1. The open-ended tube parallel to the longitudinal axis of the aircraft senses the:

Total pressure

2. The error induced by the location of the static pressure source is known as the:

Position error

3. A pitot blockage of both the ram air input and the drain hole with the static port open causes the airspeed indicator to:

React like an altimeter

4. A pitot tube covered by ice which blocks the ram air inlet will affect the following instrument (s) :

Airspeed indicator only

5. In a non-pressurized aircraft, if one or several static pressure ports are damaged, there is an ultimate emergency means for restoring a practically correct static pressure intake:

Breaking the rate-of-climb indicator glass window

6. The atmospheric pressure at FL 70 in a "standard + 10" atmosphere is:

781.85 hPa

INTERNATIONAL STANDARD ATMOSPHERE

ALTITUDE	TEMPERATURE		PRESSURE				PRESSURE RATIO	RELATIVE DENSITY	√ DENSITY	SPEED of SOUND	ALTITUDE
Feets	°C	°F	mb	PSI	In Hg	mm Hg	δ=P/Po	δ=ρ ρ₀		kts	Metres
45.000	-56,5	-69,7	147	2,14	4,36	110,7	0,1415	0,1936	0,440	574	13.716
44.000	-56,5	-69,7	155	2,24	4,57	116,0	0,1527	0,2031	0,451	574	13.411
43.000	-56,5	-69,7	162	2,35	4,79	121,7	0,1602	0,2131	0,462	574	13.106
42.000	-56,5	-69,7	170	2,47	5,03	127,8	0,1681	0,2236	0,473	574	12.802
41.000	-56,5	-69,7	179	2,19	5,28	134,1	0,1764	0,2346	0,484	574	12.497
40.000	-56,5	-69,7	188	2,72	5,54	140,7	0,1851	0,2462	0,496	574	12.192
39.000	-56,5	-69,7	197	2,81	5,81	147,6	0,1942	0,2583	0,508	574	11.887
38.000	-56,5	-69,7	206	2,99	6,10	154,9	0,2018	0,2710	0,521	574	11.582
37.000	-56,5	-69,7	217	3,14	6,40	162,6	0,2138	0,2843	0,533	574	11.278
36.000	-56,3	-69,4	227	3,30	6,71	170,4	0,2243	0,2981	0,546	574	10.973
35.000	-54,3	-65,8	238	3,46	7,04	178,8	0,2353	0,3099	0,557	576	10.668
34.000	-52,4	-62,3	250	3,63	7,38	187,5	0,2467	0,3220	0,167	579	10.363
33.000	-50,4	-58,7	262	3,80	7,74	196,6	0,2586	0,3345	0,578	582	10.058
32.000	-48,4	-55,1	274	3,98	8,11	206,0	0,2709	0,3473	0,589	584	9.754
31.000	-46,4	-51,6	287	4,17	8,49	215,6	0,2837	0,3605	0,600	587	9.449
30.000	-44,4	-48,0	301	4,36	8,89	225,8	0,2970	0,3741	0,611	589	9.144
29.000	-42,5	-44,4	315	4,57	9,30	256,2	0,3107	0,3881	0,623	591	8.839
28.000	-40,5	-40,9	329	4,78	9,73	247,1	0,3250	0,4025	0,634	594	8.534
27.000	-38,5	-37,3	344	4,99	10,17	258,3	0,3398	0,4173	0,646	597	8.230
26.000	-36,5	-33,7	360	5,22	10,63	270,0	0,3552	0,4325	0,658	599	7.925
25.000	-34,5	-30,2	376	5,45	11,10	281,9	0,3711	0,4481	0,669	602	7.620
24.000	-32,5	-26,6	393	5,70	11,60	294,6	0,3876	0,4642	0,681	604	7.315
23.000	-30,6	-23,0	410	5,95	12,11	307,6	0,4047	0,4806	0,693	607	7.010
22.000	-28,6	-19,5	428	6,21	12,64	321,1	0,4223	0,4976	0,705	609	6.706
21.000	-26,6	-15,9	446	6,47	13,18	334,8	0,4406	0,5150	0,718	612	6.401
20.000	-24,6	-12,3	466	6,75	13,75	349,3	0,4596	0,5328	0,730	614	6.096
19.000	-22,6	-8,8	485	7,04	14,34	364,2	0,4791	0,5511	0,742	617	5.791
18.000	-20,7	-5,2	506	7,34	14,94	379,5	0,4994	0,5699	0,755	619	5.486
17.000	-18,7	-1,6	527	7,65	15,57	395,5	0,5203	0,5892	0,768	622	5.182
16.000	-16,7	+1,9	549	7,97	16,22	412,0	0,5420	0,6089	0,780	624	4.877
15.000	-14,7	+5,5	572	8,29	16,89	429,0	0,5644	0,6292	0,793	626	4.572
14.000	-12,7	+9,1	595	8,63	17,58	446,1	0,5875	0,6500	0,806	629	4.267
13.000	-10,7	+12,6	619	8,99	18,29	464,6	0,6113	0,6713	0,819	631	3.962
12.000	-8,8	+16,2	644	9,35	19,03	483,4	0,6360	0,6932	0,833	634	3.658
11.000	-6,8	+19,8	670	9,72	19,79	502,7	0,6614	0,7155	0,846	636	3.353
10.000	-4,8	+23,3	697	10,11	20,58	522,7	0,6877	0,7385	0,859	638	3.048
9.000	-2,8	+26,9	724	10,50	21,39	543,3	0,7148	0,7619	0,873	641	2.743
8.000	-0,8	+30,5	753	10,92	22,23	564,6	0,7428	0,7860	0,887	643	2.438
7.000	+1,1	+34,0	782	11,34	23,09	586,5	0,7716	0,8106	0,900	645	2.134
6.000	+3,1	+37,6	812	11,78	23,98	609,1	0,8014	0,8358	0,914	648	1.829
5.000	+5,1	+41,2	843	12,23	24,90	652,5	0,8321	0,8616	0,928	650	1.524
4.000	+7,1	+44,7	875	12,69	21,84	656,3	0,8037	0,8881	0,942	652	1.219
3.000	+9,1	+48,3	908	13,17	26,82	681,2	0,8962	0,9151	0,957	655	914
2.000	+11,0	+51,9	942	13,66	27,82	706,6	0,9298	0,9427	0,971	657	610
1.000	+13,0	+55,4	977	14,17	28,86	733,0	0,9644	0,9710	0,985	659	305
0	+15,0	+59,0	1013	14,70	29,92	760,0	1,0000	1,0000	1,000	661	0
1.000	+17,0	+62,5	1050	15,23	31,02	787,9	1,0366	1,0295	1,015	664	-305

7. In a standard atmosphere and at the sea level, the calibrated airspeed (CAS) is:

Equal to the true airspeed (TAS)

8. Which instrument does not connect to the static system?

Vacuum gauge

9. What corrections must be applied to indicate airspeed to produce true airspeed?

Correction for altitude and temperature

10. The Pitot tube supplies:

Impact pressure

11. Total air pressure consists of static pressure plus:

Dynamic pressure

12. If the pitot tube ices up during a flight, the affected equipment(s) is (are):

~~1) the altimeter~~

~~2) the variometer~~

3) the airspeed indicator

The combination that regroups all of the correct statements is:

3

13. Given:

Pt = total pressure

Ps = static pressure

Pd = dynamic pressure

Pt = Pd + Ps

14. Given:

Pt = total pressure

Ps = static pressure

Pso = static pressure at sea level

Dynamic pressure is:

Pt-Ps

15. Given:

Pt = total pressure

Ps = static pressure

Dynamic pressure is:

Pt-Ps

16. The total pressure head comprises a mast which moves its port to a distance from aircraft skin in order:

To locate it outside the boundary layer

17. A dynamic pressure measurement circuit is constituted of the following pressure probes:
Total pressure and static pressure

18. The use of an alternate static source fed from within the cabin results that the static pressure senses is likely to be:
Lower than ambient pressure due to aerodynamic suction

19. If, during a descent:
- the pneumatic altimeter reading is constant
- the vertical speed indicator shows zero
- the IAS is increasing
The most likely explanation is that:
The static ports are completely blocked

20. During a climb, if the total pressure head is rapidly clogged up by ice, the sensed total pressure remains constant and:
The static pressure decreases, implying a increasing IAS

21. Concerning the pitot and static system, the static pressure error:
Is caused by disturbed airflow around the static ports

22. Concerning the pitot and static system, the static pressure error varies according to:
~~1) altimeter setting~~
2) speed
3) angle of attack
The combination that regroups all of the correct statements is:
2, 3

23. The alternate static source is used:
When the static ports become blocked

24. The alternate static source of a light non-pressurized aircraft is located in the flight deck. When used, the static pressure sensed is likely to be:
Lower than ambient pressure due to aerodynamic suction

25. The alternate static source of a light non-pressurized aircraft is located in the flight deck. As the alternate static source is opened, the vertical speed indicator may:
Indicate a momentary climb

26. The alternate static source of a light non-pressurized aircraft is located in the flight deck. When used, the altimeter:
Tends to over-read

27. The alternate static source of a light non-pressurized aircraft is located in the flight deck. When used:

~~1) the airspeed indicator tends to under-read~~

2) the airspeed indicator tends to over-read

~~3) the altimeter tends to under-read~~

4) the altimeter tends to over-read

The combination that regroups all of the correct statements is:

2, 4

28. If the static source of an altimeter becomes blocked during a descent the instrument will:

Continue to display the reading at which the blockage occurred

29. A servo-assisted altimeter is more accurate than a simple altimeter because the small movements of:

The capsules are detected by a very sensitive electro-magnetic pick-off

30. If the static source to an altimeter becomes blocked during a climb, the instrument will:

Continue to indicate the reading at which the blockage occurred

31. At sea level, on a typical servo altimeter, the tolerance in feet from indicated must not exceed:

+/-30 feet

Tolerance and accuracy should not be mixed.

Accuracy is what can be achieved, tolerance is the allowed deviation.

32. When flying in cold air (colder than standard atmosphere), the altimeter will:

Over-read

33. At a given altitude, the hysteresis error of an altimeter varies substantially with the:

Time passed at this altitude

34. The purpose of the vibrating device of an altimeter is to:

Reduce the effect of friction in the linkages

35. The static pressure error of the static vent on which the altimeter is connected varies substantially with the:

Mach number of the aircraft

36. When flying in cold air (colder than standard atmosphere), indicated altitude is:

Higher than the true altitude

37. Due to its conception, the altimeter measures a:

Pressure altitude

38. The density altitude is:

The altitude of the standard atmosphere on which the density is equal to the actual density of the atmosphere

39. The pressure altitude is the altitude corresponding:

In standard atmosphere, to the pressure Ps prevailing at this point

40. An aircraft is equipped with one altimeter which is compensated for position error and another altimeter which is not. Assuming all other factors are equal, during a straight symmetrical flight:
The greater the speed, the greater the error between the two altimeters

41. The altimeter consists of one or several aneroid capsules located in a sealed casing.
The pressures in the aneroid capsule (i) and casing (ii) are respectively:
(i) vacuum (or a very low pressure) (ii) static pressure

42. In case of accidental closing of an aircraft's left static pressure port (rain, birds), the altimeter:
Over reads the altitude in case of a sideslip to the left and displays the correct information during symmetric flight

43. The QNH is by definition the value of the:
Altimeter setting so that the needles of the altimeter indicate the altitude of the location for which it is given

44. The altimeter is supplied by:
Static pressure

45. When flying with an indicated altitude of 3000 ft into a low pressure area, the actual altitude:
Will decrease

46. The altimeter is based upon the same principle as:
The aneroid barometer

47. When the barometric subscale of the altimeter is adjusted to 1013.2 hPa, what type of altitude is being measured?
Pressure altitude

48. Without readjusting the barometric setting of the Altimeter, it will under-read when:
Flying from a low pressure area into a high pressure area

49. We are maintaining a constant flight level. That means:
The outside air pressure is constant

50. An aircraft is in level flight at FL100 over a mountain range, which extends up to 2.400 metres AMSL. If the regional QNH is 998 hPa (use 30 ft/hPa), what is the approximate terrain clearance?
1.681 feet

51. The altimeter indicates 17000 ft, altimeter setting 1013,25 hPa. The local QNH is 1003 hPa and the OAT -3°C. What is the pressure altitude?
17000 ft

52. An aneroid capsule:
~~1) measures differential pressure~~
2) measures absolute pressure
3) is used for low pressure measurement
~~4) is used for very high pressure measurement~~
The combination regrouping all the correct statements is:
2, 3

53. If the pilot increases the reference pressure using the sub-scale setting knob, the altitude indicated by the altimeter:
Increases

54. The altimeter is subject to the position error; this error varies substantially with the:
Mach number

55. The altimeter contains one or more aneroid capsules. Inside these capsules is:
A very low residual pressure and outside is static pressure

56. The altimeter indicates 15000 ft with a subscale setting of 1013,25 hPa. OAT is -21°C.
The pressure altitude of the aircraft is:
15000 ft

57. The altimeter indicates true altitude:
In standard atmosphere only

58. The altimeter is subject to static pressure error. This error results from:
Incorrect pressure sensing caused by disturbed airflow around the static ports

59. The altimeter is subject to static pressure error. This error varies according to:
TAS and angle of attack

60. If the static source to an airspeed indicator (ASI) becomes blocked during a descent the instrument will:
Over-read

61. Maintaining CAS and flight level flight, a fall in ambient temperature results in:
Lower True Airspeed (TAS) due to an increase in air density

62. When descending through an isothermal layer at a constant Calibrated Airspeed (CAS), the True Airspeed (TAS) will:
Decrease

63. A leak in the pitot total pressure line of a non-pressurized aircraft to an airspeed indicator would cause it to:
Under-read

64. The airspeed indicator circuit consists of pressure sensors. The Pitot tube directly supplies:
The total pressure

65. If the Pitot tube becomes blocked during a descent, the airspeed indicator:
Under-reads

66. The limits of the yellow scale of an airspeed indicator are:
VNO for the lower limit and VNE for the upper limit

67. The limits of the green scale of an airspeed indicator are:
VS1 for the lower limit and VNO for the upper limit

68. The limits of the white scale of an airspeed indicator are:
VSO for the lower limit and VFE for the upper limit

69. The maximum operating speed VMO is expressed in:
CAS or EAS

70. After an aircraft has passed through a volcanic cloud, the total pressure probe inlet of the airspeed indicator is blocked.
The pilot begins a stabilized descent and finds that the IAS:
Decreases steadily

71. During a climb after take-off from a contaminated runway, if the total pressure probe of the airspeed indicator is blocked, the pilot finds that indicated airspeed:
Increases steadily

72. With constant weight and configuration, an aeroplane takes off at the same:
EAS

73. The calibrated airspeed (CAS) is obtained by applying to the indicated airspeed (IAS):
An instrument and position/pressure error correction

74. VNO is the maximum speed:
Not to be exceeded except in still air and with caution

75. VNE is the maximum speed:
Which must never be exceeded

76. VLO is the maximum:
Speed at which the landing gear can be operated with full safety

77. VLE is the maximum:
Flight speed with landing gear down

78. VFE is the maximum speed:
With the flaps extended in a given position

79. The airspeed indicator of an aircraft is provided with a moving red and white hatched pointer. This pointer indicates the:
Maximum speed in VMO operation versus altitude

80. On the airspeed indicator of a twin-engine aeroplane, the blue radial line corresponds to:
Best single-engine rate of climb

81. Today's airspeed indicators (calibrated to the Saint-Venant formula), indicate, in the absence of static (and instrumental) error:
The calibrated airspeed (CAS) in all cases

82. An aeroplane is descending from FL 390 to ground level at maximum speed. The limit(s) in speed is (are):
Initially MMO, then VMO below a given flight level

83. All the anemometers are calibrated according to:
St-Venant's formula which takes into account the air compressibility

84. The Airspeed Indicator measures:
Differential pressure

85. What is the significance of the yellow arc in an airspeed indicator?
Structural warning range

86. The upper airspeed limit of the green arc on the airspeed indicator represents:
Maximum structural cruising speed (VNO)

87. In the air-tight instrument case of the airspeed indicator we will find:
Static pressure

88. If indicated airspeed is corrected for a positive error, the resulting calibrated airspeed will be:
Lower

89. CAS is obtained from IAS by correcting for the:
Position and instrument errors

90. As an airplane climbs higher, the true airspeed for a given indicated airspeed will:
Increase

91. Indicated airspeed (as read on the airspeed indicator] will:
Remain unchanged in headwind and tailwind

92. When side-slipping, one of the instruments below will give an incorrect indication:
Airspeed Indicator

93. Match indicated airspeed (IAS) with the associated definition:
The airspeed you read directly from the airspeed indicator

94. Match calibrated airspeed (CAS) with the associated definition:
Indicated airspeed corrected for installation and instrument errors

95. Match true airspeed (TAS) with the associated definition:
Calibrated airspeed corrected for altitude and non-standard temperature

96. Match groundspeed (GS) with the associated definition:

Actual speed of an aircraft over ground

97. If, when correcting an EAS value of 150 Kt, a TAS value of 146 Kt is obtained:

The density of the atmosphere must be greater than the ISA mean sea level air density

98. The reason for having a square-law compensation in the airspeed-indicator mechanism is:

The differential pressure increases with the square of the airspeed

99. TAS is equal to:

EAS corrected for density error

100. Under which of the following conditions is EAS equivalent to TAS?

QNH 1013, 15°C

101. Given:

Pt = total pressure

Ps = static pressure

Pso = static pressure at sea level

Calibrated airspeed (CAS) is a function of:

Pt-Ps

102. Given:

Pt = total pressure

Ps = static pressure

Pd = dynamic pressure

The airspeed indicator is fed by:

Pd

103. The EAS is obtained from the CAS by correcting for:

Compressibility error

104. EAS is equal to:

CAS corrected for compressibility error

105. The CAS is obtained from IAS by correcting for the following errors:

1) position

~~2) compressibility~~

3) instrument

~~4) density~~

The combination regrouping all the correct statements is:

1, 3

106. In standard atmosphere, when descending at constant CAS:
TAS decreases

107. During descent, the total pressure probe of the airspeed indicator becomes blocked. In this case:
~~1) IAS becomes greater than CAS~~
2) IAS becomes lower than CAS
3) while trying to maintain IAS constant, VMO may be exceeded
~~4) while trying to maintain IAS constant, aeroplane may stall~~
The combination that regroups all of the correct statements is:
2, 3

108. During a climb, the total pressure probe of the airspeed indicator becomes blocked; if the pilot tries to maintain a constant indicated airspeed, the true airspeed:
Decreases until reaching the stall speed

109. A blocked pitot head with a clear static source causes the airspeed indicator to:
React like an altimeter

110. Considering an airspeed indicator, a second striped needle, if installed, indicates:
VMO

111. In the absence of position and instrument errors, IAS is equal to:
CAS

112. Given:
Pt = total pressure
Ps = static pressure
Pd = dynamic pressure
The airspeed indicator measures:
Pt-Ps

113. In standard atmosphere at sea level, the EAS is:
Equal to the TAS

114. An aeroplane is cruising at FL 60 with a TAS of 100 kt in standard atmosphere. In these conditions:
1) the TAS is approximately 10% higher than the IAS
2) the difference between the EAS and the CAS is negligible
3) the speed displayed on the airspeed indicator is a CAS if the position error and instrument error are zero
The combination regrouping all of the correct statements is:
1, 2, 3

115. An airspeed indicator includes a capsule; inside this capsule is:
Total pressure and outside is static pressure

116. The pressure capsule of an airspeed indicator is sensitive to the difference:
(Total Pressure - Static Pressure), called Dynamic Pressure

117. The TAS is obtained from the CAS by correcting for the following errors:
~~1) instrument~~
2) compressibility
~~3) position~~
4) density
The combination that regroups all of the correct statements is:
2, 4

118. The TAS is obtained from the IAS by correcting for the following errors:
1) instrument
2) position
3) compressibility
4) density
The combination that regroups all of the correct statements is:
1, 2, 3, 4

119. CAS is equal to:
IAS corrected for position and instrument errors

120. TAS is equal to:
IAS corrected for instrument, position, compressibility and density errors

121. The TAS is equal to the EAS only if:
P = 1013.25 hPa and OAT = 15°C

122. Concerning the airspeed indicator, IAS is:
The indicated reading on the instrument

123. TAS is obtained from EAS by correcting for:
Density error

124. When climbing at a constant CAS in standard atmosphere:
TAS increases

125. TAS can be obtained from the following data:
EAS and density altitude

126. With EAS and density altitude, we can deduce:
TAS

127. With CAS and pressure altitude, we can deduce:
EAS

128. Considering the relationship between CAS and EAS:
EAS is always lower than or equal to CAS

129. EAS can be obtained from the following data:
CAS and pressure altitude

130. In the absence of position and instrument errors, CAS is equal to:
IAS

131. In the absence of position and instrument errors:
IAS = CAS

132. The alternate static source of a light non-pressurized aircraft is located in the flight deck. When used:
The airspeed indicator tends to over-read

133. In case of static blockage, the airspeed indicator:
Under-reads in climb and over-reads in descent

134. The parameter that determines the relationship between EAS and TAS is:
Density altitude

135. When climbing at a constant Mach number:
CAS decreases

136. Machmeter readings are subject to:
Position pressure error

137. If the outside temperature at 35 000 feet is -40°C, the local speed of sound is:
595 kt

138. During a straight and uniform climb, the pilot maintains a constant calibrated airspeed (CAS):
The Mach number increases and the true airspeed (TAS) increases

139. A VMO-MMO warning device consists of an alarm connected to:
A barometric aneroid capsule subjected to a static pressure and an airspeed sensor subjected to a dynamic pressure

140. The reading of a Mach indicator is independent of:
The outside temperature

141. The principle of the Mach indicator is based on the computation of the ratio:
(Pt - Ps) to Ps

142. The Mach number is equal to:
("a" indicates the local speed of sound)
TAS/a

143. Indication of Mach number is obtained from:
Indicated speed and altitude using a speed indicator equipped with an altimeter type aneroid

144. At a constant calibrated airspeed (CAS), the Mach number:
Increases when the altitude increases

145. At a constant Mach number, the calibrated air speed (CAS):
Decreases when the altitude increases

146. The Mach number is:
The ratio of the aircraft true airspeed to the sonic velocity at the altitude considered

147. Sound propagates through the air at a speed which only depends on:
Temperature

148. The velocity of sound at the sea level in a standard atmosphere is:
661 kt

149. If the ambient temperature decreases, the TAS of an aircraft cruising at a constant Mach number will:
Decrease because local speed of sound decreases

150. An aircraft is flying at a TAS of 310 Kt at FL290; temperature deviation is -6º C.
The local speed of sound is:
583 Kt

151. What is the Mach number?
It is the ratio of the aircraft's true airspeed to the local speed of sound of the air in which the aircraft is moving

152. How many diaphragms are present in a basic Mach meter?
Two

153. The Mach number is a function of the
Absolute temperature of the air

154. Assuming the flight level and Mach number remain constant, when the OAT decreases:
TAS decreases

155. During a climb at a constant Mach number below the tropopause in standard atmosphere:
CAS and TAS decrease

156. An airplane is in steady cruise at FL 290. The autothrottle maintains a constant Mach number. If the total temperature decreases, the calibrated airspeed:
Remains constant

157. When climbing at a constant CAS through an isothermal layer, the Mach number:

Increases

158. During a descent at a constant IAS below the tropopause in standard atmosphere:

Mach number and TAS decrease

159. An aeroplane is flying at FL 300 with a TAS of 470 kts in standard conditions. The Mach number is:

0.80

160. What is the speed of sound at 15000 feet, at an OAT of -10º C?

632 kts

161. The indicated Mach number is independent from:

Temperature

162. Machmeter readings are subject to:

Position error

163. Speed of sound is proportional to:

The square root of the absolute temperature

164. If the outside temperature at 25 000 feet is -28°C, the local speed of sound is:

610 kts

165. When descending at a constant CAS in standard atmosphere:

~~1) TAS increases~~

2) TAS decreases

~~3) Mach number increases~~

4) Mach number decreases

The combination regrouping all the correct statements is:

2, 4

166. The compressibility correction to CAS to give EAS:

~~1) may be positive~~

2) is always negative

3) depends on the Mach number only

~~4) depends on pressure altitude only~~

The combination regrouping the correct statements is:

2, 3

167. The Machmeter is subject to position error. This error varies according to:

1) angle of attack

~~2) OAT~~

3) TAS

The combination that regroups all of the correct statements is:

1, 3

168. When climbing at a constant CAS in standard atmosphere:

~~1) TAS decreases~~

2) TAS increases

3) Mach number increases

~~4) Mach number decreases~~

The combination regrouping all the correct statements is:

2, 3

169. During a climb at a constant CAS below the tropopause in standard atmosphere:

TAS and Mach number increase

170. During a descent at a constant Mach number below the tropopause in standard atmosphere:

CAS and TAS increase

171. At flight level and mach number constant, if OAT increases, the CAS:

Remains constant

172. An aeroplane is cruising at FL 220. The autothrottle maintains a constant CAS. If the OAT increases, the Mach number:

Remains constant

173. When climbing at a constant Mach number through an isothermal layer, the CAS:

Decreases

174. The maximum TAS is obtained at:

The Flight Level at which simultaneously CAS = VMO and M = MMO

175. During a climb at a constant IAS below the tropopause in standard atmosphere:

The Mach number and the TAS increase

176. During a climb at a constant Mach number below the tropopause in standard atmosphere:

IAS and TAS decrease

177. Assuming the flight level and Mach number remain constant, when the OAT decreases:

CAS remains constant and TAS decreases

178. Assuming the flight level and Mach number remain constant, when the OAT increases:

CAS remains constant and TAS increases

179. In the following formula EAS = CAS x K, the compressibility factor K:

~~1) may be greater than 1~~

2) is always lower or equal to 1

3) depends on Mach number only

~~4) depends on pressure altitude only~~

The combination that regroups all of the correct statements is:

2, 3

180. When climbing at a constant CAS:
Mach number increases

181. If OAT decreases when at a constant TAS:
Mach number increases

182. If OAT increases when at a constant Mach number:
TAS increases

183. Below the tropopause in standard atmosphere, when descending at a constant Mach number:
TAS increases

184. When descending at a constant Mach number:
CAS increases

185. If an aircraft maintaining a constant CAS and flight level is flying from a cold air mass into warmer air:
TAS increases

186. If OAT increases whilst maintaining a constant CAS and flight level:
Mach number remains constant

187. If an aircraft maintaining a constant CAS and flight level is flying from a warm air mass into colder air:
TAS decreases

188. The Machmeter is subject to position error. This error results from:
Incorrect pressure sensing caused by disturbed airflow around the pitot tube and/or static ports

189. The Machmeter is subject to position error. This error concerns:
Pitot tubes and static ports

190. The Machmeter is subject to position error. This error varies according to:
TAS and angle of attack

191. An aeroplane is flying at FL 140 with a CAS of 260 kts in standard conditions. The Mach number is:
0.51

192. The vertical speed indicator of an aircraft flying at a true airspeed of 100 kt, in a descent with a slope of 3 degrees, indicates:
- 500 ft/min

193. The response time of a vertical speed detector may be decreased by adding a:
Correction based on an accelerometer sensor

194. The vertical speed indicator (VSI) is fed by:
Static pressure

195. The operating principle of the vertical speed indicator (VSI) is based on the measurement of the rate of change of:

Static pressure

196. A vertical speed indicator measures the difference between:

The instantaneous static pressure and the static pressure at a previous moment

197. How does lag error in an Instantaneous VSI (IVSI) compare to that in a normal VSI?

It is virtually eliminated by using an acceleration pump

198. The purpose of the IVSI is to

Give an instantaneous indication of the aircraft's vertical speed when a climb or descent has been initiated

199. The Vertical Speed Indicator (VSI) gives:

Immediate trend information and stable climb or descent information after 6 to 12 seconds (depending on type)

200. Within a temperature range of +50° and -20° C the VSI is accurate to within limits of:

+/- 200 ft/min

201. The vertical speed indicator reads:

The differential pressure between the capsule pressure and the case pressure

202. Aircraft with pressurized cabin in flight:

When switching to the alternate static pressure source, the pointer of the Vertical Speed Indicator:

Indicates a climb, then settles down and reads incorrectly

203. If the static ports are completely clogged up by ice during a climb, the vertical speed indicator shows:

Zero

204. The advantages provided by an air data computer to indicate the altitude are:

1. Position/pressure error correction
~~2. Hysteresis error correction~~
3. Remote data transmission capability
4. Capability of operating as a conventional altimeter in the event of a failure

The combination of correct statements is:

1,3,4

205. Given:
- Ts the static temperature (SAT)
- Tt the total temperature (TAT)
- Kr the recovery coefficient
- M the Mach number

The total temperature can be expressed approximately by the formula:

$Tt = Ts(1+0.2\ Kr.M^2)$

The "Total Air Temperature (TAT)" can be either prefixed by "true" or "indicated". The "true TAT" is the maximum temperature attainable by the air when brought to rest adiabatically.
The "indicated TAT" is the value indicated by a TAT Probe even if its recovery factor is below 1. If the recovery factor equals 1, then indicated TAT = true TAT. Therefore, TAT alone is ambiguous. This ambiguity can be seen on page 3-4, where TAT is defined as Total Air Temperature, whereas on page 3-5, TAT is defined as the Indicated Outside Air Temperature.
The chapter on Air Temperature in Book 5 is confusing, because it does not clearly differentiate between "true" and "indicated". Just remember that the value read from the temperature gauge is always the indicated TAT and, depending on the sensitivity of the probe, it can come very close or even be equal to the true TAT. This question deals with the formula on page 3-5, and the total temperature (Tt) there is meant to be the indicated TAT, therefore the recovery factor has to be taken into account. They changed the formula to solve for indicated TAT, but this is questionable and only done to verify that you have it well in mind.
The Air Data Computer never solves for indicated TAT, because it is the only temperature input value it has. Together with the known ram rise for the actual TAS and the recovery factor, it calculates the SAT, which is the required parameter for performance calculations.

206. In an ADC, the altitude is computed with the:

Static pressure

207. An Air Data Computer (ADC):

Transforms air data measurements into electric impulses driving servo motors in instruments

208. The measurement of SAT (static air temperature) by direct means is not possible on some (fast) aircraft because

Of the effects from adiabatic compression and friction

209. The ram air temperature (RAT) is defined as:

SAT plus the ram rise

210. A temperature sensor having a recovery factor of 0.75 indicates 30° C.
Static Air Temperature (SAT) is 25° C. How high is the Ram-rise?

5° C

211. The standard temperature for all our aerodynamic computations is:

15° C or 59° F

212. To obtain total air temp. (TAT) the airflow to the sensor

Must be brought to rest without addition or removal of heat

213. The input data of an ADC are:

~~1) OAT~~

2) TAT

3) static pressure

4) total pressure

The combination that regroups all of the correct statements is:

2, 3, 4

214. An air data computer

~~1) supplies the ground speed and the drift angle~~

~~2) determines the total temperature and the true altitude~~

3) receives the static pressure and the total pressure

4) supplies the TAS to the computer of the INS

5) determines the Mach number, the outside (static) air temperature

The combination that regroups all of the correct statements is:

3, 4, 5

215. The ADC uses the following parameters as input data:

Static pressure, total pressure, TAT

216. The data output from the ADC are:

1) Barometric altitude

2) Mach number

3) CAS

4) TAS

5) SAT

The combination that regroups all of the correct statements is:

1, 2, 3, 4, 5

217. The output data calculated by the ADC are:

~~1) Attitude~~

2) Pressure altitude

3) TAT

4) TAS

5) CAS

The combination that regroups all of the correct statements is:

2, 3, 4, 5

218. The output data from the ADC are used by:

1) Transponder

2) EFIS

3) Automatic Flight Control System (AFCS)

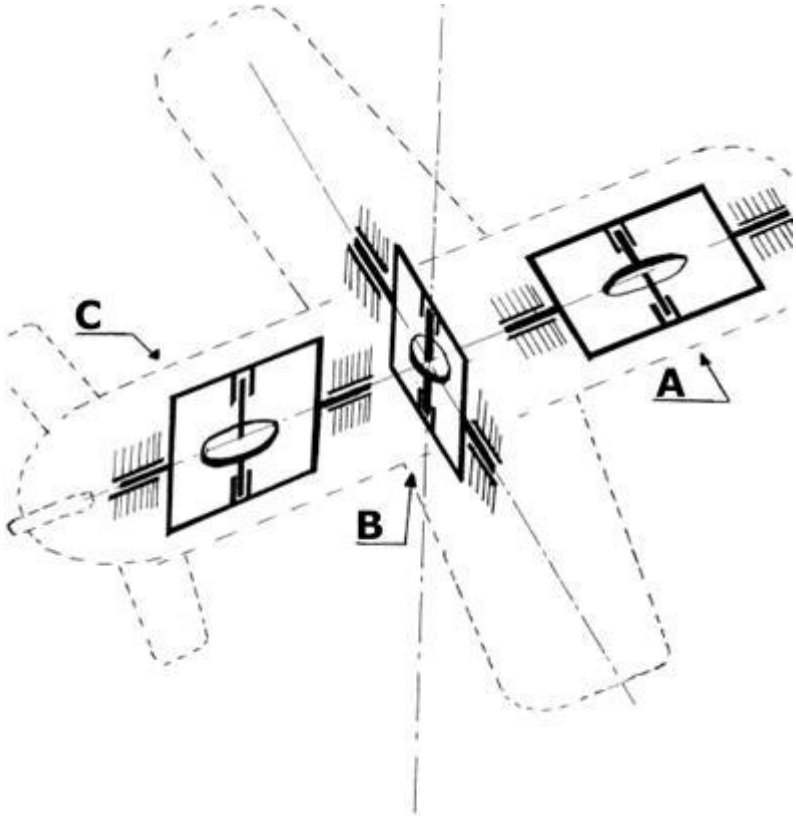
The combination that regroups all of the correct statements is:

1, 2, 3

219. A failed RMI rose is locked on 090° and the ADF pointer indicates 225°. The relative bearing to the station is:
135°

220. The indications on a directional gyroscope or gyrocompass are subject to errors, due to:
1- rotation of Earth.
2- aeroplane motion on Earth.
3- lateral and transversal aeroplane bank angles.
~~4- north change.~~
5- mechanical defects.
Chose the combination with true statements only:
1,2,3,5

221. The diagram shows three gyro assemblies: A, B and C. Among these gyros,
-one is a roll gyro (noted 1)
-one is a pitch gyro (noted 2)
-one is a yaw gyro (noted 3)
The correct matching of gyros and assemblies is:
1B, 2C, 3A



222. While inertial platform system is operating on board an aircraft, it is necessary to use a device with the following characteristics, in order to keep the vertical line with a pendulous system:
With damping and a period of about 84 minutes

223. The gyroscope of a turn indicator has:
(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)
1 degree of freedom

224. A slaved directional gyro derives its directional signal from:
The flux valve

225. The indication of the directional gyro is valid only for a limited period of time. The causes of this inaccuracy are:
1) rotation of the earth
~~2) longitudinal accelerations~~
3) aircraft's moving over the surface of the earth
~~4) vertical components of the earth's magnetic field~~
The combination that regroups all of the correct statements is:
1, 3

226. The properties of a gyroscope are:
1) rigidity in space
~~2) rigidity on earth~~
3) precession
~~4) Schuler oscillations~~
The combination that regroups all of the correct statements is:
1, 3

227. The artificial horizon uses a gyroscope with:
(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)
Two degrees of freedom, and its rotor spin axis is continuously maintained to local vertical by an automatic erecting system

228. The characteristics of the gyroscope used in a gyromagnetic compass system are:
(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)
Two degrees of freedom, whose horizontal axis corresponding to the reference direction is maintained in the horizontal plane by an automatic erecting system

229. When an aircraft has turned 270 degrees with a constant attitude and bank, the pilot observes the following on a classic artificial horizon:
Too much nose-up and bank too high

230. When an aircraft has turned 360 degrees with a constant attitude and bank, the pilot observes the following on a classic artificial horizon:
Attitude and bank correct

231. After the initial 90 degrees of a turn at constant pitch and bank, a classic artificial horizon indicates:
Too much nose-up and too little bank

232. A gravity type erector is used in a vertical gyro device to correct errors on:
An artificial horizon

233. The directional gyro axis no longer spins about the local vertical when it is located:
On the equator

234. The directional gyro axis spins about the local vertical by 15°/hour:

On the North Pole

235. The pendulum type detector system of the directional gyro feeds:

A leveling erection torque motor

236. The gimbal error of the directional gyro is due to the effect of:

A bank or pitch attitude of the aircraft

237. Under normal operating conditions, when an aircraft is in a banked turn, the rate-of-turn indicator is a valuable gyroscopic flight control instrument; when it is associated with an attitude indicator it indicates:

1. the angular velocity of the aircraft about the yaw axis

~~2. The bank of the aircraft~~

3. The direction of the aircraft turn

~~4. The angular velocity of the aircraft about the real vertical~~

The combination of correct statements is:

1,3

238. A rate integrating gyro is a detecting element used in

1. An inertial attitude unit

~~2. An automatic pilot~~

~~3. A stabilizing servo system~~

4. An inertial navigation system

~~5. A rate-of-turn indicator~~

The combination of correct statements is:

1,4

239. At a low bank angle, the measurement of rate-of-turn actually consists in measuring the:

Yaw rate of the aircraft

240. The rate-of-turn is the:

Change-of-heading rate of the aircraft

241. On the ground, during a right turn, the turn indicator indicates:

Needle to the right, ball to left

242. When, in flight, the needle and ball of a needle-and-ball indicator are on the left, the aircraft is:

Turning left with too much bank

243. When, in flight, the needle and ball of a needle-and-ball indicator are on the right, the aircraft is:

Turning right with too much bank

244. When, in flight, the needle of a needle-and-ball indicator is on the right and the ball on the left, the aircraft is:

Turning right with not enough bank

245. When, in flight, the needle of a needle-and-ball indicator is on the left and the ball on the right, the aircraft is:
Turning left with not enough banks

246. A stand-by-horizon or emergency attitude indicator:
Contains its own separate gyro

247. The input signal of the amplifier of the gyromagnetic compass resetting device originates from the:
Error detector

248. The heading information originating from the gyromagnetic compass flux valve is sent to the:
Error detector

249. The gyromagnetic compass torque motor:
Causes the directional gyro unit to precess

250. Following 180° stabilized turn with a constant attitude and bank, the artificial horizon indicates (assume air-driven and turning clockwise, when viewed from above):
Too high pitch-up and correct banking

251. Compared with a conventional gyro, a laser gyro:
Has a longer life cycle

252. A laser gyro consists of:
A laser generating two light waves

253. The heading reference unit of a three-axis data generator is equipped with a gyro with:
2 degrees of freedom and horizontal spin axis

254. The vertical reference unit of a three-axis data generator is equipped with a gyro with:
2 degrees of freedom and vertical spin axis

255. An airborne instrument, equipped with a gyro with 1 degree of freedom and a horizontal spin axis is a:
(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)
Turn indicator

256. An airborne instrument, equipped with a gyro with 2 degrees of freedom and a horizontal spin axis is:
(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)
A directional gyro

257. In a turn at a constant angle of bank, the rate of turn is:
Inversely proportional to the aircraft TAS

258. In a Turn-indicator, the measurement of rate-of-turn consists for:
Low bank angles, in measuring the yaw rate

259. A gyromagnetic compass consists of:

1) a horizontal axis gyro

~~2) a vertical axis gyro~~

3) an earth's magnetic field detector

4) an erection mechanism to maintain the gyro axis horizontal

5) a torque motor to make the gyro precess in azimuth

The combination that regroups all of the correct statements is:

1, 3, 4, 5

260. The rate of turn indicator uses a gyroscope:

~~1) the spinning wheel axis of which is parallel to the yawing axis~~

2) the spinning wheel axis of which is parallel to the pitch axis

~~3) the spinning wheel axis of which is parallel to the roll axis~~

4) with one degree of freedom

~~5) with two degrees of freedom~~

The combination that regroups all of the correct statements is:

(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)

2, 4

261. An aircraft is flying at a 120 kt true airspeed (VV), in order to achieve a rate 1 turn, the pilot will have to bank the aircraft at an angle of:

18°

262. In the building principle of a gyroscope, the best efficiency is obtained through the concentration of the mass:

On the periphery and with a high rotation speed

263. For an aircraft flying a true track of 360° between the 005°S and 005°N parallels, the precession error of the directional gyro due to apparent drift is equal to:

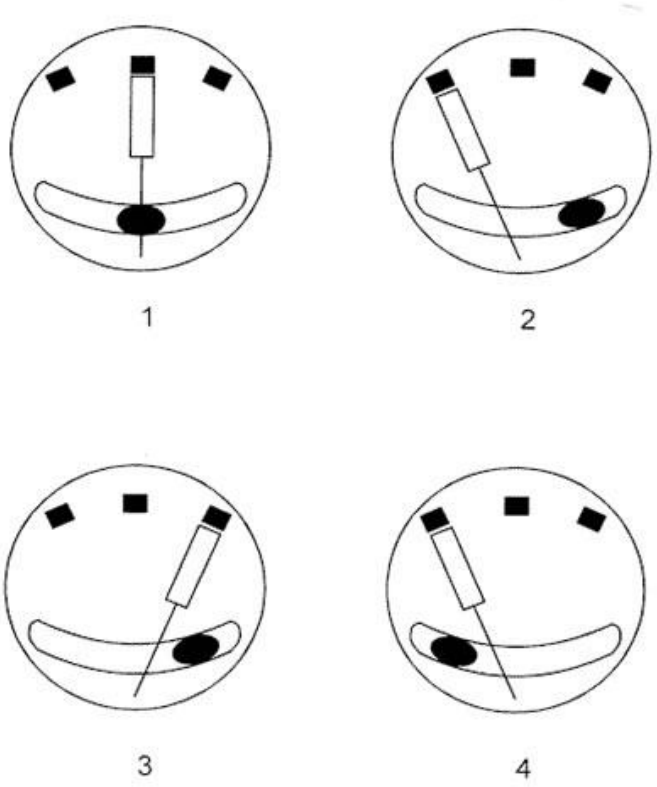
Approximately 0°/hour

264. Heading information from the gyromagnetic compass flux gate is transmitted to the:

Error detector

265. The diagram representing a left turn with insufficient rudder is:

4



266. A directional gyro is:

1) a gyroscope free around two axis

~~2) a gyroscope free around one axis~~

~~3) capable of self- orientation around an earth-tied direction~~

4) incapable of self-orientation around an earth-tied direction

The combination that regroups all of the correct statements is:

(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)

1, 4

267. The maximum directional gyro error due to the earth rotation is:

15°/hour

268. A directional gyro consists of a:

(NB: the rotor spin axis is not counted for the number of degrees of freedom of the gyro)

2 degrees-of-freedom horizontal axis gyro

269. A flux valve senses the changes in orientation of the horizontal component of the earth's magnetic field.

~~1- the flux valve is made of a pair of soft iron bars~~

2- the primary coils are fed A.C. voltage (usually 487.5 Hz)

3- the information can be used by a "flux gate" compass or a directional gyro

~~4- the flux gate valve casing is dependent on the aircraft three inertial axis~~

5- the accuracy on the value of the magnetic field indication is less than 0,5%

Which of the following combinations contains all of the correct statements?

2 - 3 - 5

270. Considering an air-driven artificial horizon, when an airplane accelerates during the take-off run, the result is:
A false nose-up attitude

271. Among the systematic errors of the directional gyro, the error due to the earth rotation make the north reference turn in the horizontal plane. At a mean latitude of 45°N, this reference turns by:
10.5°/hour to the right

272. A turn indicator is an instrument which indicates rate of turn.
Rate of turn depends upon:
1) bank angle
2) aeroplane speed
~~3) aeroplane weight~~
The combination that regroups all of the correct statements is:
1 and 2

273. The heading read on the dial of a directional gyro is subject to errors, one of which is due to the movement of the aircraft.
This error:
Is dependent on the ground speed of the aircraft, its true track and the average latitude of the flight

274. A gravity erector system is used to correct the errors on:
An artificial horizon

275. While flying, a red flag labelled "HDG" appears in the indicator (HSI) of a Slaved Gyro Compass System. This indicates that:
The flux valve is not supplying reliable information to the compass system

276. Deviation compensation in a flux gate compass is done:
Mechanically

277. The principal advantage of a gyromagnetic compass (slaved gyro compass) is:
It combines the north-seeking ability of the magnetic compass with the stability of the direction indicator

278. The "sensor part" of the flux-valve is:
The three pick-up coils

279. In a Slaved Gyro Compass System the output of the flux-valve is fed to:
The stator in the slaved gyro control

280. The purpose of the slaving torque motor is:
To produce a precessive force in order to align the gyro with the earth's magnetic field

281. Rigidity in a gyroscope is
The tendency it has to remain in its plane of rotation and resist attempts to alter its position

282. Precession in a gyroscope is
The reaction at 90 degrees in direction of rotation caused by a applied force to the spinning wheel

283. Why do some gyro instruments topple when the aircraft is placed in an extreme attitude?
Because the gimbals reach their limiting stops

284. How is vacuum provided for the air-driven gyro instruments?
By an engine-driven pump

285. The rotational speed of an air-driven gyro is normally:
9000- 12000 RPM

286. Air-driven gyro rotors are prevented from spinning too fast by the
Vacuum relief valve

287. Apparent drift in a direction indicator is
7 1/2°/hour at 30°N and 30°S, and zero at the equator

288. The error in a direction indicator caused by the convergence of the meridians in northerly and southerly latitudes is called
Transport error

289. In a vacuum operated attitude indicator, automatic erection of the gyro is performed by
The pendulous unit

290. You have just taken off in a fast aircraft fitted with a vacuum operated attitude indicator. While climbing straight ahead - still accelerating - the instrument may for a short while indicate
A climbing turns to the right

291. What angle of bank should you adopt on the attitude indicator for a standard rate (Rate 1) turn while flying at an IAS of 130 Kt?
20°

292. What is an operational difference between the turn coordinator and the turn and slip indicator?
The turn coordinator indicates roll rate, rate of turn, and co-ordination; the turn and slip indicator indicates rate of turn and co-ordination

293. What indications should you get from the turn-and-slip indicator during taxi?
The ball moves freely opposite the turn, and the needle deflects in the direction of the turn

294. Failure of the electrical supply to an electrically driven direction indicator may be indicated by:
A red warning flag

295. A remote indicating compass has usually less deviation error than a panel mounted compass because:
It is normally mounted in a part of the airplane where magnetic interference is minimal

296. The purpose of the flux-valve is:
To sense the direction of the earth's magnetic field relative to the airplane

297. The directional gyro keeps its rotation axis aligned toward
A point in space

298. Erection systems are provided for the purpose of:
Erecting and maintaining the gyro in its vertical position

299. The operating principle of the pendulous vane unit erecting system is:
The air flow reaction through the open vanes

300. What is the main cause of precession?
Bearing friction

301. The needle of the Turn and Bank indicator shows:
The rate at which the aircraft is turning about the yaw axis

302. The higher the airspeed is:
The higher the bank angle must be to turn at the standard rate

303. If a 180º steep turn is made to the right and the aircraft is rolled out to straight and level flight by visual reference, the miniature aircraft on the Attitude Indicator will...
Show a slight climb and turn to the left

304. In an Inertial Navigation System (INS), the main causes of Cumulative Track errors are
Initial azimuth misalignment of the platform and wander of the azimuth gyro

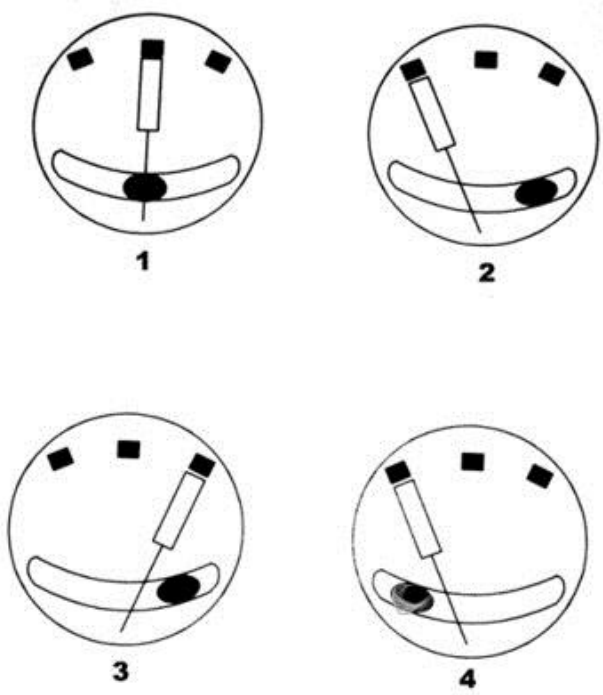
305. In an Inertial Navigation System (INS), the main causes of Cumulative Distance errors are
Wander in the leveling gyros and integrator errors in the second stage of integration

306. What is known as the "Schuler Period" has a length of
84.4 minutes

307. The properties of a gyroscope are:
1 - rigidity in space
~~2 - rigidity on earth~~
3 - precession
~~4 - Schuler oscillations~~
The combination regrouping all the correct statements is:
1,3

308. The diagram representing a left turn with insufficient rudder is:

4



309. The diagram representing a left turn with excessive rudder is:

2

310. The rate of turn given by the rate of turn indicator is valid:

For the airspeed range defined during the calibration of the instrument

311. In a remote indicating compass system the amount of deviation caused by aircraft magnetism and electrical circuits may be minimised by:

Mounting the detector unit (flux valve) in the wingtip

312. A laser gyro can measure:

A rotation motion

313. The principle of a laser gyro is based on:

Frequency difference between two laser beams rotating in opposite direction

314. The inertia of a gyroscope is greater when:

Its rotation speed is higher and the mass of the spinning wheel is located further from the axis of rotation

315. Without any external action, the axis of a free gyroscope is fixed with reference to:

Space

316. Due to the rotation of the earth, the apparent drift of a horizontal free gyroscope at a latitude of 45°N is:

11°/hour to the right

317. Due to the rotation of the earth, the apparent drift of a horizontal free gyroscope at a latitude of 30°S is:
7.5°/hour to the left

318. A free gyro has the axis of the spinning rotor horizontal and aligned with the geographic meridian.
If this free gyro is situated at latitude 60°N, the apparent drift rate according to the earthbound observer is:
13°/hour to the right

319. A directional gyro is corrected for an apparent drift due to the earth's rotation at latitude 30°S. During a flight at latitude 60°N, a drift rate of 15.5°/h to the right is observed.
The apparent wander due to change of aircraft position is:
5°/hour to the left

320. A rate gyro is used in a:
~~1) directional gyro indicator~~
2) turn co-ordinator
~~3) artificial horizon~~
The combination that regroups all of the correct statements is:
2

321. The spin axis of the turn indicator gyroscope is parallel to the:
Pitch axis

322. A control system consisting of four pendulous vanes is used in:
An air driven artificial horizon

323. The gyro axis of an electric artificial horizon is tied to the:
Earth's vertical by two mercury level switches and two torque motors

324. The gyroscope used in an attitude indicator has a spin axis which is:
Vertical

325. The latitude at which the apparent wander of a directional gyro is equal to 0 is:
The equator

326. Concerning the directional gyro, the apparent drift rate due to the earth's rotation is a function of:
Latitude

327. In a directional gyro, gimballing errors are due to:
A banked attitude

328. The annunciator of a remote indicating compass system is used when:
Synchronising the magnetic and gyro compass elements

329. In a gyromagnetic compass, the direction of the earth's magnetic field is given by the:
Flux valve

330. In a gyromagnetic compass, the signal feeding the precession amplifier comes from:
Error detector

331. In a gyromagnetic compass, the heading information from the flux valve is sent to the:
Error detector

332. The flux valve of a gyromagnetic compass:
1) feeds the error detector
~~2) feeds the direct indicating compass~~
3) gives the earth's magnetic field direction
The combination that regroups all of the correct statements is:
1, 3

333. In a gyromagnetic compass, the gyro axis:
~~1) is maintained vertical~~
2) is maintained horizontal
3) is servo-controlled in azimuth
~~4) is free in azimuth~~
The combination that regroups all of the correct statements is:
2, 3

334. The fields affecting a magnetic compass originate from:
1. magnetic masses
2. ferrous metal masses
~~3. non ferrous metal masses~~
4. electrical currents
The combination of correct statements is:
1, 2, 4

335. In the northern hemisphere, during deceleration following a landing in an Easterly direction, a direct reading compass indicates:
An apparent turn to the South

336. During deceleration following a landing in northerly direction, a direct reading compass indicates:
No apparent turn

337. During deceleration following a landing in a southerly direction, a direct reading compass indicates:
No apparent turn

338. In the southern hemisphere, during deceleration following a landing in a westerly direction, a direct reading compass indicates:
An apparent turn to the north

339. When decelerating on a westerly heading in the Northern hemisphere, the compass card of a direct reading magnetic compass will turn:
Clockwise giving an apparent turn towards the south

340. In the Southern hemisphere, during deceleration following a landing in an Easterly direction, a direct reading compass indicates:
An apparent turn to the North

341. The Quadrantal deviation of the magnetic compass is due to the action of:
The soft iron pieces influenced by the geomagnetic field

342. A pilot wishes to turn right on to a southerly heading with 20° bank at a latitude of 20° North. Using a direct reading compass, in order to achieve this he must stop the turn on an approximate heading of:
190°

343. A pilot wishes to turn left on to a southerly heading with 20° bank at a latitude of 20° North. Using a direct reading compass, in order to achieve this he must stop the turn on an approximate heading of:
170°

344. A pilot wishes to turn left on to a northerly heading with 10° bank at a latitude of 50° North. Using a direct reading compass, in order to achieve this he must stop the turn on an approximate heading of:
030°

345. A pilot wishes to turn right on to a northerly heading with 20° bank at a latitude of 40° North. Using a direct reading compass, in order to achieve this he must stop the turn on to an approximate heading of:
330°

346. The purpose of compass swinging is to determine the deviation of a magnetic compass:
On any heading

347. The compass heading can be derived from the magnetic heading by reference to a:
Compass deviation card

348. The magnetic heading can be derived from the true heading by means of a:
Map showing the isogonal lines

349. Among the errors of a magnetic compass, errors are:
In North seeking, due to bank angle and magnetic heading

350. The purpose of a compass swing is to attempt to coincide the indications of:
Compass north and magnetic north

351. In a steep turn, the northerly turning error on a magnetic compass on the northern hemisphere is:
Equal to 180° on a 090° heading in a right turn

352. Magnetic compass swinging is carried out to reduce as much as possible:
Deviation

353. In the northern hemisphere, an aircraft takes-off on a runway with an alignment of 045°. During the take-off run, the compass indicates:

A value below 045°

354. When turning onto a northerly heading the rose of a magnetic compass tends to "undershoot;" when turning onto a southerly heading it tends to "overshoot":

~~1)these compass indications are less reliable in the northern hemisphere than in the southern hemisphere.~~

2)these compass oscillations following a lateral gust are not identical if the aircraft is heading north or south.

3) this behaviour is due to the mechanical construction of the compass.

~~4) this behaviour is a symptom of a badly swung compass.~~

The correct statements are:

2 and 3

355. Concerning magnetic compasses, deviation is:

The angular difference between magnetic North and compass North

356. In the Northern Hemisphere, a magnetic compass will normally indicate a turn towards north if:

An aircraft is accelerated while on an east or west heading

357. The centre of gravity of the compass rose of a direct reading magnetic compass lies below the pivot point in order to reduce the influence of the:

Magnetic inclination

358. In the vicinity of the magnetic North Pole the magnetic compass is useless because:

The horizontal component of the magnetic field is too weak

359. If the CH = 220°, var. = E12, dev. = W2, what is the corresponding TH?

TH = 230°

360. Variation is defined as the angle between:

TN and MN

361. In the Northern Hemisphere, a magnetic compass will normally indicate a turn towards north if

An aircraft is accelerated while on an east or west heading

362. What should be the indication on the magnetic compass when rolling into a standard rate turn to the right from a south heading in the Northern Hemisphere?

The compass will indicate a turn to the right, but at a faster rate than is actually occurring

363. Coefficient B, as used in aircraft magnetism, presents

A value representing the deviation registered on headings East and West

364. Deviation on MH 180 is -5 and on MH 000 it is +3. Calculate coefficient C:

Coefficient C = +4

365. Consider the following statements on coefficient A, as used to describe deviation:

a) Coefficient A is the average deviation on all headings

b) Coefficient A will normally be calculated after coefficients B and C has been corrected for

c) Coefficient A may be calculated at any stage during a compass swing

All 3 answers are correct

366. In the calculation of deviation, the following headings are recorded:

MH CH

358 356

091 087

182 186

273 271

Coefficient C is

+3

MH	CH	DEV
N 358	356	+2
E 091	087	+4
S 182	186	-4
W 273	271	+2

Coeff C = (Dev N - Dev S)/2 = (+2 - -4)/2 = 6/2 = +3

367. In the calculation of deviation, the following headings are recorded:

MH CH

358 356

091 087

182 186

273 271

Coefficient B is

+1

368. In the calculation of deviation, the following headings are recorded:

MH CH

358 356

091 087

182 186

273 271

Coefficient A is

+1

369. A direct reading compass should be swung when:

There is a large and permanent change in magnetic latitude

370. Which of the following is an occasion for carrying out a compass swing on a Direct Reading Compass?

After an aircraft has passed through a severe electrical storm, or has been struck by lightning

371. The Quadrantal deviation of a magnetic compass is corrected by using:
Pairs of permanent magnets

372. An aircraft in the northern hemisphere makes an accurate rate one turn to the right/starboard. If the initial heading was 330°, after 30 seconds of the turn the direct reading magnetic compass should read
Less than 060°

373. When turning right from 330°(C) to 040°(C) in the northern hemisphere, the reading of a direct reading magnetic compass will:
Under-indicate the turn and liquid swirl will increase the effect

374. When accelerating on an easterly heading in the Northern hemisphere, the compass card of a direct reading magnetic compass will turn:
Clockwise giving an apparent turn towards the north

375. When accelerating on a westerly heading in the Northern hemisphere, the compass card of a direct reading magnetic compass will turn:
Anti-clockwise giving an apparent turn towards the north

376. In the northern hemisphere, during a take-off run in a westerly direction, a direct reading compass indicates:
An apparent turn to the north

377. In the northern hemisphere, during a deceleration following a landing in a westerly direction, a direct reading compass indicates:
An apparent turn to the south

378. The direct reading magnetic compass is no more reliable when approaching:
1) the magnetic poles
~~2) the magnetic equator with a east or west heading~~
~~3) the magnetic equator with north or south heading~~
The combination that regroups all of the correct statements is:
1

379. The turning error of a direct reading magnetic compass:
Increases when the magnetic latitude increases

380. Which of the following statements is correct concerning the effect of turning errors on a direct reading compass?
Turning errors are greatest on north/south headings, and are greatest at high latitudes

381. The main reason for mounting the detector unit of a remote reading compass in the wingtip of an aeroplane is:
To minimise the amount of deviation caused by aircraft magnetism and electrical circuits

382. The main reason for usually mounting the detector unit of a remote reading compass in the wingtip of an aeroplane is to:
Reduce the amount of deviation caused by aircraft magnetism and electrical circuits

383. Direct reading magnetic compass errors are:
Due to north change, depending on the bank angle and magnetic heading

384. Concerning the direct reading magnetic compass:
Turning error is due to the vertical component of the earth's magnetic field

385. At the magnetic equator, when accelerating after takeoff on heading west, a direct reading pivot suspended compass:
Indicates the correct heading

386. Parallax error is:
A reading error

387. The turning errors of a direct reading magnetic compass are:
Maximum at the magnetic poles

388. Which of the following statements about hard and soft iron in relation to magnetism is correct?
Hard iron magnetism is of a permanent nature and soft iron is of a non-permanent nature

389. The low-altitude radio altimeters used in precision approaches:
~~1 operate in the 1540-1660 MHz range.~~
~~2 are of the pulsed type.~~
3 are of the frequency modulation type.
~~4 have an operating range of 0 to 5000 ft.~~
5 have a precision of +/- 2 feet between 0 and 500 ft.
The combination of the correct statements is:
3, 5

390. The data supplied by a radio altimeter:
Indicates the distance between the ground and the aircraft

391. Modern low altitude radioaltimeters emit waves in the following frequency band:
SHF (Super High Frequency)

392. The aircraft radio equipment which emits on a frequency of 4400 MHz is the:
Radio altimeter

393. For most radio altimeters, when a system error occurs during approach the..
Height indication is removed

394. In low altitude radio altimeters, the height measurement (above the ground) is based upon:
A frequency modulation wave, for which the frequency variation between the transmitted wave and the received wave after ground reflection is measured

395. The Decision Height (DH) warning light comes on when an aircraft:
Descends below a pre-set radio altitude

396. The signal transmitted by a radio altimeter is:
A frequency modulated carrier wave

397. A radio altimeter can be defined as a:
Self-contained on-board aid used to measure the true height of the aircraft

398. During the approach, a crew reads on the radio altimeter the value of 650 ft. This is an indication of the true:
Height of the lowest wheels with regard to the ground at any time

399. The operating frequency of the Radio Altimeter is normally
Between 4,250 and 4,350 MHz, FMCW

400. The modulation technique used by the Radio Altimeter is referred to as
Frequency Modulated Continuous Wave

401. The radio altimeter:
~~1) operates in the frequency band 1600-1660 MHz~~
2) operates in the frequency band 4200-4400 MHz
3) measures frequency difference
~~4) measures amplitude difference~~
The combination of the correct statements is:
2, 3

402. The radio altimeter is required to indicate zero height AGL as the main wheels touch down on the runway. For this reason it is necessary to:
Compensate for residual height and cable length

403. The radio altimeter uses the following wavelengths:
Centimetric

404. A radio altimeter uses the following frequency band:
SHF (Super High Frequency)

405. A radio altimeter uses the following frequency band:
4200 MHz to 4400 MHz

406. The radio altimeter supplies data to the following system(s):
~~1) altitude alert system~~
2) TCAS
3) GPWS
4) automatic landing system
The combination that regroups all of the correct statements is:
2, 3, 4

407. During the approach, the radio altimeter indicates 950 ft. This is:
The height of the lowest wheels with regard to the ground

408. Concerning the radio altimeter, the maximum range for indication is typically from touchdown to:
2500 ft

409. A radio altimeter uses:
Two antennas: one for the transmission, and another for the reception

410. The source of the data displayed on the Primary Flight Display (PFD) and Navigation Display (ND) are:
1) Inertial Navigation System
2) FMS
3) weather radar
4) radio altimeter
5) ADC
The combination that regroups all of the correct statements is:
1, 2, 3, 4, 5

411. The Primary Flight Display (PFD) displays information dedicated to:
Piloting

412. For an aircraft EFIS equipped:
~~1) the ND displays flight director command bars~~
2) the PFD displays the altimeter setting
~~3) the ND displays the attitude of the aircraft~~
~~4) the flight mode annunciator is part of the ND~~
The combination that regroups all of the correct statements is:
2

413. On a modern transport category aeroplane, the engagement of the automatic pilot is checked on the display of:
The PFD (Primary Flight Display)

414. According to AMC 25-11 concerning the electronic display systems, the colour associated with a warning-type alert is:
Red

415. According to AMC 25-11 concerning the electronic display systems, the amber/yellow colours are associated with the following alert:
Caution

416. According to AMC 25-11 concerning the electronic display systems, the colour associated with a caution-type alert is:
Amber or yellow

417. According to AMC 25-11 concerning the electronic display systems, the colour associated with an engaged mode is:
Green

418. According to AMC 25-11 concerning the electronic display systems, the colour associated with an armed mode is:
White or cyan

419. According to AMC 25-11 concerning the electronic display systems, the white/cyan colours are associated with the following indication:
Armed mode

420. According to AMC 25-11 concerning the electronic display systems, when exceeding the limits of the flight envelope, the colour accepted to alert the flight crew is:
Red

421. An EFIS includes the following components:
Symbol generator, display unit(s), control panel

422. The Primary Flight Display (PFD) of an EFIS equipped aircraft displays the following parameters:
1) radio height
2) IAS
3) localizer and glide slope deviation pointers
4) flight director modes
5) autopilot modes
The combination that regroups all of the correct statements is:
1, 2, 3, 4, 5

423. According to AMC 25-11 concerning the electronic display systems, the colours used are:
Red for flight envelope and system limits, green for autopilot or flight director engaged modes

424. The Primary Flight Display (PFD) of an EFIS equipped aircraft displays the following parameters:
IAS, attitude, altitude, heading

425. The Primary Flight Display (PFD) of an EFIS equipped aircraft can display information relative to the following conditions:
Altitude capture, TCAS resolution advisory, autopilot and flight director mode changes

426. The Navigation Display (ND) of an EFIS equipped aircraft can display the following data:
Flight plan, weather radar, terrain map, intruding traffics

427. On the navigation display (ND) of an EFIS equipped aircraft, the colours used are:
Magenta or white for the active waypoint (TO waypoint), green for light precipitation

428. The Primary Flight Display (PFD) of an EFIS equipped aircraft displays the following parameters:
1) auto-throttle modes
2) attitude
3) vertical speed
4) flight director command bars
The combination that regroups all of the correct statements is:
1, 2, 3, 4

429. The Navigation Display (ND) modes can be:
1) ARC or MAP, covering 45 degrees on either side of the instantaneous track
2) ROSE or MAP CENTERED: rose with current heading up
3) PLAN: map orientated to true north
The combination that regroups all of the correct statements is:
1, 2, 3

430. All the last generation aircraft use flight control systems. The Flight Management System (FMS) is the most advanced system; it can be defined as a:
Global 3-D Flight Management System

431. The purpose of the FMS temperature compensation function is:
To provide compensated altitudes for temperatures different from ISA along the vertical approach profile

432. The FMS lateral offset function consists in:
Flying along the flight plan legs with a constant right or left offset manually entered on the FMS CDU

433. The FMS is approved to provide guidance for the following approaches:
Non precision approaches

434. The duration of a FMS navigation database loaded before expiring is:
28 days

435. The fuel management performed by most FMS along the flight plan is considered as:
A function which helps the crew to estimate the remaining fuel quantity along the flight plan but should not be considered as an accurate and reliable mean

436. Some of the FMS have a navigation mode called Dead Reckoning mode (DR), computing airspeed, heading, wind data ground speed and time. This mode is:
A back up navigation mode to compute a FMS position when the other navigation sensors are no longer operating

437. The FMS navigation database includes the following data:
~~1- obstacles~~
2- navaids
3- SID, STAR and approaches procedures
4- waypoints
5- airways
The combination which regroups all of the correct statements is:
2,3,4,5

438. When two waypoints are entered on the FMS flight plan page, a track between the two fixes is computed and can be displayed on the Navigation map display (ND). This leg created is:
A great circle arc

439. The FMS Flight Plan, Navigation, Progress or Leg page generally displays the following parameters relative to the flight plan legs or waypoints:

1- track

~~2- magnetic variation~~

~~3- waypoint elevation~~

4- time prediction

The combination which regroups all of the correct statements is:

1,4

440. The FMS is approved for Localizer approaches:

If the Localizer signals are used by the FMS

441. The FMS Required Time of Arrival (RTA) function can provide:

A speed target to satisfy a time constraint entered at a flight plan waypoint

442. The FMS cross track (XTK) is:

The abeam distance error, to the left or right from the desired flight plan leg to the aircraft position

443. The FMS navigation database processing should include the following check(s):

At each phase of the process, from the reception of each supplier's data to the distribution and loading of the formatted database

444. For a FMS designed with the vertical navigation (VNAV) capability coupled to the autopilot, the FMS vertical command output can be:

~~1) an angle of attack~~

2) a flight path angle

3) a speed target

The combination that regroups all of the correct statements is:

2, 3

445. The FMS is approved to provide guidance for the following approaches:

1- RNAV

~~2- PAR~~

3- VOR/DME, VOR

~~4- MLS~~

The combination which regroups all of the correct statements is:

1,3

446. The FMS is approved to provide guidance for the following approaches:

1- RNAV

~~2- ILS~~

~~3- MLS~~

4- VOR, NDB

The combination which regroups all of the correct statements is:

1,4

447. For most FMS the fuel prediction function, which computes the remaining fuel along the flight plan, takes into account the following situations:

~~1- the additional drag resulting in a flight carried out with the landing gear extended~~

2- the current wind computed or the resulting ground speed

~~3- the additional drag resulting in a flight carried out with the flaps stuck, partly extended~~

~~4- the additional drag resulting in a missing fuselage or wing element in compliance with the CDL~~

The combination which regroups all of the correct statements is:

2

448. The FMS navigation database includes the following data:

1- airports

~~2- obstacles~~

3- navaids

4- airways

~~5- relief~~

The combination that regroups all of the correct statements is:

1,3,4

449. The FMS navigation database includes the following data:

~~1- obstacles~~

2- waypoints

3- SID, STAR

~~4- relief~~

5- magnetic variation

The combination that regroups all of the correct statements is:

2,3,5

450. The FMS Flight Plan, Navigation, Progress or Leg page generally displays the following parameters relative to the flight plan legs or waypoints:

1-distance

2- time prediction

~~3- waypoint elevation~~

4- track

The combination which regroups all of the correct statements is:

1,2,4

451. The FMS Flight Plan, Navigation, Progress or Leg page generally displays the following parameters relative to the flight plan legs or waypoints:

1- remaining fuel prediction

~~2- aircraft position~~

3- distance

4- time prediction

The combination which regroups all of the correct statements is:

1,3,4

452. The FMS Flight Plan, Navigation, Progress or Leg page generally displays the following parameters relative to the flight plan legs or waypoints:

1- time prediction

2- distance

~~3- magnetic variation~~

4-altitude constraint or prediction

The combination which regroups all of the correct statements is:

1,2,4

453. The FMS Flight Plan, Navigation, Progress or Leg page generally displays the following parameters relative to the flight plan legs or waypoints:

~~1- FMS position~~

2- time prediction

3- track

4- distance

The combination which regroups all of the correct statements is:

2,3,4

454. The FMS provides the following functions:

1- vertical flight plan management

2- aid for fuel management

3- lateral flight plan management

~~4- terrain awareness and warning~~

The combination that regroups all of the correct statements is:

1,2,3

455. The FMS provides the following functions:

1- radio tuning

2- fuel management

3- lateral flight plan management

~~4-traffic alerts~~

The combination which regroups all of the correct statements is:

1,2,3

456. The FMS provides the following functions:

1- lateral and vertical flight plan management

~~2- de-icing management~~

3- aircraft position computation

~~4- terrain awareness and warning~~

The combination which regroups all of the correct statements is:

1,3

457. The FMS provides the following functions:

1) fuel management

2) lateral flight plan management

~~3) check-list completion~~

4) aircraft position computation

The combination that regroups all of the correct statements is:

1,2,4

458. The most common sensors interfacing a FMS to compute the aircraft position along the flight plan are:

1- IRS

2- DME

~~3- NDB~~

4- GPS

The combination which regroups all of the correct statements is:

1,2,4

459. The most common sensors interfacing a FMS to compute the aircraft position along the flight plan are:

1- DME

2- GPS

~~3- LOCALIZER~~

~~4- NDB~~

The combination which regroups all of the correct statements is:

1,2

460. The most common sensors interfacing a FMS to compute the aircraft position along the flight plan are:

~~1- MLS~~

2- GPS

3- VOR

4- IRS

The combination which regroups all of the correct statements is:

2,3,4

461. The role of the FMS (Flight Management System) is to:

1) aid the crew with navigation

~~2) shut down the engine in case of a malfunction~~

~~3) automatically avoid conflicting traffic when autopilot is engaged~~

4) reduce crew workload

5) aid fuel efficiency

The combination which regroups all of the correct statements is:

1, 4, 5

462. A FMS with only a multiple DME sensor operating shall have a position error, 95 % probability, in a non-precision approach equal or less than:

0.3 NM

463. In a FMS, MCDUs are used pre-flight to manually initialise with dispatch information the:

1) Inertial Reference System (when installed)

~~2) Flight Director and Auto Flight Control System~~

~~3) Air Data Computer~~

4) Flight Management Computer

The combination that regroups all of the correct statements is:

1, 4

464. The role of the FMS (Flight Management System) is to aid the flight crew with:

~~1) immediate actions in case of emergency procedure~~

2) navigation

3) in-flight performance optimization

~~4) electronic check-lists~~

The combination that regroups all of the correct statements is:

2, 3

465. Components of the FMS are:

1) CDU (Control and Display Unit)

2) database

3) FMC (Flight Management Computer)

~~4) electronic check-lists~~

~~5) GPWS mode controller~~

The combination that regroups all of the correct statements is:

1, 2, 3

466. The FMS enables to fly an optimum flight profile. For this, the FMC (Flight Management Computer) uses:

1) flight-crew entered flight plan data

2) data from ADC

3) aircraft position

~~4) a memorised relief world data base~~

5) data from the FMC navigation data base

The combination that regroups all of the correct statements is:

1, 2, 3, 5

467. Concerning the FMS, the parameters used to work out the vertical flight profile are;

1) zero fuel weight

2) cost index

3) fuel quantity

~~4) oxygen quantity available for flight crew~~

~~5) minimum safe enroute altitude~~

The combination that regroups all of the correct statements is:

1, 2, 3

468. Concerning the FMS, the cost index is computed by dividing:

Aircraft operating cost by fuel cost

469. Concerning the FMS, entering a cost index of zero results in:

Maximum range airspeed

470. The FMS vertical navigation management is generally performed based on:

The baro altitude input from the ADC

471. The "overfly" symbol related to a waypoint on an FMS page indicates that:

The aircraft is required to pass directly over this waypoint

472. The FMS provides the following functions:

~~1) traffic advisories emission~~

~~2) resolution advisories emission~~

3) aid for fuel management

4) lateral flight plan management

The combination that regroups all of the correct statements is:

3, 4

473. The data base of a FMC (flight management computer) is divided into two major sections:

Aeroplane performance and navigation

474. The FMS FLIGHT PLAN or LEG page displays the following parameters relative to the flight plan legs or waypoints:

~~1) aircraft position (Long/Lat)~~

2) speed

3) distance

4) track

The combination that regroups all of the correct statements is:

2,3,4

475. The FMC determines and updates present aircraft position from the following systems:

1) GPS

2) IRS

3) navigation radios

~~4) ACARS~~

The combination that regroups all of the correct statements is:

1, 2, 3

476. The FMC determines and updates present aircraft position from the following systems:

~~1) SATCOM~~

2) GPS

3) DME

4) IRS

The combination that regroups all of the correct statements is:

2, 3, 4

477. In computer technology, an example of an output peripheral is a:

Screen unit

478. In computer technology, an example of an input peripheral is a:

Keyboard

479. In computer technology, an example of a storage peripheral is a:

Hard disk

480. The Central Processing Unit (CPU) of a computer essentially consists of:

1) an Arithmetic and Logic Unit (ALU)

2) a control and timing unit

3) registers

The combination that regroups all of the correct statements is:

1, 2, 3

481. A machine for manipulating data according to a list of instructions is:

A computer

482. A basic computer ("Von Neumann architecture" type) consists of the following components:

1) an Arithmetic and Logic Unit (ALU)

2) a control unit

3) a memory

4) input and output devices

The combination that regroups all of the correct statements is:

1, 2, 3, 4

483. A basic computer ("Von Neumann architecture" type) consists of the following components:

~~1) a cache memory~~

2) a single separate storage structure

3) a Central Processing Unit (CPU)

~~4) an Asymmetric and Logic Unit (ALU)~~

The combination that regroups all of the correct statements is:

2, 3

484. A basic computer ("Von Neumann architecture" type) uses:

A processing unit and a single storage structure to hold both instructions and data

485. In computing, what is the function of the Arithmetic and Logic Unit (ALU)?

It is a digital circuit that performs basic operations

486. In computing, what is the function of a control unit?

It ensures sequencing and co-ordination of operations

487. In computing, the unit which ensures sequencing and co-ordination of operations is (are) the:
Control unit

488. In a basic computer ("Von Neumann architecture" type) the Central Processing Unit (CPU) includes:
An Arithmetic and Logic Unit (ALU) and a control unit

489. In a basic computer ("Von Neumann architecture" type) the memory:
Holds both instructions and data

490. Computer main memory comes in two principal varieties:
Random Access Memory (RAM) and Read Only Memory (ROM)

491. Which of these statements about the Random Access Memory (RAM) are correct or incorrect?
1) Data stored are lost after the power is switched off
2) It can be read and written to anytime the processor commands it
1 is correct, 2 is correct

492. The characteristics of the Random Access Memory (RAM) are:
1) rapid access
2) read and write access
3) volatile type
The combination that regroups all of the correct statements is:
1, 2, 3

493. In a basic computer, the input and output devices are typically:
1) a printer
2) a keyboard
3) a display
4) an optical disk
The combination that regroups all of the correct statements is:
1, 2, 3, 4

494. In computer architecture, a bus is a system that:
Transfers data between computer components

495. In computer architecture, the hardware is defined as:
The physical components of a computer system

496. In computer architecture, the software is defined as:
A collection of computer programs

497. Which of these statements about computer architecture are correct or incorrect?
1) The software part includes the programmes that make up the operating system (OS)
2) The hardware part includes the physical components of the computer
1 is correct, 2 is correct

498. Which of these statements about computer architecture are correct or incorrect?

~~1) The software part does not include the programmes that make up the operating system (OS)~~

~~2) The hardware part does not include the physical components of the computer~~

1 is incorrect, 2 is incorrect

499. In computing, what is meant by the term "multitasking"?

Multiple tasks share common resources, such as the same Central Processing Unit (CPU)

500. In computing, which of these statements about multitasking are correct or incorrect?

1) Multitasking gives the appearance of running several programs simultaneously

2) The Central Processing Unit (CPU) switches rapidly between each programme in turn

1 is correct, 2 is correct

501. In computing, what is meant by the term "multiprocessing"?

Two or more Central Processing Units (CPUs) are used within a single computer

502. Which of these statements about computer architecture are correct or incorrect?

1) Multitasking and multiprocessing are based on the same hardware configuration

2) The multitasking method is a software solution

1 is correct, 2 is correct

503. Which of these statements about computer architecture are correct or incorrect?

~~1) A multiprocessing configuration is a software solution~~

2) A multiprocessing configuration results in more powerful performance than the multitasking method

1 is incorrect, 2 is correct

504. The software used to run the ATSU applications (ATC and AOC):

Is certified according to an equipment certification standard (ED12B, DO178B)

505. For a large transport aeroplane equipped with a fly-by-wire flight control system, the software used for flight controls:

Is certified at the highest level of safety (level A)

506. Regarding the operating system used for an on-board documentation (charts and company information):

There are no certification requirements

507. For a large transport aeroplane equipped with a fly-by-wire flight control system and an FMS:

The operating system of the FMS is certified at a level equal or lower than the software used for flight controls

508. During the alignment phase of an inertial platform, the platform orientation is determined:
Through platform gyroscopes sensing the earth's angular components

509. During initial alignment an inertial navigation system is north aligned by inputs from:
Horizontal accelerometers and the east gyro

510. An aircraft is flying with the aid of an inertial navigation system (INS) connected to the autopilot. The following two points have been entered in the INS computer:
WPT 1: 60°N 030°W
WPT 2: 60°N 020°W
When 025°W is passed the latitude shown on the display unit of the inertial navigation system will be:
60°05.7'N
Convergency is 10° x sin 60° = 8.66°
Conversion angle (CA) is 4.333°
Distance from W020 to W025 is 5° x (60NM/° x cos60°) = 150 NM
If the parallel of N60 were a straight line (SL), the distance between N60 and the actual position would be 4.33° x /150 NM / 60 NM) = 11 NM, this according the 1/60 rule.
But the parallel is NOT a SL, therefore the solution d (N60 11) is wrong.
Graphical solution: Draw a circle with its centre at the NP and a radius of 1800 NM corresponding to the distance from NP to N60
Sketch an angle of +4.33° and –4.33° (CA) .
The distance between the secant and the circumference represents the distance between N60 and your position.
Calculation: 1800 NM x (1-cos4.33°) = 5.14 NM
But it will be much easier to eliminate the 3 wrong solutions: A and C, as we must be north of N60, D as mentioned above

511. The azimuth gyro of an inertial unit has a drift of 0.01°/HR.
After a flight of 12 HR with a ground speed of 500 kt, the error on the aeroplane position is approximately:
6 NM
The 1/60 rule says:
D = 60 NM >> 1º off >> 1 NM off.
In the first hour: D = 500 and 0.01º results in 0.083 NM off track distance
In the second hour: Further 500 NM and 0.02º error results in additional 0.166 NM off tack distance
In the third hour: Further 500 NM and 0.03º error results in additional 0.25 NM off track distance
a.s.o
Therefore, one must conclude, that the error of 12 x 0.01º does not exist from the beginning, it adds with 0.01º per hour. Calculation must be made with the average error of the total flight time, which is 0.06º. With the 1/60 rule 6 NM, or with trigonometry 6000 NM x sin0.06º = 6.3 NM.

512. The drift of the azimuth gyro on an inertial unit induces an error in the position given by this unit. "t" being the elapsed time.
The total error is:
Proportional to the square of time, t^2

513. With reference to inertial navigation systems, a TAS input is:
Required to provide a W/V read out

514. The platform of an inertial navigation system (INS) is maintained at right angles to the local vertical by applying corrections for the effects of:
Aircraft manoeuvres, earth rotation, transport wander and coriolis

515. An aircraft travels from point A to point B, using the autopilot connected to the aircraft's inertial system. The coordinates of A (45°S 010°W) and B (45°S 030°W) have been entered.
The true course of the aircraft on its arrival at B, to the nearest degree, is:
277°

516. As the INS position of the departure aerodrome, coordinates 35°32.7'N 139°46.3'W are input instead of 35°32.7'N 139°46.3'E. When the aircraft subsequently passes point 52°N 180°W, the longitude value shown on the INS will be:
099° 32.6'W

517. In order to maintain an accurate vertical using a pendulous system, an aircraft inertial platform incorporates a device:
With damping and a period of 84.4 MIN

518. The term drift refers to the wander of the axis of a gyro in:
The horizontal plane

519. In an Inertial Navigation System (INS), Ground Speed (GS) is calculated:
By integrating measured acceleration

520. The resultant of the first integration of the output from the east/west accelerometer of an inertial navigation system (INS) in NAV MODE is:
Velocity along the local parallel of latitude

521. The resultant of the first integration from the north/south accelerometer of an inertial navigation system (INS) in the NAV MODE is:
Velocity along the local meridian

522. Double integration of the output from the east/west accelerometer of an inertial navigation system (INS) in the NAV MODE gives:
Distance east/west

523. During the initial alignment of an inertial navigation system (INS) the equipment:
Will not accept a 10° error in initial latitude but will accept a 10° error in initial longitude

524. Which of the following statement is correct concerning gyro-compassing of an inertial navigation system (INS)?

Gyro-compassing of an INS is not possible in flight because it cannot differentiate between movement induced and misalignment induced accelerations

525. With reference to an inertial navigation system (INS), the initial great circle track between computers inserted waypoints will be displayed when the control display unit (CDU) is selected to:

DSRTRK/STS

526. The following points are entered into an inertial navigation system (INS).
WPT 1: 60°N 30°W
WPT 2: 60°N 20°W
WPT 3: 60°N 10°W
The inertial navigation system is connected to the automatic pilot on route (1-2-3).
The track change when passing WPT 2 will be approximately:

A 9° decrease

Just before waypoint 2 you follow final true track of leg 1 which is: 090° plus the conversion angle (0.5 x diff long[10°] x sin lat[60°] = 4.33°), i.e. 94.33°
Just after waypoint 2 you follow initial true track of leg 2 which is: 090° minus conversion angle, i.e. 85.67°
Therefore the track change over waypoint 2 is 8.66° to the left, a decrease of approximately 9°

527. The automatic flight control system (AFCS) in an aircraft is coupled to the guidance outputs from an inertial navigation system (INS) and the aircraft is flying from waypoint No. 2 (60°00'S 070°00'W) to No. 3 (60°00'S 080°00'W).
Comparing the initial track (°T) at 070°00'W and the final track (°T) at 080°00'W, the difference between them is that the initial track is approximately:

9° less than the final one

528. The automatic flight control system is coupled to the guidance outputs from an inertial navigation system.
Which pair of latitudes will give the greatest difference between initial track read-out and the average true course given, in each case, a difference of longitude of 10°?

60°N to 60°N

529. The automatic flight control system (AFCS) in an aircraft is coupled to the guidance outputs from an inertial navigation system (INS).
The aircraft is flying between inserted waypoints No. 3 (55°00'N 020°00'W) and No.4 (55°00'N 030°00'W).
With DSRTK/STS selected on the CDU, to the nearest whole degree, the initial track read-out from waypoint No. 3 will be:

274°

530. What additional information is required to be input to an Inertial Navigation System (INS) in order to obtain a W/V readout?

TAS

531. The alignment time, at mid-latitudes, for an Inertial Navigation System using gymballed gyros is approximately:

20 MIN

532. A pilot accidently turning OFF the INS in flight, and then turns it back ON a few moments later. Following this incident:

It can only be used for attitude reference

533. The sensors of an INS measure:

Acceleration

534. Waypoints can be entered in an INS memory in different formats.
In which of the following formats can waypoints be entered into all INSs?

Geographic coordinates

535. An aircraft equipped with an Inertial Navigation System (INS) flies with INS 1 coupled with autopilot 1. Both inertial navigation systems are navigating from way-point A to B. The inertial systems' Central Display Units (CDU) shows:
- XTK on INS 1 = 0
- XTK on INS 2 = 8L
(XTK = cross track)
From this information it can be deduced that:

At least one of the inertial navigation systems is drifting

536. Few modern INS systems use a mechanically stabilised platform and mechanical gyros.
These components has been replaced by

Strap down Ring laser gyros and accelerometers plus advanced digital computers

537. The alignment sequence of an Inertial Reference System (IRS) consists of:
1) search for the local vertical
2) search for the True North
~~3) comparison between the longitude find and the one entered by the operator~~
4) comparison between the latitude find and the one entered by the operator
The combination regrouping all the correct statements is:

1, 2, 4

538. The principle of the Schuler pendulum is used in the design of a:

Stabilised platform inertial system

539. Should a Schuler platform be displaced from the horizontal, it would oscillate with a period of about:

84 minutes

540. The mode selector of an inertial unit comprises the OFF - STBY - ALIGN - NAV - ATT positions:
~~1) on STBY, the unit aligns on the local geographic trihedron~~
~~2) the ATT position is used in automatic landing (mode LAND)~~
~~3) on NAV the coordinates of the start position can be entered~~
4) the platform is leveled before azimuth alignment
~~5) in cruise, the unit can only be used in NAV mode~~
The combination that regroups all of the correct statements is:

4

541. As a result of the failure of the ADC computer, the inertial navigation system (INS) will no longer provide information about:

The wind direction and speed

542. A pilot accidentally turns OFF the INS in flight, and then turns it back ON a few moments later. Following this incident:

It can only be used for attitude reference

543. The purpose of the TAS input, from the air data computer, to the Inertial Navigation System is for:

The calculation of wind velocity

544. The full alignment of the stable platform of an Inertial Navigation System:

Is only possible on the ground when the aircraft is at a complete stop

545. After alignment of the stable platform of an Inertial Navigation System, the output data from the platform is:

Acceleration north/south and east/west, attitude and true heading

546. After alignment of the stable platform of an Inertial Navigation System, the output data from the INS computer to the platform is:

Rate corrections to the gyros

547. Considering a stabilised platform inertial system, the principle of operation requires the use of at least:

3 rate gyros and 2 accelerometers

548. Considering a stabilised platform inertial system, this platform:

1) can be servo-controlled in azimuth

~~2) is kept leveled during alignment phase only~~

3) is always kept leveled

The combination that regroups all of the correct statements is:

1, 3

549. In a stabilised platform inertial system, the accelerations are measured in a trihedron which is:

(NB: "aircraft trihedron" = pitch, roll and yaw axis)

Free from the aircraft trihedron

550. Considering a stabilised platform inertial system:

1) the rate gyros and the accelerometers are mounted on the same platform

~~2) the rate gyros and the accelerometers are mounted on two separated platforms~~

~~3) the principle of operation requires at least 2 rate gyros~~

4) the principle of operation requires at least 2 accelerometers

The combination that regroups all of the correct statements is:

1, 4

551. In an Inertial Navigation System, the integration process makes a:

Time multiplication

552. In an Inertial Navigation System, the integration process:

~~1) amounts to making a time division~~

2) amounts to making a time multiplication

~~3) enable to get accelerations from position~~

4) enable to get position from accelerations

The combination that regroups all of the correct statements is:

2, 4

553. To obtain the instantaneous speed from the acceleration, it is necessary to:

1) integrate once the acceleration in time

~~2) know the initial position~~

3) know the initial speed

The combination that regroups all of the correct statements is:

1, 3

554. To obtain the instantaneous position from the acceleration, it is necessary to:

1) integrate twice the acceleration in time

2) know the initial position

3) know the initial speed

The combination that regroups all of the correct statements is:

1, 2, 3

555. To obtain the instantaneous speed from the accelerations:

It is necessary to integrate the acceleration once in time, and to know the initial speed only

556. In an Inertial Navigation System, the principle used to obtain the change in speed is:

Single integration of acceleration according to time

557. In an Inertial Navigation System, the principle used to obtain position is:

~~1) single integration of acceleration according to time~~

2) double integration of acceleration according to time

3) single integration of speed according to time

~~4) double integration of speed according to time~~

The combination that regroups all of the correct statements is:

2 or 3

558. In an Inertial Navigation System, integrating once the speed in gives:

A distance travelled

559. In an Inertial Navigation System, to know the distance travelled, it is necessary to:

1) integrate once the speed in time

~~2) to know the initial position~~

~~3) to know the initial speed~~

The combination that regroups all of the correct statements is:

1

560. In an Inertial Navigation System, to know the distance travelled:
Integrating once the speed in time is sufficient

561. The alignment of a gyro stabilised inertial platform consists in positioning the platform relative to:
The vertical axis and true north

562. If the navigation function of an INS is inoperative, the backup mode if existing used to operate the INS is:
The ATT mode which supplies attitude and heading data

563. If the navigation function of an INS is inoperative and the control rotary switch is set to ATT, the output data of the INS is (are):
Attitude and heading

564. Comparing the radio navigation system and the Inertial Navigation System:
1) the radio position is accurate when in DME range
~~2) the radio position may be obtained whatever the position on the earth~~
3) the inertial position may be obtained whatever the position on the earth
The combination that regroups all of the correct statements is:
1, 3

565. The operating principle of an inertial system consists in:
Measuring the acceleration of the aircraft and performing integrations to elaborate the ground speed and the position

566. The alignment phase of a gyro stabilised platform consists in:
Leveling the platform and determining its orientation

567. An Inertial Navigation System (INS) is:
A self contained system which operates without signals from the ground

568. If the acceleration of an aircraft is zero, its velocity:
Is constant

569. The characteristics of the earth which are being used during the alignment of an INS platform are:
Earth rotation and gravity

570. The drift of the gyroscopes of a standalone inertial system:
Is the main error source

571. The position error of a standalone inertial system:
Increases along the time

572. The position error of a standalone inertial system is approximately:
0.5 to 2 NM per hour

573. The position error of a standalone inertial system is:
Small a few minutes after initialisation and increases along the flight

574. On the INS control panel, the rotary knob can be selected to OFF, NAV or ATT positions. The correct statement is:
NAV is the normal system setting; the ATT position is the backup position in case of failure of the navigation function

575. An Inertial Navigation System:
Can operate as standalone equipment without any interface with other navigation equipments

576. In order to align an IRS, it is required to insert the local geographical coordinates. This enables the IRS to:
1) compare the computed latitude with the one entered by the pilot
~~2) compare the computed longitude with the one entered by the pilot~~
3) know the longitude
The combination that regroups all of the correct statements is:
1, 3

577. Some inertial reference and navigation systems are known as "strapdown".
This means that:
The gyroscopes and accelerometers become part of the unit's fixture to the aircraft structure

578. One of the errors inherent in a ring laser gyroscope occurs at low input rotation rates tending towards zero when a phenomenon known as 'lock-in' is experienced. What is the name of the technique, affected by means of a piezo-electric motor that is used to correct this error?
Dither

579. Which of the following lists, which compares an Inertial Reference System that utilises Ring Laser Gyroscopes (RLG) instead of conventional gyroscopes, is completely correct?
There is little or no 'spin up' time and it is insensitive to gravitational ('g') forces

580. The principle of 'Schuler Tuning' as applied to the operation of Inertial Navigation Systems/ Inertial Reference Systems is applicable to:
Both gyro-stabilised platform and 'strapdown' systems

581. Gyrocompassing of an inertial reference system (IRS) is accomplished with the mode selector switched to:
ALIGN

582. Which of the following correctly lists the order of available selections of the Mode Selector switches of an inertial reference system (IRS) mode panel?
OFF - ALIGN - NAV - ATT

583. What is the source of magnetic variation information in a Flight Management System (FMS)?
Magnetic variation information is stored in each IRS memory; it is applied to the true heading calculated by the respective IRS

584. Where and when are the IRS positions updated?
Only on the ground during the alignment procedure

585. ATT Mode of the Inertial Reference System (IRS) is a back-up mode providing:
Only attitude and heading information

586. Which of the following statements concerning the position indicated on the Inertial Reference System (IRS) display is correct?
It is not updated once the IRS mode is set to NAV

587. Which of the following statements concerning the loss of alignment by an Inertial Reference System (IRS) in flight is correct?
The navigation mode, including present position and ground speed outputs, is inoperative for the remainder of the flight

588. What is the name given to an Inertial Reference System (IRS) which has the gyros and accelerometers as part of the unit's fixture to the aircraft structure?
Strapdown

589. The alignment time, at mid-latitudes, for an Inertial Reference System using laser ring gyros is approximately:
10 MIN

590. Which of the following statements concerning the alignment procedure for Inertial Navigation Systems (INS)/Inertial Reference Systems (IRS) at mid-latitudes is correct?
INS/IRS can be aligned in either the ALIGN or NAV mode

591. Which of the following statements concerning the operation of an Inertial Navigation System (INS)/Inertial Reference System (IRS) is correct?
NAV mode must be selected prior to movement of the aircraft off the gate

592. Which of the following statements concerning the aircraft positions indicated on a triple fit Inertial Navigation System (INS)/ Inertial Reference System (IRS) on the CDU is correct?
The positions are likely to differ because they are calculated from different sources

593. The sustained oscillation in the Ring Laser Gyro (RLG) is initially caused by
The gas (or plasma) inside the triangular cavity is ionised by the voltage, causing helium atoms to collide with and transfer energy to the neon atoms

594. In a strap down inertial system the accelerometers are oriented with their axes:
Along yaw, longitudinal and lateral axis of the aircraft

595. The Inertial Strapdown Unit of an IRS is programmed with co-ordinates during alignment in order to:
Establish the trihedron with reference to the earth

596. IRS is a self-contained system because
The system calculates the position of the aircraft without reference to externally generated (man-made) signals

597. A ring laser gyro can measure:
Rotation about its sensitive axis

598. Compared with a stabilised platform inertial system, a strapdown inertial system:
~~1) can align while the aircraft is moving~~
2) has a quicker alignment phase
3) is more reliable in time
The combination that regroups all of the correct statements is:
2, 3

599. Inertial Reference System sensors include:
Accelerometers and laser gyros, mounted in the direction of the aircraft axis

600. The data that needs to be inserted into an Inertial Reference System in order to enable the system to make a successful alignment for navigation is:
Aircraft position in latitude and longitude or airport ICAO identifier

601. In an Inertial Reference System, accelerations are measured in relation to:
Aircraft axis

602. Considering a strapdown inertial system, the operating principle requires the use of at least:
3 laser gyros and 3 accelerometers

603. Considering a strapdown inertial system, the IRU (Inertial Reference Unit) measures:
Accelerations and angular rates

604. In a strapdown inertial system, the accelerations are measured in a trihedron which is fixed regarding to the:
Aircraft's trihedron (pitch, roll and yaw axis)

605. Compared with a stabilised platform inertial system, a strapdown inertial system:
~~1) has a longer alignment phase in time~~
2) has a shorter alignment phase in time
3) is more reliable in time
~~4) is less reliable in time~~
The combination that regroups all of the correct statements is:
2, 3

606. The time for a normal alignment (not a quick alignment) of a strapdown inertial system is:
3 to 10 minutes

607. The time of a strapdown inertial system consists in:
Measuring the earth rotation and local gravitation to position the reference trihedron

608. The energy required to operate a strapdown inertial system is supplied by:
The electrical system

609. The alignment of an inertial system can be successfully performed:

When the aircraft is stationary

610. The accuracy of the altitude computed by a standalone inertial system:

Decreases exponentially with flight time

611. The alignment time of a strapdown inertial system takes longer time when the aircraft is:

At a high latitude

612. The output data of an IRS include:

1) present position (lat, long)

~~2) altitude~~

3) ground speed

4) true heading

The combination that regroups all of the correct statements is:

1, 3, 4

613. The output data of an IRS include:

1) true heading

2) drift angle

3) ground speed

~~4) Mach number~~

The combination that regroups all of the correct statements is:

1, 2, 3

614. The output data of an IRS are:

1) true track

~~2) Mach number~~

3) present position (lat, long)

4) true heading

5) attitude

The combination that regroups all of the correct statements is:

1, 3, 4, 5

615. The output data of an IRS include:

1) present position (lat, long)

~~2) TAS~~

3) attitude

4) ground speed

The combination that regroups all of the correct statements is:

1, 3, 4

616. The output data of an IRS include:

~~1) radio height~~

2) attitude

3) true track

~~4) static pressure~~

The combination that regroups all of the correct statements is:

2, 3

617. The output data of an IRS include:

1) present position (lat, long)

~~2) total pressure~~

~~3) static air temperature~~

4) true heading

The combination that regroups all of the correct statements is:

1, 4

618. The output data of an IRS include:

~~1) number of satellites tracked~~

~~2) Mach number~~

3) ground speed

4) true track

The combination that regroups all of the correct statements is:

3, 4

619. The output data of an IRS include:

~~1) satellites status~~

~~2) altitude~~

3) drift angle

4) present position (lat, long)

The combination that regroups all of the correct statements is:

3, 4

620. The position data (lat, long) computed by an IRS can be used by the:

FMS

621. The attitude data computed by an IRS can be used by the:

Auto pilot system

622. If the position data (lat, long) is no longer computed by an IRS, the affected system(s) is (are):

FMS

623. The sideslip indication displayed on the PFD (Primary Flight Display) is generated by the:

Inertial system

624. The position data (lat, long) computed by an IRS can be used by the:

~~1) yaw damper~~

2) FMS

~~3) radio altimeter~~

The combination that regroups all of the correct statements is:

2

625. A strapdown inertial system consists in:

A platform attached to the aircraft chassis which includes gyroscopes and accelerometers

626. A ring laser gyro is:

A device which measures angular movements

627. The accelerometers of a strap-down Inertial Reference System are in line with:

The aircraft axes

628. Flight Director Information supplied by an FD computer is presented in the form of command bars on the following instrument:

ADI Attitude Display Indicator

629. The Head Up Display (HUD) is a device allowing the pilot, while still looking outside, to have:

A synthetic view of the instrument procedure

630. Mode "Localizer ARM" active on Flight Director means:

System is armed for localizer approach and coupling will occur upon capturing center line

631. The flight director is engaged in the heading select mode (HDG SEL), heading 180° selected. When heading is 160°, the vertical bar of the FD:

Is centered if the bank angle of the aircraft is equal to the bank angle computed by the flight director computer

632. The essential components of a flight director are:

1) a computer

~~2) an automatic pilot~~

~~3) an auto-throttle~~

4) command bars

The combination that regroups all of the correct statements is:

1,4

633. On a modern aircraft, the flight director modes are displayed on the:

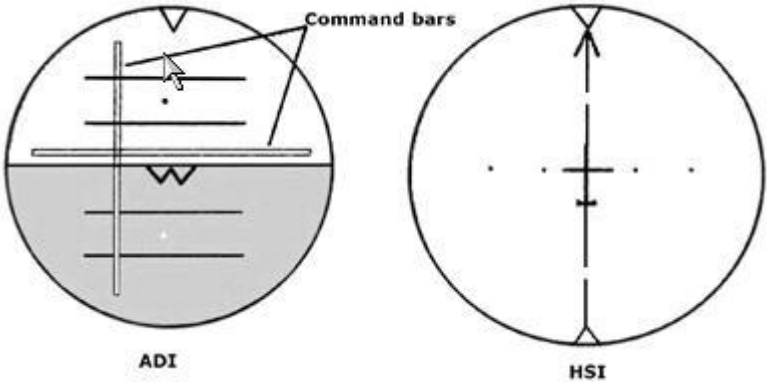
Upper strip of the PFD (Primary Flight Display)

634. The flight director provides information for the pilot:

To join to a desired path with the optimum attitude

635. An aircraft is under guidance mode following a VOR radial. From the ADI and HSI information represented, it is possible to deduce that the aircraft is:

Experiencing a left side wind



636. For capturing and keeping a preselected magnetic heading, the flight director computer takes into account:

1- track deviation

2- rate of track closure

3- rate of change of track closure

~~4- wind velocity given by the inertial reference unit~~

The combination regrouping all the correct statements is:

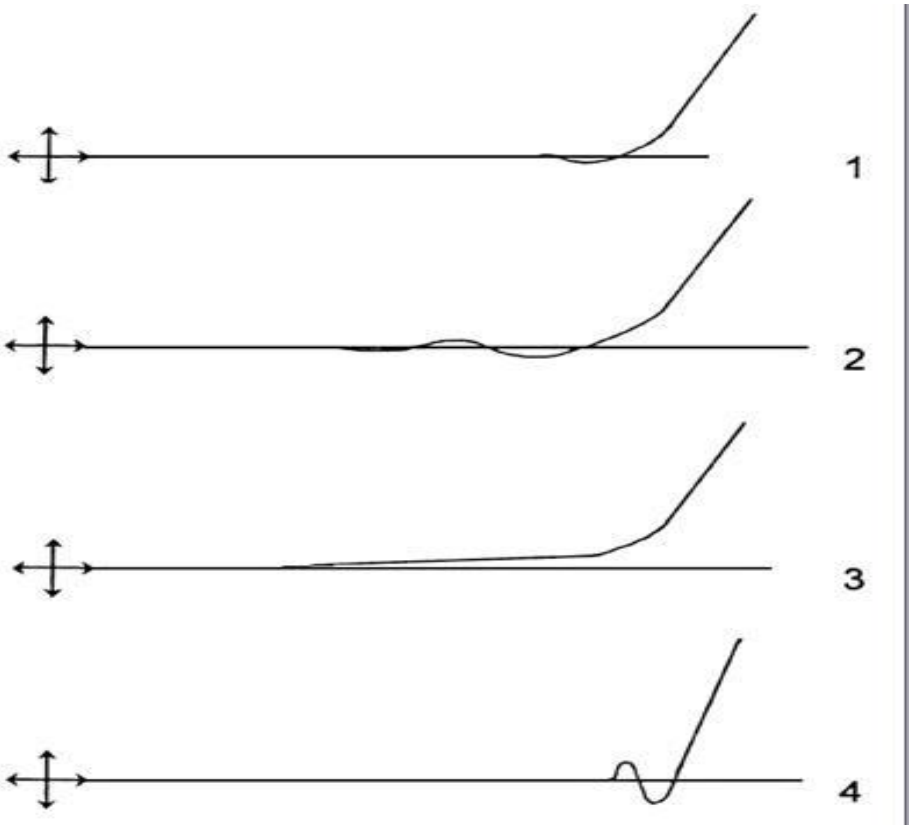
1,2,3

637. The flight director indicates the:

Optimum instantaneous trajectory to reach selected radial

638. Four scenarios of VOR axis interception are represented in the picture. The one corresponding to the optimal interception path calculated by a flight director is number:

2

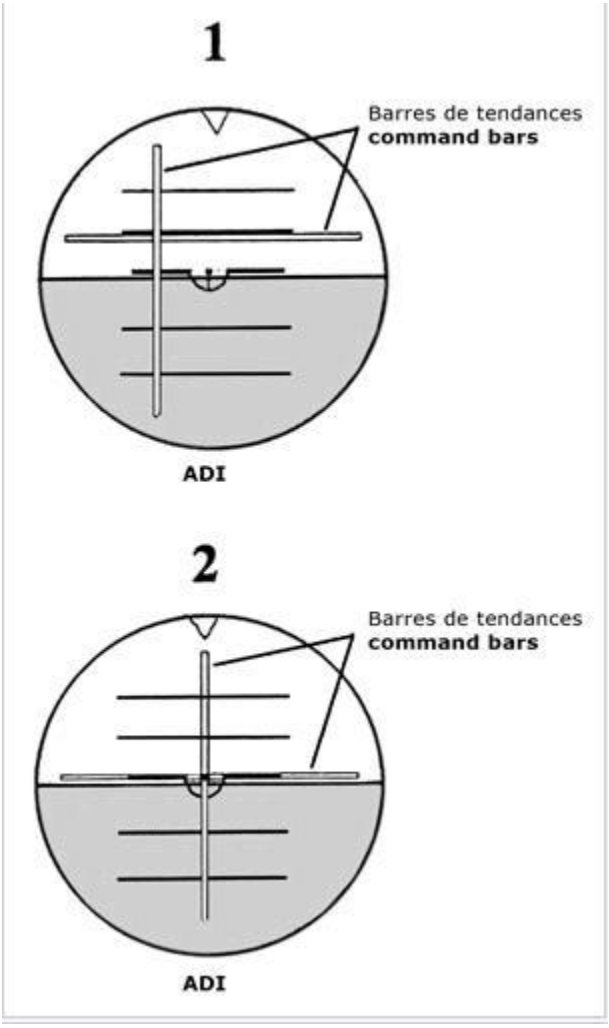


639. The command bars of a flight director are displayed on an:

ADI

640. After having programmed your flight director, you see that the indications of your ADI (Attitude Director Indicator) are as represented in diagram N°1. On this instrument, the command bars indicate that you must:

Increase the flight attitude and bank your airplane to the left until the command bars recentre on the symbolic aeroplane



641. An aeroplane is equipped with a Flight Director (with crosshair trend bars), heading 270°, in HDG mode (heading hold). A new heading, of 360°, is selected the vertical trend bar:

Deviates to the right and will be centred as soon as you roll the aircraft to the bank angle calculated by the flight director

642. The position of a Flight Director Command bar:

Indicates the manoeuvers to execute, to achieve or maintain a flight situation

643. Flying manually during a final approach, the flight director system is engaged in the LOC mode (holding of localizer axis). If the aircraft is right of the localizer axis, the vertical commands bar:

May be centered if the pilot is correcting to come back on the localizer axis

644. The output data of the flight director computer are:

Two channels: pitch and roll

645. The vertical command bar of a flight director:

~~1) repeats the position information given by the EHSI~~

~~2) repeats the position information given by the VOR~~

3) gives information about the direction and the amplitude of the corrections to be applied.

The combination regrouping all the correct statements is:

3

646. The horizontal command bar of a flight director:

~~1) repeats the position information given by the ILS in the horizontal plane~~

~~2) repeats the position information given by the ILS in the vertical plane~~

3) gives information about the direction and the amplitude of the corrections to be applied on the pitch of the aircraft

The combination that regroups all of the correct statements is:

3

647. During a final approach, the flight director system is engaged in the LOC mode (holding of Localizer axis). The position of the vertical command bar indicates:

The correction on the bank to be applied to join and follow the Localizer axis

648. Command bars of the flight director may be present on the:

~~1) HSI~~

~~2) CDU~~

3) ADI

The combination that regroups all of the correct statements is:

3

649. The FD command bars on the ADI (illustration number 2) indicate that:

The pilot should raise the aircraft nose and roll to the right

1

2

3

4

650. Considering a flight director of the command bars type:
1) the vertical bar is always associated with the roll channel
~~2) the vertical bar may be associated with the pitch channel~~
~~3) the horizontal bar may be associated with the roll channel~~
4) the horizontal bar is associated with the pitch channel
The combination containing all of the correct statements is:
1, 4

651. During a final approach, the flight director system is engaged in the G/S mode (holding of ILS Glide Slope). The position of the horizontal command bar indicates:
~~1) the position of the aircraft relative to the ILS Glide Slope~~
2) the correction on the pitch to be applied to join and follow the ILS Glide Slope
~~3) the instantaneous deviation between the aircraft position and the ILS Glide Slope~~
The combination regrouping all of the correct statements is:
2

652. During a final approach, the flight director system is engaged in the G/S mode (holding of ILS Glide Slope), the position of the horizontal command bar indicates:
The correction on the pitch to be applied to join and follow the ILS glide slope

653. The purpose(s) of the flight director system is (are) to:
~~1) give the position of the aircraft according to radio electric axis~~
~~2) give the position of the aircraft according to waypoints~~
3) to aid the pilot when flying manually
The combination regrouping all of the correct statements is:
3

654. The parameters taken into account by the flight director computer in the altitude holding mode (ALT HOLD) are:
a) altitude deviation
~~b) roll~~
~~c) bank attitude~~
d) pitch attitude
the combination regrouping all of the correct statements is:
a, d

655. The vertical command bar of a flight director:
Gives information about the direction and the amplitude of the corrections to be applied on the bank of the aircraft

656. The horizontal command bar of a flight director:
Gives information about the direction and the amplitude of the corrections to be applied on the pitch of the aircraft

657. After having programmed your flight director, you see that the indications of your ADI (Attitude Director Indicator) are as represented in diagram N°1. On this instrument, the command bars indicate that you must bank your airplane to the left and:

Increase the flight attitude until the command bars recentre on the symbolic airplane

658. After having programmed your flight director, you see that the flight director indications are as represented in the diagram. This indicates that you must:

Increase the flight attitude and bank your airplane to the left

659. Where is the flight director modes displayed?

PFD

660. The parameters taken into account by the flight director computer in the altitude holding mode (ALT HOLD) are:

1) altitude deviation

~~2) engine rpm~~

~~3) ground speed~~

4) pitch attitude

the combination regrouping all of the correct statements is:

1, 4

661. A flight director comprises a channel for:

~~a) the attitude~~

b) the bank control

c) the pitch control

~~d) the speed~~

The combination regrouping all of the correct statements is:

b, c

662. The command bars of a flight director:

May be displayed when flying manually

663. After having programmed your flight director, you see that the indications of your ADI (Attitude Director Indicator) are as represented in the diagram. On this instrument, the command bars indicate that you must bank your airplane to the left and:

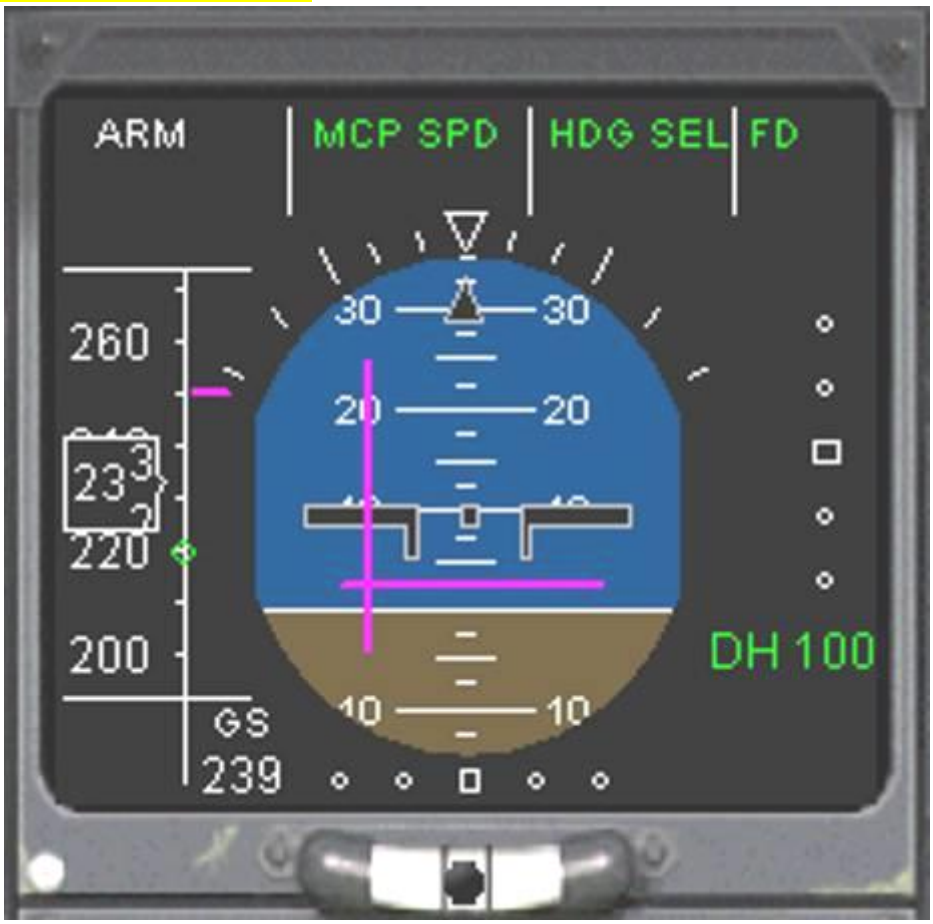
Decrease the flight attitude until the command bars recentre on the symbolic airplane

664. To allow the coupling of a dual channel flight director:

Both autopilot channels must be selected ON

665. The ADI presentation shows that the aircraft is (VSI reading zero):

In straight and level flight



666. Concerning the command bars of a flight director:

It is possible to remove them by switching the flight director OFF

667. On which instrument are the flight director bars normally present?

ADI

668. An aircraft flies steadily on a heading 270°. The flight director is engaged in the heading select mode (HDG SEL), heading 270° selected. If a new heading 360° is selected, the vertical trend bars:

Deviates to the right and will be centered as soon as you roll the aircraft to the bank angle calculated by the flight director

669. The position of the flight director command bars:

Indicates the manoeuvres to execute, to achieve or maintain a flight situation

670. The flight director command bars provide the pilot with correction to apply to:

Pitch and/or roll attitude

671. The vertical command bar of a flight director:
~~1) repeats the position information given by the ILS in the horizontal plane~~
~~2) repeats the position information given by the ILS in the vertical plane~~
3) gives information about the direction and the amplitude of the corrections to be applied on the bank of the aircraft
The combination that regroups all of the correct statements is:
3

672. The vertical command bar of a flight director:
Gives information about the direction and the amplitude of the corrections to be applied on the bank of the aircraft

673. Considering a flight director of the command bars type:
The vertical bar is associated with the roll channel

674. Considering a flight director of the command bars type:
The horizontal bar is associated with the pitch channel

675. During a final approach, the flight director system is engaged in the LOC mode (holding of localizer axis). The position of the horizontal command bar indicates:
~~1) the position of the aircraft relative to the localizer axis~~
~~2) the roll attitude of the aircraft~~
3) the correction on the bank to be applied to join and follow the localizer axis
The combination regrouping all of the correct statements is:
3

676. Flying manually during a final approach, the flight director system is engaged in the G/S mode (holding of ILS glide slope). If the aircraft is below the ILS glide slope, the horizontal command bars:
May be centred if the pilot is correcting to come back on the ILS glide slope

677. Flying manually during a final approach, the flight director system is engaged in the G/S mode (holding of ILS glide slope). If the aircraft is above the ILS glide slope, the horizontal command bars:
May be centred if the pilot is correcting to come back on the ILS glide slope

678. The position of the command bars of a flight director enables the pilot to know:
1) the direction and the amplitude of the corrections to apply on the controls
~~2) only the direction of the corrections to apply on the controls~~
~~3) the attitude of the aircraft~~
The combination that regroups all of the correct statements is:
1

679. The flight director computer continuously:
Compares the current attitude with the computed attitude

680. During a final approach, the flight director system is engaged in the G/S mode (holding of ILS Glide Slope). If the horizontal command bar is deviating upward, it means that:

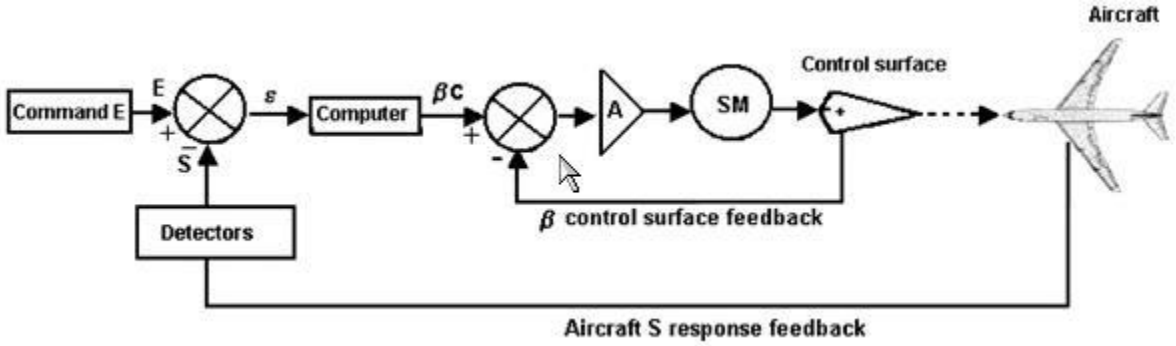
The pitch attitude must be increased

681. During a final approach, the flight director system is engaged in the LOC mode (holding of localizer axis). If the vertical command bar is deviating to the left, it means that the aircraft:

Must be rolled to the left

682. The block diagram of an auto-pilot is shown.
For each control channel (pitch, roll and yaw) the piloting law is the relationship between the deflection of the control surface commanded by the computer (BETA c) and the:

Offset EPSILON at the computer input



683. The Altitude Select System:

Is annunciated by light and/or sound when airplane is approaching selected altitude

684. Landing shall be considered as having been carried out automatically when the autopilot and the auto-throttle of an aircraft are disengaged by flight crew:

During ground roll

685. A closed loop control system in which a small power input controls a much larger power output in a strictly proportionate manner is known as:

A servomechanism

686. An autopilot capable of holding at least altitude and heading mode is compulsory:

For IFR or night flights with only one pilot

687. The interception of a localizer beam by the autopilot takes place:

At a constant heading

688. A pilot has to carry out a single-pilot IFR flight on a light twin-engined aircraft for cargo transport. The purpose of the automatic pilot is at least to hold the:

Heading and to hold the altitude

689. An automatic landing is carried out when the automatic pilot:

And the autothrottle ensure a correct final approach, at least up to ground roll

690. The correction of the control surface deflection made by the automatic pilot calculator in order to stabilize the longitudinal attitude will be all the more significant as the :
1- difference between the reference attitude and the instantaneous attitude is high.
2- rate of change of the difference between the reference attitude and the instantaneous attitude is high.
~~3- temperature is low.~~
~~4- pressure altitude is high.~~
The combination regrouping all the correct statements is:
1,2

691. The correction of the control surface deflection made by the auto-pilot calculator in order to keep a given altitude will be all the more significant when the:
1- difference between the attitude necessary to keep the given or reference altitude and the instantaneous attitude is high.
2 - variation speed of the difference between the attitude necessary to maintain the altitude and the instantaneous attitude is high.
3 - difference between the altitude of reference and the instantaneous altitude is high.
4 - variation speed of the difference between the reference altitude and the instantaneous altitude is high.
The combination regrouping the correct statements is:
1, 2, 3 and 4

692. When only one autopilot is used for climbing, cruising and approach, the system is considered:
"Fail passive" or without failure effect but with disconnection

693. In automatic landing mode, when the 2 autopilots are used, the system is considered:
"Fail operational" or without failure effect with function always ensured

694. If, in the event of a failure, the approach, flare and landing can be completed by the remaining part of the automatic system, such an automatic landing system is considered as:
Fail-operational

695. During an automatic landing, from a height of about 50 ft the:
Autopilot maintains a vertical speed depending on the radio altimeter height

696. In a selected axis capture mode, the autopilot gives a bank attitude input:
Proportional to the deviation between the selected heading and the current heading but not exceeding a given value

697. An aeroplane is equipped with an autopilot and an auto-throttle. When the altitude hold mode (ALT HOLD) is active:
The IAS is maintained constant by the auto-throttle system

698. The synchronization of the autopilot control channel system:
~~1- enables the prevention of jerks during disengagement~~
~~2- enables the cancellation of rudder control signals~~
3- enables the prevention of jerks during engagement
4- functions in the heading, navigation, approach modes
The combination regrouping all the correct statements is:
3, 4

699. An automatic landing system which can keep on operating without deterioration of its performances following the failure of one of the autopilots is called "FAIL...:

"OPERATIONAL"

700. An automatic landing system necessitating that the landing be continued manually in the case of a system failure during an automatic approach is called "FAIL...."

"PASSIVE"

701. A semi-automatic landing system disconnects itself automatically:

At approximately 100 ft

702. A landing is performed automatically when the autopilot and auto-throttle ensure good performance from the final approach:

During the landing roll and sometimes until the aircraft comes to a complete stop

703. When an aircraft, operating in the VOR coupled mode, approaches the "cone of confusion" over a VOR station, the roll channel of the autopilot:

Temporarily switches over to the heading mode

704. The control law of an autopilot control channel may be defined as the relationship between the:

Computer input deviation data and the output control deflection signals

705. In a transport airplane, an autopilot comprises, in addition to the mode display devices, the following fundamental elements:

~~1- Airflow valve~~
2- Sensors
3- Comparators
4- Computers
5- Amplifiers
6- Servo-actuators

The combination that regroups all of the correct statements is:

2, 3, 4, 5, 6

706. The autopilot basic modes include, among other things, the following functions:

1- pitch attitude hold
~~2- pressure altitude hold~~
3- horizontal wing hold
~~4- heading hold~~

The combination regrouping all the correct statements is:

1, 3

707. During a Category II automatic approach, the height information is supplied by the:

Radio altimeter

708. A pilot engages the control wheel steering (CWS) of a conventional autopilot and carries out a manoeuvre in roll. When the control wheel is released, the autopilot will:

Maintain the flight attitude obtained at that moment

709. The functions of an autopilot (basic modes) consist of:

Stabilizing and monitoring the movement around the airplane centre of gravity

710. The guidance functions of an autopilot consist in:

Monitoring the movements of the centre of gravity in the three dimensions of space

711. Among the following functions of an autopilot, those related to the airplane stabilization are:

1) pitch attitude holding

~~2) IAS or Mach number holding~~

3) horizontal wing holding

~~4) VOR radial holding~~

The combination that regroups all of the correct statements is:

1, 3

712. Among the following functions of an autopilot, those related to the aeroplane guidance are:

~~1) pitch attitude holding~~

~~2) horizontal wing holding~~

3) IAS or Mach number holding

4) altitude holding

5) VOR axis holding

~~6) yaw damping~~

The combination that regroups all of the correct statements is:

3, 4, 5

713. When using the autopilot, the function of the pitch channel automatic trim is to:

1- cancel the hinge moment of the elevator

2- ease as much as possible the load of the servo-actuator

3- restore to the pilot a correctly trimmed airplane during the autopilot disengagement

The combination regrouping all the correct statements is:

1, 2 and 3

714. A landing will be considered to be performed in the SEMI-AUTOMATIC mode when:

1- the autopilot maintains the airplane on the ILS beam until the decision height is reached then is disengaged automatically.

2- the autothrottle maintains a constant speed until the decision height is reached then is disengaged automatically.

~~3- the autopilot maintains the airplane on the ILS beam until the flare.~~

~~4- the autothrottle decreases the thrust when the height is approximately 30 ft.~~

~~5- the flare and the ground roll are performed automatically.~~

The combination regrouping all the correct statements is:

1 and 2

715. A landing will be considered to be performed in the AUTOMATIC mode when:
~~1- the autopilot maintains the airplane on the ILS beam until the decision height is reached then is disengaged automatically.~~
~~2- the autothrottle maintains a constant speed until the decision height is reached then is disengaged automatically.~~
3- the autopilot maintains the airplane on the ILS beam until the flare.
4- the autothrottle decreases the thrust when the height is approximately 30 ft.
5- the flare and the ground roll are performed automatically.
The combination regrouping all the correct statements is:
3, 4 and 5

716. When an automatic landing is interrupted by a go-around:
1- the autothrottle reacts immediately upon the pilot action on the TO/GA (Take-off/Go-around) switch in order to recover the maximum thrust
2- the autopilot monitors the climb and the rotation of the airplane
~~3- the autopilot retracts the landing gear and reduces the flap deflection in order to reduce the drag~~
~~4- the pilot performs the climb and the rotation of the airplane~~
5- the pilot retracts the landing gear and reduces the flap deflection in order to reduce the drag
The combination regrouping all the correct statements is:
1, 2 and 5

717. The IAS or Mach hold mode is provided by:
1) the autopilot pitch channel in the climb mode at a constant IAS or Mach number
~~2) the auto-throttles in the climb mode at a constant IAS or Mach number~~
~~3) the autopilot pitch channel in the altitude or glide path holding mode~~
4) the auto-throttles in the altitude or glide path holding mode
The combination that regroups all of the correct statements is:
1, 4

718. The engagement of an autopilot is not possible when:
1- there is a fault in the electrical power supply
2- the controlled-turn knob is not set to centre-off
3- there is a synchronization fault in the pitch channel
4- there is a fault in the attitude reference unit
The combination regrouping all the correct statements is:
1, 2, 3, 4

719. On an autopilot coupled approach, GO AROUND mode is engaged:
By the pilot pushing a button located on the throttles

720. When being engaged, and without selecting a particular mode, an automatic pilot enables:
Aeroplane stabilisation with attitude hold or maintaining vertical speed and possibly automatic trim

721. An automatic pilot is a system which can ensure the functions of:
Piloting and guidance of an aircraft in both the horizontal and vertical planes

722. When the autopilot is engaged, the role of the automatic trim is to:
Relieve the A.P. servo motor and return the aircraft in-trim at A.P. disconnect

723. The command functions of an autopilot include, among others, the holding of:
1- vertical speed
2- altitude
~~3- attitude~~
~~4- bank~~
5- heading
The combination which regroups all of the correct statements is:
1 - 2 - 5

724. In an auto-pilot slaved powered control circuit, the system which ensures synchronisation?
Can itself, when it fails, prevent the automatic pilot from being engaged

725. An autopilot is selected "ON" in mode "altitude hold," the pilot alters the barometric pressure set on the sub-scale of his altimeter the:
Aircraft will remain at the same altitude; the autopilot takes its pressure information from the static source

726. The autopilot is divided into two basic modes, what are they called?
Lateral mode (HDA) and Vertical mode (VS)

727. The "airspeed hold" mode can be engaged and maintained during:
Climbs, descents, turns and power changes

728. The automatic synchronisation functions of an autopilot control system:
~~1) operates only when the autopilot is engaged~~
~~2) prevents the aircraft's control system from jerking when disengaging the autopilot~~
3) prevents the aircraft's control system from jerking when engaging the autopilot
The combination that regroups all of the correct statements is:
3

729. If, in the event of a failure, there is no significant out-of-trim condition or deviation of flight path or attitude but the landing is not completed automatically, such an automatic landing system is considered as:
Fail-passive

730. The basic modes of an autopilot consist in:
Stabilizing the aircraft around its centre of gravity

731. An autopilot system:
Must provide at least aircraft stabilisation functions

732. The sequence of the automatic landing comprises several phases (from final approach to touch-down) actuated by:
The radio altimeter

733. During an autocoupled ILS approach followed by an automatic landing, the guidance signals in the vertical plane under 200 ft are computed according to the:

Radio altitude

734. A flight control system is fail-operational if, in the event of a failure:

The approach, flare and landing can be completed automatically

735. Concerning a fail-operational flight control system, in the event of a failure:

1) the system will operate as a fail-passive system

~~2) the landing is not completed automatically~~

3) the landing is completed automatically

The combination that regroups all of the correct statements is:

1, 3

736. Concerning a fail-passive flight control system, in the event of a failure:

~~1) there may be a significant deviation of flight path or attitude~~

2) there is no significant deviation of flight path or attitude

3) there is no significant out-of-trim condition

~~4) there may be significant out-of-trim condition~~

The combination that regroups all of the correct statements is:

2, 3

737. Concerning a fail-passive flight control system, in the event of a failure:

~~1) there may be a significant deviation of flight path or attitude~~

2) there is no significant deviation of flight path or attitude

3) the landing is not completed automatically

~~4) the landing is completed automatically~~

The combination that regroups all of the correct statements is:

2, 3

738. In the event of a failure, a fail-operational flight control system will operate as a:

Fail-passive system

739. According to CS 25, the definition of the control wheel steering mode (CWS) is:

"Where the pilot has the ability to make inputs to the:

Automatic pilot by movement of the normal control wheel"

740. The lateral flight path modes of an autopilot system are:

1) heading hold

~~2) speed hold~~

3) FMS lateral navigation

~~4) TAS hold~~

5) localizer intercept and track

The combination that regroups all of the correct statements is:

1, 3, 5

741. The lateral flight path modes of an autopilot system are:

~~1) speed hold~~

2) Localiser intercept and track

3) track hold

4) FMS lateral navigation

~~5) pitch attitude hold~~

The combination that regroups all of the correct statements is:

2, 3, 4

742. For a FMS designed with the lateral navigation (LNAV) capability coupled to the autopilot, the FMS lateral command output is:

A roll angle or a heading target

743. The vertical flight path modes of an autopilot system are:

~~1) pitch attitude hold~~

2) altitude hold

~~3) track hold~~

4) glide slope intercept and track

The combination that regroups all of the correct statements is:

2, 4

744. The vertical flight path modes of an autopilot system are:

1) FMS vertical navigation

2) flight path angle hold

3) glide slope intercept and track

4) altitude hold

The combination that regroups all of the correct statements is:

1, 2, 3, 4

745. When engaged in the pitch hold mode, the autopilot uses data issued by the:

Attitude reference system

746. When engaged in the FMS lateral navigation mode (LNAV) the autopilot uses the command provided by:

FMS

747. The components of an autopilot system are the:

1) actuators

2) mode control panel

~~3) EFIS control panel~~

4) mode annunciator panel

The combination that regroups all of the correct statements is:

1, 2, 4

748. The computer of the autopilot system uses, among others, input signals from the:
1) ADC
2) attitude reference system
3) ILS receiver
4) mode control panel
The combination that regroups all of the correct statements is:
1, 2, 3, 4

749. The computer of the autopilot system uses, among others, the following parameters:
CAS, altitude, vertical speed, heading, attitude

750. The purpose of the autopilot Control Wheel Steering (CWS) mode is:
To consider as target parameters, the current pitch and roll angles at the time the mode becomes active

751. The computer of the autopilot system uses, among others, input signals from the:
1) attitude reference system
~~2) mode annunciator panel~~
3) ADC
4) mode control panel
The combination that regroups all of the correct statements is:
1, 3, 4

752. In an autopilot system, the flight path modes are:
~~1) pitch attitude hold~~
2) IAS and Mach number hold
3) altitude hold
4) glide slope intercept and track
The combination that regroups all of the correct statements is:
2, 3, 4

753. In an autopilot system, the basic stabilisation modes are:
~~1) altitude hold~~
2) pitch attitude hold
3) roll attitude hold
~~4) IAS hold~~
The combination that regroups all of the correct statements is:
2, 3

754. When engaging the autopilot, the function providing a smooth "take-over" is the:
Automatic synchronisation function

755. When disengaging the autopilot, the function providing a smooth "hand-over" is the:
Automatic pitch trim function

756. In an autopilot system:
The inner loops provide the stability functions and the outer loops provide the guidance functions

757. In an autopilot system, the function consisting in controlling the movements around the center of gravity of the aircraft is provided by the:

Inner loop systems

758. In an autopilot system, the functions consisting in controlling the path of the aircraft are the:

Guidance functions

759. The computers of the electrical flight controls system comply with programs defined by attitude control laws such as :

1- on the longitudinal axis, the law may combine the load factor and the changes in the pitch rate as control data sources

2- the trimming is automatic and ensures neutral stability

3- the protections apply to pitch and bank attitudes depending on the speed

~~4- these laws do not apply to the whole flight envelope~~

The combination regrouping all the correct statements is:

1, 2, 3

760. The flight envelope protection function(s) consist(s) in:

~~1) alerting the flight crew in case of dangerous proximity with the ground~~

~~2) avoiding midair collisions~~

3) preventing the aircraft from exceeding some aerodynamic limits

The combination that regroups all of the correct statements is:

3

761. The flight envelope protection function(s) consist(s) in:

~~1) automatically performing an evasion manoeuvre if necessary~~

2) preventing the aircraft from exceeding the limits for specific flight parameters

~~3) alerting the flight crew in case of dangerous proximity with a threatening traffic~~

~~4) preventing any incursion beyond an ATC clearance~~

The combination that regroups all of the correct statements is:

2

762. The flight envelope protection system prevents the aircraft from exceeding the limits of the following parameters:

~~1) N1~~

2) angle of attack

3) speed

4) pitch attitude

~~5) flight level~~

The combination that regroups all of the correct statements is:

2, 3, 4

763. The flight envelope protection system prevents the aircraft from exceeding the limits of the following parameters (among others):

~~1) cabin altitude~~

2) bank angle

3) angle of attack

4) speed

5) pitch attitude

The combination that regroups all of the correct statements is:

2, 3, 4, 5

764. The main inputs to the flight envelope protection system are:

~~1) GPWS signals~~

~~2) ACAS signals~~

3) angle of attack

4) bank angle

The combination that regroups all of the correct statements is:

3, 4

765. A yaw damper is:

A rudder damper designed to avoid the "Dutch roll"

766. The yaw damper, which suppresses Dutch roll:

Controls the rudder, with the angular rate about the vertical axis as the input signal

767. When available, the yaw damper indicator supplies the pilot with information regarding the:

Yaw damper action on the rudder

768. The Yaw Damper signal for a given rate of oscillation, is

Varied inversely according to the airspeed

769. The yaw damper system controls:

The rudder, with the angular rate about the yaw axis as the input signal

770. The yaw damper affects:

Rudder only

771. The yaw damper system:

~~1) counters any wrong pilot action on the rudder pedals~~

2) counters dutch roll

~~3) is active only when autopilot is engaged~~

The combination regrouping all the correct statements are:

2

772. The yaw damper system sends a motion order to the rudder if the yawing rate of the aircraft is:

Not constant

773. In a yaw damper system, sensing of a disturbance in yaw is usually by:
A rate gyro or an accelerometer

774. An aircraft is in a steady right turn, with not enough right rudders (slipping turn). The yaw damper system:
Is not designed to provide a balanced turn

775. Given:
MH=magnetic heading of the aircraft
Omega= yawing rate of the aircraft
The yaw damper computer sends a motion order to the rudder if:
The derivative of Omega according to time is not equal to zero

776. The commands sent out by the yaw damper computer:
Are added to or subtracted from the rudder deflection orders sent out by the pilot or the autopilot

777. An aircraft is in a steady left turn, with too much left rudder (skidding turn). The yaw damper system:
Is not designed to provide a balanced turn

778. The yaw damper system is operative:
During manual or automatic flight

779. When the yaw damper system sends motion orders to the rudder:
No feedback is provided on the rudder pedals

780. The yaw damper system acts on:
The rudder only

781. The purpose of Auto Trim function in autopilot is to:
Control elevator trim tab in order to relieve elevator load

782. Which one of the following statements is true with regard to the operation of a Mach trim system?
It only operates above a pre-determined Mach number

783. In the automatic trim control system of an autopilot, automatic trimming is normally effected about the:
Pitch axis only

784. Mach Trim is a device to compensate for:
Backing of the aerodynamic center at high Mach numbers by moving the elevator to nose-up

785. The automatic trim is a component of the autopilot pitch channel. Its function is to:
Transfer a stabilized aeroplane to the pilot during autopilot disengagement

786. The purpose of an airplane automatic trim system is to trim out the hinge moment of the:
Elevator

787. The purpose of the automatic trim is to:
1- reduce to zero the hinge moment of the entire control surface in order to relieve the load on the servo-actuator
2- ensure the aeroplane is properly trimmed when the autopilot is disengaged
3- maintain the same stability/manoeuverablity trade-off within the whole flight envelope
The combination regrouping all the correct statements is:
1, 2, 3

788. The Engine Pressure Ratio (EPR) is computed by:
Dividing turbine discharge pressure by compressor inlet pressure

789. A Full Authority Digital Engine Control (FADEC) has the following functions:
1- flow regulation (fuel, decelerations and accelerations monitoring)
2- automatic starting sequence
3- transmissions of engine data to the pilot's instruments
4- thrust management and protection of operation limits
5- monitoring of the thrust reversers
The combination regrouping all the correct statements is:
1, 2, 3, 4, 5

790. The two main sources of information used to calculate turbojet thrust are the:
Fan rotation speed (or N1) or the EPR (Engine Pressure Ratio)

791. An airplane is in steady cruise at flight level 290. The autothrottle maintains a constant Mach number. If the total temperature increases, the calibrated airspeed:
Remains constant

792. An airplane is in steady cruise at flight level 290. The autothrottle maintains a constant Mach number. If the total temperature decreases, the calibrated airspeed:
Remains constant

793. An airplane is in steady descent. The autothrottle maintains a constant Mach number. If the total temperature remains constant, the calibrated airspeed:
Increases

794. An aeroplane is in steady cruise at flight level 270. The autothrottle maintains a constant calibrated airspeed. If the total temperature increases, the Mach number:
Remains constant

795. An aeroplane is in steady cruise at flight level 270. The autothrottle maintains a constant calibrated airspeed. If the total temperature decreases, the Mach number:
Remains constant

796. An aeroplane is in a steady climb. The autothrottle maintains a constant Mach number. If the total temperature remains constant, the calibrated airspeed:
Decreases

797. An aeroplane is in steady descent. The autothrottle maintains a constant calibrated airspeed. If the total temperature remains constant, the Mach number:
Decreases

798. An aeroplane is in steady climb. The autothrottle maintains a constant calibrated airspeed. If the total temperature remains constant, the Mach number:
Increases

799. The EPR (Engine Pressure Ratio) is:
The ratio of the turbine outlet total pressure to the compressor inlet total pressure

800. The sensor(s) feeding the EPR indicator is (are):
Pressure probes, one located upstream from the compressor inlet, and the other downstream from the turbine outlet

801. Considering a modern thrust computer, during a steady climb:
N1 is automatically adjusted as aircraft climbs

802. The FADEC (Full Authority Digital Engine Control) provides:
~~1) engine automatic shut-down if maximum N1 is exceeded~~
~~2) engine automatic shut-down if maximum EGT is exceeded~~
3) automatic thrust rating control
4) fully automatic engine starting
The combination that regroups all of the correct statements is:
3, 4

803. The FADEC (Full Authority Digital Engine Control):
1) provides fully automatic engine starting
~~2) modifies aircraft airspeed in order to allow for the lowest fuel consumption~~
~~3) counters any yaw moment in case of engine failure~~
4) provides thrust reverser control
The combination that regroups all of the correct statements is:
1, 4

804. Concerning the flexible take-off mode, the temperature selected in the FMS is:
Higher than the ambient airfield temperature, in order to achieve a reduced power setting

805. The flexible take-off mode:
~~1) can be used only if the engines are recent~~
2) reduces engine wear
3) can be used in situations where take-off can be executed without the need for full engine power
~~4) can only be used with an auto-throttle~~
The combination that regroups all of the correct statements is:
2, 3

806. The most favourable conditions to apply the flexible take-off procedure are:

~~1) high take-off mass~~

2) low take-off mass

~~3) high outside temperature~~

4) low outside temperature

5) high atmospheric pressure

~~6) low atmospheric pressure~~

The combination that regroups all of the correct statements is:

2, 4, 5

807. The FADEC (Full Authority Digital Engine Control) provides:

1) thrust reverser control

2) engine operation within safe limits

3) automatic engine starting sequence

4) automatic thrust rating control

The combination that regroups all of the correct statements is:

1, 2, 3, 4

808. The purpose of Auto Throttle is:

To maintain constant engine power or airplane speed

809. In order to know in which mode the auto-throttles are engaged, the crew will check the:

~~1) auto-throttle ARM switches~~

~~2) auto-throttle disengage switches~~

~~3) mode control panel~~

4) mode annunciator panel

The combination that regroups all of the correct statements is:

4

810. The auto-throttle:

1) can capture and maintain the N1 RPM

~~2) can capture and maintain the N2 RPM~~

3) can capture and maintain an IAS

~~4) is always engaged automatically at the same time as the autopilot~~

The combination that regroups all of the correct statements is:

1, 3

811. The automatic power control system (auto-throttle) of a transport aeroplane has the following mode(s):

1) capture and holding of speeds

2) capture and holding of Mach number

~~3) capture and holding of flight angle of attack~~

4) capture and holding of N1 or EPR (Engine Power Ratio)

~~5) capture and holding of flight paths~~

The combination that regroups all of the correct statements is:

1, 2, 4

812. During the ground run takeoff phase, the auto-throttles allow to:

Hold N1

813. The auto-throttles enable to hold:

~~1) TAS~~

2) Mach number

3) IAS

4) N1

The combination that regroups all of the correct statements is:

2, 3, 4

814. The auto-throttle system:

Can be used for take-off

815. When cruising, the auto-throttle system can be engaged in the following mode(s):

Holding of constant:

~~1) TAS~~

2) IAS

3) Mach number

The combination that regroups all of the correct statements is:

2, 3

816. During a manual ILS final approach, the auto-throttle:

Can be operated in the SPEED mode (holding of IAS)

817. During an automatic ILS final approach, the auto-throttle:

Can be operated in the SPEED mode (holding of IAS)

818. During climb with the autopilot engaged in the V/S mode (holding of vertical speed), the auto-throttle:

Can be operated in the SPEED mode (holding of IAS)

819. Flight recorder duration must be such that flight data, cockpit voice and sound warnings may respectively be recorded during at least:

25 hours for flight data, 30 minutes for cockpit voices and warnings horns

820. The TCAS (Traffic Collision Avoidance System) is a proximity alarm system which detects”traffic" when the conflicting traffic is equipped with a:

Serviceable SSR transponder

821. The TCAS 1 (Traffic Collision Avoidance System) provides:
1- traffic information
~~2- horizontal resolution (RA: Resolution Advisory)~~
~~3- vertical resolution (RA: Resolution Advisory)~~
~~4- ground proximity warning~~
The combination regrouping all the correct statements is:
1

822. The TCAS II provides:
1- traffic information (TA: Traffic Advisory)
~~2- horizontal resolution (RA: Resolution Advisory)~~
3- vertical resolution (RA: Resolution Advisory)
~~4- ground proximity warning~~
The combination that regroups all of the correct statements is:
1, 3

823. The use of the TCAS (Traffic Collision Avoidance System) for avoiding an aircraft in flight is now general. TCAS uses for its operation:
The replies from the transponders of other aircraft

824. On a large aeroplane and according to the CS 25: the regulatory margin between the stall and stall warning is:
5 kt or 5% of the CAS whichever is the greater

825. The operation of the GPWS (Ground Proximity Warning System) is governed by laws taking the aircraft height into account as well as :
1- the descent rate
~~2- the climb rate~~
3- the aircraft configuration
~~4- the selected engine rpm~~
The combination of correct statements is:
1,3

826. Concerning the TCAS (Traffic Collision Avoidance System):
No protection is available against aircraft not equipped with a serviceable SSR transponder

827. The TCAS (Traffic Collision Avoidance System) gives avoidance resolutions:
Only in the vertical plane

828. In the event of a conflict, the TCAS (Traffic Collision Avoidance System) will give information such as:
Climb/descent

829. The principle of the TCAS makes use of:
Transponders fitted in the aircraft

830. The Ground Proximity Warning System (GPWS) generates the following sound signal or signals when the aircraft is sinking after a take-off or a go-around:
DON'T SINK repetitive only

831. A ground proximity warning system (GPWS), when mandatorily installed on board an aircraft, must in all cases generate:

At least one sound alarm to which a visual alarm can be added

832. The GPWS generates a warning in the following cases:

1) excessive descent rate
2) excessive terrain closure rate
3) altitude loss after take-off or go-around
4) unsafe terrain clearance with abnormal gear/flaps configuration
5) excessive deviation under the glidepath

The combination that regroups all of the correct statements is:

1, 2, 3, 4, 5

833. The calculator combined with the stick shaker system of a modern transport airplane receives information about the:

1- angle of attack
~~2- engine R.P.M.~~
3- configuration
~~4- pitch and bank attitude~~
~~5- sideslip~~

The combination regrouping all the correct statements is:

1 and 3

834. A transport airplane has to be equipped with an altitude warning device. This system will warn the crew about :

1 - getting close to the preselected altitude, during both climb and descent.
~~2 - getting close to the preselected altitude, during climb only.~~
~~3 - the loss of altitude during take-off or missed approach.~~
~~4 - a wrong landing configuration.~~
5 - a variation higher or lower than a preselected altitude.

The combination regrouping the correct statements is:

1,5

835. A transport airplane is compelled to carry on board a Ground Proximity Warning System (GPWS). This system will warn the crew in case of:

~~1 - keeping the altitude at a lower level than the one shown in the flight plan entered in the FMS.~~
2 - dangerous ground proximity.
3 - loss of altitude during take-off or missed approach.
4 - wrong landing configuration.
5 - descent below glidepath, within limits.

The combination regrouping all the correct statements is:

2,3,4,5

836. The Ground Proximity Warning System (GPWS) is a system working according to a height span ranging from:

50 ft to 2 500 ft

837. According to the JAR-OPS regulations, the Cockpit Voice Recorder of a 50 seat multi-engined aircraft having been granted the airworthiness certificate after 1st April 1998 will record:
1- the radiotelephonic communications transmitted or received by the cockpit crew
2- the audio environment of the cockpit
~~3- the cabin attendants communications in the cabin via the interphone~~
4- the flight crew members communications in the cockpit via the interphone
5- the flight crew members communications in the cockpit via the public address system
6- the audio signals identifying the navigation or approach aids
The combination regrouping the correct statements is:
1,2,4,5,6

838. According to the JAR-OPS regulations, the Cockpit Voice Recorder of a 50 seat multi-engined aircraft, having been granted an airworthiness certificate after 1st April 1998, shall start recording:
Automatically prior to the aircraft moving under its own power until flight completion when the aircraft is no longer able to move under its own power

839. The GPWS calculator receives the following signals:
1 - vertical speed
2 - radio altimeter height
~~3 - pressure altitude~~
4 - glidepath deviation
5 - gear and flaps position
~~6 - angle of attack~~
The combination regrouping all the correct statements is:
1,2,4,5

840. The GPWS calculator is able to operate in the following modes:
1- excessive descent rate
2- excessive rate of terrain closure
~~3- excessive angle of attack~~
~~4- too high descent attitude~~
5- loss of altitude after take-off
6- abnormal gear/flaps configuration
7- excessive glidepath deviation
The combination regrouping all the correct statements is:
1,2,5,6,7

841. The GPWS (Ground Proximity Warning System) is active for a height range from:
50 ft to 2 500 ft measured by the radio altimeter

842. The main input data to the Stall Warning Annunciator System are:
~~1- Mach Meter indication~~
2- Angle of Attack
~~3- Indicate Airspeed (IAS)~~
4- Aircraft configuration (Flaps/Slats)
The combination regrouping all the correct statements is:
2,4

843. In accordance with (ICAO) Annex 6 part I, the flight data recorder is to be located in the aircraft:
As far to the rear as practicable

844. The TCAS (Traffic Collision Avoidance System) computer receives information:
1- about the pressure altitude through the mode S transponder
2- from the radio-altimeter
3- specific to the airplane configuration
~~4- from the inertial units~~
The combination regrouping all the correct statements is:
1, 2, 3

845. The stall warning system receives information about the:
1- airplane angle of attack
~~2- airplane speed~~
~~3- airplane bank angle~~
4- airplane configuration
~~5- load factor on the airplane~~
The combination regrouping all the correct statements is:
1, 4

846. When the intruding aircraft is equipped with a transponder without altitude reporting capability, the TCAS (Traffic Collision Avoidance System) issues a:
"Traffic advisory" only

847. When the intruding aircraft is equipped with a serviceable mode C transponder, the TCAS II (Traffic Collision Avoidance System) generates a:
"Traffic advisory" and vertical "resolution advisory"

848. The GPWS warns the crew in case of:
~~1) deviation above or below the selected altitude~~
~~2) deviation below the selected altitude~~
3) unsafe terrain clearance with flaps not in landing configuration
4) unsafe terrain clearance with landing gear not down
The combination that regroups all of the correct statements is:
3, 4

849. With a TCAS II, when a corrective resolution is generated:
The vertical speed must be effectively modified without delay

850. On a TCAS II, a preventative resolution advisory:
Advises the pilot to monitor the vertical speed

851. An "intruding traffic advisory" is represented on the display system of the TCAS 2 (Traffic Collision Avoidance System) by displaying:
A yellow full circle

852. On the display of a TCAS II, the traffic being the cause of a resolution advisory is represented by:

Red Full Square

853. A "close traffic advisory" is displayed on the display device of the TCAS 2 (Traffic Collision Avoidance System) by:

A blue or white empty lozenge

854. The stick shaker calculator receives the following information:

~~1- mass of the airplane~~

2- angle of attack

3- wing flap deflection

~~4- position of the landing gear~~

~~5- total air temperature~~

~~6- pressure altitude~~

The combination regrouping all the correct statements is:

2, 3

855. The CVR (Cockpit Voice Recorder) includes:

1. a microphone

2. a recorder in compliance with the shock and fire resistance standards

~~3. an independent battery~~

~~4. a flight data recorder~~

The combination regrouping all the correct statements is:

1, 2

856. A cockpit voice recorder (CVR) will record:

~~1. the information exchanged by the cabin crew~~

2. the conversations between the crew members and voice communications transmitted from or received on the flight deck by radio

~~3. the announcements made via the public address even if it has not been selected~~

4. the conversations and alarms audible in the cockpit

~~5. the captain conversations only~~

The combination regrouping all the correct statements is:

2, 4

857. An "altitude warning system" must at least warn the crew:

1- when approaching the pre-selected altitude

~~2- when the airplane is approaching the ground too fast~~

3- in case of a given deviation above or below the pre-selected altitude

~~4- in case of excessive vertical speed~~

~~5- when approaching the ground with the gear retracted~~

The combination regrouping all the correct statements is:

1, 3

858. The requirement to carry a GPWS (Ground Proximity Warning System) concerns aeroplanes which are, depending on their age, weight and passenger capacity:
1- turboprop-powered
~~2- piston-powered~~
3- jet-powered
The combination regrouping all the correct statements is:
1, 3

859. The flight data recorder must start data recording automatically:
Before the airplane is able to move by under its own power

860. The flight data recorder must automatically stop data recording when the:
Airplane cannot any longer move by its own power

861. Except for airplanes under 5,7 t airworthiness certificate of which is subsequent to 31 march 1998, a flight data recording system must be able to store the recorded data for a minimum of the last :
25 hours

862. The angle of attack transmitter provides an electric signal varying with:
1- the angular position of a wind vane
~~2- the deviation between the airplane flight attitude and the path calculated by the inertial unit~~
3- a probe differential pressure depending on the variation of the angle of attack
The combination regrouping all the correct statements is:
1 and 3

863. The TCAS II data display devices can be in the form of:
1) a specific dedicated screen
2) a screen combined with the weather radar
3) a variometer represented on a liquid crystal screen which allows the display of Traffic Advisory (TA) and Resolution Advisory (RA)
4) an EFIS screen
The combination that regroups all of the correct statements is:
1, 2, 3, 4

864. A TCAS II provides:
The intruder relative position and possibly an indication of a collision avoidance manoeuvre within the vertical plane only

865. The angle of attack transmitter placed laterally on the forward part of the fuselage supplies an electrical signal which can indicate the angular position of:
~~1) a specific slaved pitot probe~~
2) a vane detector
3) a conical slotted probe
The combination that regroups all of the correct statements is:
2, 3

866. The purpose of the altitude alert system is to generate a visual and aural warning to the pilot when the:
Airplane altitude differs from a selected altitude

867. The oncoming stall of a large transport airplane appears in the form of:
Control stick vibrations simulating natural buffeting

868. The voice recorder records on four different channels the following information:
1- aural warnings
2- radio communications
3- conversations between the crew members through the cockpit interphone
4- announcements to the passengers
The combination regrouping all the correct statements is:
1, 2, 3, 4

869. The stall warning system of a large transport aeroplane includes:
1) an angle of attack sensor
2) a computer
~~3) an independent pitot probe~~
4) a transmitter of the flap/slat position indicating system
The combination that regroups all of the correct statements is:
1, 2, 4

870. The GPWS uses the following data:
1) CAS
2) radio altitude
3) glide slope deviation
4) flaps position
5) gear position
The combination that regroups all of the correct statements is:
1, 2, 3, 4, 5

871. In case of excessive descent rate, the GPWS generates the following aural warnings:
"SINK RATE, SINK RATE" followed by "WHOOP WHOOP PULL UP" (twice)

872. If the GPWS (Ground Proximity Warning System) activates, and alerts the pilot with an aural warning "DON'T SINK" (twice times), it is because:
During take-off or missed approach manoeuvre, the aircraft has started to lose altitude

873. Alarms are standardised and follow a code of colours. Those requiring action but not immediately, are signaled by the colour:
Amber

874. The cockpit voice recorder must preserve the conversation and aural warnings of the last:
30 minutes of operation

875. The GPWS warns the crew in case of:
1) excessive descent rate
2) excessive terrain closure rate
~~3) potential midair collision threat~~
~~4) serious midair collision threat~~
5) unsafe terrain clearance with landing gear not down
The combination that regroups all of the correct statements is:
1, 2, 5

876. The GPWS can warn the crew in case of:
~~1) excessive climb rate~~
2) unsafe terrain clearance when not in landing configuration
~~3) descent path angle greater than 5 degrees~~
4) windshear
The combination that regroups all of the correct statements is:
2, 4

877. The GPWS receives data from the following systems:
1) landing gear and flaps systems
~~2) engine control computer (FADEC or ECU)~~
3) radio altimeter
~~4) TCAS~~
The combination that regroups all of the correct statements is:
1, 3

878. The EGPWS:
Is an enhanced GPWS which has its own world terrain database

879. Cockpit voice recorders shall record the following:
All speech and sound in cockpit, signals from radio navigation aids and radio communication

880. In case of impending stall, the flight warning system (FWS) generates:
A warning message

881. When the flight warning system (FWS) identifies an overspeed condition (airspeed exceeding Vmo/Mmo), it generates:
A warning message

882. Concerning the flight warning system (FWS), advisory messages may be:
Any colour except red, and preferably not amber

883. The flight warning system (FWS):
1) draws the attention of the crew to the existence of an abnormal condition
2) gives indications to the crew to identify an abnormal condition
~~3) transmits automatically to ATC urgency messages~~
~~4) cannot generate alerts in case of engine malfunctions~~
5) prioritises warnings
The combination that regroups all of the correct statements is:
1, 2, 5

884. The flight warning system (FWS):
1) increases the situation awareness of the crew
~~2) transmits automatically to ATC distress messages~~
3) gives suitable indications to the crew of the action necessary to avoid impending danger
4) prioritises warnings
~~5) cannot generate alerts in case of aerodynamic limits exceeding~~
The combination that regroups all of the correct statements is:
1, 3, 4

885. Concerning the flight warning system (FWS), caution messages:
Are the next highest priority alert messages after warning messages

886. If immediate recognition and corrective or compensatory action by the crew is required, the flight warning system (FWS) generates:
A warning message

887. The flight warning system (FWS) generates a caution message if:
Immediate crew awareness is required and subsequent crew action will be required

888. If crew awareness is required and subsequent crew action may be required, the flight warning system (FWS) generates:
An advisory message

889. Concerning the flight warning system (FWS), warning messages:
Are highest priority alert messages

890. The flight warning system (FWS) generates an advisory message if:
Crew awareness is required and subsequent crew action may be required

891. The flight warning system (FWS) generates an warning message if:
Immediate recognition and corrective or compensatory action by the crew is required

892. ACARS messages may be of the following types:
1) Air Traffic Control (ATC)
2) Aeronautical Operational Control (AOC)
3) Airline Administrative Control (AAC)
~~4) Air-to-Air Communications (ATAC)~~
~~5) Air-to-Air Data transmission (ATAD)~~
The combination that regroups all of the correct statements is:
1, 2, 3

893. The ACARS digital datalink communications system can use the following means for the data transmission:
SAT-COM, HF, VHF

894. ACARS systems consist of:
On-board units and ground units

895. The FANS concept involves implementation of datalink systems for use in:
a) Aircraft communications
b) Aircraft navigation
c) Aircraft surveillance
All of the above

896. FANS-A units utilize the following for data transmissions:
Satellite-based ACARS systems

897. The on-board communication devices to transmit and receive datalink communication can be:
1) VHF COM
2) HF COM
3) SATCOM
The combination that regroups all of the correct statements is:
1, 2, 3

898. The ACARS allows air/ground datalink communications for:
Airline Operational and Air Traffic Communications (AOC & ATC)

899. The datalink communications between the aircraft and the ground can be performed by the following system:
ACARS

900. In a datalink system, the uplink communications consist in transmitting data:
From the ground to the aircraft

901. The basic on-board datalink communication system is typically composed by the following sub systems:
1) Communication Management Unit (CMU)
2) Multi-purpose Control and Display (MCDU)
3) Communication unit (VHF, HF, Satcom)
The combination that regroups all of the correct statements is:
1, 2, 3

902. The systems that can be connected to the Communication Management Unit (CMU) are:
~~1) Flight Director~~
2) FMS
3) Multipurpose Control and Display (MCDU)
4) communication unit (VHF, HF, Satcom)
The combination that regroups all of the correct statements is:
2, 3, 4

903. The systems that can be connected to the Communication Management Unit (CMU) are:
~~1) EGPWS~~
2) HF Communication Unit
3) Multipurpose Control and Display (MCDU)
4) VHF Communication Unit
5) Satcom
The combination that regroups all of the correct statements is:
2, 3, 4, 5

904. The notification phase (LOG ON) is a FANS application which consists in:
Establishing air/ground connection to verify if the datalink communication can be performed

905. The CPDLC is a FANS application which consists in:
Transmitting datalink formatted messages between the pilot and ATC controller

906. The ADS is a FANS application which consists in:
Sending automatically aircraft surveillance data to the air traffic controller

907. The ADS is a FANS application performed:
Automatically, without any crew action to define the set of data to downlink or the type of report contract

908. The different types of ADS contracts can be:
1) periodic: at periodic time intervals
2) on demand: when asked for by the ATC
3) on event: whenever a specified event occurs
The combination that regroups all of the correct statements is:
1, 2, 3

909. The following ATC clearances can be received via the datalink application:
Departure, oceanic

910. Comparing the media used to transmit datalink communications, the appropriate classification from the slowest to the fastest data transmission rate is:
HF datalink, VHF datalink, SATCOM

911. The characteristics of the SATCOM transmissions, used for datalink communications are:
No line of sight limitation, no variable quality of signals disturbed by ionospheric conditions

912. The ground routing of the ATC datalink communications is performed:
By service providers (SITA, ARINC...) that can be interconnected to provide continuity of the transmissions

913. The CPDLC messages may concern:
1) route modifications
2) speed changes
3) voice contact request
4) emergency messages
The combination that regroups all of the correct statements is:
1, 2, 3, 4

914. The uplink datalink message "AT (position) CLIMB TO (altitude) AND MAINTAIN" is part of the:
CPDLC application

915. A MAYDAY datalink message can be sent to the ATC via the:
CPDLC application

916. The datalink communication message "CHECK STUCK MICROPHONE (frequency)" refers to a request from:
The ATC to the pilot to check microphone buttons due to a continuous transmission detected on the frequency

917. When sent, a MAYDAY datalink message to the ATC has the following effect on ADS:
The ADS contract is switched to high periodic reporting rate

918. A D-ATIS is:
An ATIS message received by datalink

919. The uplink datalink message "AT (time) CLIMB TO AND MAINTAIN (altitude) means:
At the specified time a climb to the specified altitude is to be started and the specified altitude is to be maintained

920. If immediate crew awareness is required and subsequent crew action will be required, the flight warning system (FWS) generates:
A caution message

921. If warning, caution, or advisory lights are installed in the flight deck, they must, unless otherwise approved by the Authority, be amber for:
Caution lights

922. If warning, caution, or advisory lights are installed in the flight deck, they must, unless otherwise approved by the Authority, be green for:
Safe operation lights

923. For compatibility between the different components of a flight warning system, the priority from the highest to the lowest is:
Stall, windshear, GPWS, TCAS

924. The stall warning computer of a large aeroplane uses the following data:
~~1) pitch attitude~~
2) angle of attack
3) configuration (slats/flaps)
The combination that regroups all of the correct statements is:
2, 3

925. On a large aeroplane, the input data of the stall warning system are:
1) angle of attack
~~2) weight~~
~~3) bank angle~~
4) configuration (slats/flaps)
The combination that regroups all of the correct statements is:
1, 4

926. On a large aeroplane, the computer of a stall warning system receives information about the:
1) angle of attack
~~2) engine RPM~~
3) configuration
~~4) pitch and bank attitude~~
~~5) sideslip~~
The combination that regroups all of the correct statements is:
1, 3

927. An angle of attack sensor may consist of:
~~1) an inertial system computing the difference between flight path and flight attitude~~
2) a conical slotted probe which positions itself to determine the angle of attack
3) a vane detector which positions the rotor of a synchro-transmitter
The combination that regroups all of the correct statements is:
2, 3

928. On a large aeroplane and according to the CS 25: when the speed is reduced, the stall warning must begin:
At a speed exceeding the stall speed by not less than 5 kt or 5% CAS

929. On a large aeroplane and according to the CS 25: the stall warning system must provide an alarm with sufficient margin to prevent inadvertent stalling:
With the flaps and landing gear in any normal position

930. The stall warning is inhibited:
~~1) when the flaps are retracted~~
2) when the aeroplane is on the ground
~~3) when encountering a windshear~~
~~4) upon receiving a GPWS alert~~
The combination that regroups all of the correct statements is:
2

931. The altitude alerting system:

Alerts the flight crew upon approaching a pre-selected altitude

932. The functions of the altitude alerting system is to alert the flight crew:

1) upon approaching a pre-selected altitude

~~2) upon approaching a pre-selected altitude, during climb only~~

~~3) of a loss of altitude during take-off or missed approach~~

~~4) of a wrong landing configuration~~

5) when deviating from the selected altitude

The combination that regroups all of the correct statements is:

1, 5

933. Which of these statements about the activation of the take-off warning when a take-off is initiated are correct or incorrect?

~~1) An aural warning is given when the elevator is not in a safe position for take-off~~

~~2) An aural warning is given when the brake pressure is too low~~

1) is incorrect, 2) is incorrect

934. Which of these statements about the activation of the take-off warning when a take-off is initiated are correct or incorrect?

1) An aural warning is given when the stabiliser is not in a safe position for take-off

~~2) An aural warning is given when the brake pressure is too low~~

1) is correct, 2) is incorrect

935. Which of these statements about the activation of the take-off warning when a take-off is initiated are correct or incorrect?

~~1) An aural warning is given when the elevator is not in a safe position for take-off~~

2) An aural warning is given when the parking brake is still ON

1) is incorrect, 2) is correct

936. The GPWS is able to detect:

1) excessive descent rate

2) excessive terrain closing rate

~~3) excessive angle of attack~~

~~4) excessive descent pitch attitude~~

The combination that regroups all of the correct statements is:

1, 2

937. The GPWS automatically provides distinctive warning to the flight crew in case of:

~~1) impeding stall~~

2) excessive descent rate

3) altitude loss after take-off or go-around

4) unsafe terrain clearance with abnormal gear/flaps configuration

5) dangerous ground proximity

6) downward glide-slope deviation

The combination that regroups all of the correct statements is:

2, 3, 4, 5, 6

938. The aural alert associated with the mode 1 (excessive descent rate) of the GPWS is:
"SINKRATE"

939. The aural alert associated with the mode 3 (altitude loss after take-off or go-around) of the GPWS is:
"DON'T SINK"

940. The aural alert(s) associated with the mode 4 of the GPWS (unsafe terrain clearance while not in the landing configuration) is (are):
"TOO LOW GEAR", "TOO LOW FLAPS", "TOO LOW TERRAIN"

941. The aural alert associated with the mode 5 (excessive deviation below glide slope) of the GPWS is:
"GLIDESLOPE"

942. The aural alert(s) associated with the mode 1 (excessive descent rate) of the GPWS is (are):
~~1) "TERRAIN"~~
~~2) "DON'T SINK"~~
3) "SINKRATE"
4) "PULL UP"
The combination that regroups all of the correct statements is:
3, 4

943. The aural alert(s) associated with the mode 3 (altitude loss after take-off or go-around) of the GPWS is (are):
~~1) "TERRAIN"~~
2) "DON'T SINK"
~~3) "SINKRATE"~~
~~4) "PULL UP"~~
The combination that regroups all of the correct statements is:
2

944. The aural alert(s) associated with the mode 4 of the GPWS (unsafe terrain clearance while not in the landing configuration) is(are):
1) "TOO LOW GEAR"
2) "TOO LOW TERRAIN"
3) "TOO LOW FLAPS"
~~4) "PULL UP"~~
The combination that regroups all of the correct statements is:
1, 2, 3

945. The aural alert(s) associated with the mode 5 (excessive deviation below glide slope) of the GPWS is(are):
~~1) "TERRAIN"~~
~~2) "TOO LOW GLIDESLOPE"~~
3) "GLIDESLOPE"
~~4) "PULL UP"~~
The combination that regroups all of the correct statements is:
3

946. The input data to the GPWS originate from the:

~~1) transponder~~

~~2) angle of attack sensor~~

~~3) auto-throttle system~~

4) ADC

The combination that regroups all of the correct statements is:

4

947. The EGPWS may propose the following functions:

~~1) Abnormal Take-off Configuration (ATC)~~

2) Terrain Clearance Floor (TCF)

~~3) Predictive Wind Shear (PWS)~~

4) Terrain Look Ahead Alerting

5) Terrain Alerting and Display (TAD)

The combination that regroups all of the correct statements is:

2, 4, 5

948. The GPWS may propose the Terrain Look-Ahead Alerting function; this function uses:

An electronic map of the world giving ground elevation

949. When Enhanced GPWS (EGPWS) terrain is displayed, if the computed aircraft position becomes less accurate:

The terrain display will diverge from the real terrain environment around the aircraft position

950. In the case of altitude loss during the initial climb after take-off, GPWS generates an aural alert:

"DON'T SINK"

951. If the computed aircraft position becomes less accurate, the Enhanced GPWS (EGPWS) function(s) affected is (are):

~~1) the excessive rate of descent~~

2) the terrain display on the navigation display

~~3) the flight into terrain when not in landing conditions~~

~~4) the excessive downward deviation from an ILS~~

The combination that regroups all of the correct statements is:

2

952. If the computed aircraft position becomes less accurate, the Enhanced GPWS (EGPWS) function(s) affected is (are):

~~1) the "FIVE HUNDRED" voice call out~~

~~2) the excessive rate of descent~~

3) the terrain display on the navigation display

~~4) the negative climb rate or altitude loss after take-off~~

The combination that regroups all of the correct statements is:

3

953. The Enhanced GPWS (EGPWS) terrain display uses the following colours:

Green, amber, red, magenta

954. TCAS II uses for its operation:

The replies from the transponders of other aircraft

955. On the display of a TCAS II, a proximate traffic is represented by:
A white or cyan solid lozenge

956. The main function(s) of a TCAS is to:
~~1) alert the crew to ground proximity~~
2) alert the crew to possible conflicting traffic
~~3) provide terrain alerting and display~~
~~4) automatically resolve conflict when autopilot engaged~~
The combination that regroups all of the correct statements is:
2

957. Your aircraft and an intruding aircraft both are TCAS II equipped. If the transponder of the intruder is switched off or unserviceable:
The intruding aircraft is invisible to your TCAS equipment

958. Concerning the TCAS II:
1) neither advisory nor traffic display is provided for aircraft that do not have an operating transponder
2) TCAS II operation is independent of ground-based air traffic control
3) TCAS II has feeds from the radio altimeter
The combination that regroups all of the correct statements is:
1, 2, 3

959. Your aircraft is TCAS II equipped; an intruding traffic only has a mode A transponder. The information available to your TCAS equipment is:
Two dimensional only; your TCAS cannot generate RAs (Resolution Advisories)

960. Your aircraft and an intruding traffic are TCAS II equipped. Your TCAS can generate:
Coordinated resolution advisories

961. Your aircraft is TCAS II equipped; an intruding traffic only has a mode C transponder. The information relating to this intruding traffic available on your TCAS equipment is:
Three dimensional; you're TCAS can generate both TAs (Traffic Advisories) and RAs (Resolution Advisories)

962. Your aircraft and an intruding aircraft both are TCAS II equipped. The information relating to this intruding traffic available on your TCAS equipment is:
Three dimensional; you're TCAS can generate both TAs (Traffic Advisories) and RAs (Resolution Advisories)

963. Your aircraft and an intruding traffic both are TCAS II equipped. Your TCAS determines the relative height of the intruding aircraft by:
Comparing the mode C pressure altitudes of the two aircraft

964. Your aircraft and an intruding traffic both are TCAS II equipped. Your TCAS determines the range of the intruding aircraft by:
Measuring the time lapse between the transmission of an interrogation signal and the reception of a reply signal from the transponder of the intruder

965. Your aircraft and an intruding traffic both are TCAS II equipped. Your TCAS determines the bearing of the intruding aircraft by:
Using a specific directional antenna

966. Your aircraft is TCAS II equipped. To be able to generate traffic advisory (TA), the intruder must be at least equipped with:
A transponder mode A

967. The upper antenna of the TCAS II is:
Directional and separate from the transponder antenna

968. When the TCAS II generates a Resolution Advisory (RA), the associated intruder appears on TCAS display as a:
Solid red square

969. Concerning the TCAS II, when receiving a Resolution Advisory (RA), crew members should:
Immediately initiate the required manoeuvre

970. The TCAS II has inputs from the radio altimeter in order to:
Gradually inhibit the Resolution Advisories (RAs) when getting closer to the ground

971. When a TCAS Resolution Advisory (RA) climb instruction is generated, the required vertical speed range displayed on the vertical speed indicator:
Does not take into account the stall margin

972. When a TCAS is operating, a failure of the active transponder will cause the TCAS to:
No longer operate normally

973. A TCAS Resolution Advisory (RA) voice message "CLIMB - CLIMB NOW" repeated twice is generated:
After a "DESCEND" RA when a reversal in the vertical manoeuvre sense is required

974. If a TCAS Resolution Advisory (RA) requires an immediate descent while at the same time ATC requests an immediate climb, the crew should:
Follow the TCAS RA and inform ATC

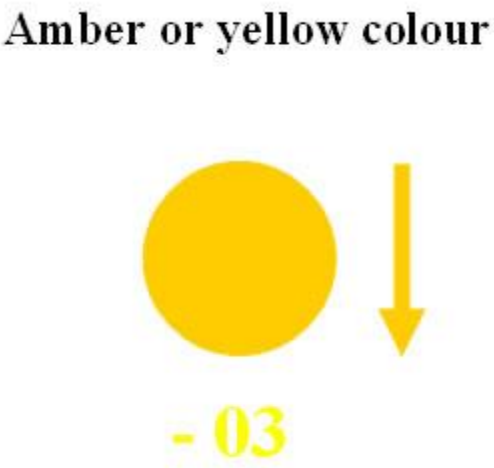
975. When comparing a TCAS Traffic Advisory (TA) and a Resolution Advisory (RA), which of the following statements is correct?
A TA indicates the relative position of the intruding traffic; an RA provides a vertical traffic avoidance manoeuvre

976. When pressing the push button EVENT on the unit control of a flight data recorder:
A mark is set on the recording, enabling this event to be found rapidly at a subsequent analysis

977. According to CS25, a CVR (Cockpit Voice Recorder) must record:
1) communications transmitted from or received in the aircraft by radio
2) communications of flight crew members on the flight deck
3) communications of flight crew members on the flight deck using the aircraft's interphone system
4) audio signals identifying navigation or approach aids introduced into a headset or speaker.
The combination regrouping all the correct statements is:
1, 2, 3, 4.

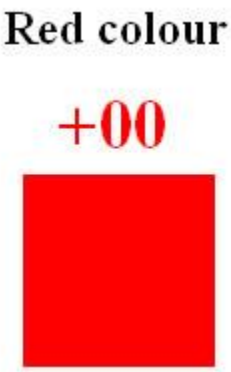
978. On the ND, the TCAS generates the intruder aircraft symbol represented below. The correct intruder vertical information is:

300 ft below, descending

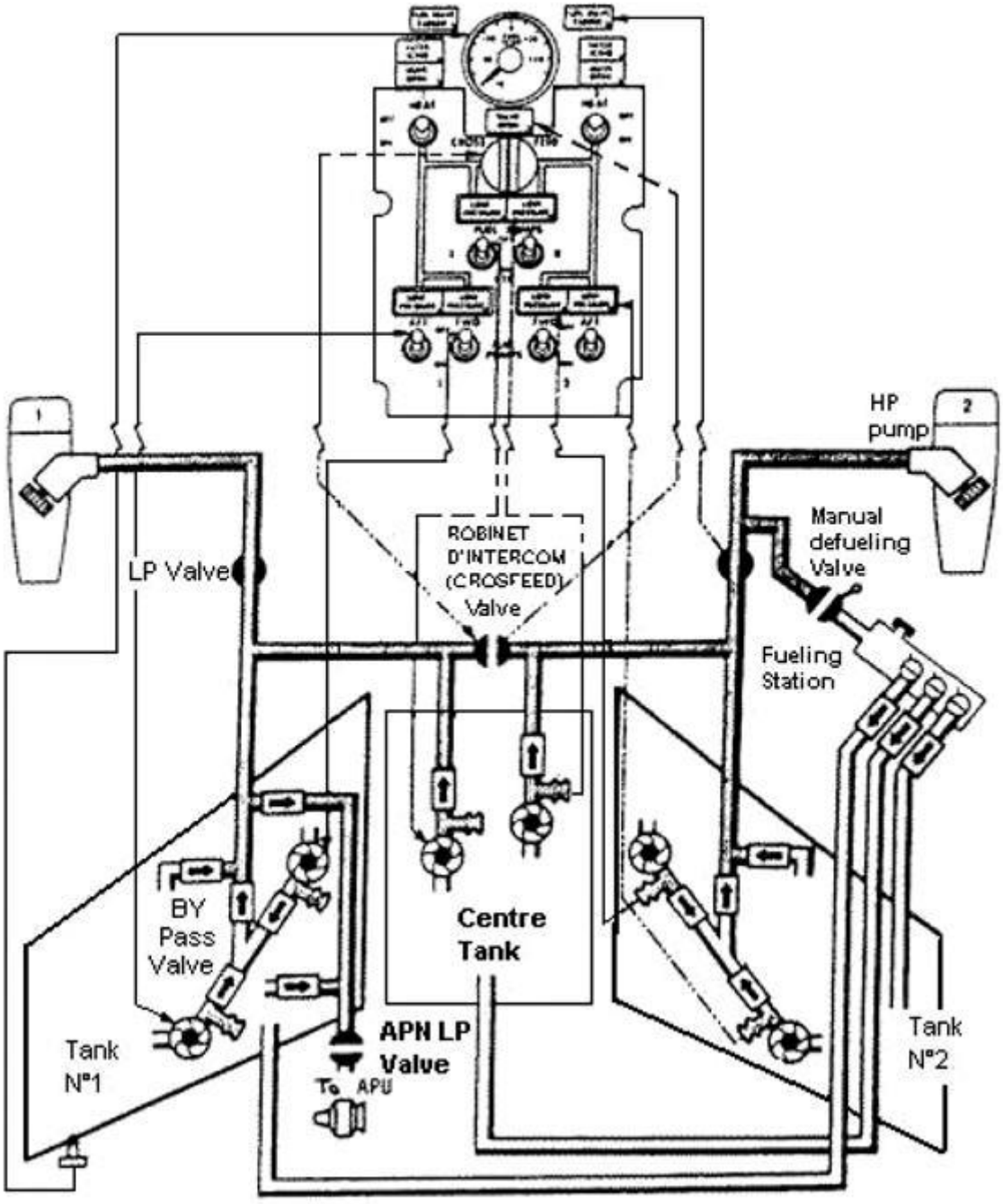


979. On the ND, the TCAS generates the intruder aircraft symbol represented below. The correct intruder vertical information is:

Level at your altitude, associated with a resolution advisory (RA)



980. Reference should be made to the fuel supply system.
In flight, with center tank empty and APU operating, a fuel unbalance is detected (quantity in tank 1 < quantity in tank 2).
Rebalancing of the two tanks is:
Possible with "CROSSFEED" open and tank 1 pump "OFF" and tank 2 pumps "ON"



981. A thermocouple type temperature sensor is composed of:
Two dissimilar metals joined together at one end (called hot junction or measuring junction)

982. The disadvantage of an electronic tachometer is the:
Necessity of providing a power supply

983. The principle of capacity gauges is based on the:
Capacitance variation of a given capacitor with the type of dielectric

984. The principle of detection of a vibration monitoring system is based on the use of:
2 accelerometers

985. A synchroscope is used on aircraft to:
Set several engines to the same speed

986. The yellow sector of the temperature gauge corresponds to:
An exceptional operating range

987. The white sector of the arc of a temperature gauge corresponds to:
A special operating range

988. The "Bourdon tube" is used to measure:
Pressure

989. Given:
M is the Mach number
Ts is the static temperature
Tt is the total temperature
$Ts = Tt / (1+0.2. M^2)$

990. The total air temperature (TAT) is:
Higher or equal than Static Air Temperature (SAT); TAT is a function of Mach number and SAT

991. The static air temperature (SAT) is:
A relative temperature expressed in degrees Celsius

992. If a manifold pressure gauge consistently registers atmospheric pressure, the cause is probably;
Leak in pressure gauge line

993. A manifold pressure gauge of a piston engine measures:
Absolute pressure in intake system near the inlet valve

994. In an engine vibration monitoring system for a turbojet any vibration produced by the engine is:
Amplified and filtered before being fed to the cockpit indicator

995. In order to measure temperature the cylinder head temperature (CHT) gauge utilises a:
Thermocouple consisting of two dissimilar metals

996. The signal supplied by a transmitter fitted with a 3-phase AC generator, connected to RPM indicator, is:
A three-phase voltage, the frequency of which varies with the RPM; the indicator is provided with a motor which drives a magnetic tachometer

997. The signal supplied by a transmitter fitted with a magnetic sensor, connected to an RPM indicator is:
An AC voltage, the frequency of which varies with the RPM; the indicator converts the signal into square pulses which are then counted

998. In transport airplanes, the temperatures are generally measured with:
1- resistance thermometers
2- thermocouple thermometers
~~3- reactance thermometers~~
~~4- capacitance thermometers~~
~~5- mercury thermometers~~
The combination regrouping all the correct statements is:
1, 2

999. The RPM indicator (or tachometer) of a piston engine can include a small red arc within the arc normally used (green arc)
In the RPM range corresponding to this small red arc the:
Propeller generates vibration, continuous rating is forbidden

1000. Different pressure sensors are used according to the intensity of the pressure measured (low, medium or high)
Classify the following sensors by order of increasing pressure for which they are suitable:
3) aneroid capsule type
1) bellows type
2) Bourdon tube type
3,1,2

1001. A vibration indicator receives a signal from different sensors (accelerometers). It indicates the:
Vibration amplitude at a given frequency

1002. The transmitter of RPM indicator may consist of:
1- a magnetic sensor supplying an induced AC voltage
2- a DC generator supplying a DC voltage
3- a single-phase AC generator supplying an AC voltage
4- a three-phase AC generator supplying a three-phase voltage
The combination of correct statements is:
1,2,3,4

1003. The indication of a fuel float gauge varies with:
1) pitch attitude
2) accelerations
3) temperature
The combination that regroups all of the correct statements is;
1, 2, 3

1004. The temperature measured by the CHT (Cylinder Head temperature) probe is the:
Temperature within the hottest cylinder, depending on its position in the engine block

1005. The float type fuel gauges provide information on:
Volume with the result that the indication varies with the temperature of the fuel

1006. The capacity fuel gauges provide information:
On mass whose indication is independent of the temperature of the fuel

1007. The red pointer which is normally on the red line on the EGT (Exhaust Gas Temperature) indicators:
Moves when the corresponding value is exceeded and remains positioned at the maximum value that has been reached

1008. The sensors used to measure the exhaust gas temperature on an airplane equipped with gas turbine engines are:
Thermocouples

1009. The measurement of the turbine temperature or of the EGT (Exhaust Gas Temperature) is carried out at the:
High pressure turbine outlet

1010. In a 3-phase synchronous motor type tachometer indicator:
~~1- the transmitter is a direct current generator~~
~~2- the voltage is proportional to the transmitter drive speed~~
3- the frequency is proportional to the transmitter drive speed
~~4- the speed indicating element is a galvanometer~~
5. the speed indicating element is an synchronous motor driving a magnetic tachometer
The combination regrouping all the correct statements is:
3, 5

1011. The advantages of a float type fuel gauge are (is):
1) easy construction
~~2) independence of indications with regard to aircraft attitude~~
~~3) independence of indications with regard to the accelerations~~
~~4) independence of indications with regard to temperature variations~~
The combination that regroups all of the correct statements is:
1

1012. The disadvantages of a float type fuel gauge are
~~1) the design is complex~~
2) the indications are influenced by the aircraft attitude variations
3) the indications are influenced by the accelerations
4) the indications are influenced by temperature variations
The combination that regroups all of the correct statements is:
2, 3, 4

1013. In an average or heavy weight transport airplane, generally, the fuel quantity is measured by "capacitor" gauges because these give:
1- indications partly independent of fuel temperature variations
2- indications almost independent of the airplane's attitude and accelerations
~~3- indications expressed in density~~
The combination regrouping all the correct statements is:
1, 2

1014. The operating principle of the inductive probe tachometer is to measure the:
Frequency of the electric impulse created by a notched wheel rotating in a magnetic field

1015. The aeroplane outside air temperature probe measures the:
Total air temperature minus kinetic heating effects in order to obtain the static temperature

1016. The basic principle of a capacitance fuel gauge system is that the:
Capacity of a capacitor depends on the nature of the dielectric in which it is immersed

1017. If the tanks of your airplane only contain water, the capacitor gauges indicate:
A mass of water different from zero, but inaccurate

1018. The pressure probe used to measure the pressure of a low pressure fuel pump is:
An aneroid capsule

1019. The probe used to measure the air intake pressure of a gas turbine engined powerplants is:
An aneroid capsule

1020. The main advantage of a ratiometer-type temperature indicator is that it:
Carries out an independent measurement of the supply voltage

1021. A millivoltmeter measuring the electromotive force between the "hot junction" and the "cold junction" of a thermocouple can be directly graduated in temperature values provided that the temperature of the:
Cold junction is maintained constant

1022. The electromotive force of a thermocouple is not modified if one or several intermediate metals are inserted in the circuit provided that:
Contact points are maintained at equal temperature between these different metals

1023. The advantages of an electric float gauge are:
1- ease of manufacture
2- independence of the indication relative to the variations of the aircraft power system if the measurement is made by a ratiometer
~~3- independence of the indication relative to the variations of the aircraft power system if the measurement is made by a galvanometer~~
4- independence of the indication relative to temperature variations
The combination regrouping all the correct statements is:
1, 2, 4

1024. The gauge indicating the quantity of fuel measured by a capacity gauging system can be graduated directly in weight units because the dielectric constant of fuel is:
Twice that of air and varies directly with density

1025. When compared with the volumetric fuel flowmeter, the mass fuel flowmeter takes into account the fuel:
Density

1026. The advantages of an electrical induction tachometer are:
1- the display is not sensitive to line resistance
2- the measurement is independent of aircraft power supply
~~3- the measurement is independent of temperature variations~~
4- the option to use without restriction several indicators connected in parallel to a single transmitter
The combination regrouping all the correct statements is:
1, 2, 4

1027. The electronic tachometer sensor is composed of:
A notched wheel rotating in front of an electro-magnet

1028. The advantages of a D.C. generator tachometer are:
1- easy transmission of the information.
2- independence of the information relative to the airborne electrical power supply.
~~3- freedom from any spurious current due to the commutator.~~
The combination regrouping all the correct statements is:
1, 2

1029. The advantages of single-phase A.C. generator tachometer are:
1- the suppression of spurious signals due to a D.C. generator commutator
~~2- the importance of line resistance on the information value~~
3- the independence of the information in relation to the airborne electrical power supply
~~4- the ease of transmission of the information~~
The combination regrouping all the correct statements is:
1, 3

1030. The disadvantages of a single-phase A.C. generator tachometer are:
~~1- the presence of spurious signals due to a D.C. generator commutator~~
2- the importance of line resistance on the information value
~~3- the influence of temperature on the tachometer information~~
The combination regrouping all the correct statements is:
2

1031. In a modern airplane equipped with an ECAM (Electronic centralized aircraft monitor), when a failure occurs in a circuit, the centralized flight management system:
1- releases an aural warning
2- lights up the appropriate push-buttons on the overhead panel
3- displays the relevant circuit on the system display
~~4- processes the failure automatically~~
The combination regrouping all the correct statements is:
1, 2, 3

1032. On an aeroplane equipped with a constant speed propeller, the RPM indicator enables:
Control of the propeller regulator and the display of propeller RPM

1033. Torque can be determined by measuring the:
Oil pressure at the fixed crown of an epicycloidal reducer of the main engine gearbox

1034. Among the following engine instruments, the one operating with an aneroid pressure diaphragm is the:
Manifold pressure gauge

1035. The principle of capacitor gauges is based on:
The variation in capacity of a condenser with the nature of the dielectric

1036. A paddle-wheel placed in a fuel circuit of a gas turbine engine initially measures:
Volumetric flow by a tally of the impulses

1037. A thermocouple consists of:
A junction of two dissimilar metals

1038. To permit turbine exit temperatures to be measured, gas turbines are equipped with thermometers which work on the following principle:
Thermocouple

1039. The quantity of fuel in the tanks is measured by capacitor type contents gauges. The working principle of these sensors is to measure the:
Charge of condensers

1040. The operating principle of Flowmeters, or "unit flow meters," the most commonly used at the present time, is to measure across their system the :
Quantity of fuel movement

1041. A "Bourdon Tube" is used in:
Pressure sensors

1042. Absolute pressure is
Measured from zero pressure (vacuum)

1043. The manifold pressure gauge measures
Absolute pressure

1044. In a mechanical oil pressure gauge the sensing element is
A bourdon tube

1045. Non-electrical temperature measurements may be done by
a) expansion of a liquid
b) expansion of a solid
c) expansion of a gas
All of the above

1046. The measurement of exhaust gas temperature (EGT) is normally based upon the principle of

Voltage generation in a thermocouple

1047. Iron and brass are commonly used in bimetallic thermometers, because

They have two different coefficients of linear expansion

1048. Which of these statements is true?

The probes used for SAT measurements have a recovery factor of 0.75 to 0.90, while the probes used for TAT measurements have a recovery factor of around 1.00

1049. A float type fuel gauge:

~~1) gives a mass information~~

~~2) gives information independent of aircraft's manoeuvres and attitude changes~~

~~3) gives information all the more accurate as the tank is full~~

4) is typically a DC powered system

The combination that regroups all of the correct statements is:

4

1050. The output from an engine vibration transducer is:

Always filtered to remove unwanted frequencies

1051. A three-phase electrical tachometer consists of:

A three-phase generator, a synchronous motor and a magnetic tachometer

1052. Vibration is indicated in the cockpit as:

A direct reading

1053. Electrical requirements for an alumel/chromel indicating system are:

Power for gauge lighting only

1054. The most common system used to monitor turbine gas exhaust temperature is the:

Hot and cold junction, alumel/chromel system

1055. Gas turbine engine rotational speed (RPM) is usually sensed using either:

A 3 phase AC tachometer generator or an AC phonic wheel system

1056. An aneroid capsule:

~~1) measures differential pressure~~

2) measures absolute pressure

3) is used for low pressure measurement

~~4) is used for very high pressure measurement~~

The combination that regroups all of the correct statements is:

2, 3

1057. The engine instrument utilising an aneroid pressure diaphragm is the:
Manifold pressure gauge

1058. To indicate a temperature, a thermocouple requires:
No power supply

1059. An aeroplane is flying at FL 180 and Mach number 0.36. The indicated total air temperature is -5°C. Considering that the probe recovery coefficient is 0.84, the present weather conditions compared with the standard atmosphere are:
Standard + 10°C

1060. Given:
Mach number M = 0.70
Measured impact temperature = -48°C
The recovery factor (Kr) of the temperature probe = 0.85
The OAT is:
-65°C

1061. A temperature sensor has a recovery factor of 0.95. The temperature measured is equal to:
Static air temperature (SAT) + 95% of the ram rise

1062. The total air temperature (TAT) is:
The temperature resulting from the aircraft motion in the air

1063. The static air temperature (SAT) is:
The ambient outside air temperature

1064. Given:
E = electromotive force (emf)
T = hot junction temperature
K = constant
The relationship that applies to a thermocouple is:
E = K x T

1065. Given:
E = electromotive force (emf)
Tc = cold junction temperature
Th = hot junction temperature
K = constant
The relationship that applies to a thermocouple is:
E = K x Th

1066. In a compensated capacitance type quantity indicating system, the contents gauge of a half-full fuel tank indicates a fuel mass of 8000 kg. If a temperature raise increase the volume of fuel by 5%, the indicated fuel mass would:
Remain the same

1067. Concerning a fuel gauge system, a pilot is more interested by the:

Mass of the fuel than the volume of the fuel

1068. Given the following parameters, in a capacitance fuel gauge, the correct formula is:

A = area of plates

D = distance between plates

E = dielectric permittivity

Capacitance = E x A / D

1069. The unit used to measure the capacitance of a capacitor is the:

Farad

1070. A magnetic tachometer consists of:

A permanent magnet turning inside a non magnetic drag cup

1071. Torque can be determined by measuring the:

Change in phase between the torque shaft and the reference shaft

1072. Any vibration displayed on an engine vibration monitoring system for a turbojet:

Indicates rotor imbalance

1073. Which of these statements about temperature are correct or incorrect?

1) 20° Celsius = 68° Fahrenheit

2) 273 Kelvin = 0° Celsius

1) is correct, 2) is correct

1074. Which of these statements about temperature are correct or incorrect?

1) -273° Celsius = 0 Kelvin

~~2) 52° Fahrenheit = 21° Celsius~~

1) is correct, 2) is incorrect

1075. Which of these statements about temperature are correct or incorrect?

1) 15° Celsius = 288° Kelvin

2) 15° Celsius = 59° Fahrenheit

1) is correct, 2) is correct

1076. Which of these statements about temperature are correct or incorrect?

~~1) 15° Celsius = 273° Kelvin~~

2) 15° Celsius = 59° Fahrenheit

1) is incorrect, 2) is correct

1077. Which of these statements about temperature are correct or incorrect?

1) 20° Celsius = 68° Fahrenheit

2) 0° Celsius = 273° Kelvin

1) is correct, 2) is correct

1078. Given:
C = temperature in Celsius
K = temperature in Kelvin
The correct relationship between these different units is:
K = C + 273

1079. Given:
C = temperature in Celsius
K = temperature in Kelvin
The correct relationship between these different units is:
C = K - 273

1080. Given:
C = temperature in Celsius
F = temperature in Fahrenheit
The correct relationship between these different units is:
F = (C x 1.8) + 32

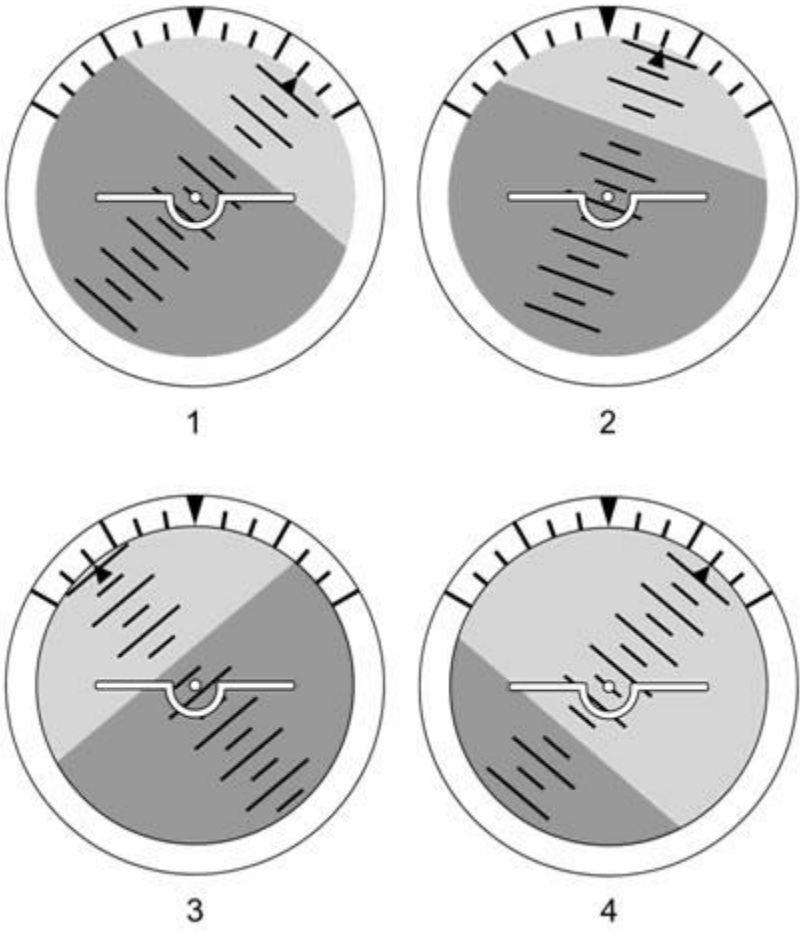
1081. Given:
C = the temperature in Celsius
K = the temperature in Kelvin
F = the temperature in Fahrenheit
Which of these statements about temperature units are correct or incorrect?
1) C = K -273
2) F = (C x 1.8) + 32
1) is correct, 2) is correct

1082. Given:
C = the temperature in Celsius
K = the temperature in Kelvin
F = the temperature in Fahrenheit
Which of these statements about temperature units are correct or incorrect?
~~1) C = K + 273~~
2) F = (C x 1.8) + 32
1) is incorrect, 2) is correct

1083. Due to the rotation of the earth, the apparent drift of a horizontal free gyroscope at latitude of 30°N is:
7.5°/hour to the right

1084. The apparent wander of a directional gyro is 15°/h:
At the north pole

1085. Diagram 1 is showing:
A 40° left bank and 15° nose down attitude



1086. Given:
Q = charge (Coulombs)
U = potential difference between the plates (Volt)
The capacitance C (Farads) is defined as:
C = Q /U

1087. An electromagnet is a type of magnet in which:
The magnetic field is produced by the flow of an electric current

1088. Which of these statements about the fuel mass unit is correct?
1 t = 2200 lb

1089. Given:
Pt = total pressure
Ps = static pressure
Pso = static pressure at sea level
The CAS is a function of:
Pt-Ps

1090. TAS is equal to:
CAS corrected for compressibility and density errors

1091. In the northern hemisphere, during a take-off run in a easterly direction, a direct reading compass indicates:
An apparent turn to the north

1092. Due to the rotation of the earth, the apparent drift of a horizontal free gyroscope at a latitude of 30°N is:
7.5°/hour to the right

1093. The components of an autopilot system are the:
1) actuators
2) mode control panel
3) mode annunciator panel
4) computer
The combination that regroups all of the correct statements is:
1, 2, 3, 4

1094. According to AMC 25-11 concerning the electronic display systems, the green colour is associated with the following indication:
Engaged mode

1095. On the ground, during a left turn, the turn indicator indicates:
Needle to the left, ball to the right

1096. Which of these statements about computer architecture are correct or incorrect?
1) A multiprocessing configuration is a hardware solution
2) The multitasking method results in more powerful performance than a multiprocessing configuration
1 is correct, 2 is incorrect

1097. Compared with a stabilised platform inertial system, a strapdown inertial system:
~~1) is more accurate but less reliable in time~~
2) measures the accelerations in a trihedron which is fixed regarding to the aircraft trihedron
~~3) doesn't need any initial position to be inserted by the flight crew~~
The combination that regroups all of the correct statements is:
2

1098. The navigation precision of a stand alone inertial system decreases along the flight, due to:
The drift of the gyroscopes

1099. A FMS can correct its fuel computations for the following non-standard configurations:
1) Landing gear down
2) Speed brakes extended
3) One engine out
4) Slats/flaps not fully retracted
The combination which regroups all of the correct statements is:
3

1100. The FMS Flight Plan, Navigation, Progress or Leg page generally displays the following parameters relative to the flight plan legs or waypoints:
1- FMS position
2- time prediction
3- track
4- distance
The combination which regroups all of the correct statements is:
2,3,4

1101. Concerning the FMS, entering a high cost index results in:
High airspeed and high fuel consumption

1102. The FMS FLIGHT PLAN or LEG page displays the following parameters relative to the flight plan legs or waypoints:
1) distance
2) altitude constraint or prediction
3) waypoint elevation
4) track
The combination that regroups all of the correct statements is:
1,2,4

1103. The FMC determines and updates present aircraft position from the following systems:
1) LOC
2) DME
3) IRS
4) GPS
The combination that regroups all of the correct statements is:
1, 2, 3, 4

1104. In a dual FMS architecture, when an incompatibility between the two FMC's occurs:
(FMC=Flight Management Computer)
Both FMC's are working independently: they are linked only to their own peripherals

1105. Under normal conditions, in a dual FMS architecture:
(FMC=Flight Management Computer)
One FMC is working as the master and the other as a slave: both FMC are synchronised via an exchange bus

1106. The initiation of an automatic go-around can be:

In a range of approach airspeeds

1107. Which of these statements about a capacitor are correct or incorrect?

~~1) The capacitance is proportional to distance between plates~~

2) The capacitance is proportional to the relative permittivity

1) is incorrect, 2) is correct

1108. Which of these statements about a capacitor are correct or incorrect?

1) The capacitance is proportional to the surfaces of the plates

2) The capacitance is proportional to the relative permittivity

1) is correct, 2) is correct

1109. Which of these statements about a capacitor are correct or incorrect?

~~1) The capacitance is proportional to distance between plates~~

2) The capacitance is proportional to the surfaces of the plates

1) is incorrect, 2) is correct

1110. On a Flight Mode Annunciator FMA, the pilot can check:

1) The engaged and armed modes of the autopilot

2) The automatic landing capacity

~~3) The ACAS mode~~

The combination that regroups all of the correct statements is:

1, 2

1111. On a Flight Mode Annunciator FMA, the pilot can check:

1) The flight director selection

~~2) The flaps/slats selection~~

3) the auto-throttle modes

The combination that regroups all of the correct statements is:

1, 3

1112. The purpose of the Flight Mode Annunciator FMA is to:

Check and confirm any selection made by the pilot on the autopilot control panel

1113. The purpose of the Flight Mode Annunciator FMA is to:

Check and confirm in which modes the automatic flight control systems are armed and/or engaged

1114. The magnitude of a torque is defined as:

Force times its lever arm

1115. A torque may be expressed in:

Newton meter (N m)

1116. Given:
P = power
T = torque
Omega = Angular Velocity
The correct relationship is:
P = T x Omega

1117. The operating principle of an electronic torque meter is:
As power is increased, the torque shaft twists

1118. The operating principle of an oil torque meter is:
1) Axial movement is generated by the helically cut gears
2) Axial force is proportional to the torque
1) is correct, 2) is correct

1119. On a multi-engine aircraft, a synchroscope is used to:
1) Reduce structural vibration and noise
~~2) Have symmetrical thrust and fuel consumption~~
1) is correct, 2) is incorrect

1120. On a multi-engine aircraft, a synchroscope provides:
Qualitative indication of the difference in speed between the engines

1121. On a twin-engined aeroplane, the synchroscope uses the following principle:
It measures the frequency difference between the two engines driven alternators

1122. On a twin-engined aeroplane, the synchroscope can consist of:
A rotor fed by the alternator driven by the master engine, and a stator fed by the alternator driven by the engine to by synchronised

1123. The types of sensors used in an engine vibration monitoring system may be:
1) magnet
~~2) tachometer~~
3) piezo electric crystal
The combination that regroups all of the correct statements is:
1, 3

1124. In a vibration monitoring system, a filter:
1) Erases any output which is normal to the engine
2) Allows through to the amplifier any frequency that is considered to be harmful to the engine
1) is correct, 2) is correct

1125. The value shown by the indicator of a vibration monitoring system is 4. This is:
A level of vibration without any unit

1126. Given:
Q = charge (Coulombs)
U = potential difference between the plates (Volt)
C= capacitance (Farads)
The correct relationship between these parameters is:
Q = C x U

1127. Given:
Q = charge (Coulombs)
U = potential difference between the plates (Volt)
The capacitance C (Farads) is defined as:
C = Q /U

1128. Which of these statements about the fuel mass unit is correct?
1 kg = 2.2 lb

1129. Which of these statements about the fuel mass unit is correct?
1 lb = 0.45 kg

1130. Which of these statements about the fuel mass unit is correct?
1 t = 2200 lb

1131. Which of these statements about fuel quantity measurement are correct or incorrect?
1) The quantity of fuel can be measured by volume
2) The quantity of fuel can be measured by mass
1) is correct,2) is correct

1132. Total fuel consumption is obtained by:
Integrating the fuel flow with respect to time

1133. By integrating a flow with respect to time we obtain:
A volume or a mass

1134. Which statements about fuel flow are correct or incorrect?
1) Fuel flow may be measured by volume per unit of time
2) Fuel flow may be measured by mass per unit of time
1 is correct, 2 is correct

1135. Fuel flow can be expressed in:
~~1) kg per m3~~
~~2) lb per m3~~
3) lb per hour
4) kg per hour
The combination that regroups all of the correct statements is:
3, 4

1136. A fuel flow meter is located:
In the high pressure fuel line to the burners

1137. Changes in temperature of the fuel affect its density, volume and dielectric value Er. A decrease in temperature causes:
A decrease in volume, increase in density and increase in Er

1138. Changes in temperature of the fuel affect its density, volume and dielectric value Er. An increase in temperature causes:
An increase in volume, decrease in density and decrease in Er

1139. Engine speed is most commonly displayed as a:
Percentage of a maximum engine speed

1140. The different types of tachometers are:
Mechanical, electrical, electronic

1141. The different types of tachometers are:
1) electrical
2) mechanical
3) electronic
The combination that regroups all of the correct statements is:
1, 2, 3

1142. The parameters used to represent thrust are:
1) N1 (low pressure shaft speed)
~~2) N2 (high pressure shaft speed)~~
~~3) EGT~~
4) EPR
The combination that regroups all of the correct statements is:
1, 4

1143. Concerning thrust measurement, the N1 is defined as the:
Low pressure shaft speed

1144. On a N1 indicator, the maximum N1 admissible:
May be greater than 100 %

1145. An aeroplane is flying at FL 320 and Mach number 0.79. The OAT is -53°C.
Considering that the probe recovery coefficient is 0.96, the indicated total air temperature is:
-27°C

1146. Because of the Earth's magnetic field, a compass placed anywhere on Earth will turn so that the north pole of the magnet inside the compass points towards the:
North magnetic pole

1147. The principle of the compass swinging procedure is to:
Determine the amount by which the compass readings are affected by hard and soft iron magnetism

1148. An electromagnet is a type of magnet in which:
The magnetic field is produced by the flow of an electric current

1149. The inclination of the Earth's magnetic field at the magnetic equator is equal to:
0°

1150. The inclination of the Earth's magnetic field at the north magnetic pole is equal to:
90°

1151. The magnetic dip at any point on the Earth's surface is the angle:
Made by a compass needle with the horizontal

1152. The magnetic variation:
Is caused by the different locations of the geographic North Pole and the magnetic north pole

1153. The magnetic variation at any point on the Earth's surface is the angle:
Between the horizontal component of the magnetic field and true north direction

1154. Which of these statements about the properties of a simple bar magnet are correct or incorrect?
~~1) North or south poles can exist separately~~
2) Magnetism is concentrated at the extremities of the bar
1) is incorrect, 2) is correct

1155. Which of these statements about the properties of a simple bar magnet are correct or incorrect?
1) North or south poles cannot exist separately
2) Magnetism is concentrated at the extremities of the bar
1) is correct, 2) is correct

1156. The force of attraction or repulsion between two magnets:
Varies inversely as the square of the distance between them

1157. Which of these statements about fundamental laws of magnetism are correct or incorrect?
~~1) Like poles attract~~
~~2) Unlike poles repel each other~~
1) is incorrect, 2) is incorrect

1158. Which of these statements about fundamental laws of magnetism are correct or incorrect?
1) Unlike poles attract
2) Like poles repel each other
1) is correct,2) is correct

1159. The location of the Earth's magnetic poles:
Periodically wanders (as much as 15 km every year)

1160. The Earth's north magnetic pole is:
Located approximately in northern Canada

1161. The altimeter indicates 16000 ft with a subscale setting of 1013,25 hPa. QNH is 993 hPa, OAT is -3°C. The pressure altitude of the aircraft is:

16000 ft

1162. The altimeter indicates 17000 ft with a subscale setting of 1013,25 hPa. QNH is 1031 hPa, OAT is -3°C. The pressure altitude of the aircraft is:

17000 ft

1163. The atmospheric pressure at FL 70 in a "standard + 10°" atmosphere is:

782 hPa

022-9771 a

Table d'Atmosphère Standard Internationale

ALTITUDE	TEMPERATURE		PRESSION				RAPPORT de PRESSION	IDENSITE RELATIVE	√DENSITE	VITESSE du SON (a)	ALTITUDE
Pieds	°C	° F	hPa	P S I	In Hg	mm Hg	δ = P/ Po	δ = ρ/ ρ₀		kt	Metres
45.000	**- 56,5**	- 69,7	**147**	2,14	4,36	110,7	0,1415	0.1936	0,440	574	**13. 716**
44.000	**- 56,5**	- 69,7	**155**	2,24	4,57	116,0	0,1527	0.2031	0,451	574	**13. 411**
43.000	**- 56,5**	- 69,7	**162**	2,35	4,79	121,7	0,1602	0,2131	0,462	574	**13. 106**
42.000	**- 56,5**	- 69,7	**170**	2,47	5,03	127,8	0,1681	0.2236	0,473	574	**12. 802**
41.000	**- 56,5**	- 69.7	**179**	2,19	5,28	134,1	0,1764	0.2346	0,484	574	**12. 497**
40.000	**- 56,5**	- 69,7	**188**	2,72	5,54	140.7	0,1851	0,2462	0.496	574	**12. 192**
39.000	**- 56,5**	- 69,7	**197**	2,81	5,81	147,6	0,1942	0,2583	0,508	574	**11. 887**
38.000	**- 56,5**	- 69,7	**206**	2,99	6,10	154,9	0,2018	0,2710	0,521	574	**11. 582**
37.000	**- 56,5**	- 69,7	**217**	3,14	6,40	162,6	0,2138	0,2843	0,533	574	**11. 278**
36.000	**- 56,3**	- 69,4	**227**	3,30	6,71	170,4	0,2243	0,2981	0,546	574	**10. 973**
35.000	**- 54,3**	- 65,8	**238**	3,46	7,04	178.8	0,2353	0,3099	0,557	576	**10. 668**
34.000	**- 52,4**	- 62,3	**250**	3,63	7,38	187,5	0,2467	0,3220	0,167	579	**10. 363**
33.000	**- 50,4**	- 58,7	**262**	3,80	7,74	196.6	0,2586	0.3345	0,578	582	**10. 058**
32.000	**- 48,4**	- 55,1	**274**	3,98	8,11	206,0	0,2709	0.3473	0,589	584	**9. 754**
31.000	**- 46,4**	- 51,6	**287**	4,17	8,49	215,6	0,2837	0.3605	0,600	587	**9. 449**
30.000	**- 44,4**	- 48,0	**301**	4,36	8,89	225,8	0,2970	0,3741	0,611	589	**9. 144**
29.000	**- 42,5**	- 44,4	**315**	4,57	9.30	256,2	0,3107	0,3881	0,623	591	**8. 839**
28.000	**- 40,5**	- 40,9	**329**	4,78	9,73	247,1	0,3250	0,4025	0,634	594	**8. 534**
27.000	**- 38,5**	- 37,3	**344**	4,99	10,17	258,3	0,3398	0,4173	0,646	597	**8. 230**
26.000	**- 36,5**	- 33,7	**360**	5,22	10,63	270,0	0,3552	0,4325	0,658	599	**7. 925**
25.000	**- 34,5**	- 30,2	**376**	5,45	11,10	281,9	0,3711	0,4481	0,669	602	**7. 620**
24.000	**- 32,5**	- 26,6	**393**	5,70	11,60	294,6	0,3876	0,4642.	0,681	604	**7. 315**
23.000	**- 30,6**	- 23,0	**410**	5,95	12,11	307,6	0,4047	0,4806	0,693	607	**7. 010**
22.000	**- 28,6**	- 19,5	**428**	6,21	12,64	321,1	0,4223	0,4976	0,705	609	**6. 706**
21.000	**- 26,6**	- 15,9	**446**	6,47	13,18	334,8	0,4406	0,5150	0,718	612	**6. 401**
20.000	**- 24,6**	- 12,3	**466**	6,75	13,75	349,3	0,4596	0,5328	0,730	614	**6. 096**
19.000	**- 22,6**	- 8,8	**485**	7,04	14.34	364,2	0,4791	0,5511	0,742	617	**5. 791**
18.000	**- 20,7**	- 5,2	**506**	7,34	14,94	379,5	0,4994	0,5699	0,755	619	**5. 486**
17.000	**- 18,7**	- 1,6	**527**	7,65	15.57	395,5	0,5203	0,5892	0.768	622	**5. 182**
16.000	**- 16,7**	+ 1,9	**549**	7,97	16,22	412,0	0,5420	0,6089	0.780	624	**4. 877**
15.000	**- 14,7**	+ 5,5	**572**	8,29	16,89	429,0	0,5644	0,6292	0,793	626	**4. 572**
14.000	**- 12,7**	+ 9,1	**595**	8,63	17,58	446,1	0,5875	0,6500	0,806	629	**4. 267**
13.000	**- 10,7**	+ 12,6	**619**	8.99	18,29	464,6	0.6113	0,6713	0.819	631	**3. 962**
12.000	**- 8,8**	+ 16,2	**644**	9,35	19,03	483,4	0,6360	0,6932	0,833	634	**3. 658**
11.000	**- 6,8**	+ 19,8	**670**	9,72	19,79	502,7	0,6614	0,7155	0,846	636	**3. 353**
10.000	**- 4,8**	+ 23,3	**697**	10,11	20,58	522,7	0,6877	0,7385	0,859	638	**3. 048**
9.000	**- 2,8**	+ 26,9	**724**	10,50	21,39	543,3	0.7148	0,7619	0,873	641	**2. 743**
8.000	**- 0,8**	+ 30,5	**753**	10,92	22,23	564,6	0,7428	0,7860	0,887	643	**2. 438**
7.000	**+ 1.1**	+ 34,0	**782**	11,34	23,09	586,5	0,7716	0,8106	0,900	645	**2. 134**
6.000	**+ 3,1**	+ 37,6	**812**	11,78	23,98	609,1	0.8014	0,8358	0,914	648	**1. 829**
5.000	**+ 5,1**	+ 41,2	**843**	12,23	24,90	652,5	0,8321	0,8616	0.928	650	**1. 524**
4.000	**+ 7,1**	+ 44,7	**875**	12,69	21,84	656,3	0.8037	0,8881	0,942	652	**1. 219**
3.000	**+ 9,1**	+ 48,3	**908**	13,17	26,82	681,2	0,8962	0,9151	0,957	655	**914**
2.000	**+ 11,0**	+ 51,9	**942**	13,66	27,82	706,6	0,9298	0,9427	0,971	657	**610**
1.000	**+ 13,0**	+ 55,4	**977**	14,17	28,86	733,0	0,9644	0,9710	0,985	659	**305**
0	**+ 15,0**	+ 59,0	**1013**	14,70	29,92	760,0	1,0000	1,0000	1,000	661	**0**
1.000	**+ 17,0**	+ 62,5	**1050**	15,23	31,02	787,9	1,0366	1,0295	1,015	664	**-305**

1164. The purpose of a magnetic compass calibration is to:

Determine the residual deviations

1165. The purpose of a magnetic compass compensation is to:

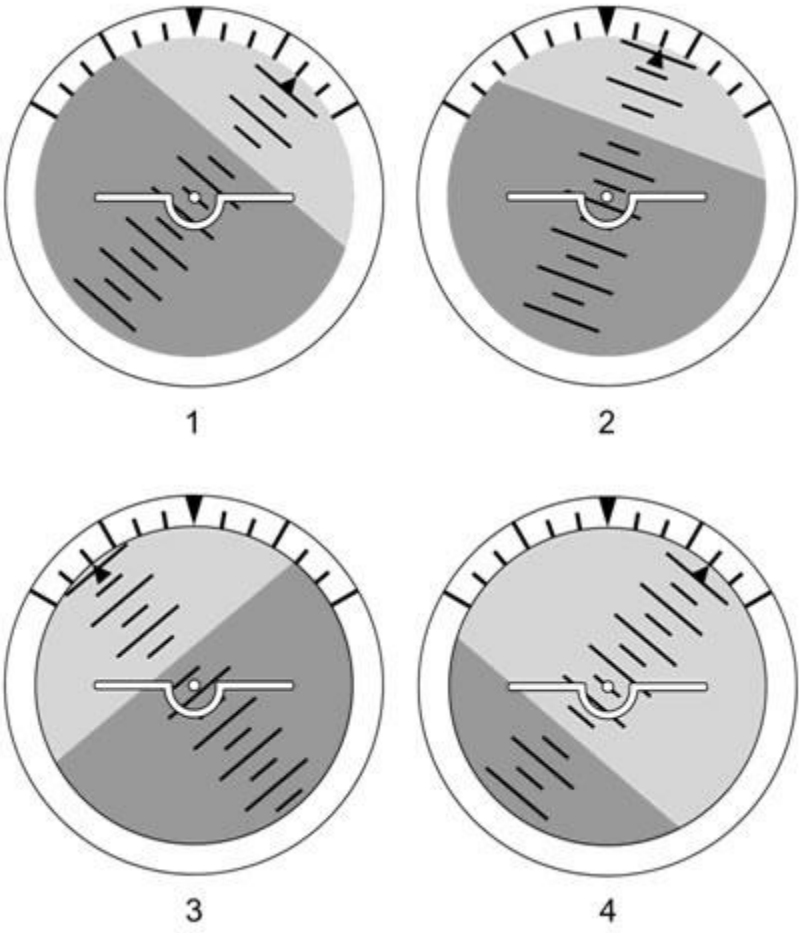
Correct for deviations

1166. The magnetic poles are the two positions on the Earth's surface where the lines of the magnetic field:

Are entirely vertical

1167. The diagram which shows a 40° left bank and 15° nose down is number:

1



1168. Diagram 3 is showing:

A 40° right bank and 8° nose down attitude

1169. Diagram 2 is showing:

A 20° left bank and 18° nose down attitude

1170. Diagram 1 is showing:

A 40° left bank and 15° nose down attitude

1171. The diagram which shows a 40° right bank and 8° nose down is:

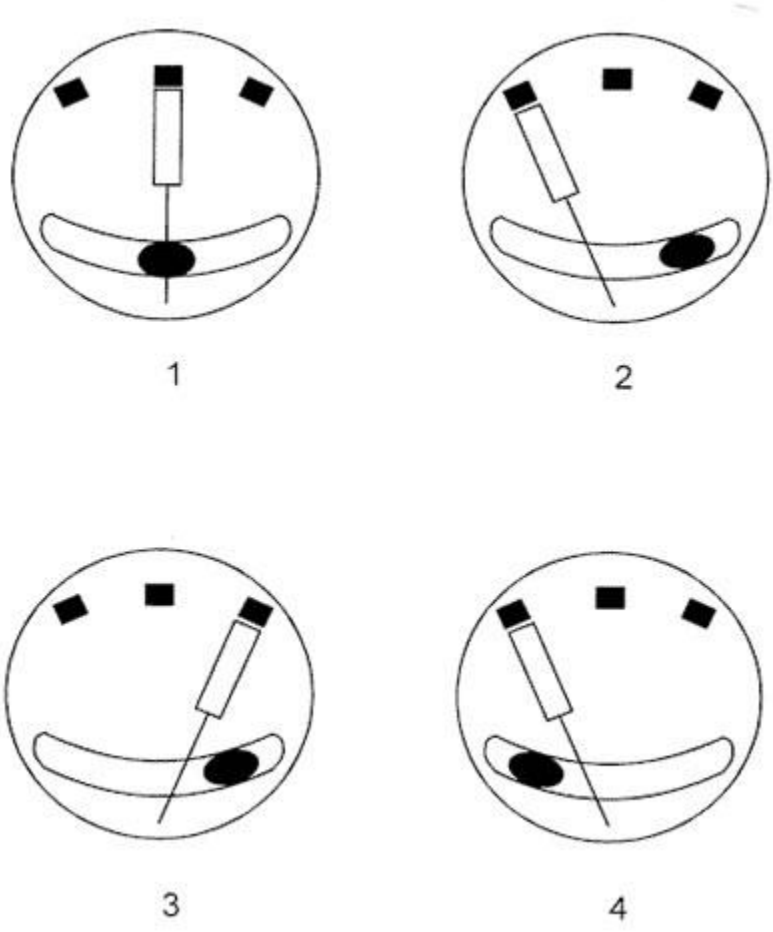
Diagram 3

1172. The diagram which shows a 40° left bank and 15° nose up attitude is number:

4

1173. Diagram 3 represents:

A right turn with insufficient rudder



1174. Diagram 2 represents:

A left turn with too much rudder

1175. Diagram 1 represents:

Straight and level flight

1176. The diagram representing a right turn with insufficient rudder is:

3

1177. The diagram representing straight and level flight is:

1

1178. When performing an automatic landing, some additional operational limitations may apply, like:

1) Maximum headwind or crosswind
2) Airport maximum pressure altitude
3) Runway conditions

The combination that regroups all of the correct statements is:

1, 2, 3

1179. Following an automatic landing, with the ROLL OUT mode engaged, the autopilot:

Controls the rudder and nose wheel steering to keep the aeroplane on the localiser centreline

1180. The purpose of an automatic landing system is to:
Make the landing possible in poor weather conditions

1181. When an autothrust system (A/THR) is in the SPEED mode, the A/THR is:
Active

1182. When an automatic thrust control system is in the SPEED mode:
It maintains the selected airspeed

1183. When an automatic thrust control system is in the THRUST mode:
Thrust is set to a computed thrust according to a performance database

1184. An automatic thrust control system can be:
1) Armed
2) Active
3) disconnected
The combination that regroups all of the correct statements is:
1, 2, 3

1185. Under normal conditions, in a dual FMS architecture, the master FMC sends its commands to the:
(FMC=Flight Management Computer)
Autopilot, flight director and autothrottle

1186. In a dual FMS architecture, when an incompatibility between the two FMC's occurs:
(FMC=Flight Management Computer)
Both FMC's are working independently: they are linked only to their own peripherals

1187. Under normal conditions, in a dual FMS architecture:
(FMC=Flight Management Computer)
One FMC is working as the master and the other as a slave: both FMC are synchronised via an exchange bus

1188. For most FMS the fuel prediction function, which computes the remaining fuel along the flight plan, takes into account the following situations:
~~1) The additional drag resulting in a flight carried out with the landing gear extended~~
~~2) The additional drag resulting in a missing fuselage or wing element in compliance with the CDL~~
~~3) The additional drag resulting in a flight carried out with the flaps stucked, partly extended~~
4) The current wind computed or the resulting ground speed
The combination that regroups all of the correct statements is:
4

1189. On an Electronic Flight Instrument System (EFIS), the following EGT parameters may be displayed:
1) Instantaneous EGT
2) Maximum continuous EGT
3) Maximum takeoff EGT limit
4) Maximum start EGT limit
The combination that regroups all of the correct statements is:
1, 2, 3, 4

1190. On an Electronic Flight Instrument System (EFIS), the following EGT parameters may be displayed:
1) Instantaneous EGT
~~2) Commanded EGT~~
3) Maximum continuous EGT limit
4) Maximum takeoff EGT limit
The combination that regroups all of the correct statements is:
1, 3, 4

1191. On an Electronic Flight Instrument System (EFIS), the following fuel flow parameters may be displayed:
1) Present fuel flow of each engine
~~2) Mean fuel flow over 1 minute~~
~~3) Maximum admissible fuel flow~~
The combination that regroups all of the correct statements is:
1

1192. On an Electronic Flight Instrument System (EFIS), the following fuel data may be displayed:
1) Fuel quantity in each tank
2) Total fuel quantity
~~3) Fuel type~~
4) Fuel temperature
The combination that regroups all of the correct statements is:
1, 2, 4

1193. On an Electronic Flight Instrument System (EFIS), the following fuel data may be displayed:
~~1) Fuel density~~
2) Fuel quantity in each tank
3) Total fuel quantity
4) Fuel temperature
The combination that regroups all of the correct statements is:
2, 3, 4

1194. The following information can be displayed on the Navigation Display (ND) with the MAP (or ARC) mode:
1) Selected and current heading
2) Next waypoint distance
3) Weather radar information
~~4) Autopilot mode~~
~~5) Landing capacity~~
The combination that regroups all of the correct statements is:
1, 2, 3

1195. The following information can be displayed on the Navigation Display (ND) with the MAP (or ARC) mode:
1) Selected and current track
~~2) Decision height~~
3) TAS
4) Ground speed
5) Wind direction and speed
The combination that regroups all of the correct statements is:
1, 3, 4, 5

1196. The following information can be displayed on a Primary Flight Display (PFD):
~~1) Traffic information from the ACAS~~
2) Flight path vector
3) Altitude
4) ILS indications
5) Lower selectable airspeed
The combination that regroups all of the correct statements is:
2, 3, 4, 5

1197. The following information can be displayed on a Primary Flight Display (PFD):
1) Attitude
2) Maximum airspeed warning
3) Selected heading
4) Decision height
~~5) Ground speed~~
The combination that regroups all of the correct statements is:
1, 2, 3, 4

1198. The following information can be displayed on a Primary Flight Display (PFD):
1) IAS
2) Vertical speed
~~3) TAS~~
4) Selected airspeed
5) Radio altitude
The combination that regroups all of the correct statements is:
1, 2, 4, 5

1199. The Flight Mode Annunciator FMA is displayed on the:
PFD

1200. On an electronic display unit, the following N1 parameters can be displayed:
1) Present N1
2) Commanded N1
3) Maximum N1 operating limit
The combination that regroups all of the correct statements is:
1, 2, 3

1201. On an electronic display unit, the source of the vibrations sensed by an engine vibration monitoring system:
Can be displayed (N1 or N2)

1202. The purpose of the Flight Data Recorder (FDR) is to record specific parameters such as:
1) Pressure altitude
2) Propulse/thrust power on each engine
~~3) The audio environment in the flight deck~~
4) Heading
The combination that regroups all of the correct statements is:
1, 2, 4

1203. The purpose of the Flight Data Recorder (FDR) is to record specific parameters such as:
1) Time
2) Attitude
3) Airspeed
4) Flaps/slaps configuration or cockpit selection
The combination that regroups all of the correct statements is:
1, 2, 3, 4

1204. The purpose of the Cockpit Voice Recorder (CVR) is to record:
1) Communications transmitted or received by radio
2) Communications of crew members using the public address system
~~3) Some air data parameters~~
The combination that regroups all of the correct statements is:
1, 2

1205. The purpose of the Cockpit Voice Recorder (CVR) is to record:
1) The audio environment in the flight deck
~~2) Specific aircraft performance parameters~~
3) The communications of crew memebers using the interphone system
The combination that regroups all of the correct statements is:
1, 3

1206. The aural alert(s) associated with the mode 2 (excessive terrain closure rate) of the GPWS is(are):
1) "TERRAIN"
~~2) "TOO LOW TERRAIN"~~
~~3) "SINKRATE"~~
4) "PULL UP"
The combination that regroups all of the correct statements is:
1, 4

1207. The aural alert(s) associated with the mode 3 (altitude loss after take-off or go-around) of the GPWS is(are):
~~1) "TERRAIN"~~
2) "DON'T SINK"
~~3) "SINKRATE"~~
~~4) "PULL UP"~~
The combination that regroups all of the correct statements is:
2

1208. The aural alert(s) associated with the mode 4 of the GPWS(unsafe terrain clearance while not in the landing configuration) is(are):
1) "TOO LOW GEAR"
2) "TOO LOW TERRAIN"
3) "TOO LOW FLAPS"
~~4) "PULL UP"~~
The combination that regroups all of the correct statements is:
1, 2, 3

1209. The aural alert(s) associated with the mode 5 (excessive deviation below glide slope) of the GPWS is(are):

~~1) "TERRAIN"~~

~~2) "TOO LOW GLIDESLOPE"~~

3) "GLIDESLOPE"

~~4) "PULL UP"~~

The combination that regroups all of the correct statements is:

3