (1.00 P.)

- [A] FL 390
- [B] FL 300
- [C] FL 100
- [D] FL 50

170 Which FL corresponds with the 500 hPa pressure level ? (1.00 P.)

- [A] FL 100
- [B] FL 160
- [C] FL 180
- [D] FL 390

171 Which FL corresponds with the 700 hPa pressure level ? (1.00 P.)

- [A] FL 390
- [B] FL 300
- [C] FL 100
- [D] FL 180

172 Which FL corresponds with the 850 hPa pressure level ? (1.00 P.)

- [A] FL 390
- [B] FL 50
- [C] FL 300
- [D] FL100

- 173 The QFF at an airfield located 400 metres above sea level is 1016 hPa. The air temperature is 10°C higher than a standard atmosphere. What is the QNH? (1.00 P.)
- [A] 1016 hPa
 - [B] It is not possible to give a definitive answer
 - [C] Less than 1016 hPa
 - [D] More than 1016 hPa
- 174 The QFF at an airfield located 400 metres above sea level is 1016 hPa. The air temperature is 10°C lower than a standard atmosphere. What is the QNH? (1.00 P.)
- [A] 1016 hPa
 - [B] Less than 1016 hPa
 - [C] It is not possible to give a definitive answer
 - [D] More than 1016 hPa
- 175 The QNH at an airfield located 200 metres above sea level is 1009 hPa. The air temperature is 10°C lower than a standard atmosphere. What is the QFF? (1.00 P.)
- [A] It is not possible to give a definitive answer
 - [B] More than 1009 hPa
 - [C] Less than 1009 hPa
 - [D] 1009 hPa
- 176 The QNH at an airfield located 0 metres above sea level is 1022 hPa. The air temperature is not available. What is the QFF? (1.00 P.)
- [A] 1022 hPa
 - [B] Less than 1022 hPa
 - [C] More than 1022 hPa
 - [D] It is not possible to give a definitive answer

- 177 The QNH at an airfield in California located 69 metres below sea level is 1018 hPa. The air temperature is 10°C higher than a standard atmosphere. What is the QFF? (1.00 P.)
- [A] Less than 1018 hPa
 - [B] It is not possible to give a definitive answer
 - [C] More than 1018 hPa
 - [D] 1018 hPa
- 178 The QFF at an airfield in California located 69 metres below sea level is 1030 hPa. The air temperature is 10°C lower than a standard atmosphere. What is the QNH? (1.00 P.)
- [A] 1030 hPa
 - [B] More than 1030 hPa
 - [C] Less than 1030 hPa
 - [D] It is not possible to give a definitive answer
- 179 If the QFE at Locarno (200 metres above sea level) is 980 hPa, what is the approximate QNH ? (1.00 P.)
- [A] 1015 hPa
 - [B] 1010 hPa
 - [C] 1005 hPa
 - [D] 1000 hPa
- 180 If the QFE at Locarno (200 metres above sea level) is 1000 hPa, what is the approximate QNH? (1.00 P.)
- [A] 990 hPa
 - [B] 1025 hPa
 - [C] 985 hPa
 - [D] 1035 hPa

- 181 If the QNH at Locarno (200 metres above sea level) is 1015 hPa, what is the approximate QFE? (1.00 P.)
- [A] 990 hPa
 - [B] 1005 hPa
 - [C] 995 hPa
 - [D] 1000 hPa
- 182 If the QNH at Locarno (200 metres above sea level) is 1025 hPa, what is the approximate QFE? (1.00 P.)
- [A] 995 hPa
 - [B] 1005 hPa
 - [C] 1000 hPa
 - [D] 1025 hPa

183 If you are flying at FL 300 in an air mass that is 15°C warmer than a standard atmosphere, what is the outside temperature likely to be? (1.00 P.)

- [A] -45°C
- [B] -30°C
- [C] -15°C
- [D] -60°C

184 If you are flying at FL 100 in an air mass that is 10°C warmer than a standard atmosphere, what is the outside temperature likely to be? (1.00 P.)

- [A] -15°C
- [B] -10°C
- [C] +15°C
- [D] +5°C

185 If you are flying at FL 120 and the outside temperature is -2°C, at what altitude will the "freezing level" be? (1.00 P.)

- [A] FL 150
- [B] FL 130
- [C] FL 90
- [D] FL 110

- 186 An aircraft flying at FL 100 from Marseille (QNH 1012 hPa) to Palma de Mallorca (QNH 1006 hPa) experiences no change to true altitude. The reason for this is that: (1.00 P.)
- [A] the air at Palma de Mallorca is warmer than that at Marseille
 - [B] the air at Palma de Mallorca is colder than that at Marseille
 - [C] the altimeters are erroneous, and need to be tested
 - [D] one of the two QNH values may be incorrect
- 187 During a flight over the sea at FL 100 from Marseille (QNH 1012 hPa) to Palma de Mallorca (QNH 1012 hPa), the true altitude is constantly increasing. What action, if any, should be taken ? (1.00 P.)
- [A] Recheck the QNH because one of the QNH values must be wrong
 - [B] None, the reason for the change is that the air around Palma is warmer than the air around Marseille
 - [C] Compensate by heading further to the left
 - [D] Have your altimeter checked, because its readings are obviously wrong
- 188 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 ? (1.00 P.)
- [A] The altimeter is faulty
 - [B] The air at Palma de Mallorca is warmer than that at Marseille
 - [C] One of the QNH values must be wrong
 - [D] The air at Marseille is warmer than that at Palma de Mallorca

- 189 During a flight over the sea at FL 135, the true altitude is 13500 feet; local QNH is 1019 hPa. What information, if any, can be gained about the air mass in which the aircraft is flying? (1.00 P.)
- [A] It is colder than ISA
 - [B] There is insufficient information to make any assumption
 - [C] It is warmer than ISA
 - [D] Its average temperature is the same as ISA
- 190 An aircraft is flying over the sea at FL 120, 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 ? (1.00 P.)
- [A] It is warmer than ISA
 - [B] It is colder than ISA
 - [C] Its average temperature is the same as ISA
 - [D] There is insufficient information to come to any conclusion
- 191 An aircraft is flying over the sea at FL 100, with a true altitude of 10000 feet; local QNH is 1003 hPa. What assumption, if any, can be made about the air mass in which the aircraft is flying ? (1.00 P.)
- [A] It is warmer than ISA
 - [B] It is colder than ISA
 - [C] There is insufficient information to come to any conclusion
 - [D] Its average temperature is about ISA
- 192 An aircraft is flying over the Alps on a very cold winter's day. The regional QNH is 1013 hPa. During the flight, you circle around a mountain at an altitude of its summit. What reading will the aneroid altimeter give, compared to the elevation of the summit? (1.00 P.)
- [A] The same altitude as the elevation of the summit
 - [B] A lower altitude than the elevation of the summit
 - [C] There is insufficient information to come to a conclusion
 - [D] A higher altitude than the elevation of the summit

- 193 An aircraft is flying over the Alps on a warm summer's day. The weather is fine, and there is a high pressure system in the area. During the flight, a mountain is passed at an altitude of its summit. What reading will the aneroid altimeter give, compared to the summit's elevation? (1.00 P.)
- [A] The same altitude as the elevation of the summit
 - [B] There is insufficient information to come to a conclusion
 - [C] A lower altitude than the elevation of the summit
 - [D] A higher altitude than the elevation of the summit

- 194 An aircraft is descending to land under IFR. If the local QNH is 1009 hPa, what will happen to the altitude reading when the altimeter is reset at the transition level ? (1.00 P.)
- [A] It will not be affected
 - [B] It will increase
 - [C] It will remain the same
 - [D] It will decrease
- 195 During the climb after take-off, the altimeter setting is adjusted at the transition altitude. If the local QNH is 1023 hPa, what will happen to the altimeter reading during the resetting procedure ? (1.00 P.)
- [A] It is not possible to give a definitive answer
 - [B] It will increase
 - [C] It will decrease
 - [D] It will remain the same
- 196 During the climb after take-off, 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? (1.00 P.)
- [A] It will decrease
 - [B] It will remain the same
 - [C] It will increase
 - [D] It is not possible to give a definitive answer

197

An aircraft is flying from Point A to Point B on the upper level contour chart. The altimeter setting is 1013.2 hPa. Which of these statements is correct? (1.00 P.)

Siehe Anlage 27

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

198

An aircraft is flying from Point A to Point B on the upper level contour chart. The altimeter setting is 1013.2 hPa. Which of these statements is correct? (1.00 P.)

Siehe Anlage 28

- [A] The true altitude will be higher at B than at A
- [B] Wind speed at A and at B is the same
- [C] Wind speed at A is higher than at B
- [D] The true altitude will be higher at A than at B

199

An aircraft is flying from Point A to Point B on the upper level contour chart. The altimeter setting is 1013.2 hPa. Which of these statements is correct? (1.00 P.)

Siehe Anlage 29

- [A] Wind speed at B is higher than at A
- [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 Madrid is higher than at A

200

An aircraft is flying from Point A to Point B on the upper level contour chart. The altimeter setting is 1013.2 hPa. Which of these statements is correct? (1.00 P.)

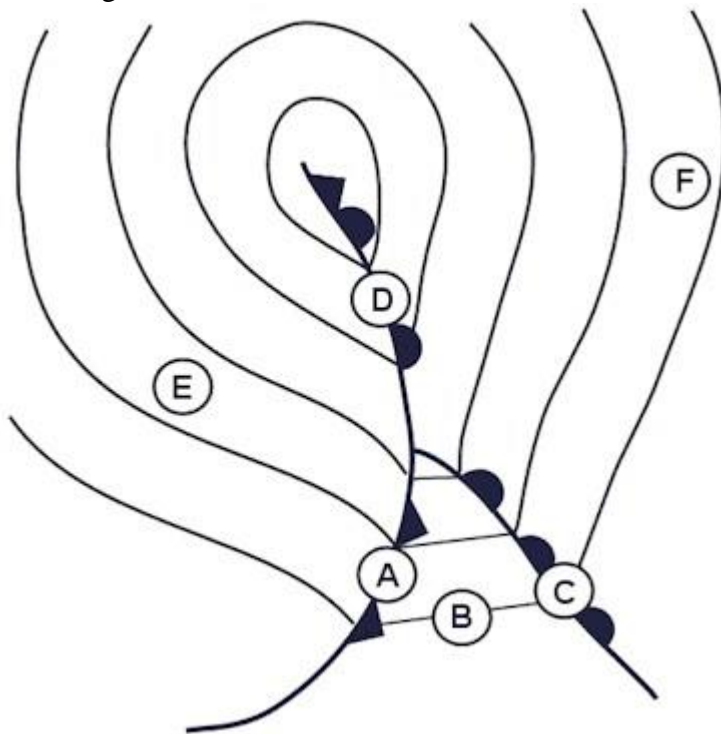
Siehe Anlage 30

- [A] The true altitude will be higher at B than at A
- [B] The true altitude will be higher at A than at B
- [C] Wind speed at A and at B is the same
- [D] Wind speed at B is higher than at A

Anlagen zu den Aufgaben

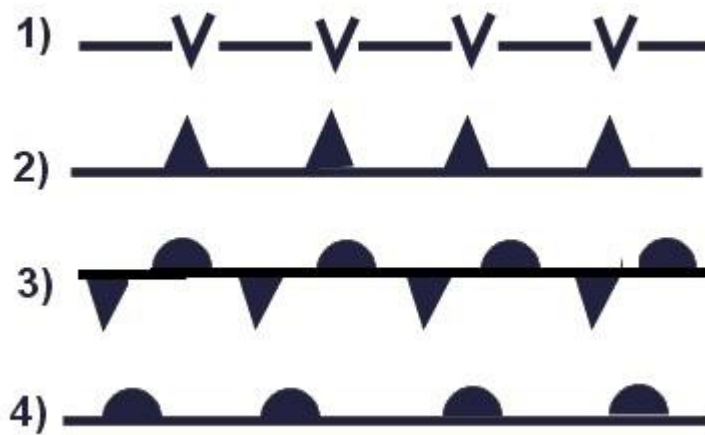
Anlage 1 zu Aufgabe 26

Titel: Anlage 1



Anlage 2 zu Aufgabe 39

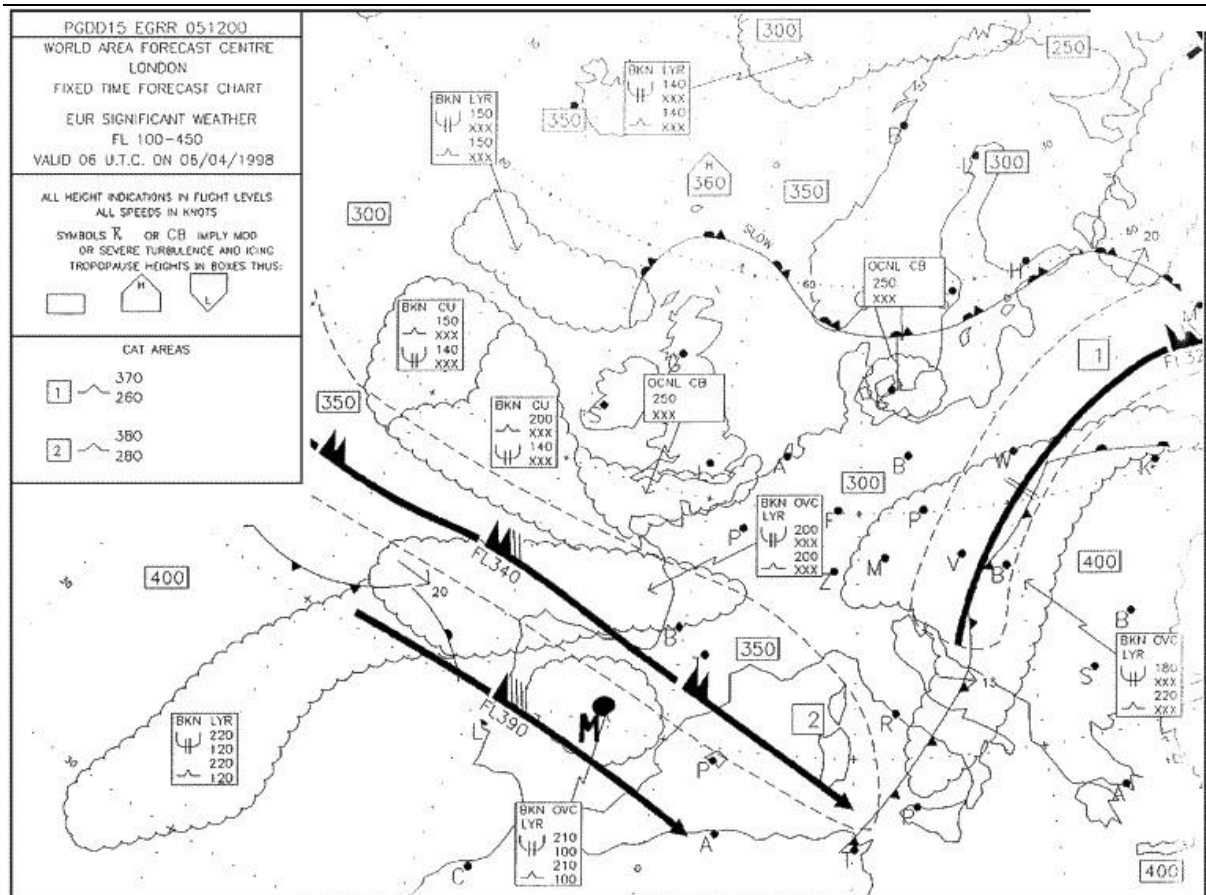
Titel: Anlage 1



Anlage 3 zu Aufgabe 42

Titel: Anlage 1

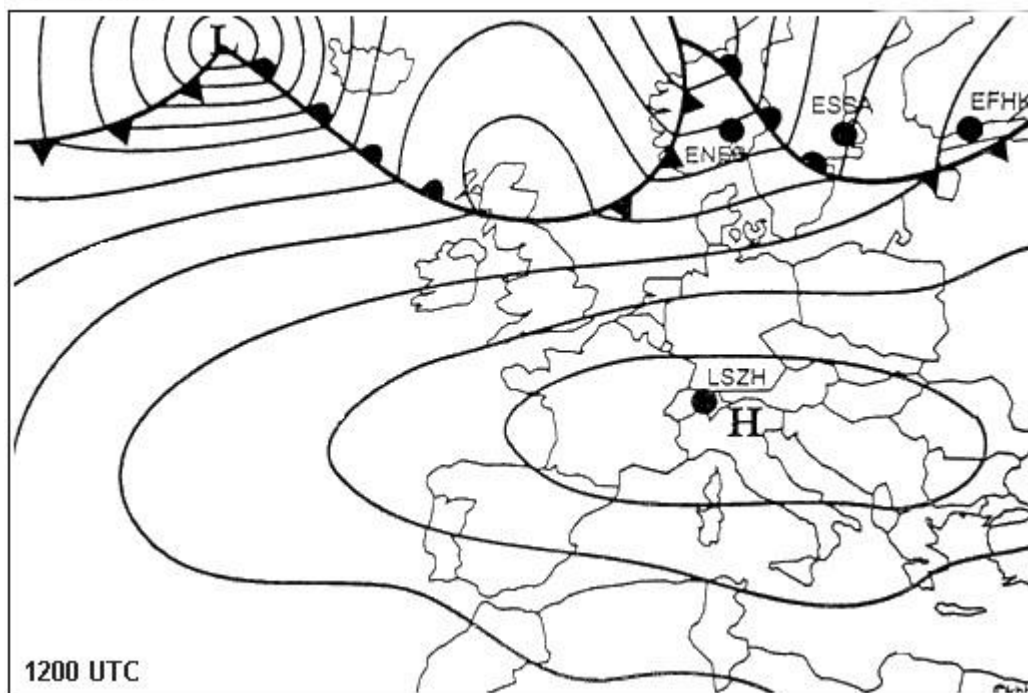
Anlagen zu den Aufgaben



Anlage 4 zu Aufgabe 43

Titel: Anlage 1

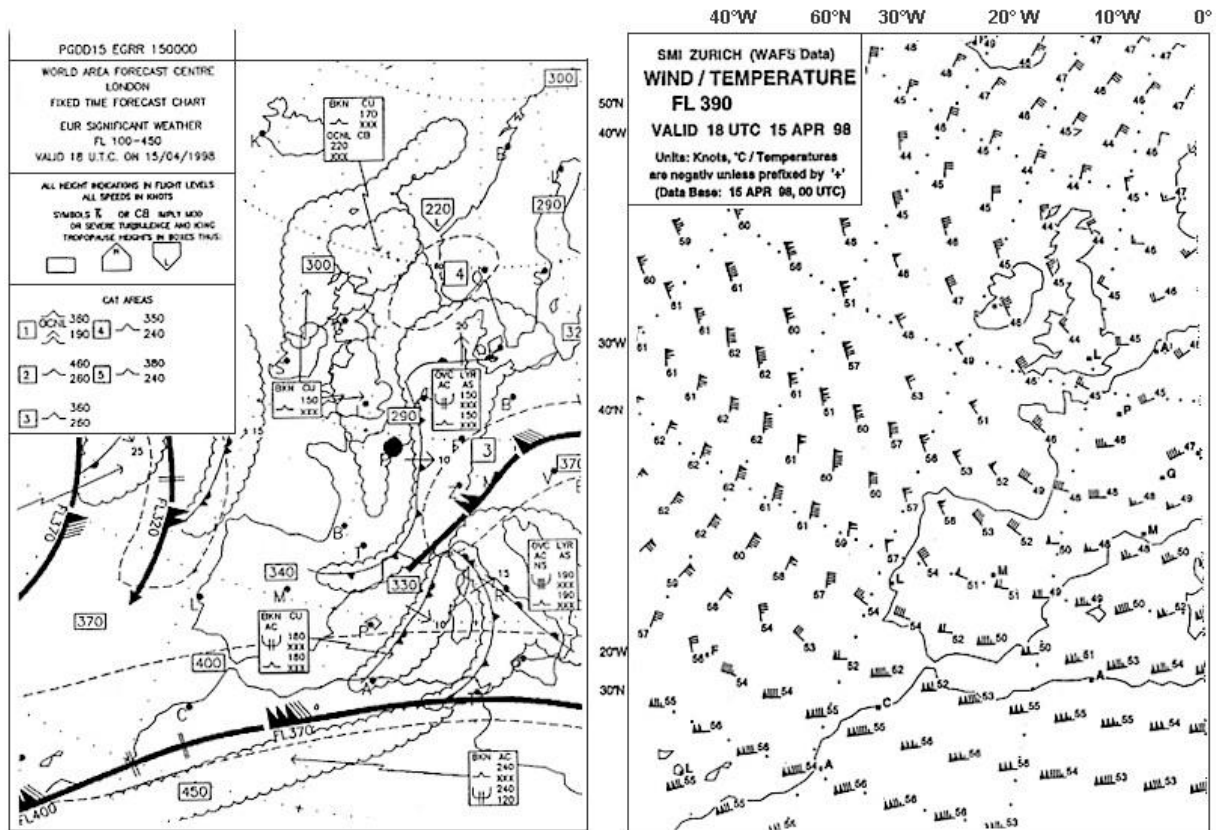
DOCUMENT:



Anlagen zu den Aufgaben

Anlage 5 zu Aufgabe 44

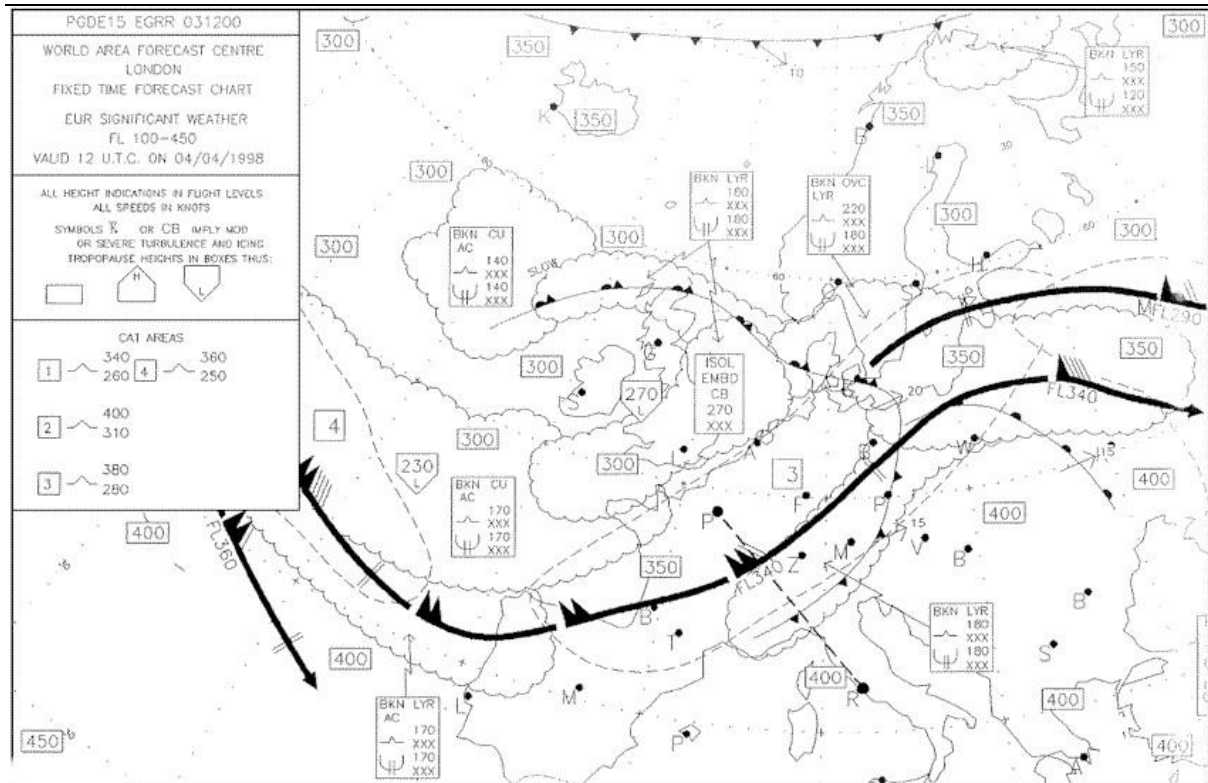
Titel: Anlage 1



Anlage 6 zu Aufgabe 45

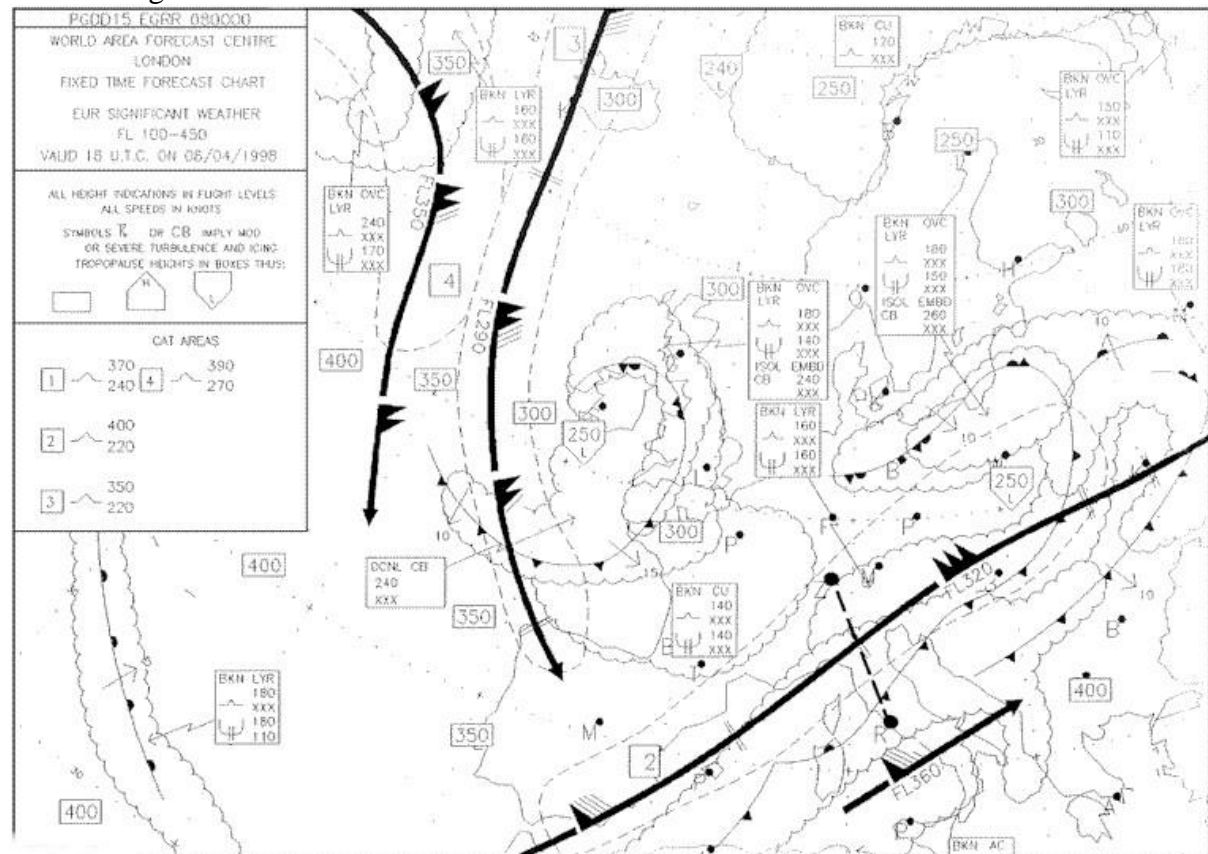
Titel: Anlage 1

Anlagen zu den Aufgaben



Anlage 7 zu Aufgabe 46

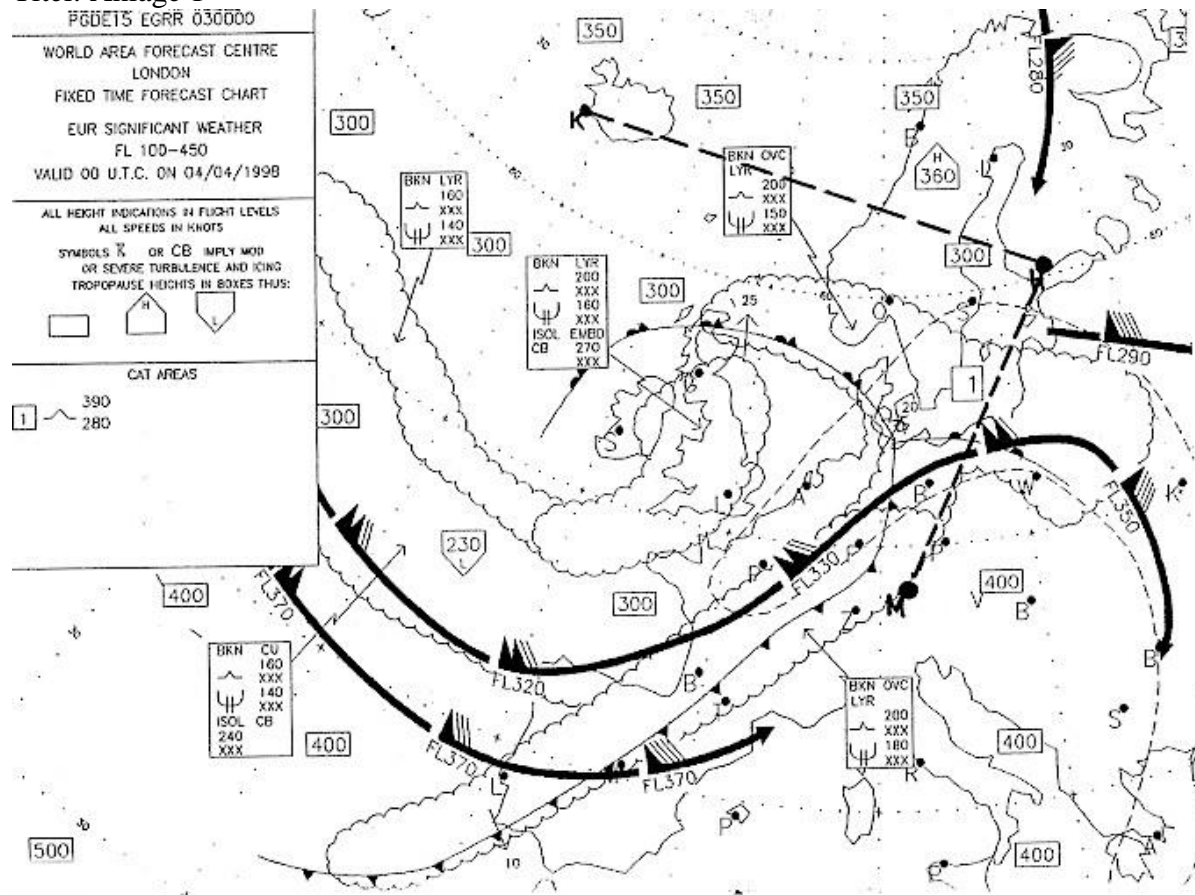
Titel: Anlage 1



Anlagen zu den Aufgaben

Anlage 8 zu Aufgabe 47

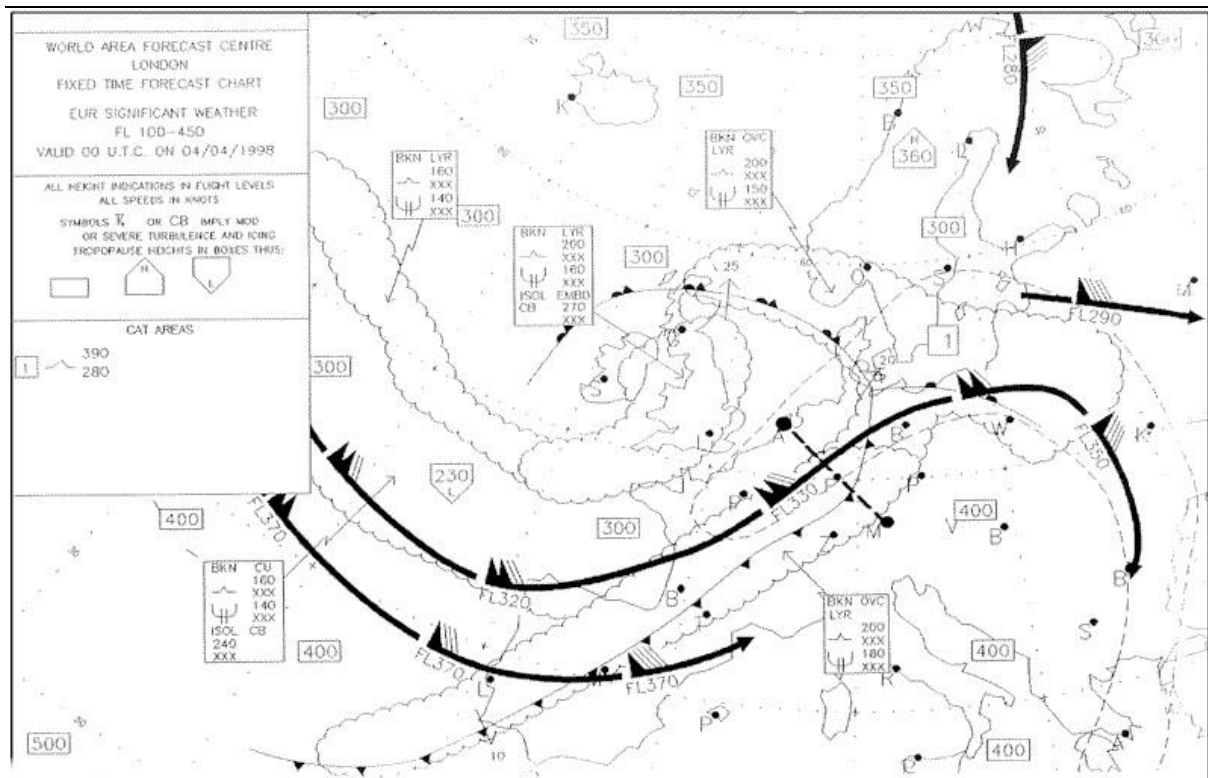
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Anlage 9 zu Aufgabe 48

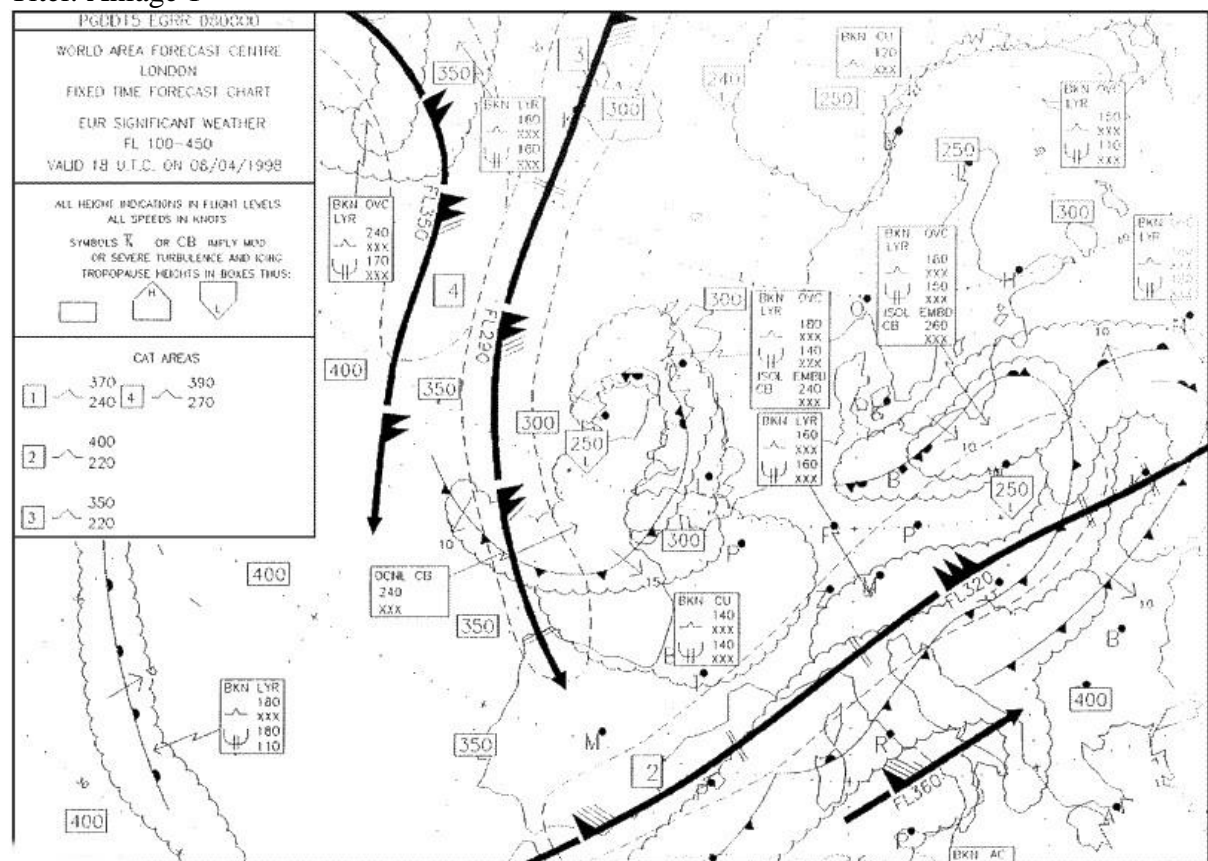
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Anlagen zu den Aufgaben



Anlage 10 zu Aufgabe 49

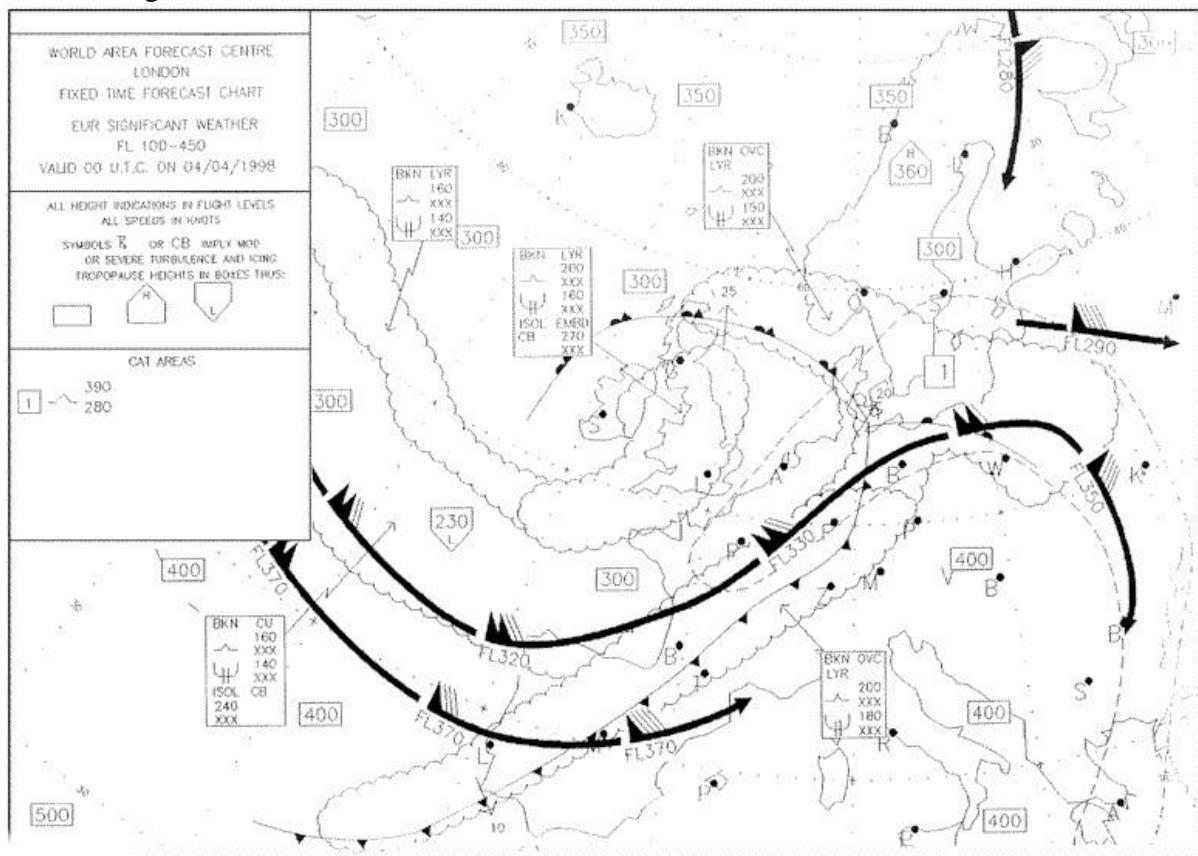
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Anlagen zu den Aufgaben

Anlage 11 zu Aufgabe 50

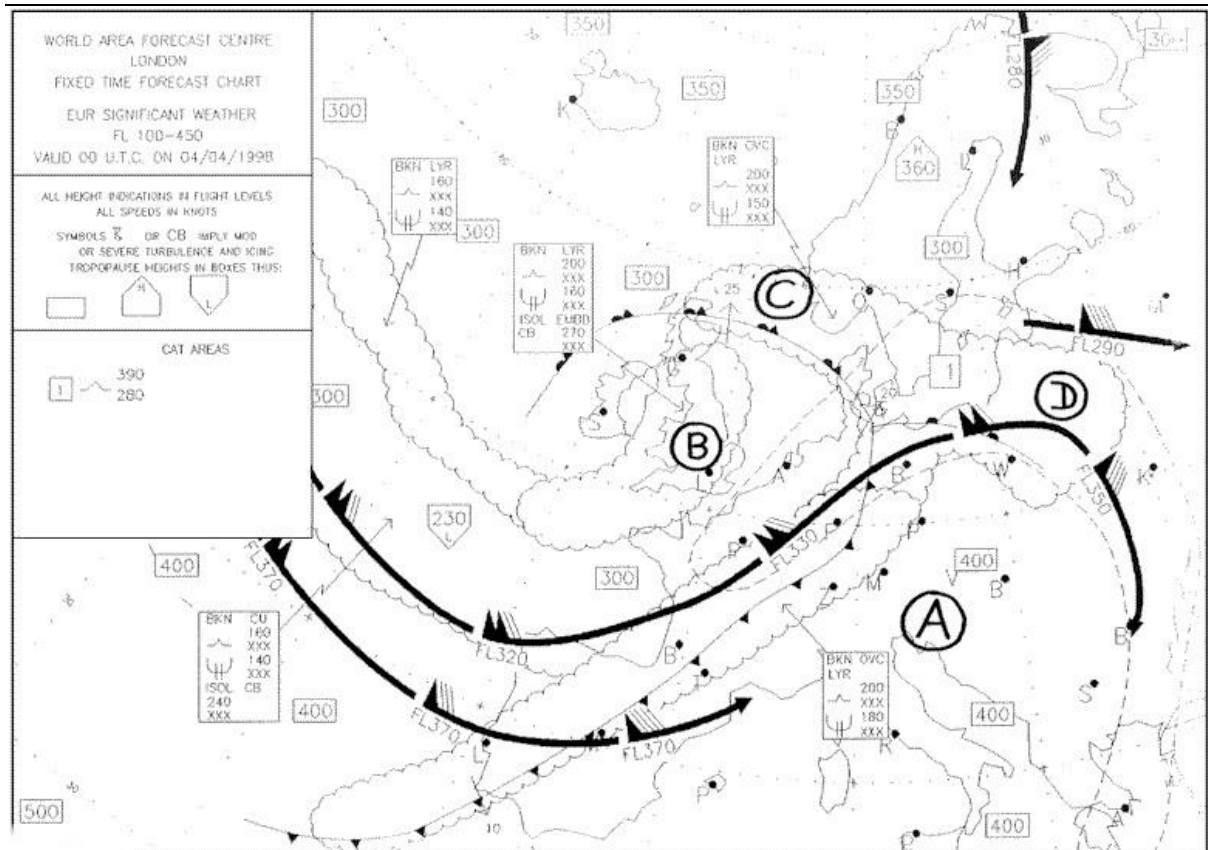
Titel: Anlage 1



Anlage 12 zu Aufgabe 51

Titel: Anlage 1

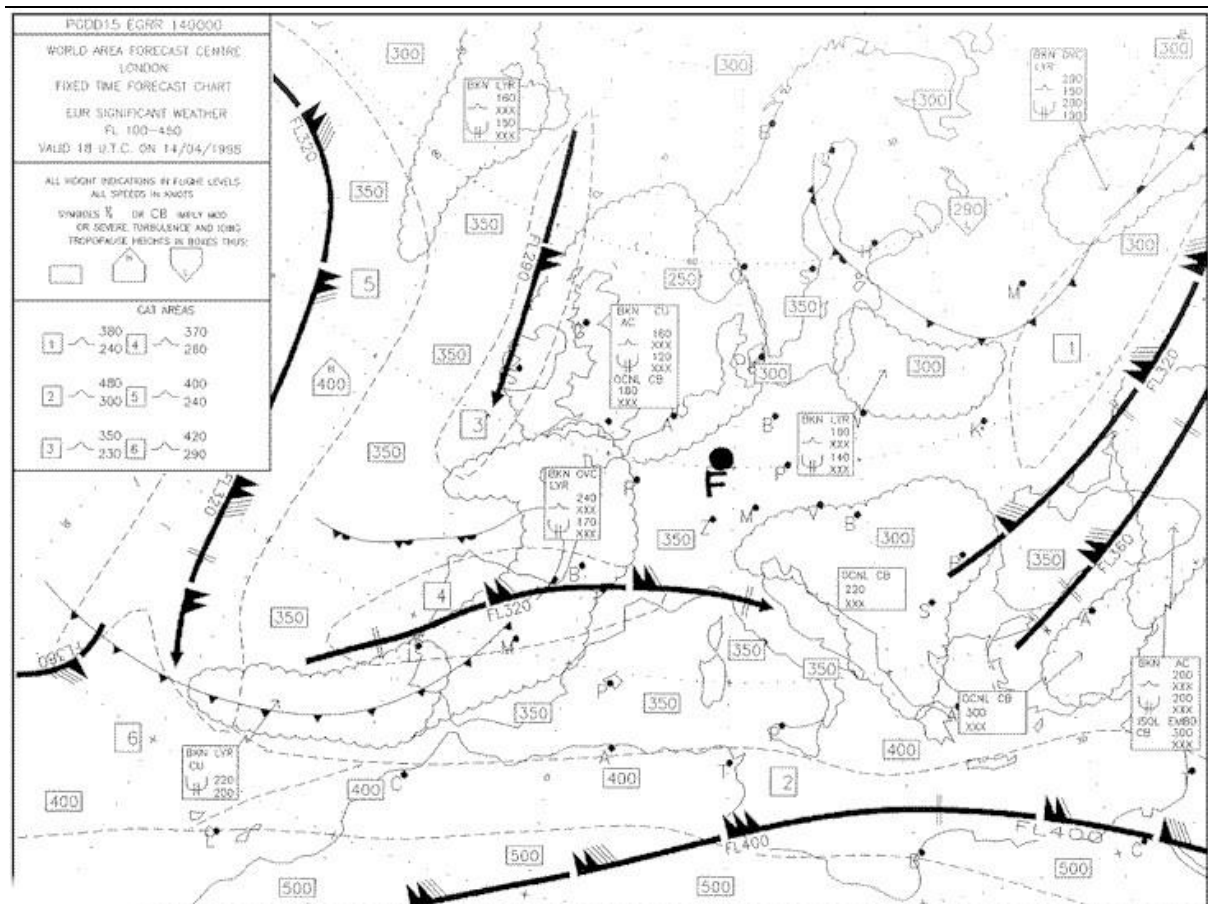
Anlagen zu den Aufgaben



Anlage 13 zu Aufgabe 52

Titel: Anlage 1

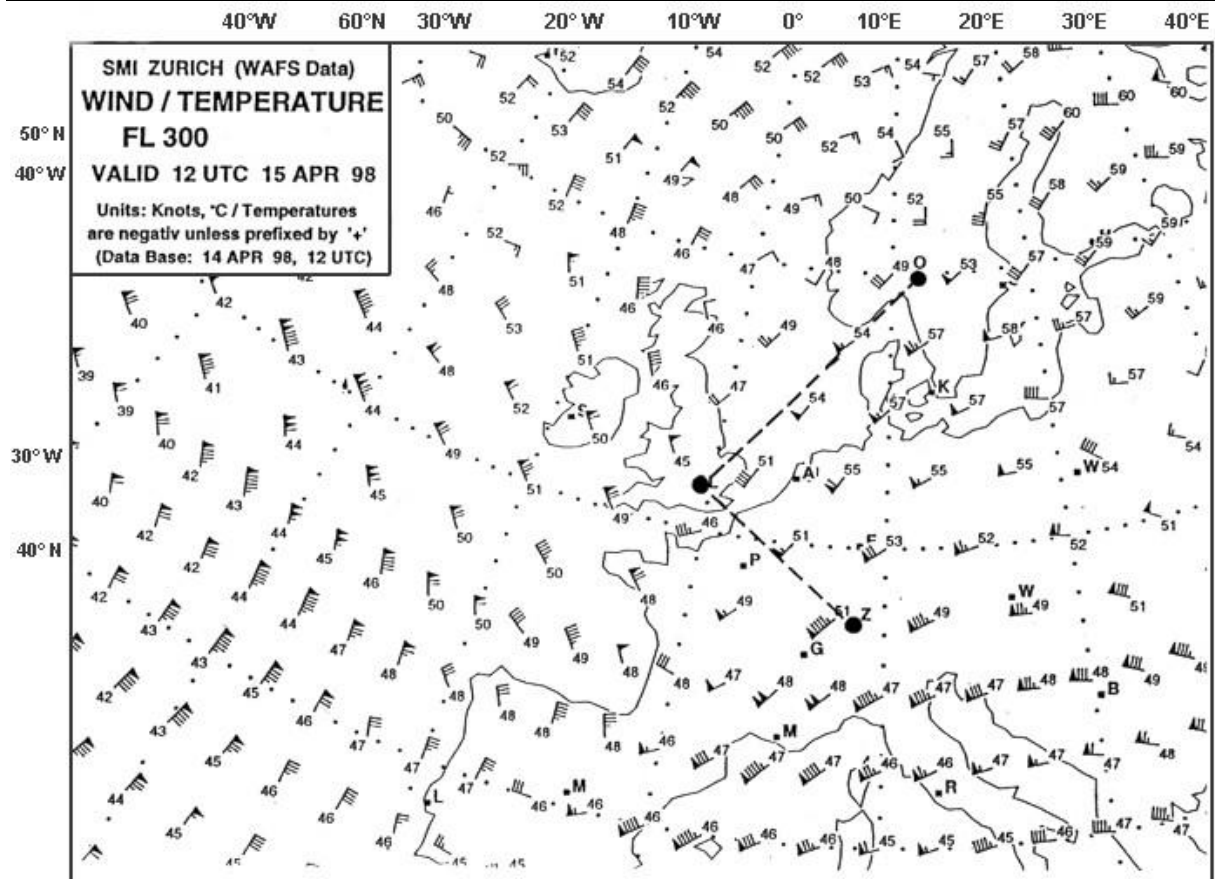
Anlagen zu den Aufgaben



Anlage 14 zu Aufgabe 53

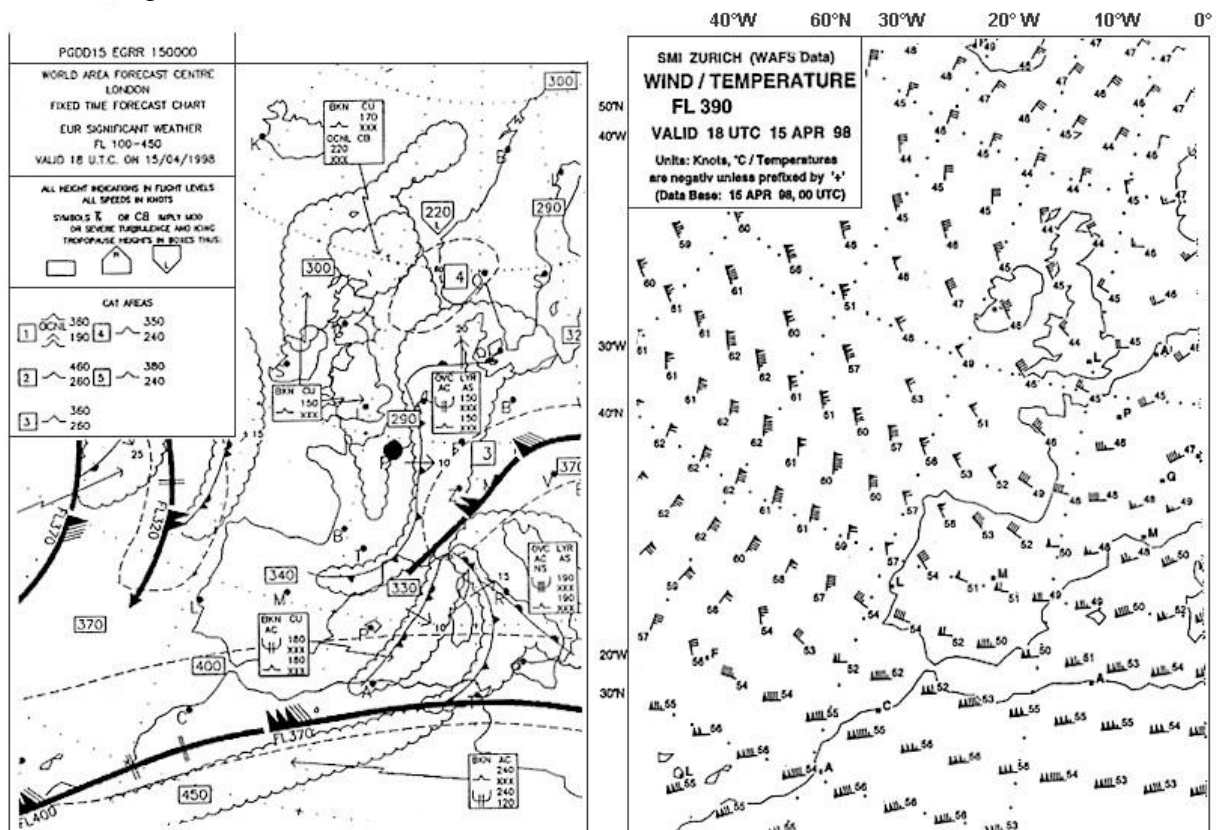
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Anlagen zu den Aufgaben



Anlage 15 zu Aufgabe 54

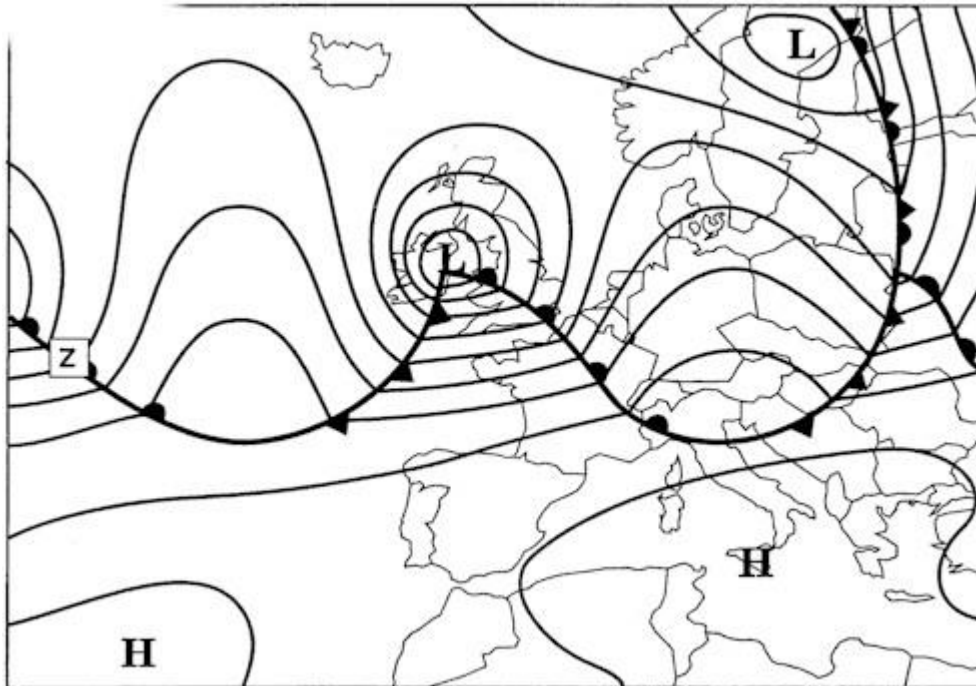
Titel: Anlage 1



Anlagen zu den Aufgaben

Anlage 16 zu Aufgabe 55

Titel: Anlage 1



Anlage 17 zu Aufgabe 56

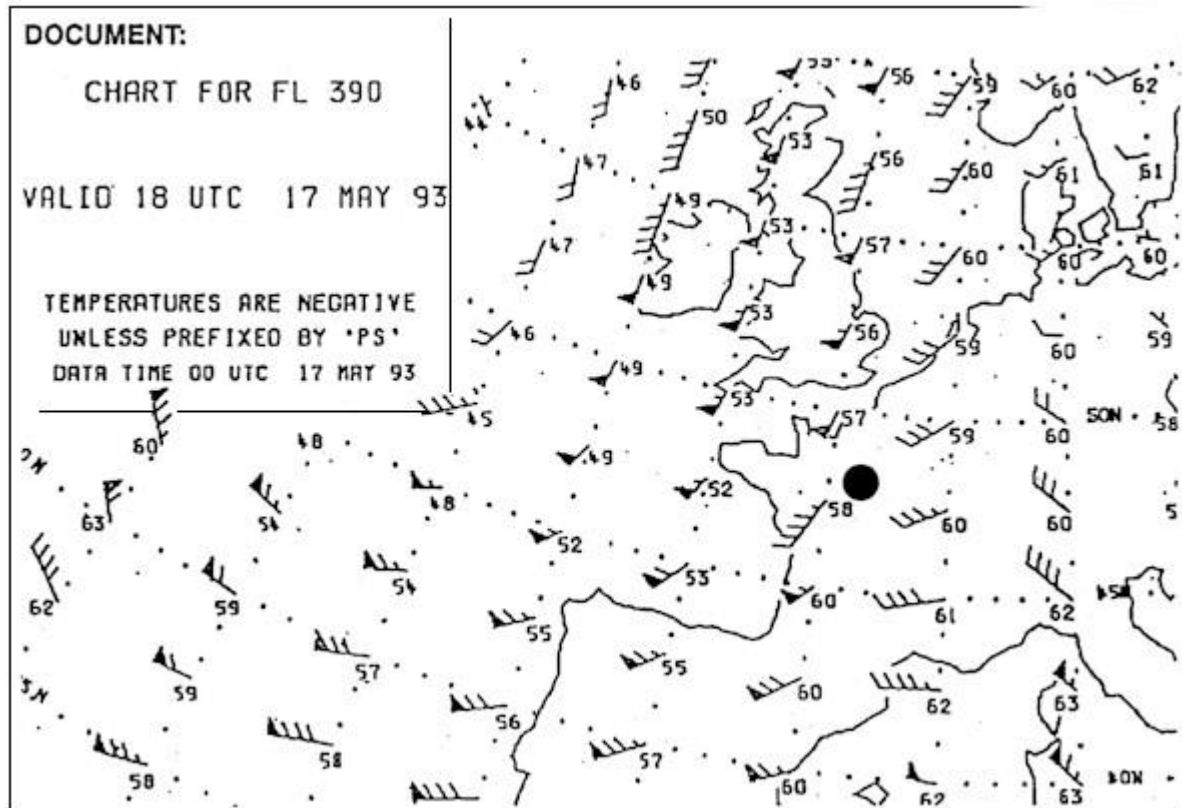
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Anlagen zu den Aufgaben

Anlage 18 zu Aufgabe 58

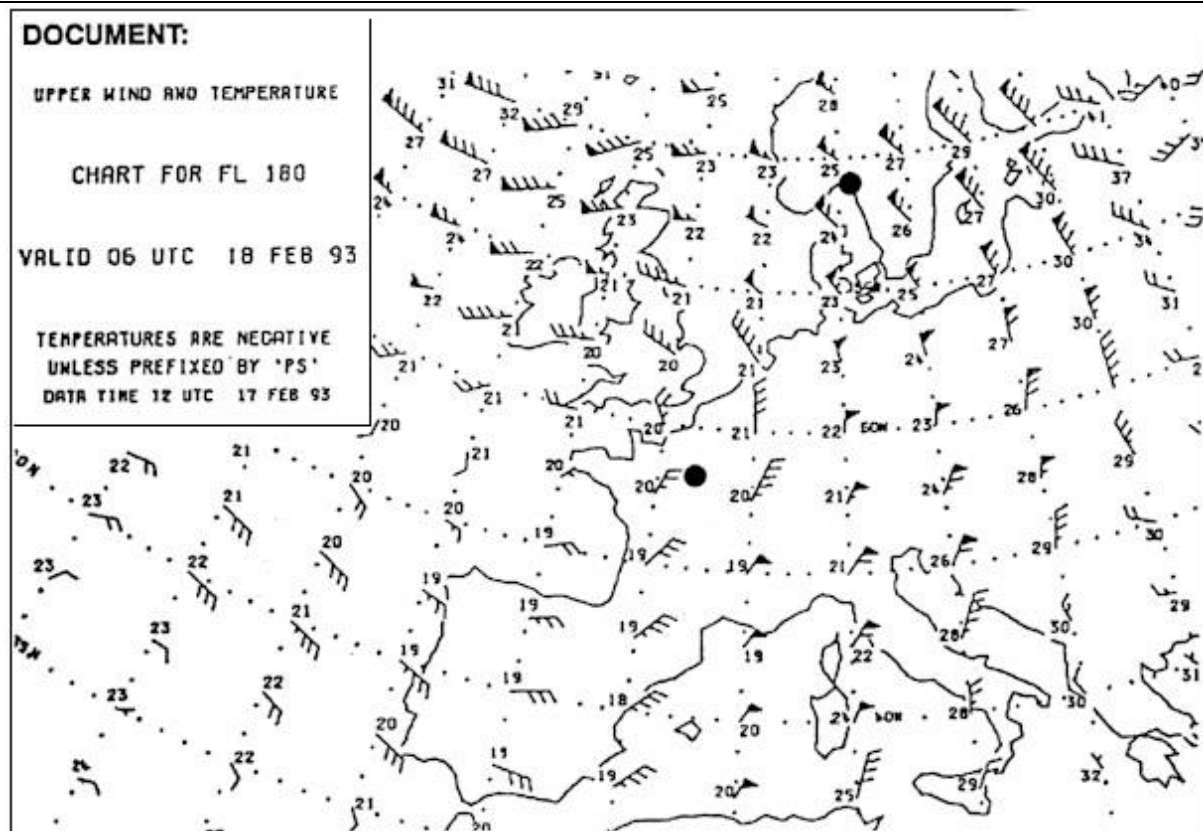
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Anlage 19 zu Aufgabe 59

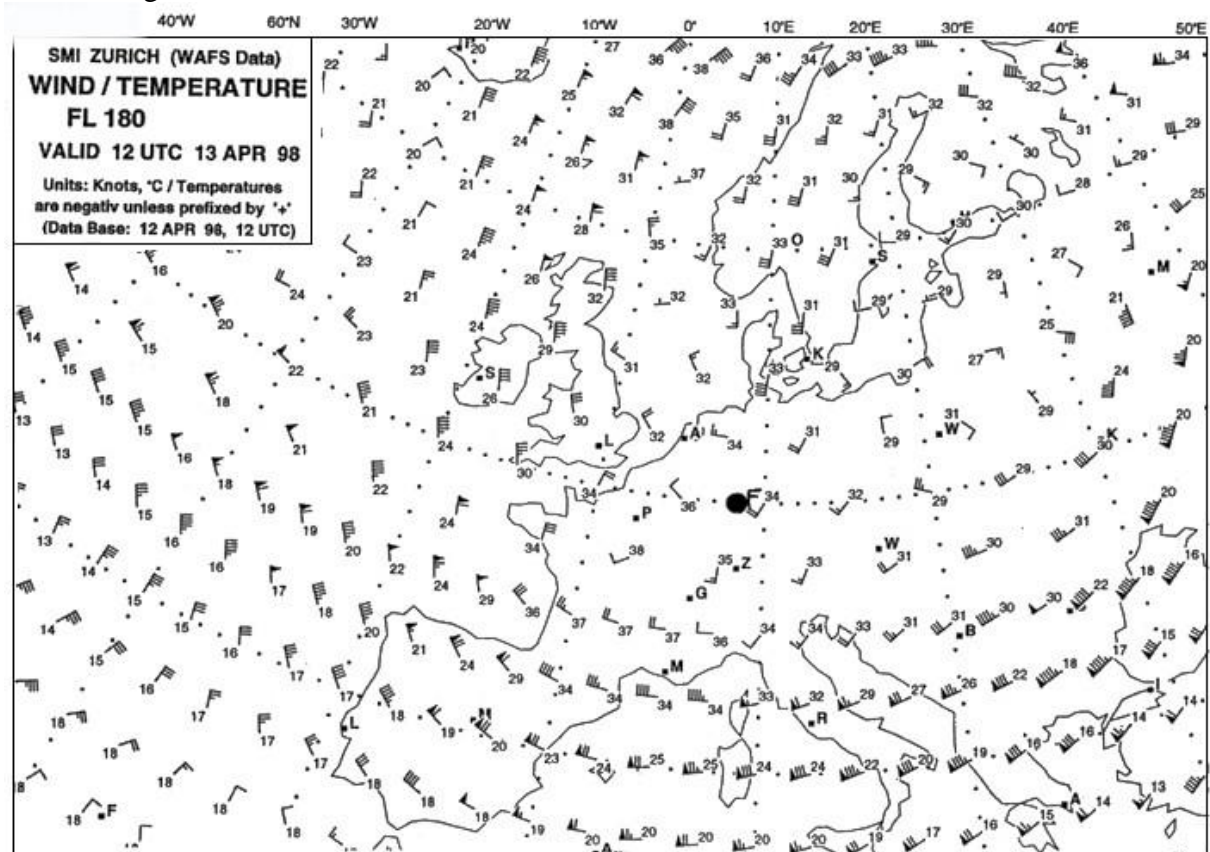
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Anlagen zu den Aufgaben



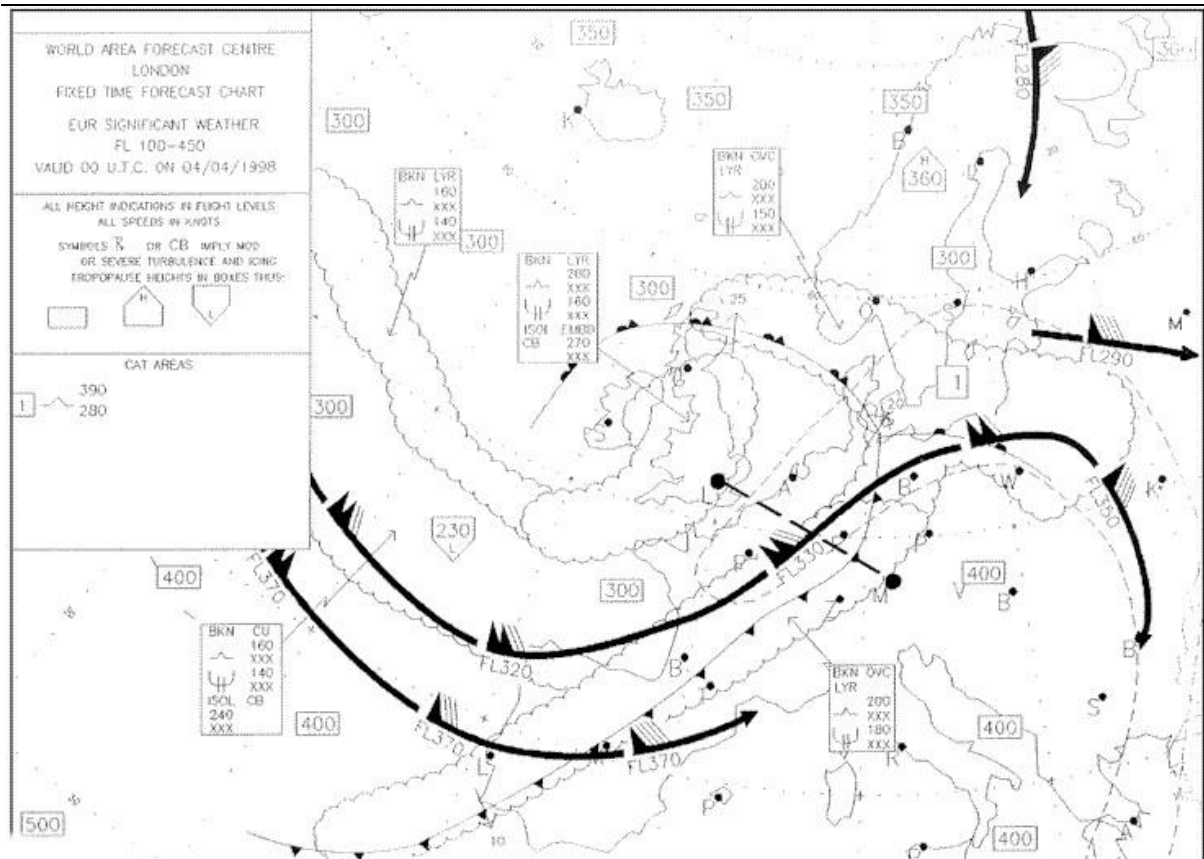
Anlage 20 zu Aufgabe 60

Titel: Anlage 1



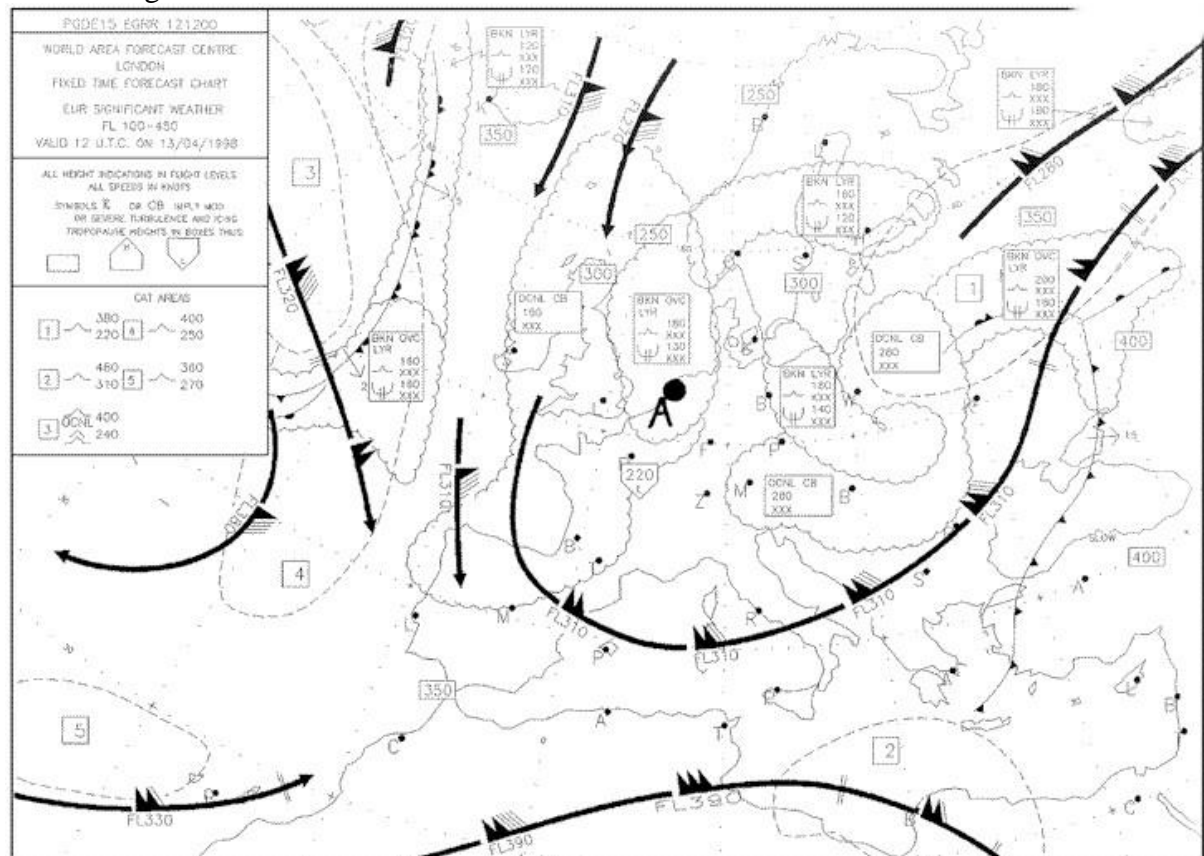


Anlagen zu den Aufgaben



Anlage 23 zu Aufgabe 64

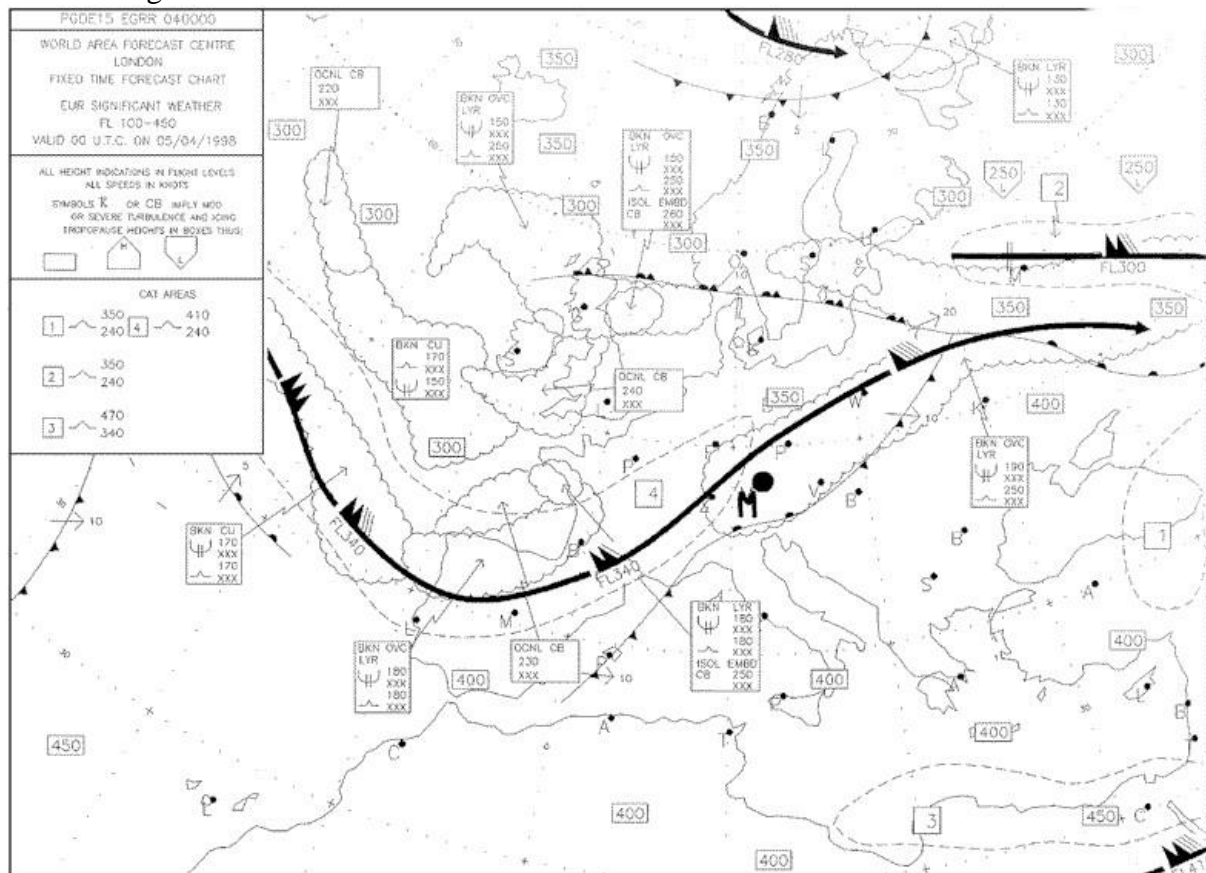
Titel: Anlage 1



Anlagen zu den Aufgaben

Anlage 24 zu Aufgabe 65

Titel: Anlage 1



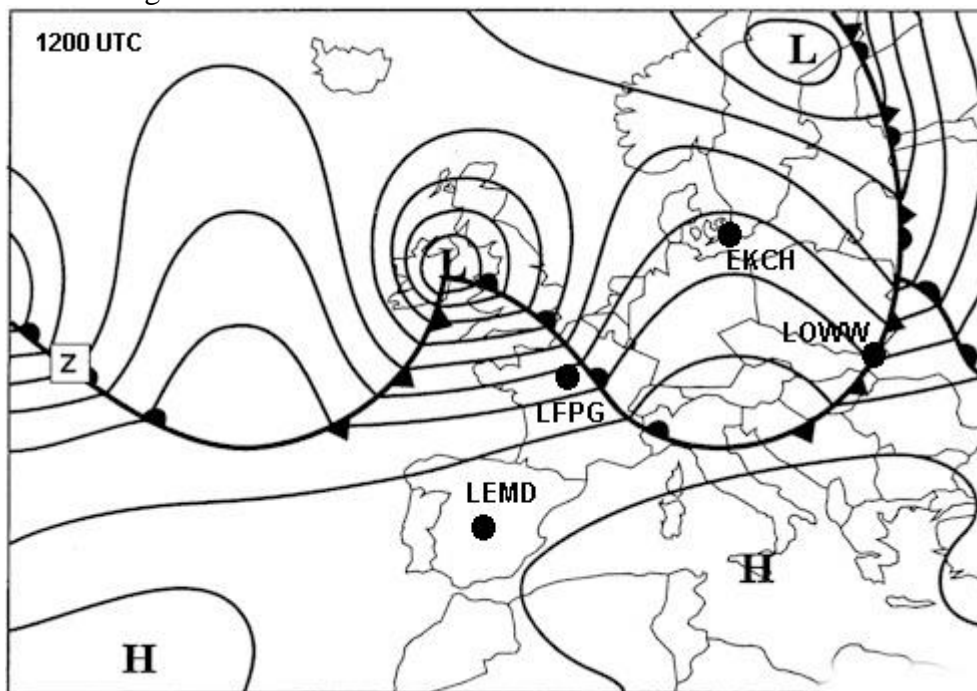
Anlage 25 zu Aufgabe 74

Titel: Anlage 1



Anlage 26 zu Aufgabe 84

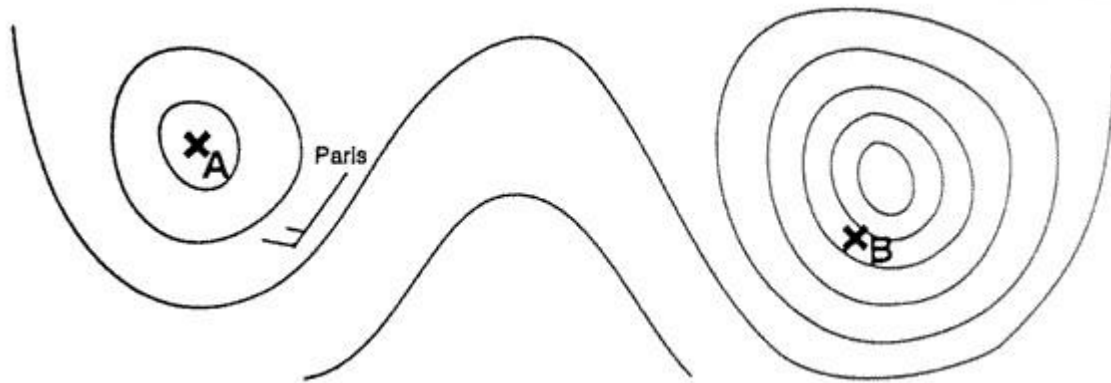
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Anlage 27 zu Aufgabe 197

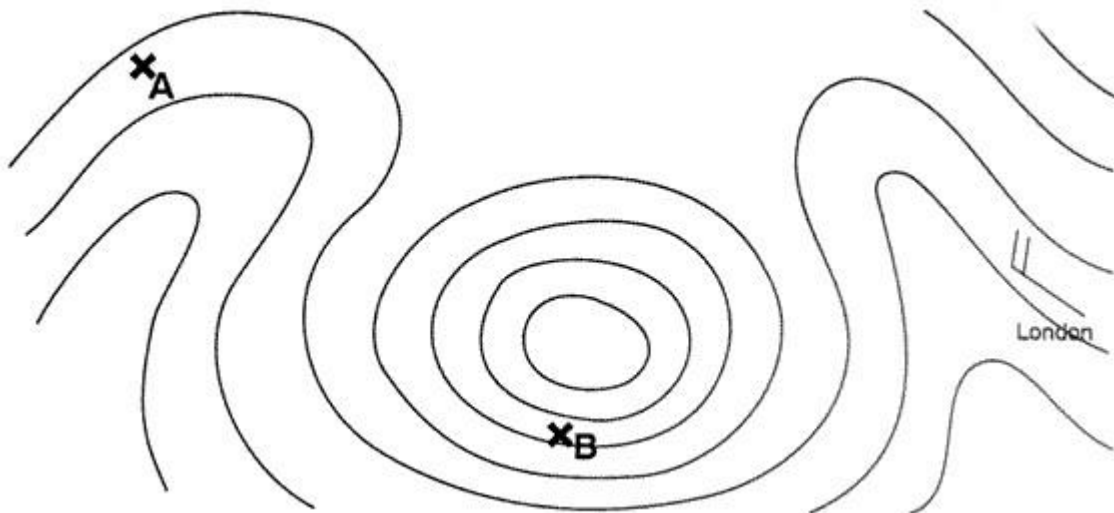
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Anlagen zu den Aufgaben



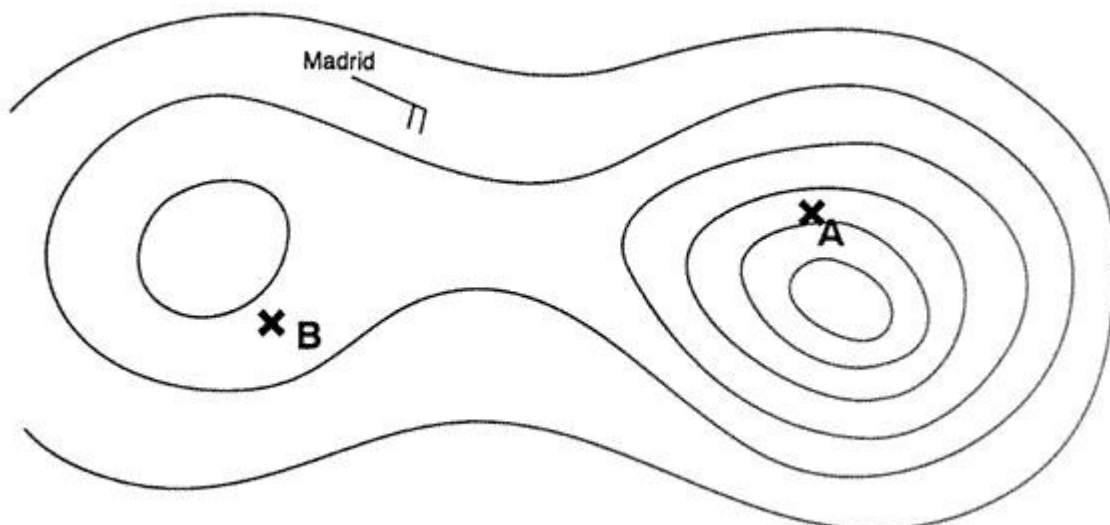
Anlage 28 zu Aufgabe 198

Titel: Anlage 1



Anlage 29 zu Aufgabe 199

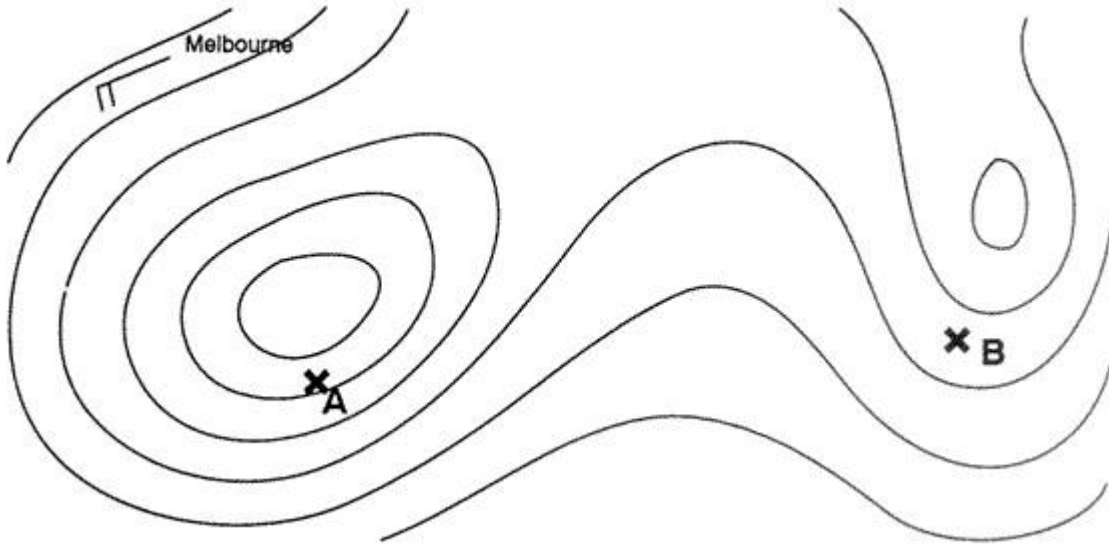
Titel: Anlage 1



Anlagen zu den Aufgaben

Anlage 30 zu Aufgabe 200

Titel: Anlage 1



Vom Teilnehmer auszufüllen

Name:

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Prüfungsdatum:

Unterschrift

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66.	A	B	C	D

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118.				D	119.	A				120.			C	
121.		B			122.		B			123.			C	
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127.			C		128.			C		129.			C	
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183 .		B		
186 .	A			
189 .	A			
192 .				D
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