

NAVIGATION

060

1 What is the angle of inclination of the Earth's axis to its orbital plane?

- [A] 66,5°
- [B] 23,5°
- [C] 90°
- [D] 33,5°

2 The meridian passing through Greenwich is known as?

- [A] Main Meridian.
- [B] Prime Meridian.
- [C] Great Meridian.
- [D] Equator.

3 A Rhumb Line is?

- [A] A line on the surface of the Earth whose centre and radius are those of the Earth.
- [B] A regularly curved line on the Earth's surface which cuts all parallels of Latitude at the same angle.
- [C] A regularly curved line on the Earth's surface which cuts all meridians at the same angle.
- [D] A line showing True north.

4 Variation is the angle between:

- [A] True north and the nearest line of Longitude.
- [B] Magnetic north and the aircraft's True heading.
- [C] Magnetic north and the aircraft's Magnetic heading.
- [D] True north and Magnetic north.

5 An isogonal is a line joining points of:

- [A] Zero magnetic variation.
- [B] Equal magnetic deviation.
- [C] Equal magnetic variation.
- [D] Zero magnetic deviation.

6 Which points on the Earth's surface determine the Earth's axis?

- [A] North and south magnetic pole.
- [B] North geographic pole and north magnetic pole.
- [C] North and south geographic pole.
- [D] Equator-hemisphere.

7 The circumference of the Earth along the Equator is:

- [A] 40 075 km.
- [B] 30 000 NM.
- [C] 24 000 km.
- [D] 21 600 NM.

8 The Earth's diameter, when compared to the Earth' axis, is:

- [A] Twice as much greater.
- [B] Longer by 43 km.
- [C] Shorter by 42 km.
- [D] The same.

9 Which of the following statements, regarding rotation of the Earth around the Sun, is correct? The Earth:

- [A] Encircles the Sun in one year.
- [B] Does not circle around the Sun because it is stationary with the Sun circling around it.
- [C] Encircles the Sun in one day.
- [D] Encircles the Sun one time during summer and one time during winter.

10 The Earth's globe rotates:

- [A] Around its axis in the direction from the east to the west.
- [B] Around its axis in the direction from the west to the east.
- [C] Together with the Sun in the direction from the east to the west.
- [D] Around so called Sun's tropic.

11 The orbit of the Earth is:

- [A] Hyperbolic.
- [B] An ellipse.
- [C] A circle.
- [D] Parabolic.

12 What is the cause of the seasons?

- [A] A shape of the Earth's orbit.
- [B] The tilt of the Earth's axis.
- [C] Irregular movement of the Earth around the Sun.
- [D] Uneven temperatures in space.

13 The shortest distance between two points on the Earth's globe is called:

- [A] Great circle.
- [B] Rhumb line.
- [C] Lambdrome.
- [D] Small circle.

14 The equator is the Great Circle which plane:

- [A] Divides the Earth's globe into the east and west hemisphere.
- [B] Divides the Earth's globe into the westerly and easterly hemisphere.
- [C] Is parallel to the Earth's axis.
- [D] Divides the Earth's globe into the north and south hemisphere.

- 15 How many Great Circles (orthodroms) can be determined on the Earth's surface?**
- [A] 360.
 - [B] 90.
 - [C] 180.
 - [D] An infinite number.
- 16 The Great Circle on the Earth's globe is the cross-section of the Earth's surface and the plane passing through:**
- [A] The center of the Earth and is always oblique to the Earth's axis.
 - [B] The center of the Earth and is always rectangular to the Earth's axis.
 - [C] The center of the Earth and is tilt to the Earth's axis at any angle.
 - [D] Any two points on the Earth's surface; the cross-section with the Earth's surface is the shortest distance between these points.
- 17 Which of the following circles on the Earth's globe does not have the center at the Earth's center?**
- [A] Orthodrom.
 - [B] Equator.
 - [C] Small Circle.
 - [D] Great Circle.
- 18 What is the characteristic of the Rhumb Line?**
- [A] It is the Great Circle.
 - [B] It is the shortest distance between two points on the Earth's globe.
 - [C] It cuts meridians under constant angle.
 - [D] It cuts meridians under various angles.
- 19 Which circles, forming the graticule, are at the same time Great Circles and Rhumb Lines?**
- [A] Equator only.
 - [B] Meridians only.
 - [C] Parallel of latitude only.
 - [D] Meridians and equator.
- 20 The Sun travels across the sky an arc of 5° in:**
- [A] 60 minutes.
 - [B] 30 minutes.
 - [C] 20 minutes.
 - [D] 4 minutes.
- 21 What time is needed for the Sun's azimuth to change by 27 arc degrees?**
- [A] 30 minutes.
 - [B] 108 minutes.
 - [C] 135 minutes.
 - [D] 90 minutes.

22 The Co-ordinated Universal Time (UTC) is:

- [A] The Zone Time.
- [B] The MidEuropean Time.
- [C] The time on the longitude 0 degrees.
- [D] The Local Time.

23 13:00 accordingly to the Finnish Summer Time is:

- [A] 1600 UTC.
- [B] 1000 UTC.
- [C] 1200 UTC.
- [D] 1100 UTC.

24 An aircraft over Helsinki is headed exactly to the south. It is 1200 UTC. What is the Relative bearing of the Sun?

- [A] Left of the aircraft's nose.
- [B] Exactly straight-in.
- [C] May be left or right of the aircraft's nose, with regard to the season.
- [D] Right of the aircraft's nose.

25 The geographic latitude is the distance of a point on the Earth's surface from the:

- [A] Equator, measured in statute miles.
- [B] Prime Meridian, measured in arc degrees.
- [C] Equator, measured in arc degrees.
- [D] Prime Meridian, measured in geographic miles.

26 What is the latitude of a point on the Equator?

- [A] 0°.
- [B] 180°S.
- [C] 90°N.
- [D] 90°S.

27 What is the difference between the latitude of the point A and the point B, which are located on following parallels of latitude:

A: 15° 54' 30" N
B: 10° 33' 30" S

- [A] 25° 27' 00".
- [B] 26° 28' 00".
- [C] 05° 28' 00".
- [D] 05° 21' 00".

- 28 Determine the latitude of the point B, located 240 NM north of the point A with the latitude $62^{\circ} 33' 00''$ N.**
- [A] $66^{\circ} 33' 00''$ N.
 - [B] $58^{\circ} 33' 00''$ N.
 - [C] $64^{\circ} 33' 00''$ N.
 - [D] $86^{\circ} 33' 00''$ N.
- 29 The distance between the parallel of latitude 10° N and the parallel of latitude 11° N, measured along the meridian, is:**
- [A] 111 km.
 - [B] 111 NM.
 - [C] 60 km.
 - [D] 60 SM.
- 30 For this question use appendix LAPL/PPL 060-01-2015. The geographical coordinates of the compulsory reporting point MINNE is:**
- [A] N $62^{\circ} 46' 48''$ and E $021^{\circ} 32' 43''$.
 - [B] N $62^{\circ} 56' 48''$ and E $021^{\circ} 32' 43''$.
 - [C] N $62^{\circ} 56' 48''$ and W $021^{\circ} 32' 43''$.
 - [D] N $60^{\circ} 56' 48''$ and E $021^{\circ} 32' 43''$.
- 31 For this question use appendix LAPL/PPL 060-01-2015. The geographical coordinates of the compulsory reporting point TERVA is:**
- [A] N $63^{\circ} 59' 33''$ and E $022^{\circ} 05' 11''$.
 - [B] S $62^{\circ} 59' 33''$ and E $022^{\circ} 05' 11''$.
 - [C] N $62^{\circ} 59' 33''$ and E $022^{\circ} 05' 11''$.
 - [D] N $62^{\circ} 59' 33''$ and E $021^{\circ} 05' 11''$.
- 32 For this question use appendix LAPL/PPL 060-01-2015. The geographical coordinates of the compulsory reporting point VASSO is?**
- [A] N $63^{\circ} 09' 28''$ and E $021^{\circ} 58' 40''$.
 - [B] N $63^{\circ} 09' 28''$ and E $022^{\circ} 58' 40''$.
 - [C] N $62^{\circ} 09' 28''$ and E $021^{\circ} 58' 40''$.
 - [D] E $63^{\circ} 09' 28''$ and N $021^{\circ} 58' 39''$.
- 33 For this question use appendix LAPL/PPL 060-01-2015. What compulsory reporting point is the most convenient to use when approaching EFVA on radial 220?**
- [A] MINNE
 - [B] KOSSU
 - [C] VASSO
 - [D] TERVA

- 34 For this question use appendix LAPL/PPL 060-01-2015.
What compulsory reporting point is the most convenient to use when approaching EFVA on radial 100?**
- [A] KOSSU
 - [B] VASSO
 - [C] TERVA
 - [D] MINNE
- 35 For this question use appendix LAPL/PPL 060-01-2015.
What compulsory reporting point is the most convenient to use when approaching EFVA on radial 030?**
- [A] KOSSU
 - [B] VASSO
 - [C] TERVA
 - [D] MINNE
- 36 The distance of 1 NM is equivalent to:**
- [A] The distance of one arc minute on a Meridian.
 - [B] The perimeter of a Polar Circle.
 - [C] Exactly the 40-thousandth part of the Earth's perimeter.
 - [D] The distance between a Meridian and the pole.
- 37 The distance of 1 NM equals to:**
- [A] 1,609 m.
 - [B] 1,111 m.
 - [C] 1,432 m.
 - [D] 1,852 m.
- 38 The formula for a quick calculation from kilometres to nautical miles is:**
- [A] $(\text{km} \times 2) - 10\%$.
 - [B] $(\text{km} : 2) - 10\%$.
 - [C] $(\text{km} \times 2) - 22\%$.
 - [D] $(\text{km} : 2) + 10\%$.
- 39 Approximately how many kilometres are in 70 nautical miles?**
- [A] 135 km.
 - [B] 145 km.
 - [C] 140 km.
 - [D] 130 km.

40 The distance of 1 statute mile is equal to:

- [A] 1,432 m.
- [B] 1,609 m.
- [C] 1,111 m.
- [D] 1,852 m.

41 How many kilometres are in 50 SM (statute miles)?

- [A] Approximately 80 km.
- [B] Approximately 92 km.
- [C] Exactly 100 km.
- [D] Little less than 75 km.

42 On a chart, 6 cm represents the distance 15 km. What is the scale of the chart?

- [A] 1 : 300 000.
- [B] 1 : 250 000.
- [C] 1 : 500 000.
- [D] 1 : 400 000.

43 The scale of the chart is 1:500 000. How many centimetres represents the distance 105km?

- [A] 84.0 cm.
- [B] 10.5 cm.
- [C] 21.0 cm.
- [D] 42.0 cm.

44 For this question use appendix LAPL/PPL 060-01-2015. What is the scale of the chart?

- [A] 1 : 500 000.
- [B] 1 : 300 000.
- [C] 1 : 200 000.
- [D] 1 : 1 500 000.

45 The scale of the chart is 1:300 000. How many centimetres represents the distance 54km?

- [A] 7 cm.
- [B] 36 cm.
- [C] 1.8 cm.
- [D] 18 cm.

- 46 The scale of the chart is 1:300 000. How many centimetres represents the distance 210km?
- [A] 63cm.
 - [B] 6,3cm.
 - [C] 70cm.
 - [D] 7cm.
- 47 The scale of the chart is 1:500 000. How many centimetres represents the distance 100 NM?
- [A] 31 cm
 - [B] 39 cm
 - [C] 41 cm
 - [D] 37 cm
- 48 The distance between the points ALFA and BRAVO is 107 NM. If an aircraft covers first 16 NM in 10 minutes, what time does it take to travel the entire route ALFA-BRAVO with the same groundspeed?
- [A] 1 hour and 1 minute.
 - [B] 59 minutes.
 - [C] 1 hour and 6 minutes.
 - [D] 1 hour and 3 minutes.
- 49 How far will an aircraft travel with 32 gal of usable fuel with fuel consumption 7,1 gal/h at the groundspeed 108 kts? (Allow 1-hour final reserve fuel)
- [A] 420 NM.
 - [B] 487 NM.
 - [C] 379 NM.
 - [D] 384 NM.
- 50 How far will an aircraft travel with 27 gal of usable fuel with fuel consumption 6,8 gal/h at the groundspeed 93 kts? (Allow 6-gallons final reserve fuel)
- [A] 287 NM.
 - [B] 301 NM.
 - [C] 292 NM.
 - [D] 308 NM.
- 51 How many gallons of usable fuel should be on board of an aircraft for a distance flight of 300 NM at the groundspeed 120 kts and average fuel consumption 7,3 gal/h? (Allow 1-hour fuel reserve).
- [A] 15.0 gal.
 - [B] 21.4 gal.
 - [C] 18.3 gal.
 - [D] 25.6 gal.

52 A distance in meters could be converted to feet using the formula:

- [A] $(m \times 3) + 10\%$.
- [B] $(m \times 3) : 10$.
- [C] $(m : 10) \times 3$.
- [D] $m \times 0.3$.

53 An altitude 1 500 meters is approximately:

- [A] 3.600 ft.
- [B] 4.000 ft.
- [C] 4.900 ft.
- [D] 4.500 ft.

54 On a chart we read the obstacle altitude 275 meters. Regarding the rule of height clearance 1.000 feet over obstacles, what is the lowest altitude for overflying the obstacle?

- [A] 2,130 ft.
- [B] 1,900 ft.
- [C] 1,230 ft.
- [D] 2,230 ft.

55 Altitude 6.000 ft is approximately:

- [A] 3,000 m.
- [B] 12,000 m.
- [C] 1,800 m.
- [D] 1,200 m.

56 Approximately what QNH pressure corresponds to the QFE pressure 1000 hPa on an airfield with the elevation 200 meters?

- [A] 1025 hPa.
- [B] 1035 hPa.
- [C] 990 hPa.
- [D] 985 hPa.

57 What does a measuring unit knot used in aviation mean?

- [A] Km/h.
- [B] NM/h.
- [C] m/h.
- [D] SM/h.

58 The wind velocity of 10 m/sec approximately equals to:

- [A] 20 kts.
- [B] 40 kts.
- [C] 5 kts.
- [D] 2,5 kts.

59 Wind velocity 5 kts is approximately:

- [A] All answers are correct.
- [B] 20 m/sec.
- [C] 10 km/hour.
- [D] 15 statute miles/ hour.

60 A velocity 120 km/h, expressed in knots, is:

- [A] 50 kts.
- [B] 65 kts.
- [C] 60 kts.
- [D] 58 kts.

61 If a vertical speed indicator of a towing airplane shows 500 ft/min, the approximately aerotow's rate-of-climb in meters-per-second is:

- [A] 3,5 m/sec.
- [B] 2,5 m/sec.
- [C] 5 m/sec.
- [D] 1,5 m/sec.

62 What is the ground speed (GS) of an aircraft, covering in 40 minutes the distance, that represents 10.8 cm on an 1:500 000 chart?

- [A] 100 km/h.
- [B] 100 mph.
- [C] 81 kts.
- [D] 81 km/h.

63 An aircraft would cover a 120 km distance in no wind condition in 2 hours and 40 minutes, however in actual meteo conditions the flight lasted 3 hours and 5 minutes. What was the wind component along track?

- [A] 16 kts tailwind.
- [B] 6 km/h headwind.
- [C] 6 kts tailwind.
- [D] 16 km/h headwind.

64 The distance of the route from the point X to the point Y via the control point Z is 84 km. If an aircraft covers the first segment X-Z (35 km) in 50 minutes, what will be the total time of flight between the points X and Y?

- [A] 1 hour and 10 minutes.
- [B] 50 minutes.
- [C] 45 minutes.
- [D] 2 hours.

65 How far will an aircraft travel in 2 minutes and 30 seconds with a groundspeed of 98 knots?

- [A] 3,35 NM.
- [B] 2,55 NM.
- [C] 2,45 NM.
- [D] 4,08 NM.

66 100 kg is how many pounds?

- [A] 250 lbs.
- [B] 220 lbs.
- [C] 180 lbs.
- [D] 200 lbs.

67 90 pounds is how many kilograms?

- [A] 52 kg.
- [B] 45 kg.
- [C] 37 kg.
- [D] 41 kg.

68 25 US gallons is how many liters?

- [A] 98 l.
- [B] 95 l.
- [C] 105 l.
- [D] 100 l.

69 What is the meaning of the term "drift angle" in navigation?

- [A] The difference between an angle under wind blows to the vector of an actual true air speed and a direction of an aircraft's longitudinal axis.
- [B] The difference between a direction of the true air speed of an aircraft and a desired track.
- [C] The angle between an aircraft's longitudinal axis and an actual path.
- [D] The difference between a magnetic course and a wind direction.

70 A Wind Correction Angle is the angle difference between:

- [A] True heading and desired true course.
- [B] Desired true and desired magnetic course.
- [C] Magnetic and compass heading in no wind condition.
- [D] True and magnetic heading.

71 Which azimuth corresponds to the general direction WNW?

- [A] 292.5°.
- [B] 202.5°.
- [C] 337.5°.
- [D] 247.5°.

- 72 Which parameter is included in the reckoning of a magnetic course?**
- [A] Magnetic variation.
 - [B] Compass deviation.
 - [C] Wind correction angle.
 - [D] Magnetic inclination.
- 73 The angle between a direction toward geographic north and a direction toward magnetic north is called:**
- [A] Inclination.
 - [B] Variation.
 - [C] Compass deviation.
 - [D] Convergency of meridians.
- 74 The magnetic variation value of a given point on the Earth's surface can be obtained by:**
- [A] Referring to the isogonic lines on aeronautical charts.
 - [B] Calculating the difference between magnetic and compass heading.
 - [C] Referring to the table of magnetic variation in the cockpit.
 - [D] Calculating the angular difference between the meridian of a given point and the Greenwich meridian.
- 75 Lines on geographical charts joining points of equal magnetic variation, are called:**
- [A] Izogonic lines.
 - [B] Izoclinic lines.
 - [C] Agonic lines.
 - [D] Izobars.
- 76 Lines on geographical charts joining points of a zero magnetic variation, are called:**
- [A] Aclinic lines.
 - [B] Izogonic lines.
 - [C] Agonic lines.
 - [D] Izoclinic lines.
- 77 When calculating magnetic direction from a given true direction, westerly variation should be:**
- [A] Multiplied.
 - [B] Added.
 - [C] Divided.
 - [D] Subtracted.

78 Magnetic course is calculated using the equation:

- [A] True course plus/minus compass deviation.
- [B] True course plus/minus magnetic variation.
- [C] True heading plus/minus magnetic variation.
- [D] Magnetic heading plus/minus compass deviation.

79 Magnetic heading is:

- [A] True course plus/minus deviation.
- [B] True heading plus/minus variation.
- [C] Magnetic course plus/minus deviation.
- [D] True course plus/minus variation.

80 Is it possible for a desired true track, true heading and actual true track to have the same value?

- [A] No, in no case.
- [B] Yes.
- [C] This is possible only when flying in north or south direction.
- [D] Yes, because these values are always equal.

81 To use an VHF/DF facilities for assistance in location an aircraft's position, the aircraft must have a:

- [A] VOR receiver and DME.
- [B] 4096-code transponder.
- [C] ILS transmitter.
- [D] VHF transmitter and receiver.

82 An NDB normally transmits on which frequency band?

- [A] 200 to 415 Hz.
- [B] 190 to 535 KHz.
- [C] 962 to 1213 MHz.
- [D] 400 to 1020 Hz.

83 As shown by ADF A, the relative bearing TO the station is: (see LAPL/PPL 060-05):

- [A] 210°.
- [B] 240°.
- [C] 060°.
- [D] 030°.

84 As shown by ADF B, the relative bearing TO the station is: (see LAPL/PPL 060-05):

- [A] 235°.
- [B] 055°.
- [C] 190°.
- [D] 315°.

85 As shown by ADF L, the relative bearing TO the station is: (see LAPL/PPL 060-06):

- [A] 160°.
- [B] 060°.
- [C] 020°.
- [D] 135°.

86 As shown by ADF E, the relative bearing TO the station is: (see LAPL/PPL 060-06):

- [A] 180°.
- [B] 135°.
- [C] 045°.
- [D] 315°.

87 As shown by ADF F, the relative bearing TO the station is: (see LAPL/PPL 060-06):

- [A] 090°.
- [B] 270°.
- [C] 360°.
- [D] 180°.

88 As shown by ADF G, the relative bearing TO the station is: (see LAPL/PPL 060-06):

- [A] 090°.
- [B] 180°.
- [C] 270°.
- [D] 360°.

89 As shown by ADF A, the magnetic bearing TO the station is: (see LAPL/PPL 060-05):

- [A] 090°.
- [B] 030°.
- [C] 180°.
- [D] 210°.

- 90 If receiving ADF indication B, what magnetic heading should the aircraft be turned to fly directly to the NDB station? (see LAPL/PPL 060-05)
- [A] 190°.
 - [B] 145°.
 - [C] 010°.
 - [D] 315°.
- 91 If receiving ADF indication B, what approximate magnetic heading should the aircraft be turned to intercept the 180° bearing TO the station? (see LAPL/PPL 060-05)
- [A] 010°.
 - [B] 220°.
 - [C] 040°.
 - [D] 160°.
- 92 If an ADF indicator in the cockpit corresponds to the figure C, the magnetic bearing FROM the station is: (see LAPL/PPL 060-05)
- [A] 025°.
 - [B] 115°.
 - [C] 270°.
 - [D] 295°.
- 93 Which of the figures corresponds to an ADF indicator of an aircraft, flying TO the station with a right crosswind? (see LAPL/PPL 060-05)
- [A] C.
 - [B] D.
 - [C] A.
 - [D] B.
- 94 What is the magnetic bearing FROM the station of an aircraft with an ADF indication, depicted in figure A? (see LAPL/PPL 060-05)
- [A] 150°.
 - [B] 180°.
 - [C] 030°.
 - [D] 210°.
- 95 On a magnetic heading of 320° and with an ADF indication as figure H, the magnetic bearing TO the station is: (see LAPL/PPL 060-06)
- [A] 005°.
 - [B] 035°.
 - [C] 225°.
 - [D] 185°.

- 96 On a magnetic heading of 035° and with an ADF indication as figure I, the magnetic bearing TO the station is: (see LAPL/PPL 060-06)
- [A] 035° .
 - [B] 215° .
 - [C] 180° .
 - [D] 090° .
- 97 On a magnetic heading of 120° and with an ADF indication as figure J, the magnetic bearing TO the station is: (see LAPL/PPL 060-06)
- [A] 270° .
 - [B] 165° .
 - [C] 045° .
 - [D] 120° .
- 98 If the magnetic bearing of an aircraft TO the station is 240° , what is the magnetic heading if the ADF indicator corresponds to the figure J? (see LAPL/PPL 060-06)
- [A] 045° .
 - [B] 195° .
 - [C] 015° .
 - [D] 105° .
- 99 If the magnetic bearing of an aircraft TO the station is 030° , what is the magnetic heading if the ADF indicator corresponds to the figure K? (see LAPL/PPL 060-06)
- [A] 090° .
 - [B] 060° .
 - [C] 120° .
 - [D] 270° .
- 100 If the magnetic bearing of an aircraft TO the station is 135° , what is the magnetic heading if the ADF indicator corresponds to the figure L? (see LAPL/PPL 060-06)
- [A] 135° .
 - [B] 360° .
 - [C] 315° .
 - [D] 270° .
- 101 VOR radials are:
- [A] Magnetic directions.
 - [B] True directions.
 - [C] Relative bearings.
 - [D] Compass directions.

102 When using a VOR for navigation, station passage is indicated:

- [A] By the first complete reversal of the TO-FROM indicator.
- [B] When the OFF flag appears.
- [C] When the first full-scale deflection of the CDI.
- [D] When the TO-FROM flag begins to flicker.

103 Which situation would result in reverse sensing of a VOR receiver?

- [A] Setting the OBS to a bearing that is 90° from the bearing on which the aircraft is located.
- [B] Selecting an ILS frequency in the VOR-receiver.
- [C] Flying a heading that is reciprocal to the bearing selected on the OBS.
- [D] Failing to change the OBS from the selected inbound course to the outbound course after passing the station.

104 To track outbound on the 180 radial of a VOR station, the recommended procedure is to set the OBS to:

- [A] 180° and make heading corrections away from the CDI needle.
- [B] 180° and make heading corrections toward the CDI needle.
- [C] 360° and make heading corrections away from the CDI needle.
- [D] 360° and make heading corrections toward the CDI needle.

105 To track inbound on the 215 radial of a VOR station, the recommended procedure is to set the OBS to:

- [A] 035° and make heading corrections away from the CDI needle.
- [B] 035° and make heading corrections toward the CDI needle.
- [C] 215° and make heading corrections away from the CDI needle.
- [D] 215° and make heading corrections toward the CDI needle.

106 With a VOR/ILS receiver set to a VOR frequency, how many degrees does full deflection of a CDI to one side represent?

- [A] 5°.
- [B] 10°.
- [C] 20°.
- [D] 15°.

107 An aircraft 60 miles from a VOR station has a CDI indication one-fifth deflection, this represents a course centerline deviation of approximately:

- [A] 3 miles.
- [B] 6 miles.
- [C] 2 miles.
- [D] 1 mile.

108 Which aircraft(s) correspond(s) to the VOR indicator V? (see LAPL/PPL 060-07)

- [A] Aircrafts 1 and 3.
- [B] Aircrafts 5 and 8.
- [C] Aircraft 2 only.
- [D] Aircraft 6 only.

109 Which airplane(s) correspond(s) to the VOR indicator X? (see LAPL/PPL 060-07)

- [A] Airplanes 1 and 2.
- [B] Airplanes 1 and 3.
- [C] Airplanes 3 and 7.
- [D] Airplane 7 only.

110 Which airplane(s) correspond(s) to the VOR indicator U? (see LAPL/PPL 060-07)

- [A] Airplane 6 only.
- [B] Airplanes 1 and 2.
- [C] Airplane 5 only.
- [D] Airplane 2 only.

111 Which presentation of a VOR indicator corresponds to airplanes 8? (see LAPL/PPL 060-07)

- [A] W.
- [B] U.
- [C] T.
- [D] V.

112 Which presentation of a VOR indicator corresponds to airplanes 5 and 7? (see LAPL/PPL 060-07)

- [A] W and Z.
- [B] U and Z.
- [C] T and X.
- [D] V and X.

113 Which of the following statements, regarding a DME operation, is correct?

- [A] DME can only show distance to the station set as the active frequency in the receiver.
- [B] When flying directly above the DME facility, the pilot reads on the DME indicator in the cockpit a zero distance.
- [C] The frequency of a DME receiver in the aircraft is being adjusted automatically when we set a VOR or ILS frequency.
- [D] If we move the DME switch in the cockpit to HOLD, all readings are reset to zero.

114 Which distance is displayed by a DME indicator?

- [A] Slant-range distance in statute miles.
- [B] The distance from the aircraft to a point at the same altitude directly above the DME ground facility.
- [C] Slant-range distance in nautical miles.
- [D] The horizontal distance along ground from the aircraft to the DME station.

115 What is the DME reading if an aircraft is directly over a VOR/DME station at the altitude of 6.000 ft AGL?

- [A] 0,5.
- [B] 1,3.
- [C] 1.
- [D] 0.

116 The slant-range error of a DME is greatest at:

- [A] Low altitudes directly over the facility.
- [B] High altitudes directly over the facility.
- [C] High altitudes and high range from the facility.
- [D] Low altitudes and high range from the facility.

117 See appendix LAPL/PPL 060-02-2015. Altitudes and elevations are in?

- [A] Km
- [B] SFT
- [C] Feet
- [D] Meters

118 Waypoints data in a GPS database (with the exception of users waypoints) could be updated by:

- [A] A pilot on ground only, when the device is stationary.
- [B] A Part-145 licenced maintenance facility only.
- [C] A pilot, however when in-flight only.
- [D] A respective software house only.

119 A CDI deviation needle on the GPS electronic screen in the cockpit shows a deviation from the desired track in:

- [A] Distance units.
- [B] Arc degrees or distance units, depends on pilot's discretion.
- [C] Arc degrees.
- [D] Time units.

120 When working with a GPS one must know that:

- [A] It is necessary to type in manually geographic coordinates of the aircraft's parking position.
- [B] It is necessary to type in manually geographic coordinates of the aircraft's starting point.
- [C] The device is able to determine navigational parameters relative only to those fixes, which are in a theoretical sight of view.
- [D] The information of the device is purely directional and it should not be used as primary radio navigation equipment.

121 Which velocity is measured in principle by every GPS instrument?

- [A] Wind Speed.
- [B] Ground Speed.
- [C] Vertical Speed.
- [D] True Air Speed.

122 Meridians:

- [A] Are parallel to each other.
- [B] Are right-angled with parallel of latitudes.
- [C] Creates squares with parallel of latitudes.
- [D] Are either northern or southern.

123 The scale of the chart is 1:500 000. How many centimeters represents the distance 5km?

- [A] 1.0 cm.
- [B] 2.5 cm.
- [C] 0.5 cm.
- [D] 1.0 mm.

124 In Helsinki-Malmi (EFHF) runway 18 is in use, wind 210° / 20 kts.

What is the crosswind component?

- [A] 20 kts.
- [B] 15 kts.
- [C] 5 kts.
- [D] 10 kts.

125 It's 01.51 on Christmas Eve in Finland, what is the Co-ordinated Universal Time (UTC)?

- [A] 23.51.
- [B] 01.51.
- [C] 00.51.
- [D] 03.51.

126 True course is 055°, wind 310° / 25 kts, variation 6 °W and aircraft is flying with a true airspeed of 113 kts.

What is the magnetic heading?

- [A] 049°.
- [B] 037°.
- [C] 041°.
- [D] 054°.

127 True course is 040°, wind 310° / 25 kts, variation 6 °W and aircraft is flying with a true airspeed of 113 kts.

What is the ground speed?

- [A] 118 kts.
- [B] 106 kts.
- [C] 110 kts.
- [D] 120 kts.

128 Which of the following geographic coordinates is incorrect?

- [A] 70°23'N 034°28'E.
- [B] 23°46'S 123°53'W.
- [C] 49°21'N 072°63'E.
- [D] 35°48'S 154°25'W.

129 True course is 125°, wind 010° / 25 kts, true airspeed 95 kts and variation 5 °E.

What are the magnetic heading and the ground speed?

- [A] 096° and 103 kts.
- [B] 106° and 103 kts.
- [C] 113° and 83 kts.
- [D] 096° and 83 kts.

130 A velocity 37 km/h, expressed in knots, is:

- [A] 20 kts.
- [B] 32,5 kts.
- [C] 6,7 kts.
- [D] 54 kts.

131 What is the total flight time when aircrafts ground speed is 106 kts and the distance is 216 NM?

- [A] 29min.
- [B] 2h 02min.
- [C] 2h 56min.
- [D] 3h 24min.

132 It's 02.30 in the summer in Finland, what is the Co-ordinated Universal Time (UTC)?

- [A] 23.30.
- [B] 05.30.
- [C] 04.30.
- [D] 00.30.

133 In degrees South-East is:

- [A] 315°.
- [B] 225°.
- [C] 135°.
- [D] 145°.

134 Which of the following is incorrect?

- [A] 000° = North.
- [B] 235° = South-West.
- [C] 315° = North-West.
- [D] 360° = North.

135 Finland is located between:

- [A] 60 and 70 degrees eastern longitude.
- [B] 50 and 60 degrees eastern longitude.
- [C] 60 and 70 degrees northern latitude.
- [D] 50 and 60 degrees northern latitude.

136 How many degrees does the Earth rotate in 24 hours?

- [A] 30°.
- [B] 35°.
- [C] 360°.
- [D] 180°.

137 A velocity 100 mph is approximately:

- [A] 185 km/h.
- [B] 120 km/h.
- [C] 80 km/h.
- [D] 160 km/h.

138 What colour represents fields on the aviation chart?

- [A] Orange.
- [B] Green.
- [C] White.
- [D] Brown.

139 Magnetic heading consists of:

- [A] Wind correction angle and deviation.
- [B] True course and variation.
- [C] True course, wind correction angle and variation.
- [D] Wind correction angle and variation.

140 What does the letter P means on the aviation chart?

- [A] Low flying area.
- [B] Parking place.
- [C] Danger area.
- [D] Prohibited Area.

141 TAS is 80 kts, the wind correction angle is +19° and headwind component is 20 kts.

What is the ground speed?

- [A] 82 kts.
- [B] 62 kts.
- [C] 50 kts.
- [D] 56 kts.

142 TC 180°, TAS 80 kts, wind 090° / 15 kts, variation 8°E.

What is the wind correction angle?

- [A] -15°.
- [B] 11°.
- [C] 15°.
- [D] -11°.

143 TC 260°, TAS 90 kts, wind 360° / 25 kts, variation 8°E.

What is the ground speed?

- [A] 81 kts.
- [B] 95 kts.
- [C] 91 kts.
- [D] 101 kts.

144 TC 120°, TAS 75 kts, wind 140° / 10 kts, variation 8°E.

What is the magnetic course?

- [A] 108°.
- [B] There is no correct answer.
- [C] 112°.
- [D] 128°.

145 Compass error caused by metal structure of an aircraft is called:

- [A] Inclination
- [B] Variation
- [C] Deviation
- [D] Drift force

146 The original symbol of eastern variation is:

- [A] -
- [B] +
- [C] on the western hemisphere -
- [D] on the eastern hemisphere -

147 The original symbol of eastern deviation is:

- [A] on the eastern hemisphere -
- [B] on the western hemisphere -
- [C] -
- [D] +

148 The original symbol of western variation is:

- [A] +
- [B] -
- [C] on the western hemisphere +
- [D] on the eastern hemisphere +

149 You place your metal sunglasses on top of instrument panel (next to standby compass). What will you notice?

- [A] Compass indication changes with several degrees
- [B] Artificial horizon is not stable
- [C] Frequency changes in your radio
- [D] There is a loud noise in your radio

150 Inclination means:

- [A] Horizontal component of the earth's magnetic field
- [B] Angle between true track and compass direction
- [C] Vertical component of the earth's magnetic field
- [D] Angle between true track and magnetic track

151 It's June and you are flying straight course from Kuopio to Tampere. In which bearing is the sun?

- [A] Aprox 45° on the left side of nose
- [B] Aprox 90° on the left side of nose
- [C] Straight ahead
- [D] Aprox 30° on the right side of nose

152 It's June and you are flying straight course from Pori to Lappeenranta. At what time the sun is straight behind you?

- [A] Around mid day
- [B] Around 9PM
- [C] Around 6PM
- [D] Around 9AM

153 Considering watching the Earth straight above north pole, the earth appears to rotate:

- [A] Full cycle clockwise in aprox. 12 hours
- [B] Full cycle anticlockwise in aprox. 24 hours
- [C] Full cycle clockwise in aprox. 12 hours
- [D] Full cycle anticlockwise in aprox. 12 hours

154 As intended in flight rules, night begins when:

- [A] The upper edge of the Sun is 12° below the horizon
- [B] Centre of the Sun's disc is 6° below the horizon
- [C] The upper edge of the Sun is 12° below the horizon
- [D] Centre of the Sun's disc is 18° below the horizon

155 Civil twilight ends when:

- [A] Centre of the Sun's disc is 6° below the horizon
- [B] Centre of the Sun's disc is 6° above the horizon
- [C] Centre of the Sun's disc is 18° below the horizon
- [D] Centre of the Sun's disc is 12° below the horizon

156 Morning civil twilight ends when:

- [A] Centre of the Sun's disc is 6° below the horizon
- [B] Centre of the Sun's disc is 12° below the horizon
- [C] Sun rises
- [D] The upper edge of the Sun is 6° below the horizon

157 What the is maximum latitudinal value:

- [A] 60°
- [B] 360°
- [C] 90°
- [D] 180°

158 Greatest longitudinal value can be:

- [A] 180°
- [B] 45°
- [C] 90°
- [D] 360°

159 One degree of an arc corresponds to:

- [A] 60 minutes of an arc
- [B] 120 seconds of an arc
- [C] 60 seconds of an arc
- [D] 100 minutes of an arc

160 During summer solstice the sun is:

- [A] At the tropic of Capricorn
- [B] At the tropic of Cancer
- [C] At South Pole
- [D] At the equator

161 During winter solstice the sun is:

- [A] At the equator
- [B] At the tropic of Capricorn
- [C] At the tropic of Cancer
- [D] At South Pole

162 During Autumnal equinox the sun is:

- [A] At the tropic of Capricorn
- [B] At the zenith
- [C] At the tropic of Cancer
- [D] At the equator

163 What is the longest straight line that can be drawn on the surface of the Earth?

- [A] Great circle
- [B] Lambdrome
- [C] Loxodrome
- [D] The circle of same azimuth

164 What is a line that crosses all meridians of longitude with constant angle?

- [A] Great circle
- [B] Small circle
- [C] Longitude
- [D] Loxodrome (rhumb line)

165 Latitude 65° 00' N is?

- [A] Rhumb line
- [B] Great circle
- [C] Small circle
- [D] Loxodrome

166 What is the distace between north and south poles?

- [A] Appoximately 10 800 NM
- [B] Appoximately 40 000 NM
- [C] Appoximately 20 000 NM
- [D] Appoximately 5400 NM

167 During winter solstice the sun is:

- [A] Above north pole
- [B] At the equator
- [C] Above south pole
- [D] Closest to Earth

168 The easiest way of navigating while flying is via:

- [A] Grid track
- [B] Small circle
- [C] Loxodrome
- [D] Great cirCle

169 The needle of magnetic compass points towards:

- [A] True north
- [B] Magnetic north pole
- [C] Geographical north pole
- [D] Equator

170 Angle between magnetic heading and compass heading is known as:

- [A] Variation
- [B] Gravitation
- [C] Deviation
- [D] Convergence

NAVIGATION
Appendix
LAPL/PPL 060-01-2015

(2103CD) SOUTHERN FINLAND



NAVIGATION

Appendix

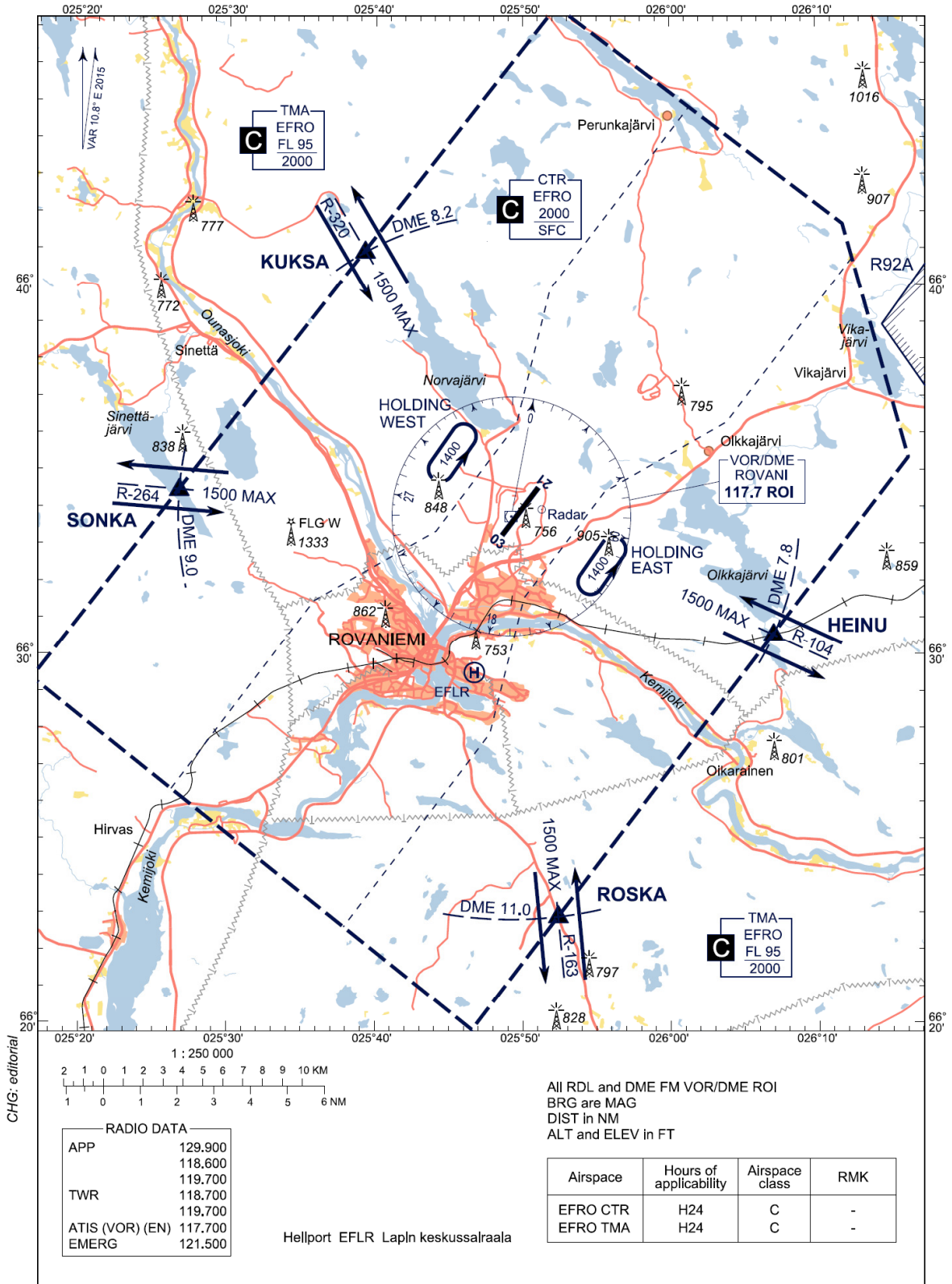
LAPL/PPL 060-02-2015

ROVANIEMI AERODROME

VISUAL
APPROACH CHART - ICAO

ELEV 643 FT

ROVANIEMI, FINLAND



NAVIGATION

Appendix

LAPL/PPL 060-03-2015

ROVANIEMI AERODROME
ROVANIEMI, FINLAND

AERODROME CHART - ICAO

66 33 42 N
025 49 51 E

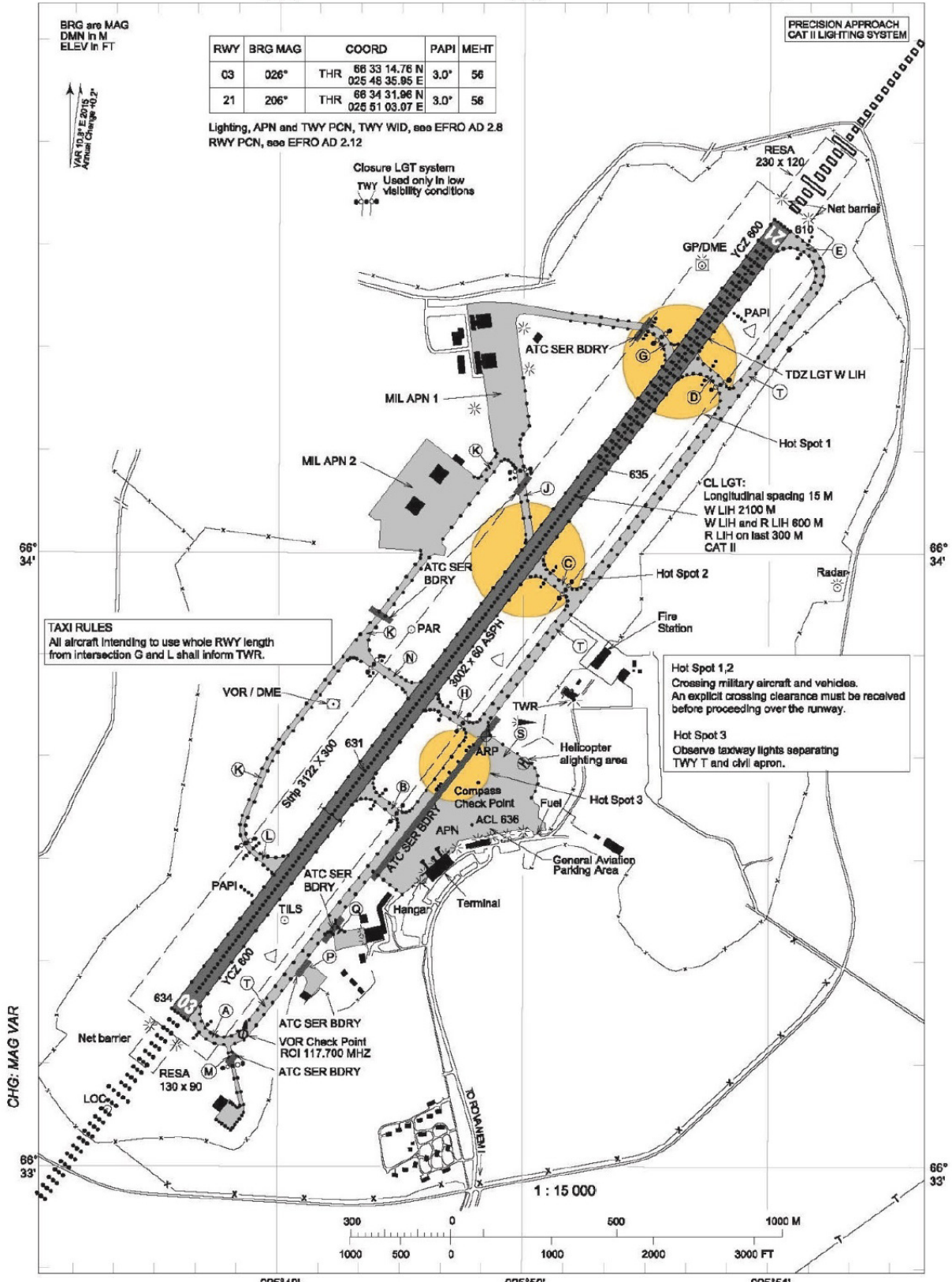
ELEV 643 FT

TWR 118.700
GND 118.525

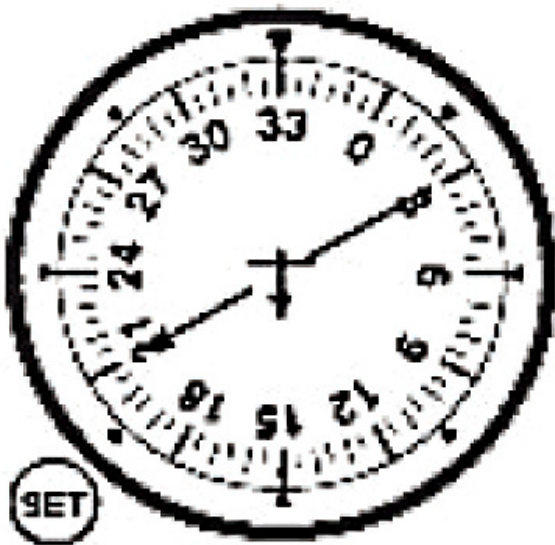
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025°50'

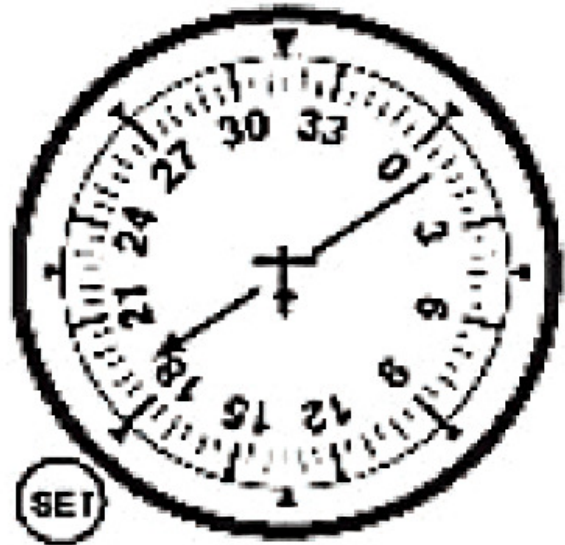
025°51'



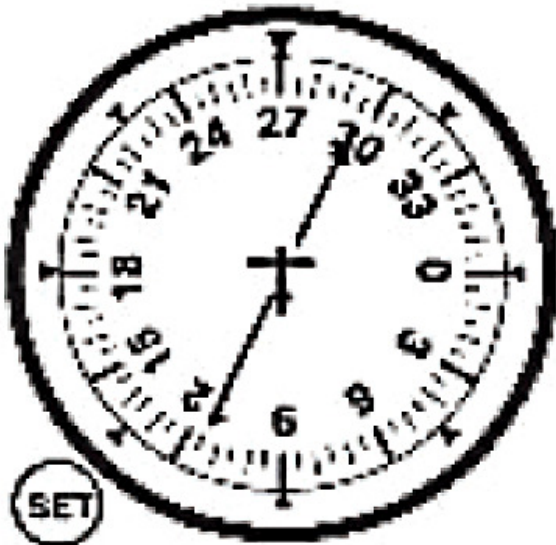
NAVIGATION
Appendix
LAPL/PPL 060-05



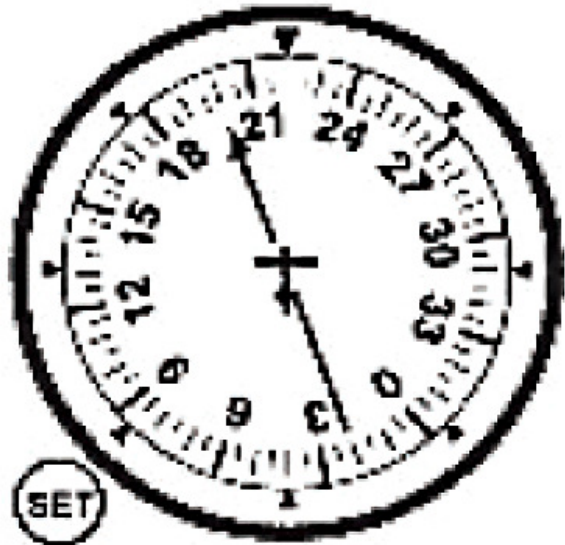
A



B



C



D

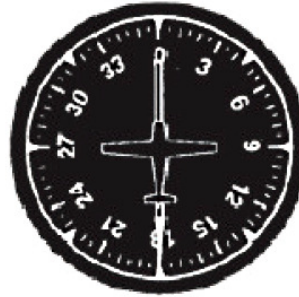
NAVIGATION
Appendix
LAPL/PPL 060-06



E



F



G



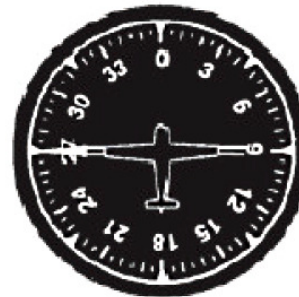
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I



J

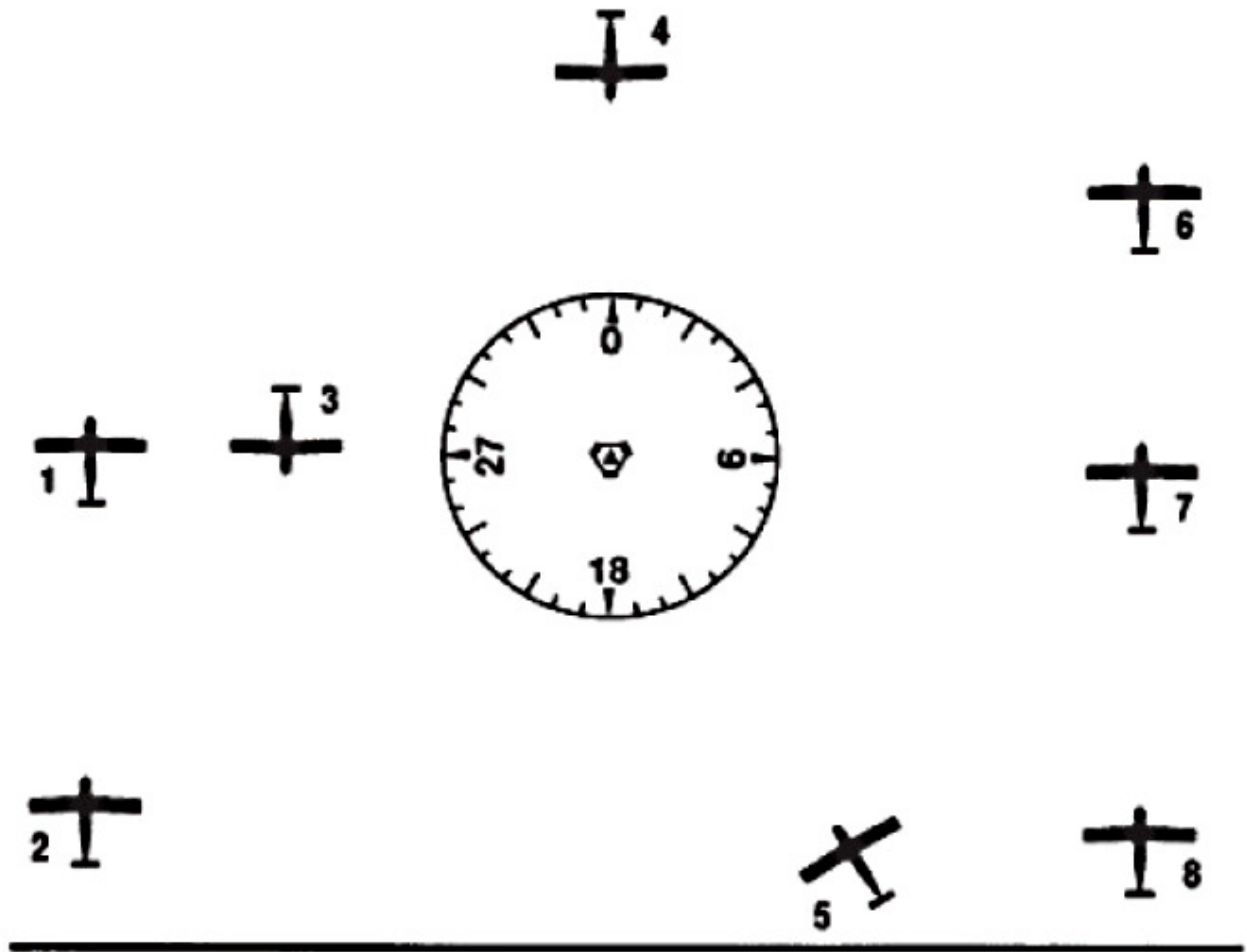


K



L

NAVIGATION
 Appendix
 LAPL/PPL 060-07



VOR INDICATIONS
 NOTE: OBS set to 180°

