

**~NAVIGATION~**

A1. All pilots know that the earth's magnetic field pulls the needle of a compass and always turns it to the North. They also know this Northerly direction shown by the compass is called...

- a) The so called magnetic North .
- b) A point on the earth, a thousand miles south to the North Pole .
- c) Bathurst Island in the Arctic Ocean .

**d) All the above.**

A2. In navigation "Variation" is called...

- a) The difference(in degrees) between true north and magnetic north.**
- b) The difference(in degrees) between compass heading and magnetic north.
- c) The difference(in degrees) between true heading and compass heading.
- d) None of the above.

A3. In all aircraft, it is observed the so called Compass Deviation. During maintenance there is an effort to reduce this by adjusting magnetic materials. All pilots know that Compass Deviation is:

- a) The difference(in degrees) between true north and magnetic north.**
- b) The difference(in degrees) between compass heading and magnetic north.
- c) The difference(in degrees) between true heading and compass heading.
- d) None of the above.

A4. The Magnetic Compass in an YPAM as well as on every other aircraft is...

- a) The most important air navigation instrument .
- b) The most primitive air navigation instrument .
- c) The most sensitive air navigation instrument .

**d) All of the above are true.**

A5. The indication of the magnetic compass is affected by the acceleration and deceleration of the aircraft. If an YPAM flying in Greece Eastbound, decelerates, then the compass will indicate:

- a) Apparent turn to the South.**
- b) Apparent turn to the North.
- c) Apparent turn to the West.
- d) compass will remain still, because heading is to the East.

A6. The indication of the Magnetic Compass is affected by the acceleration and deceleration of the aircraft. If an YPAM, flying in Greece Westbound, accelerates, the compass will indicate.

- a) Apparent turn to the South.
- b) Apparent turn to the North.**
- c) Apparent turn to the East.
- d) compass will remain still, because heading is to the West.

A7. Before take-off from a ZZZZ airfield, we contact with the nearest Controlled airport and we are given the area QNH, that we set on the altimeter. What indication shall we read on the altimeter?

- a) Approximately the height difference from this nearest controlled airport.
- b) The indication of the altimeter will be zero (0), since we are still on ground.
- c) Approximately the elevation of the airfield ZZZZ from mean sea level.**
- d) None of the above.

A8. ICAO rates the airspace from A to G depending on:

- a) Whether it is controlled or uncontrolled .
- b) Its importance, starting with type -A- which is the highest in rating .
- c) The particular service levels of air traffic services for each type .
- d) All the above .**

A9. In controlled airspace, Air traffic control service is provided...

- a) For all VFR flight only.
- b) For all VFR flight given that the aircraft is equipped with Transponder.
- c) For all YPAM flights with Greek registration.

**d) For all flights.**

A10. On an aviation map, inside the controlled airspace, we observe the so-called Terminal Control Areas or TMAs (Terminal Manoeuvring Areas). TMA is ...

- a) The airspace around specific airports, where air traffic services are provided to all flights. A control zone extends from ground level up to a certain height.
- b) A control area in a form of an airway, defined by means of radio navigational aids.

**c) A controlled area, which is located at the intersection of airways and over a CTR (Control Zone).**

- d) None of the above.

A11. Inside Controlled Airspace we come across the so called Control Zones. CTR is defined as...

**a) The airspace around specific airports, where air traffic services are provided to all flights. The control zone extends from ground level up to a certain altitude.**

- b) A control area in the form of an airway, defined by means of radio navigational aids.
- c) A controlled area, which is located at the intersection of airways and over a Control zone.
- d) None of the above.

A12. An YPAM enters ATHENS TMA through a point named on aviation map as ABLON, adjacent to a black triangle symbol. What does a black triangle symbolize on an aviation map?

- a) It is a non-compulsory reporting point.

**b) It is a compulsory reporting point .**

- c) It is the entrance to a restricted area, in which no aircraft can enter unless it carries a special permit.
- d) It is a symbol for radio navigational aids .

A13. An YPAM takes-off from airport A to airport B . The true track to be followed is 360 degrees. The indication of the magnetic compass has a 2deg E variation and the deviation is 04W . Which heading should we read on the compass to reach airport B?

- a) 360 deg.
- b) 358 deg.
- c) 002 deg.**
- d) 354 deg.

A14. We take off from airport A to airport B, total distance being 100nm .The wind is calm. After 40nm trip we realize, from the map, that we have deviated 20nm left of track. What angle should our new track form with the track that led us 20nm off track, so to fly directly to point B ?

**a) Approximately 47deg to the right.**

- b) Approximately 40deg to the right.
- c) Approximately 10deg to the right.
- d) Approximately 14deg to the left.

A15. We take off from airport A to airport B, total distance being 150nm. The wind is calm. After 30nm trip we realize, from the map, that we have deviated 4nm left of track. What angle should our new track form with the track that led us 4nm off track, so to fly directly to point B ?

- a) Approximately 2deg to the right.
- b) Approximately 6deg to the right.
- c) Approximately 10deg to the right.**
- d) Approximately 14deg to the right.

A16. We plan, on the map, to fly from an airport A to airport B .We connect the two points on the map and find out the track that connects the two airports. What is the right track to be followed to reach airport B?

**a) The true track.**

- b) The magnetic track.
- c) The compass track.
- d) None of the above.

A17. We measure a distance of one degree of latitude on the same meridian. We also measure a distance of one degree of longitude on the same parallel. Which of the following can represent the distance corresponding to one degree of latitude or longitude?

- a) Is calculated with a specific formula that consider the earth to be a perfect sphere.
- b) 60NM for the Latitude and 47 NM for the Longitude provided flying inside Greece .**
- c) 47 NM for the Latitude and 60 NM for the Longitude.
- d) None of the above.

A18. Given that Earth is not a perfect sphere, when flying in Greece, one degree of Latitude and one degree of Longitude correspond to :

- a) 67 NM for Latitude and 40NM for Longitude.
- b) 60 NM for Latitude and 47NM for Longitude.**
- c) 47 NM for Latitude and 60NM for Longitude.
- d) None of the above.

A19. We fly on a heading of 360 degrees and our destination has a relative bearing of 60 degrees . What heading should we follow to fly to our destination ?

- a) 060 degrees.**
- b) 300 degrees.
- c) 030 degrees.
- d) 360 degrees.

A20. Flying on a heading of 360 degrees and our destination has a relative bearing of 350 degrees . What heading should we follow to reach our destination?

- a) 350 degrees.**
- b) 010 degrees.
- c) 310 degrees.
- d) 360 degrees.

A21. We fly on a heading of 90 degrees and our destination is on a relative bearing of 190 degrees. What our turn should be, in order to fly directly to our destination?

- a) Left 170 degrees.**
- b) Right 290 degrees.
- c) Left 090 degrees.
- d) Right 100 degrees.

A22. We plan a trip from A to B. Our heading to reach B is 060 degrees. What is the correct altitude to follow, in order to comply with the general rule of air traffic vertical separation?

- a) 1500 feet.
- b) 2500 feet.
- c) Both a and b are true.**
- d) Both a and b are incorrect.

A23. We plan a trip from A to B. Our heading to reach B is 060 degrees. What is the correct altitude to follow, in order to comply with the general rule of air traffic vertical separation ?

- a) 3500 feet.**
- b) 4000feet.
- c) 4500 feet.
- d) None of the above.

A24. We plan a trip from A to B. Our heading to reach B is 260 degrees. What is the correct altitude to follow, in order to comply with the general rule of air traffic vertical separation?

- a) 1500 feet.
- b) 4500 feet.

**c) Both a and b.**

d) a and b incorrect.

A25. We plan a trip from A to B. Our heading to reach B is 260 degrees. What is the correct altitude to follow, in order to comply with the general rule of air traffic vertical separation?

a) 3500 feet.

**b) 4500 feet.**

c) 4000 feet.

d) None of the above.

A26. We plan a trip from A to B. Our heading to reach B is 260 degrees. What is the correct altitude to follow, in order to comply with the general rule of air traffic vertical separation?

a) 2000 feet.

b) 4500 feet.

**c) Both a and b.**

d) Both a and b incorrect.

A27. TUGRIT SERVICE, from the initials of the words TURKEY, GREECE, ITALY, is a radar advisory service. Which of the following is the corresponding frequency?

**a) 129.800 MHZ**

b) 128.900 MHZ

c) 127.800 MHZ

d) 119.700 MHZ

A28. Flying VFR in Greece we can contact Athens Information (almost full coverage). What are the corresponding frequencies of ATHININFORMATION?

a) 119.750 MHZ (North Sector) and 130.925 MHZ (South Sector).

**b) 130.925 MHZ (North Sector) and 119.750 MHZ (South Sector).**

c) Given every time on 129.800 (TURGIT Radar Advisory).

d) None of the above.

A29. In every country and in every type of airspace, there are areas which are prohibited to flights or restricted for defined time periods, for different reasons (military maneuvers, weapon firing, environmentally protected areas etc.). The coding of the areas consists of three letters followed by numbers. In Greece those areas start with the letters LG and followed by letters P, R, D, C, and TRA. Those areas are:

a) P=Prohibited and R=Restricted.

b) D=Danger and C= Controlled Firing Area.

c) TRA = Temporary Reserve Airspace.

**d) All the above.**

A30. Is a flight permitted in a Restricted Area ?

a) It is never permitted, that's why it is called a Restricted Area.

**b) It is permitted by the competent authority, upon request.**

c) It is permitted only if the captain assumes the responsibility.

d) It is permitted only if the captain was not aware that the area was Restricted.

A31. How is Danger Area defined?

a) Airspace of defined dimensions, inside which, flights are permitted under a special permit.

**b) Airspace of defined dimensions, inside which, during certain hours, dangerous conditions for aircraft may exist.**

c) Airspace of defined dimensions, inside which, aircraft flights are prohibited .

d) An area in which controlled weapon firing takes place.

A32. Before every flight, even for short flights, a Flight Plan must be submitted. Where does an YPAM pilot, departing from an airfield ZZZZ, submit his flight plan?

**a) At the nearest Air traffic service or to the Reporting Office of the nearest airport.**

b) To the owner of the airfield.

c) To Air Traffic Control, by radio, after take-off and above 2000 feet, for better reception.

d) To Air Traffic Control, by mobile phone, after take-off, above 2000 feet, for better reception.

A33. After a flight plan has been filed for an YPAM, how will it be activated ?

- a) A Flight Plan is not required for an YPAM and therefore no activation is required.
- b) Via the radio or by telephone to the competent air traffic control service .**
- c) Via transponder upon take off .
- d) It is not required to activate the Flight plan. We stay on standby, waiting the air traffic controller to call us and then respond "OPERATION NORMAL".

A34. We are approaching for landing at "DIMITRA", light aircraft airfield, runway 09-27, located at Kopaida, Prefecture of Viotia. What is the direction of the runway relative to North?

- a) 009 degrees and 027 degrees relative to magnetic North.
- b) 090 degrees and 270 degrees relative to geographical North.
- c) 090 degrees and 270 degrees relative to magnetic North.**
- d) None of the above.

A35. Planning a trip to "Chorterou" light aircraft airfield, runway 18-36, located at Sintiki, Prefecture of Serres, what is the direction of the runway relative to North?

- a) 180 degrees and 360 degrees relatively to Magnetic North.**
- b) 18 degrees and 36 degrees relative to Geographical North.
- c) 180 degrees and 36 degrees relative to Magnetic North.
- d) 18 degrees and 360 degrees relative to Magnetic North.

A36. An YPAM has a destination airport with provision of radar service. Is it required to be equipped with transponder ?

- a) It is not required for YPAM aircraft.
- b) It is required since the destination is a civil airport.
- c) It is always required.**
- d) It is not required if it is VHF equipped.

A37. A pilot of an YPAM sets the QNH on the aircraft's altimeter as given by ATC. The height displayed by his altimeter is the airfield's elevation from mean sea level. On the contrary absolute True Altitude in flight can only be observed at his altimeter when....

- a) Setting at the Altimeter the barometric pressure(QNH)1013hpa.
- b) Given by the ATC, if the YPAM is monitored by radar or if the YPAM is equipped with Global Positioning System (GPS).**
- c) By setting on the altimeter the barometric pressure(QNH)1013hpa, adding the former height reading and then divide by two.
- d) None of the above.

A38. A map projection, is a mathematical entity used to represent, on a two dimensional map, the round/ three dimensional surface of the earth. In aviation, the Operational Navigation Charts with scale of 1:1.000,000 is Lambert conical projection because....

- a) It is an ideal projection for middle latitudes and/or the area to be mapped has an east – west orientation.**
- b) Is used by the National Geographic Society for mapping most of the continents.
- c) This is a cylindrical projection, like the Mercator projection, but the cylinder is shifted to align with a sideway region and is neither on a north – south nor on a east – west axis.
- d) None of the above.

A39. True course is :

- a) The compass track corrected for Variation.
- b) The magnetic track corrected for Deviation.
- c) The true Heading corrected for the wind.**
- d) The true Heading corrected for Variation.

A40. An YPAM flies a true course of 150 degrees, TAS 060kt and wind data 300 /20 kt. Then the true heading and the ground speed are:

- a) 100deg, 77kt.
- b) 50deg, 60kt.
- c) 180deg, 60 kt.
- d) 160deg, 76kt.**

A41. An YPAM flies true course 180deg, TAS 50kt and wind data 270deg/40kt. Then the true heading and the ground speed are:

- a) 200deg, 40kt.
- b) 230deg, 30kt.**
- c) 180deg, 30kt.
- d) 150deg, 40kt.

A42. An YPAM flies true course of 150deg, true airspeed of 40kt and wind data 180deg/20kt. Then the true heading and the ground speed are:

- a) 154deg/11kt.
- b) 154deg/41kt.
- c) 184deg/41kt.
- d) 164deg/21kt.**

A43. An YPAM flies a True Heading of 90deg, Variation 2deg west and Deviation 2deg west. The Compass heading is:

- a) 94 deg.**
- b) 90 deg.
- c) 88 deg.
- d) 86 deg.

A44. An YPAM flies a True heading of 180deg, Variation 2deg east and Deviation 4deg west. The Compass Heading is:

- a) 178 deg.
- b) 186 deg.
- c) 182 deg.**
- d) 174 deg.

A45. Relative bearing of a point is the angle between...

- a) The longitudinal axis of the airplane and the straight line passing through the aircraft and the point.**
- b) The heading and the track of the aircraft to this point.
- c) The magnetic and the true heading of the aircraft.
- d) None of the above.

A46. In aviation, one knot is:

- a) Equal to one nautical mile per hour.
- b) It is the unit of measurement of the speed of the aircraft.
- c) Equals to 1852 meters per hour.
- d) All the above.**

A47. One Nautical mile equals to:

- a) 1852 meters.**
- b) 6072 meters.
- c) 1852 feet.
- d) None of the above.

A48. The longitude and latitude.....

- a) Of a point, constitute the coordinates of this point.
- b) Is the distance of a place from the prime meridian and the distance in degrees of the parallel circle passing through the place relative to the equator of the earth respectively.
- c) Constitute the so-called position geographical fix and in reports, first latitude and then longitude is given.
- d) All the above are true.**

A49. Two points have coordinates: A (N 38deg 00'00'' E 23deg 00'00'') and B (N 39deg 15'00'' E 23deg 00'00'). What is the distance between them?

- a) 15 NM.
- b) 75 NM.**
- c) These data are insufficient.

d) None of the above.

A50. What do we call Drift ?

**a) The angle between the heading and the track of an aircraft.**

b) The angle between magnetic North and compass North.

c) The angle between true North and magnetic North.

d) None of the above.

A51. An YPAM flies a True course of 50deg, airspeed 60Kt and wind data 100deg/30kt. What is the True heading and the Ground speed ?

a) 150deg/78kt.

b) 160deg/59kt.

**c) 073deg/36kt.**

d) 030deg/92kt.

A52. You have to travel 30NM, at a speed of 60kt. How long will it take ?

a) 60min.

b) 90min.

**c) 30min.**

d) None of the above.

A53. An YPAM flies with a True Course of 180deg, True Airspeed 70 kt and wind data 90deg/40kt. What is the true Heading and the Ground speed ?

**a) 145deg, 54kt.**

b) 057deg, 108kt.

c) 137deg, 48kt.

d) 157deg, 42kt.

A54. An YPAM flies for 1hr 15min and 30 sec, consuming 12 gal of fuel per hour. What is, approximately, the fuel already used ?

a) 10 gal.

b) 12 gal.

c) 13 gal.

**d) 15 gal.**

A55. An YPAM flies for 2hours 10min and 30 sec, consuming 11 gal/h of fuel. What is approximately the fuel already used ?

a) 26 gal.

**b) 24 gal.**

c) 22 gal.

d) 27 gal.

A56. An YPAM flies for 1hour 50min and 30 sec, consuming 11 gal/h of fuel what is approximately the fuel already used ?

a) 22 gal.

b) 24 gal.

**c) 20 gal.**

d) 18 gal.

A57. What distance is represented by 5cm on an aviation map with the scale 1:150.000 ?

a) 2,5 Km.

**b) 25 Km.**

c) 50 Km.

d) None of the above.

A58. When the pressure altitude is 12000 feet and the outside temperature is 12 °C, then the density altitude is :

a) 19350 feet.

b) 17760 feet.

c) 15760 feet.

**d) 14350 feet.**

A59. What distance is represented by 4cm on an aviation map with scale 1:250.000?

- a) 1 km.
- b) 6,25 km.

**c) 10 km.**

- d) None of the above .

A60. An YPAM flies a True Heading of 140deg, True Air speed 60 kt, True course 110 deg and Ground speed 85 kt. The wind data is approximately....

- a) 250deg/15 kt.
- b) 300deg/10 kt.

**c) 250deg/45 kt.**

- d) 180deg/20kt.

A61. An YPAM flies a True Heading of 90deg, True Air speed 60 kt, True course 110deg and Ground speed of 100 kt. The wind data is:

- a) 300deg/15 kt.
- b) 270deg/80 kt.

**c) 310deg/50 kt.**

- d) 070deg/90 kt.

A62. An YPAM flies with a True Heading of 180deg, True Air speed 65 kt, True course 160deg and Ground speed 110 kt. The wind data is :

- a) 220deg/20 kt.
- b) 310deg/40 kt
- c) 210<sup>0</sup>/10 kt.

**d) 310deg/55 kt.**

A63. An YPAM flies with a True Heading of 90deg, True Air speed of 70 kt, True course of 110deg and Ground speed of 110 kt. The wind data is :

- a) 320deg/50 kt.**
- b) 220deg/20 kt.
- c) 300deg/20 kt.
- d) 220deg/50 kt.

A64. According to the compass heading, we fly on track 270deg. If the Deviation is 4E and the Variation is 2E, what is the True heading ?

- a) 264deg.

**b) 276deg.**

- c) 272deg.
- d) None of the above.

A65. An Ultra-Light aircraft flies at a distance of 80nm from the airport of departure and 10nm right of track. From this position to the destination airport the distance is 150nm. How many degrees is the angle between, the track it needs to follow in order to go directly to the destination airport and the wrong track, that led it 10nm off course ?

- a) 004deg to the Left.
- b) 007deg to the Right.

**c) 011deg to the Left.**

- d) 007deg to the Left.

A66. An YPAM flies at a distance of 50 nm from the airport of departure and is 25nm right of the track . From this position to the destination airport the distance is 200nm. How many degrees is the angle between, the track it needs to follow in order to go directly to the destination airport and the wrong track, that led it 25nm off course ?

**a) 037deg to the Right.**

- b) 007deg to the Right.
- c) 007deg to the Left.
- d) 030 deg to the Left.

A67. An YPAM flies at a distance of 150nm from the airport of departure and is 25nm left of track . From this point to the destination airport the distance is 200nm. How many degrees is the angle between, the track it needs to follow in order to go directly to the destination airport and the wrong track, that led it 25nm off course ?

a) 010deg to the Right.  
b) 007deg to the Right.  
**c) 017deg to the Right.**  
d) 017deg to the Left.

A68. An YPAM flies at a distance of 250nm from the departure airport and 25nm to the left off track. How many degrees is the angle between the track followed to this offset point, with the parallel track that should have been followed, in the first place, in order to fly to the destination airport.

a) 009° to the right.  
b) 003° to the right.  
**c) 006° to the right.**  
d) 004° to the left.

A69. According to our compass we fly a course of 180deg .If the Deviation is 6W and the Variation 2E, what is the True Course ?

**a) 176 deg.**  
b) 184 deg.  
c) 182 deg.  
d) None of the above.

A70. A pilot of an YPAM realizes that after flying 20nm, he is 5nm off course. How far will he be out of course after completion of 150nm of flight ?

a) 60nm.  
**b) 37,5nm.**  
c) 100,5nm.  
d) 0,7nm.

A71. A pilot of an YPAM realizes that after flying 30nm, is off course by 10nm. How far he will be off course after the completion of a 200nm flight .

**a) 67nm.**  
b) 37nm.  
c) 50nm.  
d) 60nm.

A72. A pilot of an YPAM realizes that after flying 45nm he is off course by 12nm. How far will he be off course after the completion of a 150nm flight.

a) 67nm.  
**b) 40nm.**  
c) 500nm.  
d) 60nm.

A73. A pilot of an YPAM realizes that, after 10nm flight, he is out of course by 3nm. How far off course will he be, upon the completion of 230nm of flight ?

**a) 69nm.**  
b) 42nm.  
c) 77nm.  
d) 600nm.

A74. One minute of Latitude equals to :

**a) One nautical mile.**  
b) One kilometre.  
c) 60 nautical miles.  
d) 60 kilometres.

A75. The altitude of 20.000ft in the ICAO Standard Atmosphere, above the surface of 1013hpa, can be given as...

- a) Pressure altitude of 20000ft.
- b) FL 020
- c) Pressure altitude 20.000ft or FL200.**
- d) Density altitude 20.000 ft.

A76. What distance will be covered during a flight at 60kt within 1 hour and a half ?

- a) 40nm.
- b) 90nm.**
- c) 60nm.
- d) None of the above .

A77. Which of these characteristics can be found on a quality map?

- a) Preserves proportions and shapes.
- b) Rump lines and great circles are depicted as straight lines.
- c) The scale is constant throughout the map and adjacent map sheets perfectly match along connection side.
- d) All the above are true.**

A78. During flight, the Drift of an YPAM is due to:

- a) Wind .**
- b) Skid.
- c) Turbulence.
- d) Difference between the actual and the magnetic North .

A79. The line defined by the vertical projection of a flying YPAM on the ground is called :

- a) Spot.
- b) Track.**
- c) Course .
- d) None of the above.

A80. Map reading during dead reckoning must be carried out:

- a) From the map to the ground.**
- b) From the ground to the map.
- c) There is no rule.
- d) None of the above.

A81. Define as true or false the following statements .

Statement I: Greenwich is on 000deg 00' 00'' longitude .

Statement II: If the points of departure and arrival have coordinates: 030deg 00'30''W  
040deg 00'30''E respectively, then the difference in longitude they have is 010deg 00'00''W

- a) Only statement I is true.**
- b) Only statement II is true.
- c) Both I and II are true.
- d) Both I and II are false.

A82. Great circle on the earth's surface is the circle...

- a) That crosses geographical North and does not intersect the equator.
- b) Lies on a plane parallel to the plane defined by the Equator.
- c) Defining a plane passing through the centre of the Earth.**
- d) That has a length 8 times the radius of the Earth.

A83. True Altitude is :

- a) The Altitude above the isobaric surface of 1013hpa.
- b) The Altitude above ground or sea.
- c) The Altitude above mean sea level.**
- d) None of the above.

A84. Define as "TRUE" or "FALSE", the following statements:

Statement I: "When we fly following great circle arc, then we fly rump line track."

Statement II: "Orthomorphism on a map, generally means, that shapes are preserved."

a) Only Statement I is true.

**b) Only Statement II is true.**

c) Both are true.

d) Both are false.

A85. Declare as "TRUE" or "FALSE", the following statements:

Statement I: QNH is the pressure at Mean Sea Level, in the real atmosphere.

Statement II: QFE is the pressure Mean Sea Level in the ICAO Standard Atmosphere.

a) Only Statement I is true.

b) Only Statement II is true.

c) Both are true.

**d) Both are false.**

A86. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: 1 m = 3,28ft .

Statement II: The symbol  on an ICAO map indicates the highest obstacle.

a) Only Statement I is true.

b) Only Statement II is true.

**c) Both are true.**

d) Both are false.

A87. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: When the pressure altitude is 20,000 feet and the outside temperature is 2 degrees Celsius, the density altitude is about 17,950 feet.

Statement II: When the pressure altitude is 15,000 feet and the outside temperature is 8 degrees Celsius, the density altitude is about 17550 feet.

a) Only Statement I is true.

**b) Only Statement II is true.**

c) Both are true.

d) Both are false.

A88. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: After traveling 30nm an YPAM was found 4nm off track. The track error is about 8 degrees.

Statement II: One degree displacement off track, causes an YPAM to be approximately 17.5 NM off track after a 100nm trip.

**a) Only Statement I is true.**

b) Only Statement II is true.

c) Both are true.

d) Both are false.

A89. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: 110 degrees Fahrenheit correspond to about 43 degrees Celsius.

Statement II: 1 US gall  $\cong$  3,8 L.

a) Only Statement I is true.

b) Only Statement II is true.

**c) Both are true.**

d) Both are false.

A90. Declare as "TRUE" or "FALSE", the following Statements:

Proposal I: Transition Altitude is the true altitude at or below which we use QNH on the altimeters.

Proposal II: "Transition Level is the Level at or above which we use QNE on the altimeters

a) Only Statement I is true.

b) Only Statement II is true.

**c) Both are true.**

d) Both are false.

A91. Declare as "TRUE" or "FALSE", the following Statements:

Proposal I:  $150^{\circ} 50'$  longitude arc correspond to 10 h 3 min 20 sec time.

Proposal II:  $15^{\circ}$  longitude arc correspond to 60 min time.

a) Only Statement I is true.

b) Only Statement II is true.

**c) Both are true.**

d) Both are false.

A92. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: Solar day is the time between two successive passages of the sun from the meridian of the place.

Statement II: As inclination (dip) of the magnetic needle, is called the angle between the needle of the compass and the horizontal plane.

a) Only Statement I is true.

b) Only Statement II is true.

**c) Both are true.**

d) Both are false.

A93. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: As Relative Bearing of a point from the aircraft, we call the angle between the radial connecting the a/c and the point and the longitudinal axis of the aircraft, counting clockwise, starting from the extension of the longitudinal axis to the front of the aircraft.

Statement II: The magnetic bearing is not related to the longitudinal axis of the aircraft, but is related with the magnetic north.

a) Only Statement I is true.

b) Only Statement II is true.

**c) Both are true.**

d) Both are false.

A94. Declare as "TRUE" or "FALSE", the following Statements:

Statement I: Drift is the angle formed by the intended and the actual track.

Statement II: For an YPAM flying at 10000ft with indicated Air Speed 100kt, the True Air Speed is 100kt the most.

**a) Only Statement I is true.**

b) Only Statement II is true.

c) Both are true.

d) Both are false.

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**AERODYNAMICS-GENERAL TECHNICAL KNOWLEDGE**

C1. When the wing of an aircraft is flying, it is essentially the result of a combined action of the air on the upper and the lower part of the wing, where the traversing air causes lower pressure at the upper part. As a result a force is created, which is called:

**a) Lift (L), which we consider to be exerted at a point of the wing called center of pressure.**

b) Drag (D), opposing the motion of an YPAM into the air.

c) Thrust (T), forcing the aircraft to move forward.

d) Weight (W), opposing the Lift (L).

C2. The wing of a flying aircraft forms a certain angle with the direction of movement, which can be changed by the pilot at any time. The angle between the chord of the wing and the relative wind is called:

a) Trailing angle.

**b) Angle of attack.**

c) Lift angle.

d) Drag angle.

C3. The wing of an aircraft flying is forming a certain angle with the direction of motion, which can be changed by the pilot beyond a critical value (critical angle of attack) then ...

- a) Drag (D) overcomes the Lift (L) and while the phenomenon of lower than free stream pressure continues to exist, the micro-vortices under the surface of the wing, cause the wing to stall.
- b) The false increase of the angle of attack causes an increase of the flight speed, which in turn leads to a stall.
- c) The normal flow of air is not disrupted and the phenomenon of lower than free stream pressure does not cease. However, Lift(L) is affected, the loss of which causes the aircraft to stall.

**d) The normal flow of air is separated from the upper surface of the wing and creates vortices of air and micro-whirls. The phenomenon of lower than free stream pressure, abruptly disappears and the lift(L) vanishes. The aircraft then becomes into a stall.**

C4. When the four basic forces acting on an YPAM, lift(L), weight(W), thrust(T) and drag(D) are in balance?

- a) During non-accelerated flight.**
- b) When the aircraft accelerates in flight.
- c) When the aircraft accelerates on the ground for take-off.
- d) None of the above.

C5. What is the relation among the four basic forces acting on an YPAM in straight and level flight (cruise)?

- a) Lift (L) and weight (W) are equal to thrust (T) and drag (D) respectively.
- b) Lift (L), drag (D) and weight (W) are equal to the thrust (T).
- c) Lift (L) is equal and opposite to the weight (W) and the thrust (T) is equal and opposite to the drag (D).**
- d) The 4 basic forces, acting on an aircraft, are lift (L), weight (W), thrust(T) and drag (D), and are equal.

C6. The principles of aerodynamics teach us, about the flight and the generating mechanism of lift (L), that:

- a) It is solely due to the flow of air along the wings surface.
- b) The velocity of the flow around the wing is affected by the value of the angle of attack.
- c) The engine performance plays no role to the phenomenon of flight.
- d) All other answers are true.**

C7. Many consider the weight as a force fixed and unchangeable. The YPAM pilots know that the concept of weight is much more complex, regarding the flight. When we fly, when does the actual weight and the relative weight of an YPAM coincide and the load factor value equals to one (1 g) ?

- a) When turning, because the load factor (g) increases and the actual weight of the aircraft act as a centrifugal force.
- b) In steep climb manoeuvres, for heavier twin seat YPAMs, and smoother climb manoeuvres for single seat and lighter YPAMs.
- c) In straight and level flight.**
- d) None of the above.

C8. The size of the additional load (and therefore relatively large force), which can be exerted to the wing of an airplane can be proved dangerous and depends...

- a) On the abrupt displacement of the position of the centre of gravity, and for this reason we check the so called "Weight & Balance" at periodic and regular time intervals.
- b) On the airplane's flight speed, and this is why there is a speed, that should never be exceeded ( $V_{ne}$  -  $V_{never\ exceed}$ ).
- c) On how abruptly the force will be exerted and this is the reason why, we always perform smooth and never abrupt manoeuvres.**
- d) On the the stalling speed, since the closer it is to the cruising speed the higher is the risk for the pressure over the wing to vanish, which implies that Lift (L) vanishes as well.

C9. During flight, which basic flight control input increases the size of the additional load (the relative weight issue) and therefore the load factor of an YPAM?

a) Climb.

**b) Turn.**

c) Stall.

d) Flight at high speed reaching the maximum permissible speed ( $V_{ne}$  - never exceed).

C10. During entering in a state of additional load (large relative weight), such as when entering a turn, the increased load factor's first result is ...

a) the stall from which the pilot can exit only with proper inputs.

b) To fall into a spin from which the pilot can exit only with proper inputs.

**c) A more difficult way to handle the aircraft - but again the pilot can exit from this situation with proper inputs.**

d) A flight at high speed, reaching the maximum permissible speed ( $V_{ne}$ ), from which the pilot can exit with proper inputs.

C11. For an YPAM pilot the speed to be maintained during a flight with turbulence, is called manoeuvring speed and is ...

a) Always written in the flight manual of every aircraft.

b) Usually written on a tag at the aircraft's console, in order not to be forgotten.

c) The speed specified in the manufacturer's manuals as manoeuvring speed ( $V_a$ ).

**d) All other answers are correct.**

C12. What plays the most important role in flight, in terms of safety, is the ability of the pilot to control the speed of flight. Why is this important?

a) The so-called "indicated airspeed" is a key issue so to recognize how fast we are moving relative to the ground.

b) The so-called "indicated airspeed" is a key issue in order to estimate the fuel consumption if e.g. a strong head wind slows down the speed of the aircraft relative to the ground.

**c). The so-called "indicated airspeed" is a key issue to know and recognize the speed of the air flow running along the wing surface and determine the ability of the aircraft to stay airborne.**

d) All the above

C13. For the three axes YPAMs, one of the main functions of the flaps during approach and landing is to ...

a) Decrease the angle of descent without increasing the airspeed.

b) Assist the landing on the runway with a greater indicated speed.

**c) Increase the angle of descent without increasing airspeed.**

d) Decrease the angle of descent with increasing airspeed thus allowing the contact with the runway more safely.

C14. To avoid filling the fuel tanks with gasoline that may contain water or other impurities, a good practice is considered:

a) To use fuel from reliable sources.

b) To use containers (cans) exclusively for this use and to check them visually for water or other impurities before filling.

c) To make use of a special «trap» filter that holds dirt and water.

**d) All other answers are correct.**

C15. To avoid ignition during filling the aircraft with the gasoline, YPAM pilots know:

a) Not to smoke near or next to containers (cans) containing fuel or during filling the tanks with fuel.

b) To use containers (cans) with specific standards, exclusively for this use and in case of metal containers, to be filled always after placed on the ground (not in baggage compartment).

c) Not to move away from the aircraft, for any reason, until the process is complete.

**d) All other answers are correct.**

C16. Each year many YPAM pilots, worldwide, face mechanical problems caused by fuel containing water, because they mistakenly believe that ...

- a) The fuel filter retains water while it is true that it only retains impurities and scrapings.
- b) Water can be transferred from tank to tank, but it can also be formed inside the tank, of an YPAM, from water vapour condensation.
- c) The container(tank), which they used was clean of water, when someone else had washed it recently or was left open and condensation occurred inside.
- d) All above answers are correct.**

C17. An YPAM pilot will fly a journey during which it will be required to refuel at intermediate stations. What can he drastically do, to reduce the probability of using gasoline contaminated with water?

- a) Carry with him a funnel-water trap filter which he will place between the fuel container or the pump pistol and the YPAM's fuel tank.**
- b) The most practical solution is to carry additional fuel tanks with all required trip fuel. This is the only way to be sure about the quality of fuel.
- c) Before the flight he cares for the replacement of the fuel filter, which retains water impurities and scrapings.
- d) None of the above.

C18. Statistically, the leading cause of fuel related accidents, worldwide, concerning YPAMs and general aviation is:

- a) Using fuel containing impurities or water (referred to as «fuel contamination»).
- b) Fuel leak at the supply system that leads to the lack of sufficient quantity of fuel to run the engine (referred to aviation books as «engine out»).
- c) False calculation of the necessary amount of fuel required to run the flight (is referred to as «fuel mismanagement»).**
- d) None of the above.

C19. Density altitude has an important (and inevitable) influence on the performance of all aircraft and is defined in the bibliography as:

- a) Pressure altitude corrected for temperature variations.**
- b) The height above mean sea level.
- c) The height indicated when we place, in the altimeter's collimator, the barometric pressure of 1013.2 millibars.
- d) None of the above.

C20. An airfield or airport ZZZZ situated at high altitude, intense summer heat and humidity conditions can turn a take-off or routine landing of an YPAM in a very difficult situation, because ...

- a) The low density altitude means that the density of the air has increased, reducing the performance of the aircraft and the engines.
- b) The low density altitude reduces the efficiency of aircraft and engines.
- c) The high density altitude increases the efficiency of the aircraft, but reduces the efficiency of the engines (namely the propeller).
- d) The high density altitude reduces the efficiency of aircraft and engines.**

C21. The air density altitude at an airport mainly varies by changes in temperature and less by changes in humidity. A high density altitude means that the air density has been ...

- a) Increased and thus the efficiency increases because of less friction at the propeller blades.
- b) Reduced, which adversely affects the performance of the aircraft.**
- c) Reduced, which affects positively the performance of the aircraft, since there is less drag.
- d) Increased, which adversely affects the performance of the aircraft.

C22. Is it necessary to know how to calculate the density altitude?

- a) Yes, because it is an aircraft's performance index.**
- b) Yes, because we must have true altitude indications above mountain ranges.
- c) Yes, because we must be able to calculate the pressure altitude
- d) Yes, because it is an index of the air density that decreases with height.

C23. The Pitot tube is the dynamic pressure sensor that is found on all General Aviation aircraft. Which instrument is out of service if the pitot tube becomes clogged?

- a) The altimeter, showing constantly a zero indication.
- b) The vertical speed indicator and it remains unchanged.
- c) The airspeed indicator showing constantly zero or erroneous indications.**
- d) None of the above.

C24. The Pitot tube is a dynamic pressure sensor. To avoid the chance of a blocked dynamic pressure sensor a good pilot ...

- a) Covers the tube intake with a protective cover after the flight and removes it, in the pre-flight check before his next flight.**
- b) Never touches the Pitot tube intake, because it will no longer measure airflow correctly, resulting in incorrect readings of the airspeed indicator.
- c) During scheduled servicing and technical inspections, covers the intake of the tube with a protective cover, which contains oil with antioxidant properties.
- d) Supplies the YPAM with a backup speedometer, preferably digital, because it is not as much affected by vibrations and does not require the conventional dynamic pressure sensor.

C25. If an YPAM flies with a clogged dynamic pressure sensor (pitot tube), will lead to ...

- a) False readings on the instrument that indicate the engine hours.
- b) False readings on the instrument that indicate flight altitude.
- c) False readings on the instrument that indicate rate of climb-descent.
- d) False readings on the instrument that indicate air speed.**

C26. In case an YPAM is flying with a clogged dynamic pressure sensor (pitot), it will lead to...

- a) The indication on the Vertical Speed Indicator showing zero.
- b) The airspeed indications remaining unchanged, zero or incorrect.**
- c) The speed indications reducing, when the aircraft is descending.
- d) The speed indications increasing, as the aircraft is climbing.

C27. A good YPAM pilot, during the pre-flight check, took care and removed the protective cover from the dynamic pressure sensor (pitot tube). During the flight he realizes that the altimeter is inoperative. What does he conclude?

- a) He checks visually if the cover from the dynamic pressure sensor is indeed removed (pitot tube). In case he cannot visually confirm, he asks someone with binoculars to confirm it from the ground
- b) Since the instrument that is inoperative is the altimeter there is no connection with the dynamic pressure sensor (pitot tube) but with static pressure port connected to the altimeter.**
- c) Concludes that the instrument that is inoperative is the altimeter, and so he does not trust the airspeed indications also, since both receive information from the dynamic pressure sensor (pitot tube) which is obviously clogged.
- d) Concludes that during the pre-flight check he did not remove the protective cover from the dynamic pressure sensor, the pitot tube, as he should have done.

C28. The Altimeter of an YPAM is basically a barometer which measures the barometric pressure. In case it starts giving erroneous readings, before replacing it, is recommended to...

- a) Check carefully if the ports of the static pressure are clogged.**
- b) Remove the instrument and send it to the manufacturer for calibration.
- c) Carefully check the dynamic sensor pressure (pitot tube) whether it is blocked by scrapings or insects.
- d) None of the above.

C29. The altimeter of an YPAM is essentially a specially manufactured metal barometer that has a selector and a subscale (Collman box). The altimeter indicates the altitude the aircraft is flying in feet. When the pilot sets the barometric pressure, provided by the Air Traffic (QNH), the altimeter of the flying aircraft will show ...

- a) Altitude above the sea mean level.**

- b) The actual height in relation to the ground below (AGL), provided there is no change in terrain morphology or atmospheric pressure.
- c) It will indicate the true altitude above the ground as also seen by an Air Traffic Controller, using a Ground Radar.
- d) None of the above.

C30. An YPAM pilot, before flight, adjusts the altimeter to indicate 0 (zero).

After take-off the aircraft altimeter will show ...

- a) Indicated altitude above mean sea level (MSL).
- b) Absolute altitude above the fixed reference level (AGL).
- c) True altitude above the ground.
- d) None of the above.**

C31. An YPAM pilot wishes to fly cross-country. What 'height' should he fly so when he informs Air Traffic Control and other aircraft for his height, everyone is speaking about the same thing?

- a) He should report his Indicated altitude above mean sea level.**
- b) He should refer to Absolute altitude also known as "AGL".
- c) He should state the actual height above ground as given by ground radar.
- d) None of the above.

C32. In aviation, what is the meaning of the term "Absolute Altitude", also known as Above Ground Level (AGL)?

- a) It is the altitude, shown on the altimeter, when the local barometric pressure (QNH) is set. We use it to avoid obstacles and to ensure separation of air traffic.
- b) It is the height above mean sea level and only radar service can provide it exactly.
- c) It is the altitude above ground level; it indicates our altitude, when it is set to zero on ground, and we don't perform low altitude local flights over flat ground.
- d) None of the above.**

C33. What do we call in aviation "Indicated Altitude" also known as height above mean sea level (MSL) ?

- a) It is the altitude from the mean sea level, indicated on the altimeter, when the local barometric pressure (QNH) is set. We use it to avoid obstacles and in air traffic separation.**
- b) It is the altitude above ground level and indicates the altitude when the altimeter is set to zero on the ground. We use it for local low-flying.
- c) It is the height above mean sea level. This is the elevation reported on aviation maps concerning obstacles, such as mountains. In case of aircraft, only GPS gives us an approximate figure and only radar can provide it accurately.
- d) It is not used by YPAMs. It is the value that is indicated, when we set a barometric pressure of 1013,2 millibars at the collman box. It is known as Pressure altitude or FL and is used for flights above 18,000 feet.

C34. What do we call in aviation, "True altitude"?

- a) It is the altitude, from mean sea level, indicated on the altimeter when the local barometric pressure (QNH) is set to the Collman box. We use it to avoid obstacles and air traffic separation.
- b) It is the altitude above ground level and indicates the altitude, when the altimeter is set to zero on the ground. We use it for local low-flying.
- d) It is not used in YPAMs. It is the reading indicated, when a barometric pressure of 1013,2 millibars is set at the collman box, also known as Pressure altitude or FL. It is used for flights above 18,000 feet.
- d) It is the height above mean sea level. This is the height reported on aviation maps concerning obstacles such as mountains. In aircraft, only GPS gives us approximately this figure and radar can provide it accurately.**

G35. For YPAMs, a very important and useful flight instrument is the barometer or bario (rate of climb/descent) ...

- a) Indicates the rate we climb or descend, expressed in feet per minute.

- b) Indicates the vertical speed by measuring the rate of change in static pressure.
- c) Displays valid indications only after the aircraft is stabilized on a course.

**d) All the above.**

C36. As the altitude increases, the indicated airspeed at which an aircraft falls into a stall, with a particular configuration,

- a) Decrease as the true airspeed decreases
- b) Decrease as the true airspeed increases

**c) Remains the same regardless of altitude.**

d) None of the above.

C37. Deviation of a compass is caused by ...

- a) A defect of the compass magnets either by the manufacturer or by a hit.
- b) Flight into electrically charged clouds that generate magnetic fields.

**c) Magnetic fields within the aircraft distorting the magnetic lines.**

d) The magnetic fields caused by fluctuations of the aircraft's weight.

C38. During flight, when are the indications of the magnetic compass accurate?

**a) Only in straight and level, non-accelerated flight.**

b) When the airspeed is constant.

c) When turns do not exceed 18 degrees.

d) The indications of the magnetic compass are always accurate in flight.

C39. YPAMs are more vulnerable to high winds than light or heavy aircraft. To resist drift, caused by the wind, the pilot must steer the aircraft so the nose points into the wind, but just enough so he does not alter the course of the flight. Applying this technique, the aircraft..

a) Does not exactly follow the direction the pilot wants and a small drift is observed, similar to the sideway move of a "crab".

**b) Follows the direction that the pilot wishes, but flies sideways, looking like the move of a crab.**

c) Flies by the technique of the pilot to navigate the aircraft so that the nose points into the wind, but just enough so to not change the course of the flight. This is not recommended for YPAMs. Only heavier aircraft can move sideways (crab).

d) Follows the direction desired by the pilot, but it is not recommended and since YPAMs are more vulnerable to high winds there is a possibility to dive into a spin.

C40. When a plane is loaded so that the center of gravity is located behind the aft center of gravity limit, then what unwanted flight characteristic the pilot comes against?

a) Longer take-off distance.

b) Easier recovery after a stall.

**c) Stall at higher airspeed than usual.**

d) None of the above.

C41. Loading the plane so that the center of gravity is located behind the aft limit, will result in...

**a) Less stability at all speeds.**

b) Less stability at low speeds, but more stability at high speeds.

c) Less stability at high speeds, but more stability at low speeds.

d) None of the above.

C42. The acceleration measurement unit in aviation is expressed as  $g = 9.81 \text{ m / sec}^2$  (equal to the acceleration due to gravity). The YPAM pilots, regarding load factor (g), know that ...

a) Stresses the airframe and should be avoided.

b) During steep manoeuvres, such as a 60 degree bank angle turn, stress on airframe, increases dangerously.

c) Every aircraft manufacturer indicates, in the aircraft manual, the permissible load limits (g).

**d) All the above.**

C43. In the case of a spiral dive to the left ...

**a) Both wings are in stall.**

- b) Only the left wing is in a stall.
- c) Only the right wing is in a stall.
- d) None of the above.

C44. Take off from a landing field (ZZZZ) that has no weather station. What pressure setting we will use to adjust the altimeter ?

- a) We will take off and call the nearest airport to give us the QNH.
- b) We will use the pressure setting of standard atmosphere 29.92 inHg.
- c) We will use the pressure setting, that when set, the instrument will indicate the elevation of the landing field.**
- d. None of the above.

C45. In a three-axis YPAM the purpose of aerodynamically trimming the controls is...

- a) The coordination of all control movements.
- b) The reduction of aerodynamic loads on the controls.**
- c) The return of the flight controls to the neutral position when they become released.
- d) All the above.

C46. In the case of an engine failure of a three axis YPAM, the greatest gliding distance is achieved ...

- a) By extending the flaps.
- b) When the L/D ratio is maximum (lift / drag ratio).**
- c) Flying just above the stall speed.
- d) When we fly just below the stalling speed.

C47. Center of pressure is called ...

- a) The center of gravity of the aircraft.
- b) The point on the wing, where we consider that lift is applied.**
- c) The point where the wing of the aircraft is connected to the fuselage.
- d) The point at which the landing gear is connected to the fuselage.

C48. By increasing the total weight of the airplane, the landing speed...

- a) Decreases.
- b) Remains unchanged.
- c) Increases.**
- d) Is equal to the stall speed.

C49. What effect has high humidity on aircraft performance?

- a) Improves performance.
- b) Reduces performance.**
- c) Does not affect performance.
- d) Given moisture only, we cannot arrive to a conclusion. We also need to know temperature.

C50. In a three axis taxiing YPAM the wind is from behind and its direction at an angle with respect to the longitudinal axis. What should the position of the ailerons be (for better stability of the aircraft)?

- a) Ailerons in the neutral position.
- b) Aileron up at the side of the blowing wind.
- c) Aileron down at the side of the blowing wind.**
- d) Turn the steering control in the opposite direction from where the wind is blowing.

C51. In a three axis YPAM taxiing with tail wind, what position should the elevator controls take to assist the stability of the aircraft ?

- a) Up.
- b) Down.**
- c) Neutral position.
- d) Pulling the steering control.

C52. Most aircraft are designed in such a way that stall appears:

- a) At the aileron controls area.

- b) At the wing tip area.
- c) Simultaneously throughout the wing area.
- d) First at the root of the wing.**

C53. In a three axis YPAM, the high lift devices at the wing leading edge (slats, slots).....

- a) Increase lift.**
- b) Increase lift due to the increasing wing area.
- c) Are only used during landing.
- d) Mainly increase drag.

C54. In a three axis YPAM high lift devices at the leading edge of the wing (slats, slots), when used at the outer parts of the wing (towards wing tips)...

- a) Reduce the vortices at the wing tip area.
- b) Increase the effective angle of attack at these areas and so the stall starts at the wing tips.
- c) Increase induced drag and therefore stabilize the aircraft.
- d) Reduce the effective angle of attack at these areas and thus stall starts from the wing root.**

C55. In a three-axis YPAM the horizontal stabilizer, during a straight and level flight, produces...

- a) Lift, parallel and opposite, in direction, to wing Lift.**
- b) Lift, parallel and in same direction with wing Lift.
- c) Lift, at an angle of 45 degrees to the wing Lift and opposite in direction.
- d) Lift, at an angle of 45 degrees to the wing Lift and same in direction.

C56. A well-designed YPAM has as ideal characteristics (regarding the stability of a common aircraft)...

- a) Positive static and neutral dynamic stability.
- b) Positive static and negative dynamic stability.
- c) Positive static and positive dynamic stability.**
- d) Negative static and positive dynamic stability.

C57. In a three axis YPAM with front engine (tractor), the need to correct the path with respect to the vertical axis (yaw) is higher in conditions of...

- a) High power and medium speed.**
- b) Low power and high speed.
- c) High power and high angle of attack.
- d) High power and low angle of attack.

C58. What is the phenomenon of ground effect and at what height does it appear?

- a) Reduction of the induced drag at heights less than or equal to the wingspan.**
- b) Reduction of lift for a given speed at heights less than or equal to the wingspan.
- c) Reduction of induced drag at heights greater than or equal to two wingspans.
- d) Increase of induced drag at heights greater than or equal to two wingspans.

C59. What is the effect of "ground effect phenomenon" during landing?

- a) It is negligible for YPAMs due to low speeds.
- b) Wing tip vortices increase, causing turbulence to the following aircraft.
- c) Landing in stall conditions require less elevator control deflection compared to the same landing with no ground effect phenomenon.
- d) Reduction of the induced drag, thus resulting in excess speed at floating during flare.**

C60. To exit from a stall a pilot must...

- a) Reduce the angle of attack and increase thrust.**
- b) Increase the angle of attack and increase thrust.
- c) Reduce the angle of attack and turn to the left.
- d) Decrease the angle of attack and turn to the right.

C61. The maximum range is achieved with the minimum thrust that keeps the aircraft:

**a) Steady in straight and level flight.**

- b) At a slow long descend.
- c) At the lowest possible speed.
- d) At the lowest possible speed with the high lift devices (flaps-slats) fully extended.

C62. The induced vortices generated by a preceding aircraft (at landing or take off) are more intense when the aircraft that generated them is...

- a) Heavy, clean configuration (without flaps, gear up), and slow moving.
- b) Light, in landing configuration and slow moving.
- c) Light, in clean configuration, and fast moving.

**d) Heavy, in landing configuration (with flaps down) and fast moving.**

C63. In a three-axis YPAM the use of trailing edge high lift devices (flaps) during the approach and landing...

**a) Increase the angle of descent without increasing the speed respectively.**

- b) Reduce the descent angle without increasing the speed respectively.
- c) Allows contact with the runway at a greater indicated airspeed.
- d) Reduce significantly the need for braking after contact with the runway.

C64. An aircraft has a glide ratio of 14 : 1, how much height will this aircraft lose, gliding without motor, over a 28 km distance ?

- a) 1500 meters.
- b) 200 meters.
- c) 2000 meters.**
- d) 1752 meters.

G65. At which case the indicated altitude coincides with the true?

**a) At sea level, with standard atmospheric conditions.**

- b) At a height lower than 4800ft, under standard atmospheric conditions.
- c) When the instrument has no mechanical error.
- d) Only in the equatorial region and at a 20 degrees Celsius temperature.

C66. The empty weight of an aircraft...

- a) Contains the weight of the pilot and does not contain the weight of the unusable fuel.
- b) Is the same for all aircraft of the same type.

**c) Contains the weight of lubricants and hydraulic fluids plus the weight of any unusable fuel.**

- d) Must be recalculated every six months.

C67. At an aircraft with a fixed pitch propeller, the revolutions per minute (rpm) indication is indicative of the power output (higher engine revolutions are equivalent to a higher power output). This statement is...

- a) Always true.
- b) True but only for the same flight levels.**
- c) Applicable only during climb..
- d) Applicable only during descent.

C68. An YPAM is in straight and level flight, when suddenly the pilot feels an increase in his weight (pressing and pinning him to his seat). It means that ...

**a) The aircraft is climbing and accelerates up.**

- b) The aircraft loses height abruptly and is descending.
- c) The aircraft has undergone a load shift that has affected the center of balance.
- d) None of the above.

C69. An YPAM is in straight and level flight and the pilot suddenly feels a sudden reduction of his weight with a sense of being lighter (like leaving his seat). It means that ...

- a) The aircraft is accelerating upwards and is climbing.
- b) The aircraft loses height quickly and abruptly and is descending.**
- c) The aircraft has undergone a load shift that has affected the center of balance.
- d) None of the above.

C70. The "angle of attack" is the angle?

- a) Between the aircraft's climb angle and the horizon.
- b) Between the chord of the wing and the relative wind.**
- c) Between the longitudinal axis of the plane and the chord of the wing.
- d) None of the above.

C71. What is the relationship between lift, drag, thrust and weight, when the aircraft is in straight and level flight?

- a) Lift and the weight is equal to the thrust and the drag respectively.
- b) Lift is equal to the drag and weight to the thrust.
- c) Lift is equal and opposite to the weight and thrust is equal and opposite to drag.**
- d) None of the above.

C72. What is the function of the rudder on a plane?

- a) Controls the movement about the vertical axis (yaw).**
- b) Controls the movement about the longitudinal axis (roll).
- c) Controls the movement about the horizontal axis (pitch).
- d) All the above.

C73. The angle of attack at which the wing of an airplane falls into stall....

- a) Increases when the center of gravity shifts forward.
- b) Changes with increasing weight.
- c) Remains the same regardless of weight change.**
- d) All the above.

C74. The size of the additional load that can be applied to the wing of an airplane, depends on...

- a) The location of the center of gravity.
- b) The speed of the airplane.
- c) How abruptly the load will be applied.**
- d) All the above.

C75. During entry into stall the increased load factor results in the aircraft...

- a) Stalling at a higher airspeed.**
- b) Tending to fall into a spin.
- c) To be harder to control.
- d) All the above.

C76. One of the main functions of the flaps, during approach and landing, is to...

- a) Reduce the angle of descent without increasing airspeed.
- b) Allow the contact with the runway with greater indicated airspeed.
- c) Increase the angle of descent without increasing airspeed.**
- d) None of the above.

C77. What is the use of flaps?

- a) Allows the pilot to approach for landing with a greater angle of descent without increasing airspeed.**
- b) Allows the pilot to fly without exerting pressure on the controls.
- c) Reduce the wing area and change the lift.
- d) None of the above.

C78. What effect has a high density altitude on the efficiency of the propeller compared to lower density altitude and why?

- a) The efficiency increases due to less friction on the blades of the propeller.
- b) The efficiency is reduced because less force is exerted by a propeller at a higher density altitude than in a lower density altitude.**
- c) The efficiency is reduced due to the increased power of the propeller in the thinner air.
- d) None of the above.

C79. In what conditions is the indicated altitude the same as true altitude?

- a) When the altimeter has no mechanical error.
- b) When standard atmospheric conditions prevail.**
- c) When we fly at 18,000 feet with 29.92 barometric set to the instrument.
- d) All the above answers are inaccurate.

C80. What will the indication change be, if we change barometric setting from 29.15 to 29.85?

- a) Approximately 70 feet increase to the indicated altitude.
- b) Approximately 70 feet increase to the density altitude.
- c) Approximately 700 feet increase to the indicated altitude.**
- d) All the above answers are completely inaccurate.

C81. What is the value of the "g" load factor in a steady 60 degree turn?

- a) 1 g.
- b) 2 g.**
- c) 4 g.
- d) 5 g.

C82. Which combination of atmospheric conditions degrade the most aircraft performance during take-off?

- a) Low temperature and low relative humidity.
- b) High temperature and low relative humidity.
- c) High temperature and high relative humidity.**
- d) All the above answers are completely inaccurate.

C83. What factor tends to increase the density altitude at an airport?

- a) The increase of temperature.**
- b) The decrease of temperature.
- c) The reduction of relative humidity.
- d) All the above answers are completely inaccurate.

~~~~~ **METEOROLOGY** ~~~~~

M1. The atmospheric weight exerted on the earth's surface, is the weight of the overlying air per unit area, expressed in millibars or equivalently in hectoPascals. Pilots are well aware that ...

- a) The standard value of atmospheric pressure at sea level (zero altitude) is 1013hPa and decreases very much with height.**
- b) The standard value of atmospheric pressure at sea level (zero altitude) is 500hPa and increases very much with height.
- c) The standard value of atmospheric pressure at sea level (zero altitude) is 200hPa and decreases very much with height.
- d) None of the above. Atmospheric pressure at sea level is of no importance in aviation.

M2. Concerning air density, pilots are well aware that the performance of an aircraft significantly depends on air density, meaning that...

- a) The higher an aircraft is flying, pressure change has no effect on the change in density resulting in no decrease of performance .
- b) The higher an aircraft is flying, pressure variation affects the change in density hence the thinner is the air and the more is the decrease in performance.**
- c) The higher an aircraft is flying , there is no change of air pressure, and the air becomes thinner just because temperature decreases.
- d) The performance of an aircraft does not depend on air density.

M3. The uneven heating of the earth's surface from the sun during the day, due to the uneven distribution (land and sea), has as a direct consequence...

- a) The increase of air humidity (i.e. water vapor content), expressed in various ways. For pilots a very important expression of moisture is the dew point.
- b) Variations in the atmospheric pressure, i.e. in zones with low or high pressure**

**causing air motion (wind).**

- c) The evaporation of water from oceans, lakes and wet inland surfaces, causing the hydrological cycle to take place.
- d) The lifting of the moist air in the troposphere, where water vapor is cooled and condensed and hence clouds are formed.

M4. For pilots a very significant expression of moisture, present in the atmosphere, is called dew point, because...

- a) It is the temperature at which, when air is heated at constant pressure it becomes saturated with water vapor which already contains.
- b) It expresses the quantity of water vapor present, in a given volume of air, in relation to the maximum amount of water vapor that could exist.

**c) When they have air temperature and dew point, they can qualitatively estimate air saturation, leading to many useful aviation conclusions.**

- d) When they have both air temperature and dew point, they can estimate the amount of water vapor that the mass of atmospheric air can hold, leading to many useful aviation conclusions.

M5. The air water vapor content is very important for flights- the two terms more widely used in aviation meteorology, are...

- a) Absolute humidity and relative humidity.
- b) Absolute humidity and dew point.
- c) Relative humidity and specific humidity.
- d) Relative humidity and the dew point.**

M6. When the difference of air temperature and the dew point decreases. We have...

- a) A temperature drop.
- b) Decrease in relative humidity.
- c) Increase in relative humidity.**
- d) Formation of storms.

M7. Huge air parcels with nearly homogeneous horizontal characteristics, mainly in temperature and moisture, are called air masses. The boundaries between two air masses, of different type, are called ...

- a) Frontal surfaces and are substantially three dimensional transition zones (frontal zones) normally separating, a warmer from a colder air mass.
- b) Frontal surfaces, having a width usually ranging from 50 to 100km.
- c) Frontal surfaces, in which sudden variations of characteristics of the air masses are common phenomenon.
- d) All the above are true.**

M8. Aircraft pilots know that an easily recognizable weather discontinuity during the passing of a front, is...

- a) A change in temperature.**
- b) An increase of cloud cover.
- c) An increase of relative humidity.
- d) An increase of absolute humidity.

M9. The more "humid" air is, (i.e. the more water vapor it contains) the less dense it is. When aircraft pilots plan their flight, air vapor content is of great importance. The two terms widely used are...

- a) Absolute humidity and relative humidity.
- b) Absolute humidity and dew point.
- c) Relative humidity and dew point.**
- d) Relative humidity and specific humidity.

M10. An aircraft pilot knows that the temperature and air density decrease with increasing altitude. What is the rule of thumb to remember when planning the flight?

- a) The temperature is reduced by 2 degrees Celsius per 1,000 feet.**
- b) The temperature is reduced by 2 degrees Celsius per 2,000 feet.

- c) The temperature is reduced by 2 degrees Celsius per 1,000 meters.
- d) The temperature is reduced by 2 degrees Celsius per 2,000 meters.

M11. There is a warm front when the air on the cold side of the front recedes giving way to warmer air. On weather maps warm fronts are illustrated with ...

**a) Semicircular symbols.**

- b) Tooth like triangular shapes which indicate the direction of motion.
- c) Alternating semicircular and triangular symbols on different sides of the front line.
- d) Alternating semicircular and triangular symbols on the same side of the front line.

M12. There is a cold front when the air in the cold side of the frontal area proceeds in the area where the prevailing wind was warmer. On weather maps cold fronts are depicted with...

a) Semicircular symbols.

**b) Tooth like triangular shapes which indicate the direction of motion.**

- c) Alternating semicircular and triangular symbols on different sides of the front line.
- d) Alternating semicircular and triangular symbols on the same side of the front line.

M13. Earth is heated during the day by solar radiation. During night there is a heat loss so that the surface of the earth is cooled. Aircraft pilots know the importance of temperature for all flights and that...

**a) The highest temperature of the day occurs approximately 2-3 hours after the highest position of the sun in the sky is achieved and the minimum temperature usually occurs shortly after sunrise (up to 1 hour).**

- b) The highest temperature of the day occurs at noon and the minimum temperature occurs usually just before sunrise (up to 1 hour).
- c) The highest temperature of the day occurs at the moment of the highest position of the sun in the sky is achieved and the minimum temperature occurs before sunrise between 04 am and 05 am.
- d) None of the above.

M14. A pilot is given a weather forecast which states (among others) the air temperature and the dew point. Taking into account both these temperatures we arrive to a qualitative estimation of air saturation level. The pilot observes in the report that the temperature is 8 °C and the dew point of 5 °C. That means...

- a) The air is too close to saturation.
- b) There is a possibility of fog formation.
- c) The risk of icing at the carburetors is increased, with all its consequences.
- d) All the above.**

M15. An YPAM pilot preparing for flight is informed by the weather forecast, that the temperature at the airport is 22 °C and the dew point is 19 °C. He is knowledgeable of the practical aviation rule of thumb that...

**a) When the difference between the two is less than 4 °C, the risk of icing at the carburetors increases geometrically.**

- b) When the difference between the two is less than 4 °C, the air is far from being saturated and thus the flight performance of the aircraft increases.
- c) When the difference between the two is less than 4 °C, there is no chance of fog.
- d) When the difference between the two is less than 4 °C, there is no reason to worry about.

M16. The actual barometric pressure at mean sea level, may be different from the standard reference value of 1013.25 hPa, so when the actual pressure is higher...

a) The actual height of the aircraft is equal to the indicated altitude.

**b) The actual height of the aircraft is greater than the indicated altitude.**

- c) The indicated altitude of an aircraft is equal to the absolute altitude
- d) The actual height of the aircraft is less than the indicated altitude.

M17. An YPAM is in cruise. Due to high workload, the pilot forgets to place in the altitude box the new QNH passed from the Air Traffic Controller. If this flight is coming from an area of high pressure to an area of low pressure then ...

- a) There is no problem because the altimeter indication is the actual altitude above mean

sea level.

b) There is no problem because the altimeter indication will show lower than the actual altitude above mean sea level.

**c) There is a big problem because the altimeter will indicate a higher altitude than the actual height above mean sea level.**

d) We cannot answer based on the above data because altimetry errors arise only when the ambient temperature differs from that of the standard atmosphere.

M18. YPAM pilots that like cross-country flights, mind to be informed for any changes of the QNH in order to have always the true QNH value in their altimeter box (Collman box), hence...

a) The instrument measures the external pressure at this flight level and then, by using physics formulae and ground pressure, indicates the actual height at which the aircraft is flying.

b) They are sure for the true instrument readings, regardless if they are flying from an area of high pressure to an area of low pressure or vice versa.

c) Pilots have a correct indication for safe traffic separation to be achieved.

**d) All the above.**

M19. In international aviation terminology the saying: From High to Low, Look out Below is referred to ....

a) Instrument altimetry error as a result of the difference of air temperature from that of standard atmosphere. In cold air, the pressure drops quicker with increasing height than it drops in warm air.

**b) Instrument altimetry error resulting from the fact that the aircraft flies from a high pressure area to a low pressure area.**

c) Altimetry error, resulting from sudden changes in vertical movements of ambient air.

Those types of error are expected in thunderstorms and severe mountain wave conditions.

d) Altimetry error (lower readings) occurring when the actual pressure at mean sea level is greater than 1013.25 or greater than the value the pilot has set in the altitude box.

M20. An YPAM is taxiing on the ground and the pilot has set at the altimeter the true QNH. The passenger asks why the altimeter indicates 354 feet instead of zero?

a) Obviously the true QNH is not set at the altimeter box.

b) All altimeters are metal barometers which have altimetry error +/- 400 feet.

c) Only when the real pressure at mean sea level is greater than 1013.25, then the altimeter reading is zero.

**d) Most airports have an elevation, even in some coastal areas there is a small elevation from mean sea level. This particular field is located at an elevation of 354 feet from mean sea level.**

M21. In the science of meteorology clouds are classified by two basic criteria:

a) Low and stratiform.

b) Low and high.

**c) The height at which they are and the shape they have.**

d) The height at which they are and the synthetic "nimbo" in case the clouds are dark, therefore with rain.

M22. Cumuliform are clouds with great vertical development. When pilots see them they know that...

**a) These are clouds created from updrafts due to some instability in the atmosphere.**

b) These are clouds with great horizontal development (layers) usually covering a large part of the sky.

c) The air around and under them is usually stable and a flight without turbulence is expected.

d) These are clouds being formed close to mountains when a mass of air is forced to climb a mountain slope and arrive at areas of low temperature.

M23. Cumulonimbus (CB) clouds are isolated and towering, with large vertical development and formations like mountains or turrets. Their upper part is usually smooth and flattened. Which of the phenomena mentioned below are more likely to be experienced under

such a cloud?

- a) Precipitation
- b) Severe turbulence.
- c) Wind shear.

**d) All the above.**

M24. Relative humidity is a measure of the amount of water vapor present in a specific air volume with respect to the maximum amount of water vapor that could be present. The amount of water vapor that a mass of atmospheric air can hold depends on...

a) The dew point and this is important in aviation because the more "wet" the atmospheric air is the more dense it is.

**b) The temperature and this is important in aviation because the more "wet" the atmospheric air the less dense it is.**

c) Air stability and this is important in aviation, because the more "wet" the atmospheric air is, the less dense it is.

d) The latent heat and this is important in aviation, because the more "wet" the atmospheric air is, the more dense it becomes.

M25. An YPAM takes off from an airport at 1,000 feet elevation but performs like being at 3,730 feet. What must the pilot calculate before flight, in order to find in the manual of the manufacturer the true performance of his YPAM?

**a) The so-called density altitude, which is the pressure altitude corrected for temperature deviation above or below the corresponding temperature of the ICAO Standard Atmosphere.**

b) The so-called dew point because the more "wet" the atmospheric air the less dense it becomes.

c) The relative humidity and the dew point .

d) The pressure altitude, because the higher an aircraft is flying, the more effect has pressure variation on the change of density and hence air becomes thinner and performance decreases.

M26. At an airport we observe a pilot calculating the pressure altitude. He then checks the thermometer and calculates the temperature difference from standard and then multiplies the difference by 120. Finally, he sums up the pressure altitude and the corresponding temperature difference with respect to ICAO Standard Atmosphere. What does he calculate and why is it so important?

a) He calculates the standard value of atmospheric pressure at sea level (zero altitude). It is 1013hPa and decreases a lot with height.

b) He calculates the relative humidity and the dew point. The content of air in water vapor is very important for flights.

c) He calculates the decreasing temperature (2°C per 1000 feet).

**d) He calculates the density altitude which affects the generation of lift and the performance of the engine and propeller.**

M27. A pilot estimates that the pressure altitude is 3000 feet higher than actual which is just 750 feet. What consequences will this have on his aircraft?

a) Slower acceleration due to reduced engine performance and more field distance to achieve the takeoff speed.

b) Need to develop higher true air speed to produce the required lift and remain airborne, after takeoff, without stalling.

c) The rate of climb will be reduced due to lower engine performance and lower lift at wings.

**d) All the above.**

M28. Which meteorological factor tends to increase the density altitude at an airport which in turn affects the generated lift and engine and propeller performance?

a) The increase in barometric pressure.

**b) The increase in ambient temperature.**

c) The decrease in relative humidity.

d) All the above are true.

M29. Clouds are called the visible set of tiny water droplets or ice particles, suspended in the atmosphere. Clouds, fog or rain are always formed when ...

**a) Vapor condensation takes place.**

- b) There is a presence of water vapor.
- c) The relative humidity is 100%.
- d) All the above.

M30. Sometimes we observe on the ground small scale water condensation called frost. Conditions favorable for the formation of frost are...

a) Air close to ground cooled due to night radiation, presence of condensation nuclei and temperature reduced to the dew point.

**b) Wind calm, cloudless sky, high relative humidity of air close to ground and dew point temperature less than zero.**

- c) Wind calm, sky with convective clouds (mainly CB), low relative humidity value of the air close to ground and dew point temperature greater than zero.
- d) None of the above.

M31. Two terms widely used in aviation, used to calculate the content of air in water vapor, is relative humidity and dew point. Dew point is...

a) An amount of water vapor present in a given volume of air compared to the maximum amount of water vapor that could be present and is expressed in percentage (%).

b) A situation when a front is moving and warm air mass is leading, followed by cold air mass.

**c) The temperature at which, when air is cooled isobarically (at constant pressure), becomes saturated without adding or removing water vapor.**

- d) None of the above is true.

M32. Early in the morning an YPAM pilot prepares for take-off and observes small scale vapor condensation on the ground (frost). What are the effects of frost in flight?

a) Changes the aerodynamic shape of the airfoil and reduces lift.

b) Slows down the airflow over the airfoil and increases the effect of flight controls.

**c) Distorts the laminar flow over the wings and thus reduces the lift with what this may imply.**

- d) Improves the rate of climb due to greater engine performance and greater lift at the wings.

M33. The weather forecast reports in general south-westerly light winds and atmospheric pressure drops about 3hPa (mb) in three hours. The pilot looks at the weather map because...

**a) Probably a cold front is approaching. After passing we can expect a sudden rise in barometric pressure and north-westerly winds.**

b) Probably we have the effect of a warm occlusion, where the cold air moves over warm air.

c) Probably a warm front is approaching and it can be identified by the relevant type of clouds, accompanied by continuous rain, creating fog and low clouds in the cold sector, due to the low temperatures in the cold sector.

- d) None of the above.

M34. Wind is called every horizontal air mass movement. The wind is the result of pressure differences from place to place. The pilots are thoroughly informed about ...

a) The direction, that is the point of the horizon from which the wind blows and is given in degrees and written using three digits (e.g wind 240 °).

b) The speed at which the air mass moves, given in knots (e.g wind 05 knots).

c) Whether the wind is variable or gusty.

**d) All the above.**

M35. An YPAM pilot with a passenger onboard are observing a weather map before flight, searching for the direction and speed of the wind. The pilot explains to the passenger that the wind is depicted by...

a) Closed isobaric curves with the indications L, H, R and T on them. The ratio of the pressure change between two isobaric curves to the distance between them, is called pressure gradient.

**b) An arrow with vertical to it lines indicating the intensity. Each vertical line represents 10 knots, each half line 5 knots and each black triangle 50 knots. Wind**

**direction is the direction from where the wind is blowing.**

- c) An arrow with vertical to it lines indicating the intensity, each vertical line represents 20 knots, each half line 10 knots and each black triangle 100 knots. The wind direction is from the vertical lines towards the small circle.
- d) An arrow with numbers on it indicating the intensity in knots. The wind direction is determined by the point at the horizon the arrow aims at.

M36. Before takeoff, the pilot is informed that the wind is variable. What does this mean exactly?

- a) Means that the wind direction is not completely constant but varies between two extreme values. The last 10 minutes average of the two extreme values is given as direction.**
- b) Means that wind speed momentarily exceeded by 10 knots (at least) the last ten-minutes mean wind speed.
- c) Means that the wind speed has for two minutes the double value of the last ten-minutes average wind speed. This is also called "squall".
- d) Means that the wind direction is constant but the speed varies between two extreme values.

M37. Before takeoff, the pilot is informed that the wind is gusty. What does this mean exactly?

- a) Means that the wind direction is not completely constant but varies between two extreme values. As wind direction it is given, the last 10 minutes average of the two extreme values.
- b) Means that the wind speed, in the previous 10 minutes, momentarily exceeded by 10 knots (at least) the mean wind speed (measured every two minutes).**
- c) Means that the wind speed doubled (for two minutes) when compared to the last ten-minutes average wind speed. This is also called squall.
- d) Means that the wind direction is constant but the speed varies between two extreme values.

M38. Looking at a weather map before flight to find the direction and speed of the wind we see an arrow with a vertical to it line and a half vertical line. The arrow "comes" from 315th degrees. What does the pilot conclude from the above?

- a) The direction is South-East and the speed of the wind is 15 knots.
- b) The direction is South-East and the speed of the wind is 10 knots.
- c) The direction is South and the speed of the wind is 10 knots.
- d) The direction is North-West and the speed of the wind is 15 knots.**

M39. Looking at a meteorological map before flight seeking the direction and speed of the wind we see an arrow with two vertical to it lines. The arrow "comes" from 180° degrees. What does the pilot conclude from the above?

- a) The direction is North and the wind speed is 20 knots.
- b) The direction is South and the wind speed is 15 knots.
- c) The direction is South and the wind speed is 20 knots.**
- d) The direction is North and the wind speed is 10 knots.

M40. Before takeoff a pilot is checking a weather map. He knows that the more close to each other are the isobars, the greater the pressure gradient force, therefore ...

- a) The greater the direction of the wind.
- b) The greater the speed of the wind.**
- c) The more variable is the wind.
- d) The more gusty the wind.

M41. As an YPAM is preparing to land, the pilot is informed by radio about the wind direction and speed. The passenger asks him how close to the ground an air pocket can be. What does the pilot respond?

- a) There is no "air pocket". It is a wrong term, since air does not have gaps and refers basically to downdrafts.**
- b) The "air pocket" is essentially the horizontal wind shear that appears in the form of abrupt changes in direction or speed, and may last up to the landing phase.

- c) The "air pocket" is basically vortices creating barriers to air flow, as they do hills, buildings and trees that disrupt the smooth flow of air (mechanical turbulence).  
d) The "air pocket" ,in meteorology, is the so called mountain wave, being waves created on the lee side of a mountain, when stable air is blowing perpendicular to this mountain.

M42. Pilots know that because land is not evenly heated, different surfaces such as ground covered by vegetation compared with sandy areas and water surfaces absorb and emit back in a different way the absorbed amounts of heat. As a result...

- a) We have the formation of the so-called mountain wave that affect the flight.  
**b) We have the formation of updrafts and downdrafts that affect flights.**  
c) We have the formation of wind shear that affects flights.  
d) We have the formation of the so-called "air pockets" that affect flight.

M43. During descent of an aircraft for landing, the uneven heating of different surfaces can cause ...

- a) Wind shear that affect the final approach.  
b) Mountain waves that affect the final approach.  
**c) Updrafts and downdrafts affecting the final approach.**  
d) Vortices or wingtips vortices affecting the final approach.

M44. In airports that heavier aircraft are operating, YPAM pilots avoid the vortices formed around the wing tips of other aircraft. The phenomenon is severe specially when an ultra-light aircraft is behind a heavier aircraft landing or taking-off. This phenomenon is called...

- a) Mechanical turbulence or vortices that disturb the air flow by disrupting the smooth flow of air.  
b) Mountain wave.  
c) Wind Shear  
**d) Vortices or wing tip vortices.**

M45. An YPAM pilot wishing to land in a field ZZZZ , is informed about the direction and intensity (speed) of the surface wind. He observes that a hangar located at the field is aligned with the wind direction and the estimated landing point of the aircraft. What for he should be prepared?

- a) He should expect wind shear that will cause turbulence.  
b) He can expect something similar to the phenomenon of mountain wave.  
**c) He should expect the so-called mechanical turbulence that can cause quite strong chops.**  
d) He should expect vortices or so-called wingtips vortices (wake turbulence) that can cause turbulence - chop.

M46. What kind of weather report is the TAF?

- a) It is an airport weather forecast report of nine hours duration, issued every three hours.**  
b) It is a description of the current weather at an airport.  
c) It is an airport weather forecast report of 3-hours duration issued every nine hours.  
d) None of the above.

M47. What kind of weather information does a TAF report provide?

- a) The name of the airport and the surface wind.  
b) Horizontal visibility, % of cloud cover & vertical distance of cloud base from the ground.  
c) Expected significant weather changes.  
**d) All answers above are true.**

M48. VOLMET is the continuous broadcast of weather report ...

- a) On frequency 127.800 (VHF) with weather information for a specific number of airports.**  
b) On frequency 127.700 (VHF) with weather information for a number of airports.  
c) Exclusive on frequency 127.800 (VHF) with present weather information for a specific

number of airports.  
d) None of the above.

M49. Metar: A meteorological telegram prepared by meteorological stations for aviators. Pilots know about METARs that...

- a) Contain current weather observation data.
- b) Contains a two-hour weather forecast (TREND).
- c) Are issued every half hour.
- d) All the above are true.**

M50. When the barometric pressure drops ...

- a) It is likely weather to get better.
- b) Weather will get better for sure.
- c) It is likely weather to get worse.**
- d) Weather get worse for sure.

M51. In an airport a severe surface temperature inversion takes place during night. Which weather phenomenon is most likely to occur early in the morning?

- a) Thunderstorm.
- b) Fog.**
- c) Precipitation.
- d) Severe rain.

M52. The height of clouds (cloud ceiling) is a very important information for all flights. The definition of cloud base height is ...

- a) The vertical distance of the base of the cloud from mean sea level.
- b) The distance of the cloud from the observation point.
- c) The vertical distance of the cloud base from the observation point.**
- d) The distance from the cloud base to the uppermost point of the cloud (ceiling).

M53. Clouds in meteorology are divided into four categories according to ...

- a) Their shape (vertical or horizontal growth).
- b) Their base height (cloud ceiling).**
- c) The distance from the cloud base to the uppermost point of the cloud (ceiling).
- d) Their composition.

M54. One basic criterion for the taxonomy of the clouds is the height of their base. There are four categories: Low (<6500ft), Medium (<23000ft in temperate climate regions), High and Vertical growth clouds. Examples of high clouds are:

- a) AC / Altocumulus, AS/ Altostratus, NS/ Nimbostratus
- b) SC/ Stratocumulus, ST/ Stratus, CU/ Cumulus, CB/ Cumulonimbus.
- c) CI/ Cirrus, CC/ Cirrocumulus, CS/ Cirrostratus**
- d) None of the above.

M55. A key criterion for the taxonomy of clouds is the height of their base. There are four categories: Low (<6500ft), Medium (<23000ft in temperate climate regions) High and Vertical growth clouds.

Examples of medium clouds are:

- a) AC/ Altocumulus, AS/ Altostratus, NS/ Nimbostratus**
- b) SC/ Stratocumulus, ST/ Stratus, CU/ Cumulus, CB/ Cumulonimbus.
- c) CI / Cirrus, CC/ Cirrocumulus, CS/ Cirrostratus or Cirrocumulus.
- d) None of the above.

M56. A key criterion for the taxonomy of the clouds is the height of their base. There are four categories: Low (<6500ft), Medium (<23000ft in temperate climate regions) High and Vertical growth clouds.

Examples of Low clouds are:

- a) AC/ Altocumulus, AS/ Altostratus, NS/ Nimbostratus
- b) SC/ Stratocumulus, ST/ Stratus.**
- c) CI / Cirrus, CC/ Cirrostratus
- d) None of the above.

M57. Pilots carefully avoid flying in areas where clouds appear isolated, towering with great vertical development. These clouds look, sometimes, like mountains and their upper part is usually smooth and flattened. Electrical phenomena and severe turbulence are observed inside and around them. In their mature stage, thunderstorms take place. These clouds extent from 0 to 50,000ft. Meteorologists call them...

**a) Cumulonimbus(CB).**

b) Lenticular clouds.

c) Stratus(ST).

d) Cirrocumulus(CC).

M58. Many times we observe in the sky, white clouds in thin layers, sometimes extensive and sometimes less extensive. They consist of small cloud elements looking like small shredded clouds. They are composed of ice crystals and water droplets. There is no turbulence in their vicinity but near jetstreams turbulence is moderate to severe. They do not concern YPAM pilots because these are Upper clouds and are observed at heights over 18,000 feet.

Meteorologists call them:

a) Cumulonimbus (CB).

b) Lenticular clouds.

c) Stratus (ST).

**d) Cirrocumulus (CC).**

M59. YPAM pilots often encounter clouds, with little vertical extent, adjacent to or just above mountain tops. Meteorologists call them...

a) Cumulonimbus (CB).

**b) Orographic clouds.**

c) Stratus (ST)

d) Cirrocumulus (CC)

M60. At altitudes up to 6,000 feet, YPAM pilots may encounter gray clouds with their base low and uniform. These clouds can cause precipitation. When they are very low they cause visibility problems. Meteorologists call them:

a) Cumulonimbus (CB).

b) Lenticular or orographic clouds (Lenticularis).

**c) Stratus (ST).**

d) Cirrocumulus (CC).

M61. An YPAM pilot encounters clouds in his flight path into generally stable air. The passenger asks for passing through clouds. The pilot responds ...

a) That VFR flights are not permitted into clouds.

b) That YPAM license and equipment do not cover such flights.

c) That flights near or into clouds are not safe due to icing risk.

**d) All the above are true.**

M62. The weather forecast is about an approaching warm front. Warm fronts are characterized by the following phenomena:

a) Showers-Thunderstorms.

**b) Rain.**

c) Rain-Showers.

d) Fog-Thunderstorms.

M63. Cold fronts are characterized by the following phenomena:

**a) Heavy rain, convective clouds (Cumulus and Cumulonimbus), as well as Altocumulus, Nimbostratus, Stratocumulus and Stratus clouds.**

b) An average frontal speed of 10 knots (half the speed of a warm front).

c) The formation of Cirrus clouds (Ci) at high-altitude and cold air weak variable winds.

d) All the above.

M64. What exactly is a METAR?

a) An international code for transmission of hourly (or half-hourly) surface weather

observations with a two-hour forecast.

- b) A simple code that allows easy understanding of present time weather at a given location.
- c) It is the so called "meteorological telegram" that every licensed pilot can read.

**d) All the above.**

M65. An YPAM pilot is approaching a controlled airport. He receives the report that the "Prevailing conditions are CAVOK». What exactly does it mean?

- a) It is an international acronym, CEILING and VISIBILITY OK, and is read as CAV-O-K
- b) There are no clouds below 5,000 feet, over the airport, and visibility at least 10 km.
- c) There are no cumulonimbus clouds (Cb) or other significant weather.

**d) All the above.**

M66. An YPAM pilot is approaching a controlled airport. He receives the report that the "Prevailing conditions are CAVOK ». The passenger makes a remark that the sky is completely covered with clouds and asks the pilot how come is it possible the Control Tower to report Ceiling and Visibility OK?

- a) This appears to be an error because the use of CAVOK word, in a weather report, implies that the weather is good, there are no clouds and visibility is over 10 KM.

**b) The message is correct provided the cloud base is not under 5,000 feet.**

- c) Clearly this is a mistake because with the use of term CAVOK it is indicated that there is no significant weather phenomenon near the airport.

d) The message is correct provided the cloud base is below 500 feet.

M67. Each cloud type affects flights in a different way. Pilots know that the most significant and dangerous one, is the Cumulonimbus (CB). In meteorological reports we see a separate category of abbreviations, attached exclusively for CB clouds. They characterize their form and location with respect to other clouds e.g Isolated. Which of the following is true?

- a) OCNL means Occasional - Well separated CB.
- b) FRQ means Frequent - Several CB with little or no separation.
- c) EMBD means Embedded-Contained CB in other layers of clouds.

**d) All the above are true.**

M68. What information do we extract from the following METAR?

LGSK: 131050Z 04007KT 9000 SCT020 BKN030 OVC080 12/08 Q1021

- a) The wind is from 131 degrees/50 knots.
- b) The wind is from 10 degrees/21 knots.

**c) The wind is from 40 degrees/07 knots.**

d) None of the above.

M69. What information do we extract from the following METAR?

LGSK 131050Z 04007KT 9000 SCT020 BKN030 OVC080 12/08 Q1021

**a) The visibility is 9000 meters with scattered clouds with base at 2000ft, broken clouds with base at 3000ft and overcast with base at 8000 feet.**

- b) The visibility is 900 meters and there are Scattered clouds with base at 2000, Broken clouds with base at 3000 and Overcast cloud conditions with base at 8000 meters.

c) Visibility is 9000 meters and there are Scattered clouds with base at 200, Broken clouds with base at 300 and Overcast with base at 800 feet.

d) None of the above.

M70. What information do we extract from the following METAR?

LGSK 131050Z 04007KT 9000 SCT020 BKN030 OVC080 12/08 Q1021

- a) The temperature is 08 degrees and the dew point is 12 degrees Celsius.

**b) The temperature is 12 degrees and the dew point 08 degrees Celsius.**

c) The temperature is 21 degrees and the dew point 10 degrees Celsius.

d) None of the above.

M71. What information do we extract from the following METAR?

LGSK 131050Z 04007KT 9000 SCT020 BKN030 OVC080 12/08 Q1021

- a) It has been issued at 10:21Z.

**b) It has been issued on the 13th of the month at 10:50 Z.**

- c) Has been issued on the 4<sup>th</sup> of the month at 00:07Z.
- d) None of the above.

M72. What information do we extract from the following METAR?

LGSK 131050Z 04007KT 9000 SCT020 BKN030 OVC080 12/08 Q1021.

- a) Has been issued at 13:10Z.
- b) Has been issued on the 12th of the month at 10:50 Z.
- c) Has been issued on the 4th of the month at 00:07Z.

**d) None of the above.**

M73. What information do we extract from the following METAR?

LGAV 121420Z 35025G35KT 3000 + TSRA BKN010 SCT015CB BKN020TCU 04 / M01 Q1010 WSLDGRWY21 TEMPO TSRA

- a) The dew point is -1 and there is a thunderstorm with light rain.
- b) There is a thunderstorm with light rain.

**c) the dew point is "-1".**

- d) None of the above.

M74. What information do we extract from the following METAR?

LGAV 251020Z 03026KT CAVOK 30/14 Q1012 NOSIG.

- a) Wind from 30°.
- b) Wind average speed is 26 kt.
- c) Visibility from 2018 up to 2103m.

**d) Wind from 30° and its average speed is 26 kt.**

M75. What information do we extract from the following METAR?

LGAV 251020Z 03026KT CAVOK 30/14 Q1012 NOSIG.

- a) Wind direction towards 030°.
- b) Wind of average speed 30 knots.
- c) Visibility from 250 up to 10200 meters.

**d) There are no clouds below 5000 feet.**

M76. What information do we extract from the following METAR?

LGRX 251020Z 09006KT 070V130 9999 SCT045 14/09 Q1007

- a) The wind direction varies from 70 to 130 degrees.**
- b) From 07 to 13 UTC there will be clouds with base at 450 feet.
- c) The wind speed is variable.
- d) Forecasted visibility is 10000 meters.

M77. At the following weather report.....

LGRX 101520 31010G25 8000 FEW025 BKN140 08/06 1017 NOSIG.

- a) Visibility is 8000ft.
- b) Barometric pressure is 1014 hPa.
- c) The wind has an average speed of 10 knots.**
- d) The cloud cover is 1/8 to 2/8 with cloud base at 14000 feet.

M78. What kind of weather report is the following?

IN ATHINAI FIR EMBD TS OBS IN WEST PART MOV E-NE INTSF =

- a) METAR.
- b) TAF.
- c) SPECI.

**d) SIGMET.**

M79. What is the pressure and temperature, at sea level, in Standard Atmospheric Conditions (ISA) ?

- a) 15° C and 29.92 inHg.**
- b) 59° C and 1013,2 millibars.
- c) 59° F and 29,92 millibars.
- d) 15° C and 1000,0 millibars.

M80. Which of the following is most likely to encounter under a CB ?

- a) All of the following.**
- b) Severe turbulence.
- c) Wind shear.
- d) Precipitation.

M81. What pressure value is reduced to mean sea level and is used for setting the altimeter of an aircraft?

- a) QNH.**
- b) QFE.
- c) QFF.
- d) QDM

M82. What pressure value, when set at an altimeter, gives zero reading when the aircraft is on the ground?

- a) QNH.
- b) QFE.**
- c) QDM.
- d) QFF

M83. The temperature at the airport is 10 degrees Celsius and the dew point is 6 degrees. What is the estimated height ,over the airport , that we expect the cloud base to be formed due to convection?

- a) at 1600 feet.**
- b) at 4000 feet.
- c) to 6000 feet.
- d) at 8000 feet.

M84. What conditions lead to the formation of hoar frost ?

- a) The surface temperature, at which water vapor condensation takes place, must be below the freezing point.**
- b) The temperature of the surface, on which the water droplets fall, must be below the dew point of ambient air.
- c) The ambient air temperature is below the freezing point.
- d) All the above

M85. What can reduce the stability of an air parcel ?

- a) Heating from below.**
- b) Cooling from below.
- c) Reduction of the water vapor.
- d) All the above.

M86. What are the characteristics of stable air?

- a) Stratiform clouds.**
- b) Unrestricted visibility.
- c) Cumuliform clouds.
- d) None of the above.

M87. What are the characteristics of a wet and unstable air mass?

- a) Low visibility and steady wind.
- b) Cumuliform clouds and showers.**
- c) Stratiform clouds and showers.
- d) None of the above.

M88. What are the characteristics of unstable air?

- a) Turbulence and good surface visibility.**
- b) Turbulence and poor surface visibility.
- c) Nimbostratus clouds and good surface visibility.
- d) None of the above.

M89. What type of clouds are characterized by the term "Nimbus" ?

- a) Clouds with vertical extent.
- b) Rain clouds.**
- c) Clouds with hail.
- d) All the above.

M90. What type of clouds give the strongest turbulence?

- a) Towering cumulus.
- b) Cumulonimbus.**
- c) Nimbostratus.
- d) Stratus

M91. The boundary between two air masses with different thermo-hydrumetric characteristics is called:

- a) frontolysis.
- b) frontogenesis.
- c) frontal surface.**
- d) frontolysis or frontogenesis

M92. Steady precipitation preceding a front is an indication of...

- a) Stratiform clouds with moderate turbulence.
- b) Cumuliform clouds with light or no turbulence.
- c) Stratiform clouds with light or no turbulence.**
- d) None of the above.

M93. Where is wind shear encountered?

- a) At high altitudes.
- b) At low altitudes.
- c) At all altitudes and all directions.**
- d) None of the above.

M94. What conditions are necessary for the development of a storm?

- a) High humidity and unstable conditions.**
- b) High humidity, high temperature and Cumuliform clouds.
- c) Upward forces, humid air and extensive cloud cover.
- d) Updrafts and Stratiform clouds.

M95. At what stage of a storm, phenomena have the greatest intensity?

- a) At mature stage.**
- b) At cumulus stage.
- c) At dissipation stage.
- d) At cumulus and dissipation stages .

M96. In a storm, which stage is primarily characterized by downdrafts?

- a) The cumulus stage.
- b) The dissipation stage.**
- c) The mature stage.
- d) The cumulus and dissipation stages.

M97. The cloud base height is.....

- a) The vertical distance of the base of the cloud from mean sea level.
- b) The distance of the cloud from the observation point.
- c) The vertical distance between the base of the cloud and the observation point.**
- d) The distance of the cloud from mean sea level.

M98. On above surface weather maps, we plot \_\_\_\_\_ and at areas where the curves are closer to each other, the winds are \_\_\_\_\_. (Fill in appropriately the blanks)

- a) Isobars / stronger.
- b) Contours, weaker.

c) Isobars / weaker.

**d) Contours / stronger.**

M99. On a surface weather map we plot \_\_\_\_\_ and at areas where the curves are closer to each other the wind is \_\_\_\_\_. (Fill in appropriately the blanks).

**a) Isobars / stronger.**

b) Contours / weaker.

c) Isobars / weaker.

d) Contours / stronger.

M100. Cumuliform clouds are typical of a

a) Warm front.

b) Cold front.

c) Occluded front.

**d) (b) and (c).**

M101. Temperature inversion near the ground favors:

**a) Fog and low visibility.**

b) Rain

c) Strong winds.

d) Lightning

M102. The wind, as we climb from the surface to the middle of the friction layer:

a) Backs and weakens.

b) Veers and weakens.

c) Backs and becomes stronger.

**d) Veers and becomes stronger.**

M103. Dew point is the temperature...

a) Where relative humidity is at least 80%.

b) That when reached by cooling, all the moisture contained in ambient air has condensed.

c) Where relative humidity is above 90%.

**d) When reached by cooling, the ambient air becomes saturated, without change in pressure and without addition or removal of water vapor.**

M104. A pilot at landing, has an indication of 0 ft ,on his altimeter. What is his altimeter setting ?

a) QFF.

**b) QFE.**

c) QNH.

d) None of the rest.

M105. What weather report describes an, important for the aviation, phenomenon inside the F.I.R. of the issuing office.

**a) The SIGMET.**

b) The SPECI.

c) The TAF.

d) The METAR.

M106. Determine as 'TRUE' or 'FALSE', the following statements.

Statement I: "The sound of thunder in a place implies by definition a storm in this area."

Statement II: "Increase in humidity favors atmospheric instability."

a) Only (I) is true.

b) Only (II) is true.

**c) Both are true.**

d) Both are false.

M107. LGAV 121420Z 35025G35KT 3000 + TSRA BKN010 SCT015CB BKN020 TCU 04 / M01 Q1010 WS LDG RWY21 TEMPO TSRA

Based on the above METAR determine as 'true' or 'false', the following statements.

statement I: Dew point is "-1".

statement II: There is a thunderstorm with light rain.

**a) Only (I) is true.**

b) Only (II) true.

c) Both are true.

d) Both false.

M108. LGAV 121420Z 35025G35KT 3000 + TSRA BKN010 SCT015CB BKN020TCU 04 / M01 Q1010 WS LDG RWY21 TEMPO TSRA

Based on the above METAR determine as 'true' or 'false', the following statements.

statement I: "The wind is blowing towards 350 °».

statement II: "There is a thunderstorm with heavy rain."

a) Only (I) is true.

**b) Only (II) true.**

c) Both are true.

d) Both false.

M109. LGAV 121420Z 35025G35KT 3000 + TSRA BKN010 SCT015CB BKN020TCU 04 / M01 Q1010 WS LDG RWY21 TEMPO TSRA

Based on the above METAR determine as 'true' or 'false', the following statements.

statement I: There is 5/8 - 7/8 cloud cover from towering cumulus and the average wind speed is 25kt ".

statement II: The Dew Point is + 1°C.

**a). Only (I) is true.**

b) Only (II) true.

c) Both are true.

d) Both are false.

M110. What are the ideal conditions for the formation of radiation fog?

a) Night.

b) No clouds, light winds and high humidity.

**c) (a) and (b).**

d) (a), (b) and high temperature.

M111. The stratiform clouds give continuous rainfall mainly because:

a) The air in this case is unstable.

**b) They have great horizontal extent.**

c) They have little vertical extent.

d) (a) and (c).

M112. What can be observed in the central part of a barometric low?

a) Descending air.

**b) Ascending air.**

c) Sometimes (a) and sometimes (b).

d) Ascending air during the warm season and descending air during the cold period.

M113. Temperature inversion inside a layer.....

a) Reduces the atmospheric pressure on the ground.

b) Facilitate convection.

c) Causes showers and thunderstorms.

**d) Stops convection.**

M114. From the following report «LGAV 251020Z 03026KT CAVOK 30/14 Q1012 NOSIG»

a) There is wind from 30°.

b) The average wind speed is 26 kt.

c) Visibility is from 2018m to 2103m.

**d) Both (a) and (b).**

M115. Determine as 'true' or 'false', the following statements.

statement I: 'The term + TSRA means thunderstorm with heavy rain. "

statement II: "If a thunder is heard at a location, the observer records thunderstorm, with or

without presence of rain”

- a) Only statement (I) is true.
- b) Only statement (II) is true.

**c) Both statements are true.**

- d) Both statements are false.

M116. LGAV 121420Z 35025G35KT 3000 + TSRA BKN010 SCT015CB BKN020TCU 04 / M01 Q1010 WS LDG RWY15 TEMPO TSRA

Based on the above METAR determine as 'true' or 'false' the following statements.

statement I: Visibility is 3000 ft.  
statement II: Dew Point is + 1°C.

- a) Only statement (I) is true.
- b) Only statement (II) is true.
- c) Both statements are true.

**d) Both statements are false.**

M117. LGAV 121420Z 35025G35KT 3000 + TSRA BKN010 SCT015CB BKN020TCU 04 / M01 Q1010 WS LDG RWY15 TEMPO TSRA.

Based on the above METAR determine as 'true' or 'false', the following statements.

statement I: The visibility is 3000 m.  
statement II: Dew Point is -1 °C.

- a. Only statement (I) is true.
- b. Only statement (II) is true.

**c. Both statements are true.**

- d. Both statements are false.

M118. At a Significant weather chart, the symbol



means...

- a) Severe icing.
- b) Moderate icing.**
- c) Severe turbulence.
- d) Moderate turbulence.

M119. At a Significant weather chart, the symbol



means...

- a) Severe freezing.
- b) Moderate icing.
- c) Severe turbulence.
- d) Moderate turbulence.**

M120. At a Significant weather chart, the symbol



means...

- a) Thunderstorm.**
- b) Moderate icing.
- c) Severe turbulence.
- d) Moderate turbulence.

M121. At a Significant Weather chart, the symbol



means...

- a) Fog.
- b) Snow.
- c) Rain.**
- d) Freezing rain.

M122. At a Significant Weather chart, the symbol  means...

a) Fog.  
b) Snow.  
c) Rain.  
**d) Freezing rain.**

M123. At a Significant Weather chart, the symbol  means...

a) Fog.  
**b) Snow.**  
c) Rain.  
d) Freezing rain.

M124 .At a Significant weather chart, the symbol  means...

**a) Drizzle.**  
b) Snow.  
c) Rain.  
d) Freezing rain.

M125. In Charter Significant Weather, symbol  means...

a) Fog.  
b) Snow .  
**c) Hail.**  
d) Freezing rain.

M126. In Charter Significant Weather, symbol  means...

**a) Fog.**  
b) Snow.  
c) Hail.  
d) Freezing rain

M127. At a significant weather chart, the symbol  means...

a) Fog  
b) Snow.  
c) Hail.  
**d) Shower.**

M128. Determine as 'true' or 'false', the following statements.  
Statement I: "Wind shear is a cause of turbulence."  
Statement II: "Increasing moisture contributes to the reduction in air density."  
a) Only statement (I) is true.  
b) Only statement (II) proper.  
**c) Both statements are true.**  
d) Both statements are false.

M129. EGPB 050500Z 0506/0606 23017G30KT 9999 BKN020 TEMPO 0506/0512 5000 RA BKN012 BECMG 0515/0518 27020G30KT TEMPO 0600/0606 8000 –SHRA.  
Determine as 'true' or 'false', the following statements.  
statement I: The above report is a METAR.  
statement II: In the above report it is stated that from 0600 to 1200, temporarily, there will be rain.

- a) Only statement (I) is true.  
**b) Only statement (II) is true.**  
c) Both statements are true.  
d) Both statements are false.

M130. EGPH 050500Z 0506/0606 23017G30KT 9999 BKN020 TEMPO 0506/0512 5000 RA BKN012 BECMG 0515/0518 27020G30KT TEMPO 0600/0606 8000 –SHRA.

Determine as true or false, the following statements.

statement I: "In the above report it is stated that from 0600 to 1200, temporarily, the cloud cover will be 3/8 to 4/8 with cloud base at 120meters".

statement II: "In the above report it is stated that from 15:00 to 18:00 the wind becomes gusting at 30 knots".

- a) Only statement (I) is true.  
**b) Only statement (II) true.**  
c) Both statements are true.  
d) Both statements are false.

M131. EGPH 050500Z 0506/0606 23017G30KT 9999 BKN020 TEMPO 0506/0512 5000 RA BKN012 BECMG 0515/0518 27020G30KT TEMPO 0600/0606 8000 –SHRA.

Determine as true or false, the following statements.

statement I: "In the above report it is stated that from 00:00 to 06:00 the visibility will be 8000m and showers of light rain will prevail".

Statement II: "The above signal is a TAF valid for 24 hours."

- a) Only statement (I) is true.  
b) Only statement (II) true.  
**c) Both statements are true.**  
d) Both statements are false.

## LEGISLATION - RULES OF THE AIR

N1. Under the current operational regulation for operation and conduct of flights with Ultralight Aerosport Flight Machines(YPAM), the following five (5) basic types of Ultralight aircraft are mentioned...

**a) Planes (also known as three-axis), the weight shift (known as "TRAIK"), the Helicopter (with impeller driven by engine), the Motorized Parachutes heavier than 70kgw (Also known as Paramotor or Power Para Glider - PPG), and the auto-gyro (also known as gyroplanes).**

b) Planes (also known as three-axis), the weight shift (known as "TRAIK"), the Helicopter (with impeller driven by engine), the Motorized Parachutes heavier than 70 kgw (also known as Paramotor or Power Para Glider - PPG), and the Balloons (consisting of the boat or "basket" and the balloon or "aerostatic sphere").

c) Planes (also known as three-axis), the weight shift (known as "TRAIK"), the Helicopter (with impeller driven by engine), the gyroplane (also known as an autogyro) and the Motorized parachute (known as Paramotor or Power Para Glider- PPG).

d) Planes (also known as three-axis), the Hang-glider (without engine - also known as "Eagle" flying with weight shift), the Helicopter (with impeller driven by engine), the gyroplanes or auto-gyro and the Motorized Parachutes heavier than 70 kgw (known as Para motor or Power Para Glider - PPG)

N2. For pilots of Ultralight Aerosport Flight Machines(YPAMs) (categories:airplanes, helicopters and autogyros) and according to the current regulation of the Hellenic Civil Aviation Authority (HCAA) a flight instruction time of.....is required

- a) 15 hours as a minimum.  
**b) 25 hours as a minimum.**  
c) 30 hours as a minimum.  
d) 50 hours as a minimum.

N3. For all categories of pilots of Microlight Aerosport Flight Machines (YPAMs), according to current regulation by the Civil Aviation Authority (CAA), candidates should successfully attend a theoretical training of total duration...

- a) 15 hours as a minimum.

- b) 25 hours as a minimum.
- c) 30 hours as a minimum.
- d) 50 hours as a minimum.**

N4. After completion of the theoretical courses, candidates should complete, both theoretical and flight test ...

- a) Within one (1) year.
- b) Within two (2) years.**
- c) Within three (3) years.
- d) Within four (4) years.

N5. Under the Ultralight Aerosport Flight Machines (YPAMs) regulation and before the first “solo” flight the candidate pilot should:

- a) Have, both, the flying school’s and instructor’s consent and the flight should be recorded in his personal log book.
- b) Have completed 30% of the planned hours of theoretical training.
- c) Have completed a minimum of 7 flight hours with an instructor and hold a valid medical certificate.
- d) All the above must have taken place before the first “solo” flight.**

N6. According to the current regulation, Ultralight Aerosport Flight Machines (YPAMs) must, at least, be equipped with the following flight instruments:

- a) Air speed indicator, altimeter, rate of climb / descent and engine instruments.**
- b) Airspeed indicator, altimeter, rate of climb / descent instrument, receiver of Global Positioning System(GPS) and engine instruments.
- c) Airspeed indicator, altimeter, rate of climb / descent instrument, attitude indicator and engine instruments.
- d) The current regulation does not provide a minimum equipment list for YPAMs.

N7. According to the current regulation on Ultralight Aerosport Flight Machines (YPAMs) the automatic position reporting device (Transponder Mode A) ...

- a) Is mandatory and is required for air traffic control, search and rescue and National Defense purposes.
- b) Is mandatory and required only for search and rescue purposes.
- c) Is optional and is only required when flying in radar controlled airspace.**
- d) Is optional, and its use, is not required in the Greek Flight Information Region (FIR).

N8. According to the current regulation, Ultralight Aerosport Flight Machines (YPAMs) flying in radar controlled airspace must at least be ...

- a) Equipped with an automatic position reporting device (Transponder) Mode A type.**
- b) Equipped with an automatic position reporting device (Transponder) Mode C type.
- c) Equipped with an automatic position reporting device (Transponder) Mode S type.
- d) Equipped with an automatic position reporting device (Transponder) type Mode S with ADS-B Out.

N9.A Ultralight Aerosport Flight Machine (YPAM), flying in airspace, where it is required to use two way communication, should, according to regulation, be equipped with .....

- a) Automatic position reporting device (Transponder) Mode A type.
- b) A VHF radio device for use of air frequencies.**
- c) Mobile phone to call the Air Traffic Controller (ATC).
- d) Automatic position reporting device (Transponder) Mode A type and VHF radio for use in air frequencies.

N10. According to the current regulation, a Ultralight Aerosport Flight Machine (YPAM) must have some minimum empty weight and a minimum stall speed.

- a) Namely, the minimum weight of an empty load aircraft should not be less than 70 kgw and the lower stall speed should not exceed 35 knots.**
- b) Namely, the minimum weight of an empty load aircraft should not be less than 100 kgw and the lower stall speed should not exceed 45 knots.

- c) Namely, the minimum weight of an empty load aircraft should not be less than 120 kgw and the lower stall speed should not exceed 55 knots.  
d) Namely, the minimum weight of an empty load aircraft should not be less than 200 kgw and the lower stall speed should not exceed 65 knots.

N11. An YPAM pilot makes occasional use, for his landings, of an agricultural field with a warehouse. This is illegal...

- a) Because according to regulation every land YPAM should operate only from airports or landing fields.  
b) Because he cannot file a flight plan from an airfield etc that is not published in the AIP Greece.  
c) Because in case of an accident the insurance company will not compensate for any losses.  
**d) All the above.**

N12. Ultralight Aerosport Flight Machines pilots must report immediately to the HCAA any Regulatory violation, of air traffic rules, radiotelephony rules, laws, other regulations or directives. For lawbreakers, according to provisioned procedure, the following may be imposed:

- a) Temporary suspension of pilot license.  
b) Permanent pilot license suspension.  
h) Fine of up to 5,000 Euros.  
**d) All the above.**

N13. According to the current regulation for Ultralight Aerosport Flight Machines (YPAMs) a pilot that was held responsible for a violation of air traffic rules or rules of radiotelephony...

- a) Has no right to comment on the misconduct attributed to him, because this judgment falls exclusively in the jurisdiction of the prosecuting authority.  
**b) Is entitled to express in writing his views, for the violation attributed to him, within reasonable time limit, determined in the Call document that will be send to him.**  
c) Has the right to submit in writing his view, for the violation attributed to him, without any time limit, because he right to defend yourself against an accusation is constitutional.  
d) None of the above.

N14. If a pilot of a Ultralight Aerosport Flight Machine (YPAM) is informed in flight that a person is in danger at sea or in an area that is not served by other rescue means ...

- a) He is required to provide assistance in any way.  
b) Must inform ATC but cannot alter the original flight plan.  
**c) He is required to provide assistance in any way, as long as this is possible, without endangering the aircraft or passenger (if any).**  
d) He is not required to provide assistance because Ultralight Aerosport Flight Machines(YPAMs) are not certified aircraft and this may raise legal liability for compensation.

N15. An YPAM pilot in flight, realizes that an aircraft has been abandoned or observes aircraft wreckage...

- a) He should inform about ,without delay, the Air Traffic Controller (ATC), or, if he is on the ground, the local aviation authority or the nearest police authority.**  
b) He is not required to take any action, the sole responsibility for air accidents lies with the Accident Investigation and Aviation Safety Board.  
c) He should notify, within 48 hours, the Civil Aviation Authority.  
d) None of the above.

N16. A pilot of a Ultralight Aerosport Flight Machine (YPAM) performing flight without a flight plan or alters his flight plan in flight, with false reasoning...

- a) Performs an illegal flight and is liable for suspension of his pilot's license.  
b) Performs an illegal flight and is punished with a fine.  
c) Performs an illegal flight and may be punished with imprisonment up to six months.  
**d) All the above.**

N17. A Ultralight Aerosport Flight Machine (YPAM) pilot that violates air traffic rules in a way that may endanger the safety of other aircraft ...

- a) Can be punished with imprisonment up to six months and a fine.**

- b) Can be punished with a fine.
- c) Cannot be penalized because Ultralight Aerosport Flight Machines (YPAM) are not certified aircraft and therefore not required to comply with air traffic rules.
- d) Cannot be penalized because the violation of air traffic rules is not easy to prove according to legislation.

N18. In case someone performs a flight with a Ultralight Aerosport Flight Machine (YPAM) without a license or with a license that is not valid ...

- a) Is punished with a fine.
- b) Is not punished unless danger arises for aircraft safety.
- c) Is punished with imprisonment up to two years and a fine.**
- d) Is punishable with imprisonment up to six months.

N19. In a ZZZZ landing field a licensed YPAM pilot allows a non-licensed (but much experienced ) person to fly with the aircraft for a short period over the field. Anyone who allows or accepts the handling of an aircraft by a person who is not licensed ...

- a) He is not penalized because the pilot is solely responsible even when he is watching from the ground.
- b) He is not punished because the other pilot, although non-licensed, was very experienced.
- c) Shall be punished with imprisonment up to two years and a fine.**
- d) He can be punished with imprisonment up to six months.

N20. A Ultralight Aerosport Flight Machine (YPAM) pilot forgot to renew his insurance contract that has expired but allows a licensed pilot to make a flight. Who is held legally responsible in this case?

- a) Insurance cover is the exclusive obligation of the owner and anyone who violates the obligation for minimum insurance, as imposed by regulations, may be punished with a fine and imprisonment up to six months.
- b) The flight insurance is the sole obligation of the pilot, because he must verify personally before the flight that the YPAM documents are okay and therefore any default may be punished with imprisonment up to six months and a fine.
- c) Flying with a valid insurance is the obligation of the owner and the pilot. Anyone who violates the obligation for minimum insurance, as imposed by the regulation, shall be punished with imprisonment up to six months and a fine.**
- d) The legal responsibility lies with the insurance company.

N21. A licensed pilot with a properly registered and insured (YPAM) allows a friend that is a skilled paratrooper, to perform a jump without having obtained a special permit by the Civil Aviation Authority (CAA)...

- a) It is considered as an "acrobatic flight or a show" that, without a permit from the authority, is punishable with imprisonment up to six months or a fine. If the act was over residential areas, the imprisonment can be raised up to one year.**
- b) It is considered as an "acrobatic flight or a show" that legally does not require a license and is not punished in any case.
- c) Not considered as an "acrobatic flight or a show" but without legal authorization from the authority it is punished with imprisonment up to six months or a fine. If the act was over residential areas, imprisonment can be raised up to one year.
- d) Is not considered as an "acrobatic flight" and a permit is not required legally and is not punished in any way. But over populated areas, as an exception, a special permission is required by law, and imprisonment for up to one year may be imposed.

N22. What is the time period required, by law, to inform the Accident Investigation and Aviation Safety Board after an accident (injury / death) occurs?

- a) The pilot, the owner or any other person aware of an accident or serious incident has to inform, without any delay.**
- b) The pilot, the owner or any other person aware of an accident or serious incident has to inform within 24 hours, without neglecting his obligation.
- c) The pilot, the owner or any other person aware of an accident or serious incident has to inform within 78 hours, without neglecting his obligation.
- d) The legislation requires the Accident Investigation and Aviation Safety Board to be

informed, after an accident (injury / death) occurs, but does not foresee for any minimum time limit.

N23 An occurrence is characterized as an accident given that...

- a) Injury of any person and / or death have been caused.
- b) The Ultra Light Aero Sport Flight Machine (YPAM) was completely destroyed, crashed at any inaccessible point or ditched and sank.
- c) The Ultra Light Aero Sport Flight Machine (YPAM) has suffered damage, and any repair is considered to be unsafe for its future airworthiness.
- d) All the above.**

N24. The Air Accident Investigation and Aviation Safety Board (AAIASB) is by law ...

- a) An agency part of the Hellenic Civil Aviation Authority (HCAA).
- b) An audit authority that refers to the Ministry of Public Order and Citizen Protection.
- c) An independent authority referring to the Minister who has the responsibility for public transport.**
- d) An independent authority referring directly by the ICAO.

N25. An YPAM pilot while taxiing collides with a leading aircraft due to brake failure, resulting only aircraft damage. Is it considered an accident?

- a) No, because an accident should occur in a period from take-off to the time of landing. Any occurrence during ground operations is not considered an accident.
- b) Yes, because from the start of taxiing until the complete stop of the aircraft any event that may occur is considered an incident/accident and is investigated by the Accident Investigation and Aviation Safety Board.**
- c) No, since there is no injury or death it is not considered as an accident but it may be deemed appropriate to be investigated by the Accident Investigation and Aviation Safety Board.
- d) Yes, because two aircraft have been involved and the fact that it happened on the ground is legally irrelevant. Had the (YPAM) collided with a car or a person while on the ground, it should have been not considered as an accident in any case.

N26. A Ultralight aircraft pilot gets involved in an accident at a landing field. Which independent authority has the right and obligation to take over the investigation of the accident?

- a) The Civil Aviation Authority (CAA), whose mission is to organize, develop and control the system of the country's public air transport sector along with the flight safety sector.
- b) The Air Accident Investigation and Aviation Safety Board (AAIASB) by investigating the contributing factors leading to accidents so they can be avoided in the future.**
- c) The owner of the airport or landing field ZZZZ, regardless from being a physical or legal entity, in cooperation with local prosecutors.
- d) All the above.

N27. What is the purpose of the investigation of an aircraft accident by members of the independent authority named Air Accident Investigation and Aviation Safety Board?

- a) Identifying and recording the conditions and causes that led to the accident and prosecuting the guilty ones if such evidence arise.
- b) Publishing of a report with safety recommendations with the scope to avoid re-occurrence of the same or similar accidents in the future.**
- c) The scientific identification of the circumstances and causes that led to the accident so penalties are enforced by the CAA to the pilot, the owner or the mechanic.
- d) All the above.

N28. The movement of an aircraft or aircraft parts after an accident it is strictly prohibited except if.....

- a) It is necessary for the immediate rescue of persons in distress.**
- b) The owner or his representative is present and approves.
- c) It is demanded by the accredited representative of the insurance company and at the presence of a police officer.
- d) This action is mandatory in order to avoid prosecution to the pilot at a later time.

N29. A Greek pilot performs a flight within ATHINAI FIR (Flight Information Region) with an Ultra Light aircraft with Czech registration (OK -....) and has an Ultralight pilot's license obtained in Italy. Which Air Traffic rules should he follow?

- a) Czech because the registry is from that country.
- b) Italian because all his flight training was in that country.
- c) Greek, because all flights in the ATHINAI FIR follow the national legislation.**
- d) International uniform air traffic rules - there is no significant difference of rules from country to country, especially within the state members of the European Union.

N30. A pilot is planning a flight trip. What is the legally maximum operating altitude of an YPAM?

- a) The highest altitude, it can legally fly, is 10,500 feet.
- b) The maximum altitude that it can legally fly is 12,500 feet or FL125 depending whether the flight is contacted above or below the safety altitude of an airway.**
- c) The maximum altitude that it can legally fly is 13,500 feet or FL135 depending if the flight is contacted above or below the safety altitude of an airway.
- d) The maximum altitude is determined by the landscape e.g mountains. No restrictions are applied by legislation.

N31. YPAM flights are conducted in accordance with current Regulation and...

- a) On the basis of all the published rules of the air.
- b) Based on the instructions of Air Traffic Controllers (ATC).
- c) Based on any kind of aeronautical publications of the HCAA (AIP Greece, Notams, etc).
- d) All the above.**

N32. According to traffic rules and the relevant regulation for Ultralight Aerosport Flight Machines (YPAMs), flights between 3,000 to 12,500 feet ...

- a) Are carried out at any height (provided that a NOTAM with height restrictions has not been issued or the TMA does not require published VFR altitudes and routes).
- b) Are performed in altitudes in accordance to the semi-circular rule, i.e. tracks 0-179 degrees fly in odd thousands of feet + 500 ft, i.e. 3.500 ft, 5.500 ft, 7.500 ft etc. For tracks 180-359 degrees fly in even-thousands of feet + 500 ft, i.e. 4.500 ft, 6.500 ft, 8.500 ft etc.**
- c) Only allowed with the permission of the Air Traffic Controller (ATC) and the heights that he will define.
- d) None of the above.

N33. A pilot is planning a flight and will follow a Southerly course of 200 degrees. Along his route he will encounter an obstacle (mountain) of 6000 feet in height. At what altitudes can he fly, following the semicircular rule?

- a) 7.500, 9.500, 11.500.
- b) 6,500, 8,500, 10,500, 12,500.**
- c) At any altitude (as long as there is not a NOTAM with height restrictions or the TMA does not require published VFR altitudes and routes).
- d) At the altitudes given to him by the Air Traffic Controller.

N34. An (YPAM) pilot planning a flight from 3,000 feet up to 12,500 feet with a North-East course of 050 degrees. What altitudes can he fly under the semicircular rule?

- a) 3.500, 5.500, 7.500, 9.500, 11.500.**
- b) 6,500, 8,500, 10,500, 12,500.
- c) 3,000, 5,000, 7,000, 9,000, 11,000.
- d) 6,000, 8,000, 10,000, 12,000.

N35. An (YPAM) pilot is planning a low altitude, additive flight, track 179 degrees, below 3,000 feet, over a non-highly-populated area, town, village or outdoor gathering. What is the minimum height that he can fly?

- a) Based on the semi-circular rule, he can fly at 2,500 feet.
- b) Since below 3,000 feet no semicircular rule applies, at any height he prefers.

**c) Any height but not less than 500 feet, which is the minimum in this instance.**

d) There is no minimum limit - the limit is set by the pilot and the aircraft capabilities.

N36. An YPAM pilot is planning a flight in a TMA (Terminal Maneuvering Area) with published VFR routes and altitudes. What altitudes can he fly?

a) He can fly under the semicircular rule following the published VFR routes.

**b) Follows the published VFR altitudes and routes based on the QNH given by the Air Traffic Controller (ATC).**

c) Any altitude (as long as there is an issued NOTAM, with height restrictions).

d) He follows published VFR altitudes and routes based on QFE i.e. the height over the ground surface.

N37. An YPAM pilot is planning a flight in a TMA (Terminal Maneuvering Area) without published VFR routes and altitudes. What altitudes he can and must fly at?

a) He can fly at any altitude (QNH basis) he wishes following the semicircular rule and with regular reports to the Air Traffic Controller (ATC).

b) He may be required, due to other traffic or present restrictions, to fly at a height that will be assigned to him by the Air Traffic Controller.

c) He can fly at a flight level (FL), if he is over the transition altitude of the TMA, placing at his altimeter a reference barometric pressure of 1013,2.

**d) All the above.**

N38. Two aircraft approaching a landing field at the same time. If there are no other reasons, which one has normally the priority based on the rules of the air?

**a) The one at the lower altitude.**

b) The one at the higher altitude.

c) The one that is heavier.

d) The one that is faster.

N39. An YPAM pilot observes, in-flight, an approaching aircraft in a head on collision course. What avoiding action must he take according to the rules of the air?

a) Immediate change of course to the left.

**b) Immediate change of course to the right.**

c) Immediate change of height only.

d) Immediate radio emergency call to the other aircraft.

N40. An YPAM pilot is obliged according to regulations to terminate the flight ...

a) 30 minutes before Sunset.

b) At the time of Sunset.

**c) 30 minutes after Sunset.**

d) 60 minutes after Sunset.

N41. A pilot is approaching an airport and finds out that he has no communication due to radio failure. What light signal would he expect from the tower when entering the traffic circle?

a) A steady green light.

**b) A series of white light flashes.**

c) A series of red light flashes.

d) A steady red light.

N42. In case an YPAM pilot is about to attempt an emergency landing, how should he start his emergency transmission?

a) SOS ...

**b) MAY-DAY ... (three times)**

c) PAN-PAN ... (three times)

d) ALERT ...

N43. The international emergency frequency, in the VHF air bands, can be easily placed in all radios for emergencies and is ...

**a) 121.500 MHz**

b) 127.800 MHz

- c) 129.800 MHz
- d) 156.800 MHz (known as channel 16)

N44. An YPAM pilot is approaching in flight, from behind, another slower aircraft. How can he avoid the possibility of collision according to the rules of the air.

- a) We will overtake from the left.
- b) He will overtake from the right.**
- c) He will overtake from above or below.
- d) He will make direct emergency radio call to the other aircraft.

N45. Night flights (30 minutes after sunset until 30 minutes before sunrise) with Ultralight Aerosport Flight Machines (YPAM) are not allowed according to regulation.

- a) Are exceptionally allowed, if the pilot has an international Private Pilot License (PPL)
- b) Are allowed exceptionally, if the aircraft is equipped with navigational lights.
- c) Are allowed exceptionally, if the pilot has an international Private Pilot License (PPL) and the aircraft is equipped with navigational lights.
- d) There are no exceptions.**

N46. What is the minimum documentation that must be held and valid by a Ultralight Aerosport Flight Machine (YPAM) before any flight?

- a) Certificate of Airworthiness
- b) Certificate of Registration
- c) Insurance Contract
- d) All the above.**

N47. Is smoking allowed in flight with a Ultralight Aerosport Flight Machine (YPAM) ?

- a) Yes, if allowed by the owner of the YPAM.
- b) No, it is forbidden in all cases.**
- c) Yes, provided the YPAM is open-type (Open Cockpit).
- d) None of the above.

N48. When a Ultralight Aerosport Flight Machine (YPAM) has undergone a repair or modification that could affect its flight ability or alter its characteristics, then ...

- a) The owner, the pilot or the authorized pilot should fly with the YPAM alone before another person can fly with it.
- b) The certificate of airworthiness automatically ceases to apply and must be reissued.**
- c) Provided the repair or conversion was undertaken by a licensed mechanic, there is no reason that the airworthiness certificate cannot be valid.
- d) The manufacturer must be informed and consent in writing.

N49. Which Ultralight Aerosport Flight Machines (YPAMs) are not required, by the current regulation, to be equipped with a fire extinguisher?

- a) Seaplanes and amphibians.**
- b) Gliders and motorgliders.
- c) The motorized paragliders - known as paramotor.
- d) All YPAMs, with no exceptions, are required to have a fire extinguisher.

N50. Based on current regulation, to fly, legally and safely above water surface, one Ultralight Aerosport Flight Machine (YPAM), you should ...

- a) Be provided with floats so in case of emergency be able to make a safe ditching.
- b) Be equipped with a lifeboat which is deployed automatically (by a CO<sub>2</sub> bottle) when in contact with water.
- c) Be equipped with life jackets that every person on board must wear throughout the duration of flight over water.**
- d) Have successfully attended a Survival at Sea Training School (SaSTS).

N51. Is it legal for a Ultralight Aerosport Flight Machine (YPAM) to fly without an Aircraft Radio Station permit, that is issued by HCAA ?

- a) No, two way communication is important and explicitly required by regulations.
- b) Yes, if flights are executed into airspace that two way communication is not**

**required.**

- c) Yes, provided that the pilot carries a portable device that works in VHF air band frequencies
- d) No, the aircraft radio station permit and the radio equipment are in the minimum required.

N52. An YPAM pilot is planning a trip abroad. Is it permissible for YPAMs to perform international flights?

- a) No, according to YPAM regulation, can only be used for sport, recreation, education and training flights.

**b) Yes, if the YPAM departs from and lands to an international airport (with suitable infrastructure e.g. customs control).**

- c) Yes, if the YPAM departs with an approved international flight plan from any commercial airport or recognized ZZZZ landing field.
- d) Yes, if the YPAM departs with an approved international flight plan from any civil airport and goes to any civil foreign airport.

N53. What kind of health certificate is required for a Ultralight Aerosport Flight Machine (YPAM) pilot ?

**a) A category 2 health certificate issued by authorized medical doctors (aeromedical examiners) and / or by aero medical centres authorized by the HCAA .**

- b) With a uniform health certificate recognized by the Ministry of Infrastructure and Transport (same as the one issued for obtaining a car driving license).
- c) A category 1 health certificate issued from authorized, by HCAA, aeromedical examiners.
- d) YPAM pilots can only fly with a medical certificate issued from a neurologist – psychiatrist or pathologist of a public hospital.

N54. Which Annex of the ICAO manual (International Civil Aviation Organization), addresses the Air Traffic Rules?

- a) Annex 1.

**b) Annex 2.**

- c) Annex 3.
- d) Annex 4.

N55. Two aircraft in flight are at the same altitude and in converging tracks, which one is required to give priority to the other one;

- a) The one having lower speed.
- b) The one that has the other on its right.**
- c) The one that has the other on its left.
- d) The one having higher speed.

N56. In case there are no fixed position reporting points or navigational aids, how long after take-off and in what time intervals must a Ultralight Aerosport Flight Machine (YPAM) pilot report his position, altitude and heading to the Air Traffic Controller ?

- a) 15 minutes after take off, and every half hour thereafter.
- b) 30 minutes after take-off, and every 1 hour thereafter.**
- c) 45 minutes after take-off, and every half hour thereafter.
- d) 60 minutes after take off, and every half hour thereafter.

N57. In a controlled airport an YPAM pilot is taxiing observing carefully the information signs at the taxiways and apron. He knows well that any sign with white letters on red background indicate ...

**a) A mandatory message - usually defines a point which we can not cross without explicit permission from the Air Traffic Controller.**

- b) An optional message - usually defines a point which we can freely cross, without permission from the Air Traffic Controller.
- c) An explanatory message - usually defines a point, where airport vehicles often pass and draws our attention.
- d) A mandatory message - usually defines a point where usually strong lateral winds prevail and draws our attention.

N58. From a legal and aviation point of view: Flight time is ...

a) The time from the moment an YPAM begins to move under its own means until the time it stops moving under its own means.

**b) The time from the moment an YPAM begins to move under its own means until the moment it touches the ground at landing.**

c) The time from the moment an YPAM takes off until the time it touches the ground at landing

d) The time from the moment an YPAM exited the aerodrome circle until the time that joins it again.

N59. The person or legal entity with an YPAM at his/its possession, is obliged among other things ...

a) To maintain an updated log with all the YPAM's flights (to be kept at the base of the YPAM and not within the aircraft).

b) To keep the insurance up to date and have the contract available at all times.

c) To have the registration and airworthiness certificates available.

**d) All the above.**

N60. Every Ultralight Aerosport Flight Machine (YPAM) have to necessarily be equipped with safety belts for pilots and passengers and is the obligation of the pilot to confirm ...

a) That the belts function / lock properly.

b) That the passenger is properly fastened in his seat before takeoff.

c) That the passenger does not unfasten his/her safety belt, in flight.

**d) All the above.**

N61. A Ultralight Aerosport Flight Machine (YPAM) was involved in an incident / accident without injuries or death to occupants or other persons. The aircraft is sent to the manufacturer and is fully serviced. Can the owner / pilot, next , perform a flight with no further action?

a) Yes, provided the repair was carried out by the manufacturer and the YPAM was returned to its previous condition.

b) Yes, with the pilot's responsibility, provided that a full preflight check has been carried out.

**c) No. The airworthiness certificate is automatically not valid, when an YPAM is involved in an accident.**

d) No, because the certificate of registration is automatically not valid if an YPAM is involved in an accident.

N62. Keeping responsible under the law the owner and the pilot, an YPAM is not allowed to fly without ...

a) Possessing a minimum insurance coverage accepted by the owner and the pilot.

b) Having a minimum insurance accepted by the administrator of the field or the airport.

**c) Possessing a minimum insurance coverage, as provisioned in Regulation 785/2004 of the European Parliament, and as it is amended.**

d) Having any minimum insurance.

N63. A Ultralight Aerosport Flight Machine (YPAM) airplane (three axis) pilot, wishes to widen his aviation horizons by flying legally a Trike weight shift (or displacement) YPAM.

What additional training must he obtain, in a licensed school, and endorse in his license?

a) The current legislation does not require any additional training or license extension process. YPAM licenses are uniform and it is at the discretion of each pilot, which YPAM he/she will fly.

**b) Must log 7 hours with a Flight instructor, fly 3 "Solo" hours and go through a practical flight test of 1 hour.**

c) He/She has to repeat, from the beginning, the flight training provided for the Ultralight Aerosport Flight Machines (weight shift) YPAM, because it is a completely different flying machine.

d) He should log 7 hours with a Flight instructor, fly three (3) "Solo" hours and go through a practical flight test of 1 hour. He should also take again the theory exam.

N64. Unlike the Trajko weight shift YPAMs for which the Regulation requires practical training of at least 15 hours, for all other Ultralight Aerosport Flight Machines e.g three axis YPAMs the minimum practical training required at a licensed school is.....

- a) Minimum practical training of 20 hours.
- b) Minimum practical training of 25 hours.**
- c) Minimum practical training of 35 hours.
- d) Minimum practical training of 45 hours.

N65. An YPAM pilot is planning a long flight trip (cross-country). He estimates 4 to 4 ½ hours to reach his destination, with take off early in the morning, and for the return flight in the afternoon, he plans for at least five hours. Beyond the challenges for planning the flight (fuel, weather, navigation, etc.) according to the above scenario, does he face, additionally, any legal issue?

- a) No, provided the YPAM holds all the required legal documents.
- b) No, as long as the pilot's license and medical certificate are valid.
- c) Yes, because flying from one end of the state to the other end requires a special permit,
- d) Yes because YPAM pilots are not permitted to fly more than 8 hours within a single day.**

N66. An YPAM pilot licensed from a country outside the European Union wishes to submit his license to the Hellenic Civil Aviation Authority (HCAA) in order to verify it and issue a Greek license. What are the requirements provisioned in the regulation for that case?

- a) Licenses of aircraft pilots from outside the European Union are not recognized for obtaining a Hellenic YPAM license.**
- b) Practical training of at least 25 hours at an authorized training school should take place.
- c) Seven hours with a Flight instructor, three (3) hours "Solo" flight and a practical flight test of 1 hour should take place.
- d) Only the theory exam should be taken.

N67. Occupants of a Ultralight Aerosport Flight Machine (YPAM) intending to fly over water...

- a) Are obliged to bear a life jacket.**
- b) Are not required to carry a life jacket.
- c) Are obliged to carry a personal emergency beacon with positioning locator.
- d) Are obliged to bear a life jacket unless the aircraft is amphibious.

N68. An active pilot with an Airline Transport Pilot License (ATPL) visits a landing field ZZZZ and expresses the wish to the owner of a single seated YPAM plane (3axis) to perform a short flight around the field...

- a) Possessing a superior pilot license, it is legitimate to perform this flight.
- b) Pilots with licenses / certificates according to PART-FCL, even at the ATPL level, are not allowed to fly with a Ultralight Aerosport Flight Machine (YPAM). They need to hold a permit by completing three flight hours with an instructor and 1 hour examination with an YPAM Flight examiner.**
- c) Pilots with licenses /permits issued by EASA or JAR, even at ATPL level, are not allowed to fly with Ultralight Aerosport Flight Machines (YPAMs). They need to issue a license /permit by attending at a licensed training school a practical training of at least 25 hours.
- d) Pilots with licenses /permits issued by EASA or JAR, even at ATPL level, are not allowed to fly with Ultralight Aerosport Flight Machines (YPAMs). They must attend, from the beginning, the flight training provided for YPAM, at authorized schools.

N69. What is the " Destination Alternate Airport" in aviation terminology?

- a) Exclusively the airport or field ZZZZ of departure.
- b) Exclusively the destination airport or field ZZZZ.
- c) The aerodrome to which an aircraft can be directed, when the landing at the destination airport becomes impossible or not recommended.**
- d) According to YPAM Regulation, there is no term "Destination Alternate Airport".

N70. Major airports are divided into "Controlled Airports» and "Non-Controlled airports" (those providing only Aerodrome flight information services=AFIS). Is it possible for a Ultralight Aerosport Flight Machine (YPAM) to land in a major controlled airport?

a) No. In "Controlled Airports" air traffic control, provide services for the airport traffic and is mainly focused to International IFR flight.

**b) Yes, provided the Ultralight Aerosport Flight Machine (YPAM) is properly equipped for flying in controlled airspace ,serviced by radar, and the pilot is extremely careful with generated vortices.**

c) No. At a "Controlled Airport" the information needed by the YPAM pilot is not provided by the Air Traffic Controller.

d) Yes, only by prior permission from HCAA.

N71. A Ultralight Aerosport Flight Machine (YPAM) pilot has filed a plan to land in a major controlled airport and wishes to receive information about the landing or take-off as well as about prevailing weather conditions.

a) He has to tune in a VOLMET frequency of (127,800).

b) He has to tune in at AFIS frequency (different for each airport).

**c) He has to tune in at ATIS frequency (Automatic Terminal Information Service).**

d) He has to tune in the approach frequency and contact the Air Traffic Controller.

N72. ICAO has introduced a specific four-letter worldwide code system for all airports. According to this code system what does the 3rd and 4th letter represent?

a) The wider region that the airport is located.

**b) The letters identify the county containing the airport, with rare exceptions.**

c) The first letter of the name of the State of the airport.

d) If the airport is International, Domestic, Private, Military etc.

N73. A Ultralight Aerosport Flight Machine (YPAM) pilot intends to land at an airport that is designated in AIP GREECE as military. This is prohibited unless a written permission from the Hellenic Air Force is obtained. Exceptionally, the use of N.Anchialos, Araxos, Aktio, Kalamata, Lemnos, Skyros and Chania airports is permitted ....

a) On weekdays, weekends and holidays for all YPAMs.

b) On weekends and holidays for all YPAMs.

**c) On weekends and holidays, but only for YPAMs with Greek registration e.g SX- UXX.**

d) On weekends and holidays, but only for YPAMs having received a oral permission from the military Air Traffic Controller.

N74. A Ultralight Aerosport Flight Machine (YPAM) pilot intends to fly outside the TMA. He must do the following during flight ...

a) Report the requested calculated times over geographical points so the FIC can be informed.

b) Report requested heights over geographical points so the FIC stays informed.

c) Avoid position reports at unknown report points and determine his position in relation to the published VFR points.

**d) All the above are true in order to avoid the unnecessary alerting of search and rescue mechanism.**

N75. Before entering an airport's controlled traffic circuit all aircraft must be informed about:

**a) Runway in use, wind direction, speed (with any substantial changes) and barometric pressure (QNH).**

b) QNH, length of runway in use, wind direction and mean wind speed (if available).

c) QNH, runway in use, wind direction and boundaries of the maneuvering area.

d) QNH, runway in use, average surface wind speed value and airport elevation.

N76. A Ultralight Aerosport Flight Machine pilot gives way to other aircraft in the following order:

**a) Aircraft towing other aircraft, balloon, glider or airship.**

b) Balloon, aircraft towing other aircraft, airship or glider.

c) Aircraft towing other aircraft, glider, airship or balloon.

d) Aircraft towing other aircraft, airship, glider or balloon.

N77. The flight visibility for VFR flights within controlled airspace below 10,000 feet must be:

a) 5000 meters.

**b) 5000 meters or more.**

- c) 4000 meters.
- d) 15000 meters or more.

N78. Which Air Traffic Unit provides flight information and alerting services within an FIR;

- a) Area Control Center (ACC).
- b) NOTAM OFFICE
- c) ACT.
- d) Flight Information Center (FIC).**

N79. What's the lowest height that a VFR flight may be performed, when it does not pass over densely populated areas of cities, towns, settlements or over outdoor gatherings of persons?

- a) 500 feet.**
- b) 3000 feet.
- c) 3500 feet.
- d) There is no minimum. At pilot's responsibility the flight can be conducted as low as desired.

N80. What's the lowest height at which a VFR flight may be performed when passing over densely populated areas of cities, towns, settlements or outdoor gatherings of persons?

- a) 500 feet above the highest obstacle in the area, located 2000 feet or 300 meters from the aircraft's position.
- b) 1000 feet above the highest obstacle in the area, located 2000 feet or 600 meters from the aircraft's position.**
- c) 1500 feet above the highest obstacle in the area, located 2000 feet or 900 meters from the aircraft's position.
- d) 2000 feet above the highest obstacle in the area, located 2000 feet or 1200 meters from the aircraft's position.

N81. A Ultralight Aerosport Flight Machine (YPAM) and a glider flying at almost the same altitude are approaching head on, with a risk of collision. What avoiding action must be taken?

- a) The glider has right of way. The YPAM must alter course to the right.
- b) The YPAM has right of way so the glider should alter course to the right.
- c) Both should alter course to the right.**
- d) Both must alter course to the left.

N82. The minimum flight altitude above sea level is ...

- a) 500 feet.**
- b) 1000 feet.
- c) 2000 feet.
- d) There is no altitude limit since there are no obstacles over sea surface.

N83. We are approaching an airport and we have no radio communication. What signal should we expect from the Tower entering the traffic circuit?

- a) Steady green.
- b) White flashes.**
- c) Red flashes.
- d) Orange color flashes

N84. Define as "True" or "False", the following sentences:

Sentence I: Occupants of a Ultralight Aerosport Flight Machine (YPAM) are not permitted to unfasten their safety belts in flight.

Sentence II: Occupants of a Ultralight Aerosport Flight Machine (YPAM) are not allowed to throw any objects overboard during flight.

- a) Only I is True
- b) Only II is True.
- c) Both are True.**
- d) Both are False.

N85. Define as "True" or "False", the following sentences:

Sentence I: Take off run available (TORA) is the length of that runway, declared available and suitable for the ground run and the takeoff of an airplane.

Sentence II: For declared airport distances: ASDA = TORA + Clearway.

**a) Only I is True.**

b) Only II is True.

c) Both are True.

d) Both are False.

N86. Define as "True" or "False", the following sentences:

Sentence I: "A fracture of one's toe bone during flight, constitutes an accident".

Sentence II: "Collision on the ground, without loss of control, which barely was averted, constitutes a serious incident".

a) Only I is true.

**b) Only II is true.**

c) Both are true.

d) Both are false.

N87. Define as "True" or "False", the following sentences:

Sentence I: "If a person on board an airplane gets injured during flight and dies after two months, this is designated as a fatal injury."

Sentence II: "As a cause of an accident or incident is considered an action, an omission, an event or condition or a combination of the above, that caused it."

a) Only I is true

**b) Only II is true.**

c) Both are true.

d) Both are false.

N88. Alternate aerodrome can be...

a) The departure aerodrome.

b) The destination aerodrome.

c) Any other aerodrome.

**d) (a) and (c) are correct.**

N89. Controlled Aerodrome is...

**a) An aerodrome at which, Air Traffic Control Services are provided.**

b) An aerodrome where AFIS is provided.

c) An aerodrome where Air Traffic Control Service or AFIS are provided.

d) None of the above.

N90. Steady green light from the Control Tower to a plane on ground means...

**a) Clear for takeoff.**

b) Clear for taxiing.

c) Clear for taxiing and takeoff.

d) Return to apron.

N91. Before entering the traffic circuit of a controlled aerodrome, aircraft pilots must be informed about:

a) Runway in use and QNH.

b) The average surface wind speed and any significant changes of it.

c) Time and air temperature.

**d) (a) and (b) are true.**

N92. When two aircraft are in converging paths and at about the same altitude, which one is required to give way?

a) The slower one.

**b) The one that has the other on its right.**

c) The one that has the other on its left.

d) None of the above.

N93. Heading is defined as:

- a) **The direction to which the longitudinal axis of the aircraft is pointing, usually expressed in degrees from North.**
- b) The area to which the aircraft is going.
- c) The area from which the aircraft is coming.
- d) None of the above.

N94. Threshold is defined as:

- a) The extension of the airport runway.
- b) The center of an airport runway.
- c) The point where the glide path intersects the runway.
- d) **The beginning of that portion of the runway that is used for landing.**

N95. Altitude, is defined as the vertical distance of a level, point or object measured from...

- a) A specified position.
- b) The airport's reference point.
- c) **Mean sea level.**
- d) The aerodrome elevation.

N96. Control Zone is defined as...

- a) A controlled airspace extending from the earth's surface up to 500 meters.
- b) **A controlled airspace extending from the earth's surface to an upper specified limit**
- c) Airspace from the earth's surface up to 1000 feet.
- d) None of the above.

N97. Terminal area (TMA) is defined as...

- a) A standard sized Control Area.
- b) A designated area for every airport.
- c) **Control area created at the junction of many airways and includes one or more airports.**
- d) Control area created at the junction of many airways and includes one or more airports. Extends from the surface of the earth and up to 1000 feet.

N98. Airport Elevation is defined as...

- a) The highest point of the maneuvering area.
- b) The altitude of the airport apron.
- c) **The altitude of the highest point of the landing area.**
- d) The highest point of the movement area.

N99. Height is defined as...

- a) **The vertical distance of a point or object measured from a specific location e.g. ground.**
- b) The aerodrome Elevation.
- c) The vertical distance of a point or object from mean sea level.
- d) (a) and (b) are true.

N100. Aerodrome Traffic is defined as...

- a) All traffic on the maneuvering area of an aerodrome and all aircraft flying in the vicinity .
- b) **All traffic on the maneuvering area of an aerodrome and all aircraft in the Airport Traffic Circuit.**
- c) All aircraft taking off or landing or located in the aerodrome maneuvering area.
- d) All traffic in the Airport Movement Area.

N101. The PAN signal means that an aircraft...

- a) Is about to perform an emergency landing.
- b) **Is transmitting an urgent message concerning the safety of a ship, another aircraft or vehicle or a person onboard the aircraft or observed on the ground.**
- c) Is in an adverse situation, but there is no need for immediate assistance.
- d) It is about to change flight level.

N102. What is an Airport Control Tower.

- a) The unit, responsible for providing flight and air traffic information in the aerodrome area.
- b) The competent unit established to provide air traffic control in the aerodrome area.**
- c) The competent Air Traffic Unit to provide flight information in the airport movement area.
- d) The competent Air Traffic Unit with flight information, providing services at the airport circuit traffic.

N103. Flight Visibility is defined as...

- a) The visibility as reported by an observer from the Meteorological Service.
- b) The visibility, in flight, in front of the aircraft cockpit.**
- c) The ability to see and recognize visible objects dependent on weather conditions and expressed in meters.
- d) The ability to see and recognize visible objects not illuminated during the day and illuminated during night, in meters.

N104. Among four aircraft, the first one in flight, the second moving on the ground, third one ready for take-off and the fourth one approaching for landing, which one has the priority?

- a) The one taking off.
- b) The one moving on the ground.
- c) The one in flight.
- d) The landing one.**

N105. Flights within a "Restricted Flight Area" are...

- a) Permitted with the responsibility of the pilot.
- b) Permitted under the term "to be performed under VMC conditions".
- c) Only IFR flights are permitted.
- d) Permitted, provided that the applicable, relevant regulations (restrictions) are met.**

N106. Airships give way to...

- a) Gliders and balloons.**
- b) Aircrafts towing another aircraft or object.
- c) Balloons.
- d) None of the above.

N107. Aircraft captains give way to...

- a) Balloons and gliders.
- b) Gliders and airships.
- c) Aircraft towing other aircraft, balloon, glider or airship.**
- d) None of the above.

N108. Danger Area is called the airspace of predefined dimensions...

- a) Over the territory or territorial waters of a State, within which the aircraft flight is permitted under special permission.
- b) Over the territory or territorial waters of a State, within which the aircraft flight is prohibited.
- c) Inside which, conditions may exist, bringing about risks to aircraft, within specified time periods.**
- d) Flying in such airspace, maybe dangerous for aircraft that are not controlled.

N109. May a flight be conducted into a restricted area?

- a) After special permission from the Hellenic CAA or the Hellenic Air Force General Staff.
- b) After permission from the State within the sovereignty of which the relevant area has been established.**
- c) At Commander's responsibility.
- d) In no circumstances.

N110. The cloud base/ceiling over an airport is, 1/8 at 1000 feet, 3/8 at 2500 feet, 5/8 at 4000 feet, 8/8 at 5500 feet. The cloud ceiling is at...

- a) 1000 feet.
- b) 2500 feet.

**c) 4000 feet.**  
d) 5500 feet.

N111. Landing / takeoff of a flight under VFR rules at an airport situated in controlled airspace, is permitted without special permission provided...

- a) The ground visibility is 5 km or more and the cloud ceiling is 1500 feet or more.**  
b) The visibility is 8 km and the cloud ceiling is 1000 feet.  
c) The flight visibility is more than 5 km and the cloud ceiling is more than 1500 feet.  
d) None of the above.

N112. When QFE is set to an altimeter then the altitude indications will be...

- a) Height.**  
b) Transition altitude.  
c) Altitude.  
d) Transition level.

N113. What does a red steady light from the Tower to an aircraft on the ground mean?

- a) Stop.**  
b) Return to where you started.  
c) Start taxiing while remaining clear of the runway.  
d) None of the above.

N114. Series of green flashes to aircraft in flight mean...

- a) Clear to land.  
b) Give way to another aircraft.  
**c) Return for landing.**  
d) None of the above.

N115. To obtain information about landing or takeoff and meteorological information in a controlled airport, tune in frequency of...

- a) VOLMET.  
b) AFIS.  
**c) ATIS.**  
d) (a) and (b) are true.

N116. Series of red flashes from the Airport Control Tower, to an aircraft in flight, mean...

- a) Give way to another aircraft.  
b) Return for landing.  
**c) Airport unsafe, do not land.**  
d) None of the above.

N117. The descent by parachute is only allowed...

- a) In case of force majeure.  
b) Only in an area specified by the HCAA and with permission from the Control Tower.  
c) With permission from the HCAA.  
**d) In case of force majeure or with permission from the HCAA.**

N118. "Controlled Aerodrome" is...

- a. An airport which provides air traffic control service within its traffic area.**  
b. An airport which provides AFIS within its traffic area.  
c. An airport which provides ATC services or AFIS within its traffic area.  
d. None of the above.

N119. "Ceiling" is defined as...

- a) The vertical distance of a horizontal plane, point or object, measured from a specified location.  
**b) The height above the ground or water, of the base of the lower layer of clouds, below 20000 feet (6000meters) covering more than half the sky.**  
c) The vertical distance of a horizontal plane, point or object measured from mean

sea level.

d) The height from the base to the top, of the lower layer of clouds below 20000feet (6000meters), covering more than half of the sky.

N120. Maneuvering area is defined as...

a) That part of an aerodrome used for aircraft landing and takeoff.

**b) That part of an airport used for takeoff, landing and taxiing of aircraft, excluding apron.**

c) That part of an aerodrome used for landing, takeoff, taxiing and parking of aircraft.

d) The part of an airport which is used for parking of aircraft.

N121. What do the initials VFR mean?

**a. Initials used for defining Visual Flight Rules .**

b. Initials used to determine weather conditions required for flying visually.

c. Initials used for defining Visual Flight Rules and weather conditions requirements

d. None of the above.

N122. Flight Visibility is defined as...

a) The visibility as reported by an observer of the Meteorological Service.

**b) The visibility in front of the aircraft cockpit when in flight.**

c) The ability to see and recognize visible objects, dependent on weather conditions and expressed in meters.

d) The ability to see and recognize visible objects not illuminated during the day and illuminated during night, in meters.

N123. Define the category of an area with reference code "LGP 40".

a) Restricted area.

**b) Forbidden area.**

c) Dangerous area.

d) Area for acrobatic flights.

N124. Define the category of an area with reference code "LGD 65".

a) Local area for flights.

b) Forbidden area.

c) Restricted area.

**d) Dangerous area.**

N125. Air Traffic Control Unit is a generic term in a broad sense, what does it mean?

a) Control Area, Approach Control Unit, the Airport Control Tower.

**b) Air Traffic Control Units, Flight Information Centre, Air traffic Reports Office.**

c) Air Traffic Control Service to controlled flights inside controlled airspace.

d) None of the above.

N126. Flights outside controlled airspace boundaries are...

a) Allowed after a special permit from Hellenic Air Force Command.

b) Allowed after special permission from the HCAA.

c) Permitted after communication with the competent ATC unit.

**d) All the above.**

N127. Pilots must maintain, in relation to other aircraft, a distance of at least...

a) 1500 meters.

b) 4 nautical miles.

**c) Minimum required to avoid any risk of collision.**

d) Such a distance as to have the other aircraft always in sight.

N128. It is mandatory for the pilot of an aircraft to be informed before flight with all the relevant information available. This applies to...

a) Only IFR flights.

b) Flight to another airport.

c) Any type of flight.

**d) It is not required, if the flight is to be performed within the airport traffic circuit.**

N129. A VFR flight plan has been filed, it is valid for...

- a) **60 minutes after the expected taxiing starting time (EOBT).**
- b) 30 minutes after the expected taxiing starting time (EOBT).
- c) 60 minutes after the estimated time of departure (ETD).
- d) 90 minutes after the expected taxiing starting time (EOBT).

N130. How long before the estimated taxiing starting time (EOBT) should a flight plan be submitted to the competent Air Traffic Office?

- a) 30 minutes for IFR flights.
- b) 60 minutes for VFR flights.
- c) **60 minutes for VFR and IFR flights.**
- d) 90 minutes for VFR and IFR flights.

N131. What is the maximum time difference between estimated and actual time over reporting points, in order said information to be reported to Air Traffic Service?

- a) 3 minutes.
- b) Plus or minus 15 minutes or more.
- c) **Plus or minus 3 minutes or more.**
- d) 10 minutes.

N132. If, at the destination airport, there are no telecommunications means and no other way of communication with the competent ATC unit, closing of the flight plan by the pilot, will be transferred to the ATC Unit...

- a) **By radio, if possible in practice, and shortly before landing of the aircraft.**
- b) After take-off from the first landing airport.
- c) Upon arrival of the aircraft at the first landing airport.
- d) After verbal notice to the local authorities at the destination.

N133. Is he obliged to justify this request, when a pilot requests to receive special priority?

- a. No
- b. Yes only in case of an IFR flight.
- c. **Only if asked.**
- d. Yes only in case of a VFR flight.

N134. A Special VFR flight can be performed at ...

- a. CTRs and Landing Areas.
- b. CTRs and AWYs.
- c. TMA and CTR.
- d. **CTR.**

N135. If the minimum vertical distance from clouds of a VFR flight is 600 feet, then this flight is conducted....

- a. Outside controlled airspace below 10000 feet.
- b. Outside controlled airspace above 3000 feet.
- c. Within controlled airspace below 3000 feet.
- d. **Outside controlled airspace at or below 3000 feet above sea level.**

N136. VFR aircraft in straight and level flight must comply with the semicircular rule, taking into account...

- a. Their track.
- b. Their heading and altitude.
- c. Their heading.
- d. **Their track and altitude.**

N137. What is the definition of "Track".

- a. The horizontal distance between two points on the ground.
- b. **The line formed by the projections, of the successive positions of an aircraft in**

**flight, on the earth's surface.**

- c. The direction of the longitudinal axis of the aircraft.
- d. The area in which the aircraft is moving.

**HUMAN PERFORMANCE AND LIMITATIONS**

11. Aviation psychology bibliography makes extensive reference to the fact...

- a) Man is created to walk on earth and is protected with the instinctive fear for heights and fall.
- b) The interaction of psychological factors determine whether one wishes to fly or continues to fly aircraft or, on the contrary, is overwhelmed with fear and avoids all flights.
- c) The interaction of psychological factors is what the aviation psychology calls "BALANCE OF FLIGHT".

**d) All the above are true.**

12. Air nausea, it is a condition that occurs while a body is exposed to factors related to the motion of the flight. It is not a particular disease; it is rather a set of symptoms. The YPAM pilots must...

- a) Ask in advance those, who wish to fly as passengers, if they are sensitive to nausea in trains, cars, roller-coasters or (mainly) at sea.
- b) Be aware that symptoms of air nausea and simple travel sickness are the epigastric distress (weight at the top of the stomach), pale face, cold sweats, vomiting, increased body temperature, headache-dizziness, and depression-apathy.
- c) Know that important explanation of air nausea is that is due to psychological reasons as well, such as insecurity, emotional instability, and the non flexible character.

**d) All the above.**

13. Regarding alcohol consumption we know that...

- a) Consumption of alcohol can affect the pilot's judgment to that extent that it can significantly contribute (or be the sole cause) to situations that can lead to an accident.
- b) Is a substance that, over certain concentration levels in the blood will cause sleepiness. Frequent use can cause chronic addiction.
- c) Consumption of the same amount affects differently the same person depending on his physical- psychological condition and the amount of food he has consumed.

**d) All the above are true and responsible pilots do not fly at the presence of any direct or indirect symptom of alcohol.**

14. Headache, after drinking, alcohol and other undesirable side effects (hangover) remain obvious to someone who has consumed alcohol even...

**a) After 48 to 72 hours.**

- b) After 12 to 24 hours.
- c) After 8 to 12 hours.
- d) After 4 to 8 hours.

15. The pilot who has consumed alcohol in a large amount even 24 hours before flying, will have the following undesirable side effects that are crucial for an aircraft pilot...

a) Reduced reaction times and improvement of memory.

**b) Reduced reaction times and problems with his memory because the brain has a decreased ability to use oxygen. If he flies at higher altitudes with lower oxygen levels the symptoms are worse.**

c) He has reduced reaction times and memory problems because in the brain the partial pressure of oxygen has raised, whatever that implies.

d) He will have reduced reaction times without memory problems regardless of how low or high he is flying, hence the relative pressure of oxygen plays no role on that.

16. The general rule regarding the consumption of alcohol and the flight, states that it is strictly forbidden for someone to occupy a pilot's seat even after drinking even a small amount of alcohol before...

**a) 08 hours - which is sufficient enough time, given that no other reasons are present.**

- b) 12 hours – which is sufficient enough time, given that no other reasons are present.
- c) 24 hours – which is sufficient enough time, given that no other reasons are present.

d) 48 hours - which is sufficient enough time, given that no other reasons are present.

17. If someone has consumed alcohol he can discard it and feel better after a...

- a) A nice cold bath.
- b) Consumption of food - especially bread.
- c) Drinking a strong black coffee.

**d) The only thing that helps in eliminating alcohol from the body is the advent of time.**

18. The ongoing side effects after drinking alcohol (hangover) can easily be identified by a pilot before the flight, so as to cancel the flight long before he will be exposed to the following symptoms...

- a) Headache, skin irritation, diarrhoea, cold hands, blocked nose, fatigue, upset stomach and cold sweat.
- b) Headache, dizziness, pain in hands and feet, blackouts, ear pain and problems in organizing his thinking.

**c) Headache, dizziness, dry mouth, blocked nose, fatigue, upset stomach, problems in organizing thinking and photosensitivity.**

d) The headache after drinking alcohol (hangover) is the only symptom. Usually, there are no other symptoms to help us identify the problem.

19. A pilot has consumed relatively small quantity of alcohol (two glasses of wine) but is tired and under decongestant medication for blocked nose. What kind of restriction is applicable to him concerning his next flight ?

a) 8 hours are enough since there are no other serious reasons.

**b) 8 hours are not enough, since there are two other very good reasons. The type of drug that he has consumed and his reduced physical condition and fatigue cancel the restricting period of 8 hours. He must immediately inform his doctor, who will provide clear instructions for the treatment to follow and when he will be fit to fly again.**

c) He has to wait for 24 hours, until alcohol and decongestant drugs, he has taken for the blocked nose, are not present in his body.

d) None of the above.

110. One effect of alcohol consumption is that it reduces the tolerance of the brain in hypoxia. Which of the following statements is true?

- a) This negative effect does not change; it is irrelevant with respect to altitude.
- b) This negative effect is reduced with increasing altitude.

**c) This negative effect increases with increasing altitude.**

d) This negative effect can be reduced by the consumption of coffee.

111. The medical definition of hypoxia (hypoxia) is...

**a) The lack of sufficient supply of oxygen (O<sub>2</sub>) in the body and brain, for their metabolic needs.**

b) The excess of oxygen (O<sub>2</sub>) in the body and brain, causing metabolic problems.

c) The lack of carbon dioxide (CO<sub>2</sub>) in the body and brain.

d) The lack of sufficient carbon monoxide (CO) in the body and brain

112. The medical definition of hypoxia is...

a) The flight at high altitude, causing disturbance of consciousness.

**b) The insufficient supply of oxygen (O<sub>2</sub>) in human body tissues for their metabolic needs.**

c) Insufficient air supply causing a disturbance of consciousness.

d) The need for immediate supply of carbon monoxide (CO) in order to avoid any disturbance of consciousness.

113. The greatest danger from hypoxia for a pilot is...

a) Tachycardia and hyperventilation in an effort to compensate against hypoxia.

b) That the first symptoms of hypoxia can hardly be noticed until it is too late and maybe he is already unconscious.

c) The sudden loss of consciousness resulting in the inability to fly the aircraft and maybe the cause of an accident.

**d) Consciousness disorder, resulting in weakness to properly command an aircraft and to prevent an accident.**

I14. On flights above 10,000 feet when breathing atmospheric air we are facing the danger of hypobaric hypoxia or hypoxia due to height. What are the symptoms of hypoxia as it evolves?

a) Sleepiness, blue edges, whistling in the ears and blurred vision.

**b) Difficulty of concentration, disorders of mood and consciousness, sleepiness, blue lips, tingling at the skin and gradual unconsciousness.**

c) Palpitations, cold sweat on the face, chest pain, blurred vision, dizziness, weakness, wheezing in the ears, convulsions, drowsiness, unconsciousness.

d) None of the above.

I15. On flights at altitudes above 10000 feet, when breathing atmospheric air we are facing the serious danger of hypobaric hypoxia or hypoxia due to height which can cause disturbance in consciousness resulting in inability to command an aircraft leading to an aircraft accident.

a) This does not apply if the YPAM is open-type (open cockpit) because there is no closed compartment and so it is practically impossible for the carbon monoxide (CO) to accumulate.

b) This is not true because the majority of YPAM pilots fly with planes with closed pressurized cabins so carbon monoxide (CO) cannot accumulate as it is not possible for atmospheric pressure to drop.

c) This is not the case and we are not in danger because the maximum flight altitude of YPAMs is determined by law at 12,500 feet. At this max altitude we do not have symptoms of hypobaric hypoxia or hypoxia due to height.

**d) None of the above.**

I16. Regarding YPAMs the easiest, cheapest and most common way to prevent hypoxia is...

a) Creating artificial pressure in the cabin of the aircraft so that the pilot is not exposed to low atmospheric pressure.

b) The provision of the aircraft with an oxygen system device (O2) supplied under pressure, with a face mask so as to prevent any drop of the pressure of oxygen (O2) in the breathing air.

**c) The planning and execution of the flight should not exceed 10,000 feet where the ambient air does not cause symptoms to pilots in good physical condition.**

d) None of the above.

I17. A pilot breathing atmospheric air at 9000 feet is not in danger by hypobaric hypoxia or hypoxia due to height, which may cause disturbance of consciousness leading in inability to command the aircraft and possible accident.

**a) This is generally true but does not exclude the possibility for the initial symptoms of hypoxia to appear, such as decrease in peripheral vision, increased reaction time and decrease in memory. The flight at high altitudes requires attention.**

b) This is true although hypoxia alone cannot lead to disturbance of consciousness that can gradually lead to incapacitation and accident. Flying at altitudes above 12500 feet requires attention.

c) It is neither right nor wrong, since it depends on whether, at 9000 feet, the pilot is breathing pressurized air with the aid of a face mask or he is breathing normally. With the aid of the mask he is not in danger of hypobaric hypoxia or hypoxia due to height up to 30000 feet.

d) This is generally wrong. For any flight from 8000 to 9000 feet, the counterbalance mechanisms are not sufficient and the pilot displays symptoms such as cyanosis, hyperventilation and tachycardia. These symptoms, alone, may well cause disturbance of consciousness resulting in incapacitation and cause of accident.

I18. An YPAM pilot feeling normal at 6500 feet, when climbed at 9500 feet, suddenly realizes a deterioration in the efficiency of performing his duties. Furthermore he notes a problem with his peripheral vision. What should he suspect that he has suffered from and what should his actions be?

a) Suspect carbon monoxide (CO) poisoning, immediately close all cockpit/cabin windows. Inform, by radio, ATC about his situation.

**b) Suspect hypoxia and immediately descend to 9500 feet or the lowest safe altitude.**

**Monitor himself to confirm that he feels better and locate the nearest airport.**

- c) Suspect carbon dioxide (CO<sub>2</sub>) poisoning, open all cabin windows and monitor himself to confirm that he feels better.
- d) None of the above.

I19. An YPAM pilot with a mild cold, poor physical condition and being an untenable smoker, decides to make a long flight (cross-country) great part of which is flown close to 10000 feet...

- a) This pilot is more in danger of hypoxia than another pilot who does not smoke and is in good physical condition and health.
- b) It is easier for this pilot to suffer from hypothermia than another pilot who does not smoke and is in good physical condition and health. He is also in barotrauma danger.
- c) It is easier for this pilot to present signs of nervousness and lack of concentration than another pilot, who does not smoke and is in good physical condition and health.

**d) All the above.**

I20. An YPAM pilot and unrepentant smoker is in a difficult situation, in flight, demanding all of his skills. He decides to light a cigarette (although is prohibited by Regulations) believing that this will calm him down, clear his mind and will help him both mentally and physically. For his information...

- a) Nicotine has a direct pharmacological effect and catecholamines cause calmness and mental clarity with many positive effects for the flight.
- b) Nicotine causes tachycardia and in turn, better oxygen supply in brain and tissues. Still it is not advisable to violate the YPAM regulation for fire safety reasons.

**c) The impression by some smokers that they are more calm when smoking, that smoking clears their minds and perform better more mentally and physically, is false and is due to counteracting against the symptoms of withdrawal syndrome.**

- d) None of the above.

I21. What can the consequences of the smoking habit be to the pilot's body, during flight?

- a) It is easier to suffer from hyperventilation.
- b) It is easier to suffer from hypoxia.**
- c) It is easier to suffer from visual hallucinations.
- d) All the above.

I22. What is the definition of hyperventilation?

- a) Hyperventilation is a natural phenomenon caused by the lack of nitrogen in the blood and caused by emotional stress.
- b) Hyperventilation is a quick and deep breath occurring in conditions of lack of carbon dioxide in the blood.
- c) The hyperventilation is a quick and deep breath occurring in state of anxiety or panic as a result of lack of nitrogen in the blood.

**d) Hyperventilation is a quick and deep breath occurring in situations of stress or panic. Causes the pilot to feel that his breath is interrupted by the lack of oxygen in the blood.**

I23. How can a pilot suffer from hyperventilation?

- a) Due to stress caused by quick and deep breathing.**
- b) Due to high altitude flying in combination with slow rhythmic breathing.
- c) After diving with autonomous equipment (scuba).
- d) Due to high altitude flying after diving with autonomous equipment (scuba).

I24. A pilot with anxiety or stress begins to breathe too quickly with deep breaths. He suffers the first symptoms of hyperventilation. That is...

- a) Numbness, tingling of the lips and fingers.**
- b) Loss of consciousness.
- c) Feeling of euphoria and a false sense of safety.
- d) Chest pain and to the left shoulder.

I25. A pilot suffers from hyperventilation. That is, the quick and deep breathing occurring in a state of anxiety or panic. Initially he has symptoms, such as numbness, tingling of lips and fingers. What are the symptoms of hyperventilation if it carries on ?

a) Sleepiness, blue edges, whistling in the ears and blurred vision.

**b) Palpitations, sweat, chest pain, blurred vision, dizziness, weakness, whistling in the ears muscle spasms, drowsiness, unconsciousness.**

c) Difficulty in concentration, drowsiness, blue lips, tingling in the skin, and finally unconsciousness.

d) Headache, dizziness, dry mouth, stuffy nose, fatigue, upset stomach, problems at organizing thoughts and photosensitivity.

I26. What is the carbon monoxide (CO) ?

a) A very dangerous toxic white gas with an exhaust like smell. In English bibliography, is called "the silent killer".

b) A relatively harmless, colourless, odourless and tasteless gas that is lighter than air.

**c) A poisonous colourless, odourless and tasteless gas that in English bibliography, is called "the silent killer".**

d) None of the above.

I27. What are the gradual symptoms of carbon monoxide poisoning to a pilot that has not understood the problem in due time?

**a) Headache, dizziness, memory and judgment difficulty, slower respiratory frequency, loss of muscle strength, muscle spasms, unconsciousness, coma, death.**

b) Numbness, tingling in the lips and fingers, headache and euphoria.

c) Sudden deterioration in the efficiency of performing flying duties, additionally, problems with his peripheral vision.

d) Unfortunately, there are no symptoms and that is why (in English bibliography) it is called "the silent killer".

I28. How can we, as pilots, avoid the possibility of carbon monoxide poisoning (CO)?

a) Avoid the use, unless a great need, to activate the heating system of the cabin.

**b) We always take care for fresh ambient air entering the cabin, especially when using the heating system.**

c) We fly at low altitudes where ambient air is denser.

d) We prefer heating by chemical or electrical means as we do with clothes and resistors.

I29. The possibility of poisoning from carbon monoxide (CO) with an open type YPAM (open cockpit) is zero...

**a) This is true because there is no closed cabin and the pilot operates literally in open air.**

b) This is not true because there is always the risk of poisoning by carbon monoxide (CO).

c) The above statement does not provide sufficient data and we cannot answer for it is not clear whether this open type (open cockpit) YPAM is equipped with a heating system.

d) None of the above.

I30. What is the right procedure, if an YPAM pilot realizes that he suffers from the initial symptoms of poisoning from Carbon monoxide (CO)?

a) Initially increases the amount of oxygen (O<sub>2</sub>) in blood, tissues and brain by breathing slowly, deeply and rhythmically. He then increases the heating to avoid hypothermia.

b) First turns off the heating in the cabin, because the danger of carbon monoxide (CO) is greater than hypothermia, and lands as soon as possible.

c) First turns off the heating in the cabin, then increases the supply of fresh air through ventilation and windows and finally lands as soon as possible.

**d) First, immediately increases the fresh air supply into the cabin by opening a window followed by opening the ventilation and lands as soon as possible.**

I31. Besides known procedures, are there any additional technical means that we as pilots can include to the aircraft's equipment, in order to avoid the possibility of poisoning from carbon monoxide?

a) Unfortunately for small aircraft, there are no technical means to detect the presence of carbon monoxide (CO) and that is why in English bibliography, this poisonous gas is referred as the "silent killer".

b) Unfortunately for small aircraft, there are no technical means to detect the presence of carbon monoxide (CO) and for this reason, all relevant procedures are taught in detail.

**c) For small aircraft there are very affordable electronic and chemical means to successfully detect the presence of carbon monoxide (CO) in the cabin.**

d) Fortunately for small aircraft like YPAM there are detailed procedures which make the presence of devices that detect carbon monoxide (CO) in the cabin meaningless and that's why are not necessary.

132. Every year, many general aviation accidents take place around the world. For many of them the cause, in accident reports, is identified as poisoning from carbon monoxide (CO).

**a) The above statement is true and that is why pilots are taught how to avoid, detect and, when it happens, to fight against carbon monoxide poisoning (CO).**

b) The above statement is true and for this reason it is mandatory for all general aviation aircraft, including YPAMs, to be equipped with the technical means of detection.

c) The above statement is false. Practically these incidents have been eliminated.

d) The above statement is false. We have incidents but are very limited.

133. How come, and from what reason, the decompression illness affects pilots or passengers (Divers Disease)?

**a) After diving, with breathing apparatus (scuba), if we then fly within 12 to 24 hours, small nitrogen bubbles are released into the blood, then coalesce to form larger bubbles, and then they are carried by the bloodstream into the tissues, causing symptoms similar to the divers disease.**

b) After intensive free or scuba diving with or without breathing apparatus (scuba), if we fly before 12 to 24 hours have elapsed, small nitrogen bubbles in blood and tissues coalesce creating larger bubbles that cause the onset of symptomatology related to divers disease.

c) The symptoms of the divers disease is caused if we fly altitudes above 8000 feet after diving with breathing apparatus (scuba) and before 12-24 hours have elapsed, due to the lack of sufficient amount of nitrogen in the blood and tissues.

d) The decompression disease (so-called "disease of divers") is caused, if after diving with breathing apparatus (scuba), we fly before 8 to 10 hours have elapsed. It is caused when small bubbles of nitrogen in the blood and tissues coalesce and create larger bubbles resulting in the onset of related symptoms of diving disease.

134. YPAM pilots know well and always ask their passengers before the flight if...

**a) They have performed diving with breathing apparatus (scuba) in the last 12 to 24 hours.**

b) They have executed free diving with mask and snorkel in the last 12 to 24 hours.

c) They have performed diving with breathing apparatus (scuba) in the last 10 hours.

d) They have executed free diving with mask and snorkel in the last 10 hours.

135. A passenger informs us that during the past 48 hours he has dived four consecutive times with autonomous breathing apparatus (scuba). What is the safest time to fly after the dives?

a) 8 hours.

b) 12 hours.

c) 22 hours.

**d) 24 hours.**

136. An YPAM pilot has forgotten to ask (although obliged to) his passenger, if he had performed a dive with autonomous breathing apparatus (scuba) in the previous hours. However, the passenger had performed an autonomous dive just four hours ago. What are the symptoms from decompression illness (the so-called "divers disease") this passenger might display?

a) Shaking, inability to concentrate, hypothermia and finally unconsciousness.

b) Palpitations, sweating face and finally unconsciousness.

**c) Itching, feet and arm pains, headache, muscle pain, strong pain and disabled shoulders, elbows and joints, dizziness, vomiting, and eventually unconsciousness.**

d) Sudden deterioration in the effectiveness of speech in general and reduction in peripheral vision.

I37. An YPAM pilot has forgotten to ask(although obliged to) his passenger, if he had a dive with autonomous breathing apparatus (scuba) in the previous hours. What must he do if he realizes, at high altitude, that the passenger begins to show symptoms of decompression illness (the so-called “divers disease”) and having a confirmation from him that he had indeed dived before the flight?

**a) While quickly descending he must inform medical services for the preparation of a decompression chamber. Moreover he must maintain the lower acceptable altitude above ground (where the atmospheric pressure is greater) towards the nearest airport.**

b) Ascends higher, where the atmospheric pressure is lower and maintain this altitude as long as permitted by fuel or until the passenger feels better.

c) Request, by radio, for an ambulance and for preparation of the decompression chamber, maintaining the same altitude to the nearest airport.

d) None of the above.

I38. Generally, the importance of vision during flight becomes evident, since even in case of a well-equipped modern aircraft with plenty of devices, the information provided to the pilot through vision, is...

a) At least 50%.

**b) Exceeds 75%.**

c) Exceeds 65%.

d) None of the above.

I39. As pilots or navigators, during flight, what technique do we use to check for other aircraft and the airspace around and in front of us, through vision?

a) We watch for, constantly and intensively in all directions, without focusing at one point.

**b) Divide the sky into sectors and focus at each one for few seconds before we turn our sight, with small eye movements, to the next sector.**

c) We stare at a fixed point directly in front of us and we expect to identify other aircraft with our peripheral vision.

d) None of the above.

I40. As pilots we protect our eyes and increase our visual ability always wearing quality sunglasses with good specifications, which...

a) Protect us from UV A & B.

b) Protect us from the blur caused by strong light (e.g that of reflections).

c) Have a permeability in the visible spectrum (500-780nm) so as to avoid disrupting colour perception.

**d) All the above.**

I41. As pilots we know that the labyrinthine illusion (Coriolis Illusion) ...

a) Usually occurs when and after the aircraft is in a prolonged roll.

b) When the horizontal semicircle tube of the pilot's labyrinth is adapted to rotation and does not detect it any more.

c) When the pilot execute a head movement to a different axis, then will perceive a false sense of fall (or even a somersault of the body to the front or to the back)depending on the direction of the original rotation.

**d) All the above are true.**

I42. As pilots, to avoid, after execution of a turn, the possibility of labyrinthine illusion (Coriolis Illusion), making us mistakenly believe that we are accelerating or even that the aircraft is turning to another direction...

**a) We make long and slow movements that do not require a large movement of the head, especially taking care if something has dropped on the floor.**

b) Make quick, short moves requiring some movement of the head. We take precaution if something drops on the floor to get it with a quick move.

- c) Make those moves that require great movement of the head so as the middle ear does not have time to fill with fluid.  
d) None of the above.

I43. Is it possible for an YPAM pilot to have the illusion that he is turning or accelerating while flying straight and level at constant speed?

a) No, never, only the opposite can occur as a consequence of a strong change of pressure in the middle ear, called vertigo from pressure change (Alternobaric Vertigo).

**b) Yes, it happens immediately when, after a prolonged constant rate turn, has returned to straight and level flight. The phenomenon is called labyrinthine illusion (Coriolis Illusion).**

c) Yes it often happens as a symptom-illusion in case of poisoning from carbon monoxide (CO). For this reason, open type (open cockpit) YPAM pilots are never threatened by this illusion.

d) No, never. As pilots we know that the labyrinthine illusion (Coriolis Illusion) is a sense of rotation, when in fact there is no rotation and it is not the false sense that we turn or accelerate while, in reality, we fly straight and level.

I44. YPAM pilots know about Vertigo, that ...

a) It is a false sense of rotation.

b) When it occurs as a consequence of strong change of pressure in the middle ear, is called dizziness, caused by a change of pressure (Alternobaric Vertigo).

c) It is dizziness from change of pressure (Alternobaric Vertigo) and can occur after a simple sneeze.

**d) All the above.**

I45. The approach and landing are those phases of flight where visual illusions play a very important role. A pilot is familiar to approach a horizontal runway. What illusion is created when approaching an airport with a landing runway with uphill slope?

**a) The perspective of depth of the runway, perceived by the pilot is considerably smaller and that can give the pilot the misconception(illusion) that he is very high at the approach.**

b) The perspective of depth of the runway, perceived by the pilot is considerably larger and that can give the pilot the misconception(illusion) that he is very low at the approach.

c) the perception of the runway length cannot be wrong when the runway is not horizontal simply because this pilot is familiar with approaching an horizontal runway.

d) None of the above.

I46. The approach and landing are those phases of flight where visual illusions play a very important role. A pilot is familiar to approach a horizontal runway. What illusion is created when approaching an airport landing runway with a downhill slope?

**a). The perspective of depth of the runway, perceived by the pilot is considerably larger and believes that the YPAM is higher than normal.**

b). The perspective of depth of the runway, perceived by the pilot is considerably smaller and believes that the YPAM is lower than normal.

c) The perspective of depth of the runway, perceived by the pilot is such, giving the wrong impression that the runway is longer than in reality.

d) None of the above.

I47. What is the minimum period of time after which a pilot can fly after donating blood?

a) 8 hours.

**b) 24 hours.**

c) 12 hours.

d) None of the above.

I48. YPAM pilots, planning a prolonged flight at high altitude or in winter conditions, have to take into consideration hypothermia. To avoid it, they

a) Test, if available, before the flight and maintain as required the heating system.

b) Use appropriate clothing with effective insulation against the cold.

c) At open type YPAM's (open cockpit) use specially "breathing" fabrics, which allow the

transfer of water vapour but are waterproof with good insulation.

**d) All the above are true.**

I49. Is the risk of hypothermia, for YPAM pilots, a serious issue or not?

- a) It is not a serious problem because in our country the mild weather conditions make it a rare phenomenon for general aviation flights.
- b) It is a serious issue only when we fly over sea in winter, in case of ditching the prolonged stay in the water reduces the temperature of the body and can cause frostbite, putting in danger the lives of the occupants.
- c) It is not a serious problem because all YPAMs, even the open type ones (open cockpit), have a capable heating system, making flights safe.

**d) It is a serious issue and is caused by the prolonged stay in a not well heated cabin and / or when we fly with open type YPAM (open cockpit) with wrong clothing at low temperatures.**

I50. For YPAM pilots the most important issue regarding their health is...

- a) Take care to renew, at least one month (30 days) earlier his medical certificate in order not to be found at a K1 seat with an expired medical certificate.
- b) To maintain meaningful and honest cooperation with his aeromedical examiner, Report to him in detail everything related to medication, changes in visual or hearing ability and any trauma, injury or surgery.**
- c) To be aware of methods for detection of psychotropic drugs by the competent laboratories and must not make use of them before blood tests.
- d) To maintain a friendly and if possible personal relation with the aeromedical examiner.

I51. A pilot who has consumed alcohol and feels relatively well on the ground...

- a) It is reasonable to have no problem in the air since he was well on the ground.
- b) Since there are no other reasons such as drug consumption and lack of sleep, the pilot will maintain the same skills he had on ground, during the flight.
- c) The side effects of alcohol consumption are multiplied with increasing altitude.**
- d) The side effects from alcohol consumption are affected by fatigue, lack of sleep and flight in difficult weather conditions. The altitude of the flight does not change a thing.

I52. Two pilots have the same weight and have consumed the same amount of alcohol. After 24 hours they use their own aircrafts for a local flight. Is it possible for one to have undesirable side effects and the other none?

**a) Yes, because depending on one's weight, metabolism, general physical condition of the individual, how tired he is, even his psychological condition, the effects of alcohol consumption can differ significantly from person to person.**

- b) Yes, because alcohol consumption even after 24 hours affects the middle ear and the eye muscles with side effects that vary in importance from person to person.
- c) Yes, provided they have the same weight and the same general physical condition.
- d) No, because the side effects may not be apparent to a pilot that has consumed alcohol after 24 hours, irrespectively of the general physical condition of the individual, or even his psychological state.

I53. You are approaching a runway that is shorter in length than the ones you are accustomed to. What is the illusion created?

- a) That it is closer than in reality.
- b) No illusion created.
- c) That it is farther away than in reality.**
- d) There is no rule.

I54. What is the approximate chemical composition of the air we breathe...

- a) 100% oxygen.
- b) 21% nitrogen, 78% oxygen, 1% other gases.
- c) 21% oxygen, 78% nitrogen, 1% other gases.**
- d) 11% nitrogen, 78% oxygen, 11% other gases

I55. What is the carbon monoxide?

- a) A poisonous white gas with an exhaust like odour.
- b) A harmless colourless, odourless and tasteless gas.
- c) A poisonous, colourless, odourless and tasteless gas.**
- d) A necessary gas for the smooth operation of breathing.

I56. When we see an aircraft, straight ahead, appearing not to have any relative motion and, as time passes, it is getting larger and larger, then...

- a) Is getting away from us.
- b) We are in a collision course.**
- c) The other aircraft is moving perpendicular to our path.
- d) The other aircraft is moving perpendicular to our path and is moving away.

I57. When we fly with reference to a cloud with an inclined top or base, what impression can be created to us?

- a) Sense of a false horizon.**
- b) Loss of orientation.
- c) Blinding due to light reflection from the cloud.
- d) Sense that we execute a turn

I58. What illusion is created, during landing, when the runway has an uphill slope?

- a) That we are higher.
- b) That we are lower.
- c) That the runway is shorter.
- d) That we are higher and / or that the runway is shorter.**

I59. What kind of wrong reactions can we have, during landing, when the runway has an uphill inclination?

- a) Believing that we are lower, we climb higher and do a low approach.
- b) Believing that we are lower, we climb higher and do a high approach.
- c) Believing that we are higher, we descend lower and do a low approach.**
- d) Believing that the runway is shorter, we descend lower and make a shallow approach.

I60. What illusion is created, during landing, when the runway has a downhill slope?

- a) That we are higher.
- b) That the runway is shorter.
- c) That we are in a climbing turn.
- d) That we are lower and / or that the runway is longer.**

I61. What illusion is created during landing when the runway is wider?

- a) That we are lower.**
- b) That we are higher.
- c) That the runway is shorter.
- d) Does not create an illusion, because the runway is flat.

I62. What illusion is created, during landing, when the runway is narrower?

- a) That we are lower.
- b) That we are higher.**
- c) Does not create an illusion given that the runway is flat.
- d) That the runway is shorter.

I63. What is the illusion created when the runway is wider?

- a) thinking that we are lower we flare from a higher height.**
- b) that the runway is longer.
- c) thinking that we are higher we are late to flare.
- d) thinking that we are higher our flare takes place much higher.

I64. What is the result of the illusion created when the runway is narrower?

- a) Thinking that we are lower we flare from a higher altitude.
- b) Thinking that we are higher we are late to flare.**
- c) Thinking that we are lower we are late to flare.

d) That the runway is shorter.

I65. What is the result of illusion that is created when we land in mist or haze?

a) That the runway is longer.

**b) The runway seems farther away and the landing might be heavy because of delayed flare.**

c) The runway is not well seen and we might become disoriented.

d) The runway seems farther away and that may lead to a stall, starting the flare from too high.

I66. What are the symptoms of dizziness (vertigo) and how can it be caused?

**a) The sense of rotation although it is not happening. It can be caused by illness, accelerations or sudden changes in pressure.**

b) The sense of rotation can be caused by fatigue.

c) The dizziness and loss of consciousness can be caused by illness, accelerations or sudden changes in pressure.

d) The sense of rotation when in fact is not happening. It can be caused by air nausea.

I67. What illusion can be created during level off after a prolonged steady turn?

a) The body feels that it begins to descend.

b) The body feels that it continues to rise.

c) A spinning sensation.

**d) There is no illusion created.**

I68. What illusion may be created during a constant rate turn?

a) The body does not feel any acceleration and there is no illusion.

b) The body feels more than 1g acceleration and also feels that is descending.

c) The body feels an acceleration of less than 1g and feels like descending.

**d) The body feels more than 1g acceleration and also feels like ascending.**

I69. What causes air nausea?

a) Only by the accelerations caused by turbulence or by tight turns and manoeuvres during which the body exceed loads of 1g.

b) Only by psychological factors such as fear of flying.

**c) By both accelerations and psychological factors.**

d) Only by pathological reasons.

I70. During the management of an emergency situation critical for safety and under huge workload, the priorities of the pilot, must be...

a) Navigation, communications, control of the aircraft.

b) Communications, navigation, control of the aircraft.

**c) Control of the aircraft, navigation and communications.**

d) Find and execute the list of actions recommended by the manufacturer

71. At what phase of the flight does the pilot have the larger workload to manage?

a) Taxi.

b) Take off.

**c) Approach and landing.**

d) During cruise.

I72. Pilots should scan the instrument panel, in order to avoid labyrinthine hallucinations (Coriolis Illusion)...

a) With slow and long moves.

b) With frequent moves in a different direction each time.

c) With quick short moves.

**d) With minimal head motion.**

I73. The flight over surfaces with no particular landscape or distinct features or reference points e.g. water surfaces or surfaces covered by snow, causes the illusion of...

**a) A higher altitude than the actual, and results in a lower than the desired approach.**

- b) A lower than actual altitude, leading to an approach higher than the desired.
- c) Deceleration, leading to an approach faster than the desired one.
- d) Acceleration, and leads to an approach slower than the desired.

174., What consequences can the habit of smoking have to the pilot's body during flight?

- a) Leads to hyperventilation.
- b) Reduces the tolerance to hypoxia.**
- c) Increases the possibility of visual hallucinations.
- d) Increases the possibility of labyrinthine illusions.

175. A pilot is carrying out prolonged coordinated constant rate turns. What is the illusion created?

- a) That is not turning.**
- b) That is turning in an opposite direction.
- c) That he is climbing.
- d) That he is in a descent.

176. The minimum time required to elapse between the dive (without decompression stops), and the flight is...

- a) 12 hours for flights close to or exceeding 18,000 feet above sea level.
- b) 2 hours for flights close to or exceeding 4000 feet above sea level.
- c) 2 hours for flights close to or exceeding 8000 feet above sea level.
- d) 12 hours for flights close to or exceeding 14,000 feet above sea level.**

177. The minimum time required to elapse between blood donation and a flight is...

- a) 8 hours for flights close to or exceeding 8000 feet from sea level.
- b) 6 hours for flights close to or exceeding 8000 feet from sea level.**
- c) 12 hours for flights close to or exceeding 8000 feet from sea level.
- d) 12 hours for flights close to or exceeding 14,000 feet from sea level.

### **ENGINES**

K1. An owner of an ultra-light (YPAM), not operating for training purpose, has the right to carry out maintenance work without an authorized mechanic. Those who exercise this privilege in a responsible way ....

- a) hold and follow precisely all the instructions included in the updated pilots', manufacturers' and service manuals.
- b) replace engine parts, when required, with original or equivalent in quality spare parts.
- c) they know what is the maintenance work they are not allowed to do and when to request for a manufacturer's or for an authorized mechanic's support.
- d) All the above answers are true.**

K2. Most of the ultra-light (YPAM) engine manufacturers, make available the operator's manual, the service manual, the heavy maintenance manual and the repair manual. The plain pilot's responsibility is to hold and know in detail.

- a) The operator's manual.**
- b) The operator's manual and service manual.
- c) The operator's manual, the service manual, the heavy maintenance manual and the repair manual.
- d) None of the above is true.

K3. A variety of engines may be installed on ultra lights (YPAM), since they are not certified aircraft. Recently, the favourable engines are aviation engines, which can be distinguished easily by their following basic properties:

- a) They have a very good weight to power ratio (light weight with high power output) and a dual ignition system.**
- b) They are made of stainless steel to prevent corrosion and they are equipped always with a fuel injection system.
- c) They are equipped with carburettor to enable them to fly at high altitudes and carburettor heat system to prevent icing.

d) These engines have been tested successfully on ground vehicles and then modified for aviation use .

K4. On a single Pilot YPAM and on those with very light weight the two stroke operating engines are preferable because ....

a) They cost less, than the cheapest four stroke engine .

b) They have a very good weight to power ratio (light weight combined with high power output).

c) The maintenance and general operation of the two stroke engine is simpler than that of the four-stroke engine.

**d) All the above are true .**

K5. Ultralight (YPAM) pilots know that the four stroke engine has at least two cylinder valves.....

a) For safety reason if one of these becomes inoperative .

**b) One inlet valve and one exhaust valve .**

c) One valve is synchronized with the crankshaft and one valve is synchronized with the reduction gear .

d) The four stroke engine has no valves . There are holes on the body of the cylinder known as ports , covered and uncovered during the up and down piston movement.

K6. In a four stroke engine, the valve mechanical timing with the crankshaft is done in order.

a) To prevent burning and expansion of the fuel-air mixture.

b) To prevent the fuel- air mixture to enter the combustion chamber .

**c) The valves to open and close at the proper time .**

d) The valves to open and close due to differential pressure .

K7. The owner of an ultra-light (not operating under the auspices of a training school) has the right to carry out maintenance work without using an authorized mechanic. Those who responsibly exercise this privilege:

**a) keep in store or order specific expendable spare parts (eg a specific silicone) with the specifications required by the manufacturer's service manual .**

b) They use expendable spare parts, having properties as much as possible similar to the ones described in the service manual.

c) They follow the service manual instructions , only for some parts they can find and no for those they cannot find .

d) None of the above answers are true .

K8. An incomparable advantage of a four stroke engine compared with the two-stroke ultra light (YPAM) engine is :

a) The four stroke engine has a better weight to power ratio compared with the two-stroke engine .

b) The four stroke engine is more economical than the two stroke engine .

c) Maintenance in four stroke engine is more cheaper than in two stroke engine.

**d) Fuel consumption is better in four stroke engine than in two stroke engine .**

K9 A four stroke water cooled engine installed with a fuel injection system instead of a carburetor system , has the following important features .

a) Higher fuel consumption and higher power output as well.

b) Lower fuel consumption and lower power output as well.

**c) Constant power output at any altitude and lower fuel consumption .**

d) Higher fuel consumption but constant power output at any altitude .

K10. A water cooled engine is installed on an YPAM . The recommended maintenance for the water cooler and the engine cooling system is :

a) To inspect the water cooler pipes, with caution, every 100 operating hrs.

b) To replace the water cooler pipes with new pipes , every 2000 operating hrs or after 24 months of normal operation .

c) To drain and refill the anti-freeze e.g. every 50 operating hrs .

**d)All maintenance actions to be carried out in accordance with the maintenance manuals . Different requirements apply for each engine.**

K11. The fuel pump must be replaced whenever required by the service manual or whenever there is even a small probability that a malfunction might occur . It is a part of major importance for the engine and its malfunction will most likely occur:

- a) During Taxi .
- b) During Take-off.**
- c) During Landing.
- d) During Engine start .

K12. Fuel Pump is a major part of the engine which .....

- a) Must be replaced when it is required and has a relatively low cost .**
- b) Must be replaced, when it fails, and has a relatively low cost .
- c) Must not be replaced and has a relatively high cost .
- d) Must be replaced when it is required, although it costs too much .

K13. Fuel Pump is major part of the engine and some manufacturers .....

- a) Recommend to replace it with a new one every 25 operating hrs .
- b)Install a second engine driven pump or a second electrically operated pump for safety reasons .**
- c) Recommend to disassemble the pump and in case it is engine driven pump you may replace the internal gaskets , every (1)one year of operation; if the pump is electrically operated , to be checked by a multimeter .
- d)Install, instead of an engine driven-pulse pump, an electrical pump.

K14. In all YPAM engines there is a wide use if safety wire locking technique . With the safety wire technique we achieve .....

- a)To reduce vibration to that level, so the bolts will not leave their position, due to oscillation.
- b)Even distribution of thermal loads, so bolts will not overheat unevenly in relation to other bolts.
- c)That a bolt will remain in position, by binding the bolt with another bolt or a fixed point at the engine.**
- d)That the engine service has been carried out by an authorized mechanic or by someone with aviation training .

K15. An airfield visitor observes a safety wire lock applied on an engine and asks the pilot what is the basic principle of this technique . The pilot explains that :

- a)This safety lock results in securing the bolt with a special wire to prevent it from rotation and becoming unscrewed .
- b)Locking is carried out in such a way that the tendency of the bolt to rotate is balanced by the tension of the special kind of wire.**
- c)The lock is carried out in a way to be easily discernible, if the bolt has become partly loose or unscrewed .
- d)None of the above answers are true .

K16. About the safety wire technique on an engine, the type of wire (material and thickness) to be used depends on :

- a)The type of bolt .
- b) The engine area where the bolt is located .
- c)The manufacturer and is referred on the engine service manual .
- d)All the above answers are true .**

K17. Unlike with conventional engines, aviation engines have a time limit, either years or operating hours need a major overhaul . The time from one to the next overhaul is called...

- a)Time Between Overhauls (TBO)and the longer this time the lower is the cost per flying hour.**
- b)Time Between Overhauls (TBO) and the shorter this time the lower is the cost per flying hour.

- c) Time Between Overhaul (TBO) and the longer this time the higher is the cost per flying hour.  
d) Time Between Overhaul (TBO) and the cost of flying hour does not change .

K18. During flight a pilot notices an excessively high engine temperature indication . He knows that , this can cause.....

- a) Damage to heating pipes and cylinder cooling fins deformation .  
**b) Loss of power, excessive oil consumption , and possible permanent internal engine damage .**  
c) Damage only the ignition system .  
d) None of the above answers is true. High temperatures do not affect the engine operation .

K19. One reason for a double ignition system installation on an aircraft engine is :

- a) To improve engine performance .**  
b) For even temperature distribution .  
c) For balanced cylinder Head Pressure .  
d) For noise reduction .

K20. What are the most favourable conditions for carburetor icing?

- a) Any temperature below the freezing point and a relative humidity less than 50%.  
b) Temperature 0 °C to 10 °C and low humidity .  
**c) Temperature -10 °C to 20 °C and high humidity .**  
d) Low temperature .

K21. One possible source of problems against the smooth engine operation is.....

- a) Fuel remaining in the fuel tank for six months or more.  
b) Fuel containing water.  
c) Engine parts are supplied with wrong kind of fluids.  
**d) All the above answers are true .**

K22. In a very cold winter flight when using carburetor heating system :

- a) More air comes into the carburetor as a result .  
b) Engine power output will be reduced.  
**c) No carburetor icing will take place .**  
d) Engine power output will be improved.

K23. During a cross country flight , the pilot had to refuel with lower than provisioned octane rating fuel . When it is used lower octane rating fuel than provisioned , it can cause

- a) Not the same fuel air mixture in every cylinder .  
b) Lower Cylinder head temperatures .  
**c) Detonation.**  
d) Fire .

K24. An ultra-light pilot after Take-Off and during climb suspects engine detonations . What will be his first corrective action .

- a) He must make immediately the mixture "leaner".  
**b) He must slightly lower the nose of the aircraft to increase the speed .**  
c) He must activate the carburetor heating system .  
d) He must reduce the airspeed and keep engine r.p.m. constant .

K25. During an engine run up test on the ground, two YPAM pilots , observe an uncontrollable burning of the fuel/air mixture before the actual spark plug ignition . This engine phenomenon is called:

- a) Ignition .  
**b) Pre-ignition.**  
c) Super explosion.  
d) Engine feedback

K26. During a cross country flight the pilot cannot find the proper octane rating fuel recommended by the manufacturer to refuel . When he provisioned octane rating fuel for an

aircraft is not available , what is the best alternate option ?

**a) Wait until the proper octane rating fuel is available . We use only the type of fuel mentioned in the engine user manual.**

b)To use the next lower octane rating gasoline . There is a slight difference and this will not affect engine operation.

c)Wait until lead free automobile gasoline is available with lower octane gasoline rating.

d)To use any automobile fuel, provided that it is from approved gas station.

K27. It's a common practice in aviation to refill the fuel tanks after the last flight of the day . This is considered a good procedure because :

a)Pushes any water contained , on top of the tanks away from the engine fuel supply lines.

b)Prevents fuel expansion, making smaller the tank free space(gaseous state).

**c)Limits the possibility to get water in the fuel by condensation, by minimizing the fuel vapour phase in the free space within the tank.**

d)Prepares the airplane for the next day flights.

K28. Experienced pilots always monitor engine instruments and know the normal operation parameters. An abnormally high engine oil temperature indication may be caused by :

**a)Too low oil level.**

b)Operating with a high viscosity engine oil.

c)Operating with very rich fuel - air mixture.

d)Operating with a low viscosity engine oil.

K29.During a summer flight an ultra light Pilot observes during climb that the engine overheats. What will be his best action to cool down the engine .

**a)To reduce the rate of climb and increase the airspeed.**

b)To reduce climb speed and increase engine r.p.m.

c)To increase climb speed and increase engine r.p.m.

d)To reduce engine r.p.m.

K30. It is an extremely dangerous procedure to hand- start an engine and must be avoided. If it is necessary to turn the propeller by hand it is very important the pilot to:

a)Shout "contact" before touching the propeller.

**b)Be in the cabin and have the control.**

c)Be in the cabin and give instructions.

d)Requesting assistance from trained mechanic.

K31. In the four stroke piston engine the four- stroke operating cycles are :

**a)Intake, compression, combustion, exhaust.**

b)Combustion, intake , compression, exhaust.

c)Compression, intake, combustion, exhaust.

d)Exhaust, intake, compression, combustion.

K32. The cylinder head temperature gauge is known as (CHT) (Cylinder Head Temperature) and measures the temperature from:

a)No 1 cylinder .

b)The turbine .

**c)The hottest cylinder.**

d)The exhaust gases.

K33. During an engine start on a cold winter day the pilot observes that the oil pressure is slightly higher than expected . His best reaction will be:

a)To shut down the engine and check for possible oil leaks .

b)To shut down and restart the engine with caution .

c)To shut down the engine and change the engine oil .

**d)He has nothing to do. It is normal on a cold day, engine oil pressure to be slightly increased, provided that its temperature gradually increases , resulting in gradual decrease of its pressure.**

K34. During an YPAM flight with a fixed-pitch propeller the first indication of carburetor icing is:  
a) A decrease in the exhaust manifold pressure.  
b) A fast decrease of the cylinder Head Temperature .  
c) An increase of Cylinder Head Temperature .  
**d) A decrease in engine r.p.m.**

K35. What engine component converts the reciprocating motion to rotation:  
a) The camshaft .  
b) The connecting rod .  
**c) The crank shaft.**  
d) The pistons .

K36. When aircraft engineers refer to “fuel air mixture” they refer to.....  
**a) The mass of the mixture in the cylinders .**  
b) The volume of the mixture in the cylinders.  
c) A small amount of mixture in the carburetor .  
d) The volume of the mixture in the intake manifold .

K37 . The Cylinder Head Temperature gauge (CHT) measures .....  
**a) The engine exhaust gas temperature .**  
b) The hottest cylinder .  
c) The pair of two front opposite cylinders .  
d) The mean temperature of all the cylinders .

K38. During engine start an YPAM pilot observes high oil pressure . What does this mean?  
a) It is normal, provided pressure decreases as r.p.m. increase to maximum .  
**b) It is normal , but we must not increase engine r.p.m. until the oil pressure drops to the normal operating range.**  
c) The oil filter may be clogged and the engine must be shut down immediately.  
d) It is due to improper engine oil . The engine must be shut down and restarted after the oil change .

K39. The Cylinder Head Temperature gauge (CHT) measures the hottest cylinder temperature by using.....  
a) An electronic temperature sensor.  
b) A thermocouple within the coldest cylinder.  
c) A thermocouple within the hottest cylinder.  
**d) A thermocouple in each cylinder – head.**

K40. Each YPAM pilot knows that, when the difference between (OAT) outside air temperature and dew point is less than 4 °C , carburetor ice may form on .....  
a) Movable modular parts .  
**b) The choke, when reduced power is used .**  
c) The air intake .  
d) The fuel nozzle .

K41. During an engine periodic inspection the mechanic discovers “dirty” spark plugs. This means there is.....  
**a) Carbon deposit and it usually occurs during a low power descend or in IDLE operation .**  
b) Lead deposit and it usually occurs during a moderate power descend or in idle operation .  
c) Residual combustion deposit and it usually occurs during high engine r.p.m.  
d) Residual combustion deposit and it usually occurs in an overheated engine operating with lean mixture .

K42. During flight an YPAM pilot suspects that he is flying through carburetor icing conditions. Given that there is such a system available in the particular YPAM he decides to operate it. Except icing what other consequences are brought about by using Carb-Heat without being in icing conditions (CHT= Cylinder Head Temperature)?  
a) CHT, RPM and power output are uncontrollable.

- b)Decreases CHT, RPM and power output .
- c)Increases CHT,RPM but decreases power output
- d)Increases CHT , but decreases RPM and the engine power.**

K43. Drag in case of wind milling propeller compared to that produced by a non-operating engine propeller is:

- a)Lower .
- b)Greater .**
- c)Lower of greater depending on the propeller blade tips stall.
- d)The same ; there is no difference .

K44. Some YPAMs are equipped by a backup fuel acceleration electrical pump(booster pump).This acceleration booster electrical pump is usually mounted in.....

- a)In the lowest position of the fuel tank .**
- b)Upstream of the engine driven mechanical pump.
- c)Downstream of the fuel tank fuel feed lines .
- d)Under the fuel tank selector which is located between the two pilot seats .

K45.Which of the following prevents the oil pressure to reach unacceptably high values and cause some serious damage to the engine .

- a)The pressure relief valve .**
- b)the ball valve .
- c)The by-pass valve .
- d)The non – return valve .

K46.Excessive high Engine temperatures.....

- a)Will cause damage to the heating pipes and cylinder cooling fins deformation .
- b)Will cause loss of power , excessive oil consumption , and possibly an internal permanent engine damage .**
- c)Will not affect engine at all.
- d)Will cause damage only to the ignition system.

K47. Operating the carburetor heat .....

- a)Causes more air entering the carburetor .
- b)Will enrich the fuel air mixture .**
- c)Has no effect on the fuel-air mixture .
- d)Will improve engine power .

K48. If the appropriate octane rating fuel is not available what type of fuel you can use as a substitute .

- a)The next higher octane rating gasoline .**
- b)The next lower octane rating gasoline .
- c)Unleaded automobile gasoline with lower octane rating.
- d)Any automobile gasoline .

K49. Airplane piston engines internal cooling depend on .

- a)A suitably operating thermostat .
- b)The air flow passing through the exhaust manifold .
- c)The circulation of lubricating oils .**
- d)The air cooler .

K50. Which procedure contributes to engine cooling in case of engine's overheating.....

- a)Enriching the mixture .**
- b)Increasing engine r.p.m.
- c)Decreasing the airspeed .
- d)Decreasing engine r.p.m.

K51.What will be pilot's first action immediately after starting the engine .

- a)Adjust engine r.p.m. and check engine instruments for the proper indications.**

- b) Select, momentarily, magneto or ignition switch to OFF position in order to check grounding.  
c) To check the brakes and the parking brake.  
d) To check fuel tank quantity indications.

K52. If the oil pressure is slightly higher during start on a cold day :

- a) Shut down the engine, there is possibly an oil leak .  
b) Shut down the engine immediately and restart with caution .  
c) Engine oil must be changed .  
**d) This is normal, provided that oil temperature gradually increases .**

K53. Octane rating is the measure of .....

- a) Fuel vaporization tendency .  
b) The fuel ability to ignite.  
**c) The fuel ability to resist detonation.**  
d) Fuel's resistance to random detonation.

K54. The instrument, measuring the "EGT" exhaust gas temperature, measures .

- a) Temperature of exhaust gases.**  
b) Temperature of the hottest cylinder.  
c) Temperature of the coldest cylinder.  
d) The mean temperature of all cylinders.

K55. Each cylinder valve, during a full cycle of a four-stroke piston engine, opens and closes

- a) One time .**  
b) Two times .  
c) Three times .  
d) Four times .

K56. What is the function of the mixture control (idle cut-off) switch, on a piston engine .

- a) Controls the fuel inlet of the idle-jet, during idle operation.  
b) Changes fuel flow of the main jet .  
c) Shuts down the engine, during taxiing, in idle, when cylinder head temperature increases fast, to keep spark plugs clear.  
**d) Cuts off the fuel supply to the carburetor.**

K57. The detonation of the fuel mixture in a piston engine is associated .

- a) With use of fuel of higher octane grade than that certified .  
b) With use of rich mixture and low Cylinder Heads Temperature .  
**c) With excessive build up on the plugs during long operation with a high rich mixture .**  
d) With use of lean mixture and high Cylinder Heads Temperature.

K58. During pre-ignition, the smooth operation of a four stroke engine is disturbed by:

- a) Uncontrolled explosions of the mixture .  
**b) A carbon hot spot in the combustion chamber causing premature ignition of the mixture .**  
c) A slow burn of a rich mixture inside the hot cylinder .  
d) An explosion of any mixture that takes place inside the hot cylinder .

K59. Cylinder head temperature in a piston engine is measured using :

- a) Thermo-couple mounted on No1 cylinder .  
b) A resistor wherever there is available voltage supply .  
c) A resistor in the exhaust manifold .  
**d) Thermocouple mounted on the hottest cylinder .**

K60. How altitude increase affects the fuel – air mixture supplied to the engine .

- a) Mixture becomes leaner.  
**b) Mixture becomes richer.**  
c) Mixture does not change significantly.  
d) Flight altitude has no effect on the mixture.

K61. An aircraft is flying straight and level at 8000 feet. After starting to descend, how does the lower altitudes affect the mixture .

- a) **Mixture becomes leaner** .
- b) Mixture becomes richer .
- c) Mixture is unaffected.
- d) Depends on the airspeed of flight .

K62. After landing, the engine continues to run after the ignition switch is turned off. What is the possible cause and the recommended corrective action?

- a) **Overheated Engine-Corrective action: cool down the engine in low r.p.m.(2000).**
- b) Overheated Engine -Corrective action: cool down the engine in high r.p.m(5000)
- c) Very Low Engine Temperature –warm up the engine at high r.p.m. (5000)
- d) The fuel – air mixture is lean – activate the mixture control (choke)

K63. After starting and warming up, the engine is roughly running at idle, and at the same time there is too much exhaust gas. What is the most probable cause ?

- a) The spark plug temperature is too low.
- b) The fuel air mixture is too lean.
- c) The spark plug temperature is too high.
- d) **The starting carburetor choke, has remained activated** .

K64. After starting the engine, the engine oil level is increasing .

- a) Engine oil needs to be changed .
- b) Engine oil temperature is too high .
- c) **Engine oil temperature is too low** .
- d) Engine oil has been just changed .

K65. If the aircraft engine is permitted to use MOGAS (automobile gasoline), in which case can we use AVGAS?

- a) **If there is no other fuel available or when a “vapor lock” occurs** .
- b) Always .
- c) When the engine is close to the scheduled overhaul .
- d) When the engine is brand new or comes from a major overhaul .

K66. The two stroke engine oil type:

- a) Has the same specifications with the oil of the four stroke engines .
- b) Is changed after a certain operating hours .
- c) **Is consumed in a mixture with the fuel, in certain proportion, or is injected into the engine.**
- d) Has the same specification with the oil used in the propeller pitch governor .

K67. In an ultra-light four stroke engine, if the oil pressure does not begin to rise within 15 seconds after an engine start in summer or 30 seconds in winter, then the pilot must....

- a) Wait another 60 seconds .
- b) Increase engine r.p.m. to 100%.
- c) **Shut down the engine immediately** .
- d) Increase engine r.p.m. to 50%.

K68. You should expect carburetor icing:

- a) **During descend and approach** .
- b) During taxi and take off.
- c) During cruising at the maximum speed.
- d) During a steep descent .

K69. An internal combustion engine cylinder , operating at an altitude of 18000 feet contains.....compared to the same cylinder , completely filled with air and operating at sea level.

- a) More nitrogen .
- b) Twice the amount of oxygen.

- c) The same oxygen .  
**d) Half the oxygen .**

K70. Concerning ignition system with magneto :

**a) Is a self – contained , engine – driven unit, which supplies electrical current to the plugs and is completely independent of the electrical system of the aircraft .**

b) It is always connected to the battery , and produces high power output only on high engine r.p.m.

c) Comprises two magnetos, one fires the spark plugs in odd cylinders the other fires the spark plugs on even cylinders .

d) The operation of the magnetos is controlled by an ON-OFF MASTER Switch .

K71. In an airplane with a fixed-pitch propeller, the first instrument indication of carburetor icing is:

a) An increase in engine r.p.m.

**b) A decrease in manifold pressure .**

c) An Increase of cylinder head temperature .

d) An Increase in exhaust gas temperature .

K72. An engine continues to run after the ignition switch is turned to off position . What is the pilot's best course of action ?

a) Keep trying to reset the ignition switch .

b) To move the throttle to the idle position .

c) To move the throttle to the take off position .

**d) To move the mixture control , to the idle cut – off position .**

#### **RADIOTELEPHONY-PHRASEOLOGY**

F1. Every pilot knows that in radio communication has to follow a standard phraseology.

A passenger asks an YPAM pilot why does this happen. What the pilot's answer should be?

a) In this way, the Air Traffic Controller can understand if he is in communication with a licensed pilot or an outsider to aviation, transmitting over the radio.

b) In this way, those who listen to the frequency as well as the passengers in the aircraft, do not understand what happens and do not panic in an emergency.

**c) In this way, the risk of misunderstanding and confusion is reduced and more information is exchanged in less time.**

d) None of the above.

F2. A pilot of an YPAM (SX-UAB) approaching the airport, reports his position to the Air Traffic Controller. He then receives the message: "SX-UAB, traffic at two o'clock, distance 10 miles, north course, 2700 feet climbing". Why did he receive this message?

**a) The Air Traffic Controller made a standard traffic update for SX-UAB.**

b) The Air Traffic Controller obviously informs all other aircraft about the position and course of SX-UAB.

c) The Air Traffic Controller gave wrong information, the pilot of SX-UAB should seek clarification.

d) None of the above.

F3. In controlled airspace with Radar service, it is mandatory for pilots to activate their aircraft Transponder. In the Greek FIR the following codes 7000, 7600 and 7700 indicate respectively ...

a) VFR flight, radio communication failure, Hijack.

b) Radio-failure, Emergency, VFR flight.

c) Radio-failure, VFR-flight, Emergency.

**d) VFR flight, Radio-failure, Emergency.**

F4. In radio-telephony, standard phraseology, 100.300 is pronounced...

a) ONE HUNDRED POINT THREE

b) ONE DOUBLE OOU POINT THREE

c) ONE ZERO ZERO DECIMAL THREE

**d) WUN ZE-RO ZE-RO DAY-SEE-MAL TREE.**

F5. What is the true phraseology, from Airport Control Tower to an aircraft, to confirm whether is ready for takeoff?

a) ARE YOU READY FOR TAKE-OFF.

**b) ARE YOU READY FOR DEPARTURE.**

c) ARE YOU READY FOR LINE UP.

d) All the above.

F6. An aircraft is in final for landing, while a second one is in downwind. What is the right phraseology to be used ,by the Airport Control Tower, to the aircraft in downwind so to slightly delay its own approach to allow extra time for the leading aircraft in final?

**a) EXTEND DOWNWIND.**

b) EXTEND LONG APPROACH TO DOWNWIND.

c) EXTEND BASE.

d) None of the above.

F7. An YPAM pilot receive, from the Airport Control Tower, the following directive: "hold short of runway". What the read back of the pilot should be over the radio?

a) ROGER.

b) WILCO.

**c) HOLDING SHORT.**

d) ROGER WE WILL DO

F8. An YPAM pilot intends to cross the runway in use, what wording should he use when in communication with the Airport Control Tower?

a) REQUEST TO PASS RUNWAY [number].

b) REQUEST CROSS AIRWAY [number].

c) REQUEST CLEARANCE TO CROSS AIRWAY [number].

**d) REQUEST CROSS RUNWAY [number].**

F9. Airport Control Tower clears for take-off SX-BDI. What is the correct response from the aircraft pilot to the take-off clearance?

(A) SX-BDI ROGER.

(B) CLEARED FOR TAKE-OFF.

(C) ROGER CLEARED FOR TAKE-OFF.

**(D) CLEARED FOR TAKE-OFF SX-BDI.**

F10. What phraseology will an aircraft pilot use, when he observes another traffic, for which information was previously given by the Control Tower?

a) TRAFFIC IN CONTACT.

b) ROGER TRAFFIC IN CONTACT.

c) CONTACT REPORTED TRAFFIC.

**d) TRAFFIC IN SIGHT.**

F11. If a pilot is in an emergency, which signal should be transmitted over the radio?

a) EMERGENCY DESCENT.

**b) MAYDAY-MAYDAY-MAYDAY.**

c) PAN-PAN-PAN.

d) REQUEST EMERGENCY DESCENT

F12. An aircraft pilot is requesting airport information for departure. Which standard phraseology should be used?

a) REQUEST TAKE-OFF INFORMATION.

**b) REQUEST DEPARTURE INFORMATION.**

c) REQUEST AERODROME INFORMATION.

d) REQUEST AERODROME WEATHER INFORMATION.

F13. An aircraft pilot asks for taxiing instructions. Which standardized phraseology should he used?

**a) AT SOUTH APRON REQUEST TAXI.**

- b) REQUEST CLEARANCE TO TAXI.
- c) REQUEST TAXI FOR TAKE-OFF.
- d) REQUEST TAXI TO HOLDING POINT.

F14. When requested by the Control Tower to report "runway clear", the correct standard phraseology is:

- a) RUNWAY IS CLEARED.
- b) CLEARED RUNWAY.
- c) RUNWAY VACATED.**
- d) VACATED THE RUNWAY.

F15. In radio-telephony which of the following wordings is correct in order, the Airport Control Tower, to know when the aircraft pilot is ready for take-off ?

- a) REPORT WHEN READY FOR DEPARTURE.**
- b) REPORT WHEN READY FOR TAKE-OFF.
- c) ARE YOU READY FOR TAKE OFF
- d) All the above.

F16. Which of the following statements is the correct phraseology to request from the Airport Control Tower the correct time?

- a) WHAT TIME IS IT?
- b) TIME CHECK.
- c) REQUEST TIME CHECK.**
- d) CHECKTIME.

F17. The standard radiotelephony phraseology provisioned by ICAO, applies to all cases for which it is specified. When the standard phraseology does not serve the purpose of a radio communication...

- a) The closest relative standard phraseology is used.
- b) They are done no reports - communications beyond the standard.
- c) Other than radio communication must be used e.g. via mobile phone.
- d) Plain language is used.**

F18. In radiotelephony, and in order to save time, the Air Traffic Controller can use abbreviated Call Signs. An YPAM with registration SX-UAB the correct abbreviated call sign is...

- a) UAB
- b) X-UAB
- c) S-AB**
- d) AB

F19. In radio-telephony, the authorization for taxiing to the runway in use will be given using standard phraseology as follows:

- a) TAXI VIA .... TO HOLDING POINT ..... RUNWAY ...**
- b) CLEARED TO RUNWAY .... VIA ....
- c) RUNWAY ..... TAXI VIA .....
- d) TAXI VIA .... TO RUNWAY.....

F20. The standard names for the Services of : Area Control Center, Approach Control, Airport Control Tower and Ground Movements Control respectively are...

- a) CONTROL, ARRIVAL, AERODROME DISPATCH and APRON.
- b) CONTROL, APPROACH, TOWER and GROUND.**
- c) CONTROL, INFORMATION, ARRIVAL and HOMER.
- d) CONTROL, RADAR, APPROACH and INFORMATION.

21. An YPAM pilot during flight, receives the following message from the radar controller: "TRAFFIC AT TREE "O'CLOCK". Meaning that...

- a) There is traffic on the left.
- b) There is traffic on the right.**

- c) The radar controller maintains separation of three miles between aircraft.  
d) There is traffic three miles ahead.

F22. An YPAM pilot is approaching for landing at a controlled airport in use. Approaching (inbound) he makes a call on the radio, but gets no answer. He performs all procedural actions, but still receives no answer. What should he do?

- a) Make three (3) repeated calls to attract the attention of the Air Traffic Controller.  
**b) Follow the RADIO COMMUNICATION FAILURE procedure.**  
c) Failing to receive a response he must divert to the alternative airport.  
d) He should wait for twenty (20) seconds and then make a second call. If needed after twenty (20) seconds, he should transmit for a third time, and so on.

F23. In radiotelephony, when can the phrase "Take-off" be used by a pilot?

- a) Never, it is only used by the Tower Controller (Airport Control Tower).  
b) To advise the Tower that he is ready for departure.  
c) Only when the aircraft has already entered and is taxiing on the runway in use.  
**d) Only to confirm that the clearance to take-off was received and only if it was at first place broadcasted by the Tower Controller.**

F24. An YPAM pilot wants to inform the Airport Control Tower that he prepares for take-off, the correct phrase is ...

- a) READY FOR TAKE-OFF.  
**b) READY FOR DEPARTURE.**  
c) READY FOR LINE-UP.  
d) READY TO GO.

F25. An YPAM pilot preparing to make an addition flight decides to abort the take-off after he has already started the takeoff run, because he heard a suspicious noise coming from the engine. What is the proper phrase to inform Airport Control Tower that he is aborting take-off?

- a) ABANDON TAKE-OFF.  
**b) STOPPING.**  
c) ABORT TAKE-OFF.  
d) CANCEL TAKE-OFF.

F26. A sudden strong cross wind during approach does not allow an YPAM pilot to land. How come he should inform the Airport Control Tower that he is proceeding with a missed approach procedure?

- a) GOING AROUND**  
b) RETRYING APPROACH  
c) ENTER AGAIN IN THE CIRCUIT  
d) PITCHING UP

F27. An YPAM pilot is approaching to a major airport. Immediately after landing he is called by the Airport Control Tower to «Vacate left». What does this mean?

- a) Give way to the aircraft that is on your left.  
b) Vacate immediately the runway or keep left because another aircraft is landing.  
c) Stop on the left side of the runway and wait for instructions.  
**d) Turn left at the first available taxiway to vacate the runway.**

F28. In radio-telephony, if the signal is interrupted or the noise is so loud, that we understand nothing, the proper response is...

- a) You are UNREADABLE.**  
b) You are READABLE NOW AND THEN.  
c) You are READABLE WITH DIFFICULTY.  
d) You are READABLE.

F29. During a flight, it is not possible to achieve contact with an aeronautical station on the designated frequency. What should the YPAM pilot do?

- a) Attempt to make contact on another frequency appropriate for the particular route.

- b) Attempt to establish communication with another aeronautical station, on the ground or aircraft, on a frequency suitable for the particular route.  
c) If his efforts are not successful, he should transmit his message twice on the frequency or frequencies, putting in front of his message the phrase "TRANSMITTING BLIND".

**d) All the above are true.**

F30. An YPAM pilot gets a command to remain clear of the runway in use. What is the correct wording for the pilot to display that he understands and will comply?

a) Roger.

**b) Holding short.**

c) Will stop before.

d) Wilco(WILL COMPLY).

F31. In what language should air and ground radiotelephony communications be contacted?

a) In Greece and inside the Greek FIR, exclusively in Greek.

b) In Greece and inside the Greek FIR, given that we are in the European Union, exclusively in English.

**c) Carried out in the language normally used by the ground station or else in English.**

d) Are conducted in the language that the pilot speaks and understands better.

F32. As an YPAM approaches an airport, radiotelephony communications are conducted in Greek. Then, another aircraft approaching reports in English and the station replies in English because that pilot does not speak Greek. Does something change, from this time, regarding all other communications?

a) No, since air/ground communications were initially carried out in Greek. Everyone involved, except the pilot who does not understand Greek, can report in Greek.

b) No, since the ground station speaks both Greek and English, there is no need to change something, regarding all communications.

c) Yes, basic courtesy requires that when someone in the group does not speak Greek all others should speak English so that he feels welcomed.

**d) Yes, flight safety requires that when a pilot does not speak Greek everyone involved should speak English so the other pilot can have a full picture or even be able to contribute in flight safety.**

F33. In radiotelephony what does the phrase "squawk 1234" mean?

a) Make a quick reading of DF (direction finder)

b) Make a trial broadcast on the frequency 123.4 MHz

c) Remain on frequency 123.4 MHz

**d) Select the transponder code 1234.**

F34. In the unlikely case that we need to emit the distress signal "MAYDAY", according to standard phraseology this should be done...

**a) At the frequency in use - where we had recent communication, since this is the most immediate action (not requiring time) .If this has no effect, then this should be done at the frequency 121,5 MHz.**

b) On the emergency frequency 121,5 MHz, which is the emergency frequency and closely monitored by ground stations and some aeronautical stations.

c) At any other international emergency frequency.

d) At any frequency, at the pilot's discretion.

F35. In radiotelephony the emergency message must at least contain the following information:

a) Call-sign of aircraft, route and destination airport.

**b) Ground station call-sign, aircraft call-sign, nature of the risk, pilot intentions, current position (level and course).**

c) Aircraft call-sign, departure airport, position and flight level.

d) Aircraft call-sign, current position and what kind of assistance the pilot requires.

F36. In radiotelephony when an aircraft "READS BACK", that means...

- a) Transmission of a station to another in cases of failure of two-way communication, but when it is believed that the called station is able to receive the broadcast.
- b) A method in which telecommunication between two stations, at a given time, is made one way – also known as Single Direction Telecommunication (SIMPLEX).
- c) Any transmission, emission or reception of signs, signals, text, images, sounds or information of any nature, by wire or optical means or other electromagnetic systems.
- d) A process by which the person, who receives the message, retransmits back the critical parts to ascertain that he received it correctly(part of, or complete message).**

F37. In radiotelephony for spelling of names, words, abbreviations and words whose pronunciation can cause doubts, use ...

- a) The line drawing alphabet.
- b) The English alphabet.
- c) The radiotelephony alphabet.**
- d) The Latin alphabet

F38. What is the correct way of transmitting the number 3500 when referring to altitude, cloud base (cloud height), visibility and RVR (runway visual range);

- a) Three five zeero zeero.
- b) Three five hundred.
- c) Three thousand five hundred.**
- d) Three five double 0.

F39. An YPAM pilot wishes to be informed by another station if the latter has received and understood his previous message. The standard wording for “inform me if you have received and understood the message” is...

- a) AFFIRM.
- b) ACKNOWLEDGE.**
- c) BREAK.
- d) BREAK-BREAK.

F40. What is the true way in radiotelephony to report altitude 3500 ft ?

- a) Three five zero zero.
- b) Three five hundred.
- c) Three thousand five hundred.**
- d) Three five double 0.

F41. In radiotelephony what does the phrase “Hold Position” mean ?

- a) Remain near the control tower.
- b) Remain close to the holding point.
- c) Remain at our position until further notice.**
- d) Stop and give priority to aircraft.

F42. In radiotelephony what is the true wording for a frequency change?

- a) SX-ABC contact Athinai tower 122.75 MHz.**
- b) SX-ABC change to tower frequency 122.75 MHz.
- c) SX-ABC transfer to tower 122.75 MHz.
- d) SX-ABC switch frequency to Athinai tower 122.75 MHz.

F43. When an aircraft makes a “BLIND TRANSMISSION”, that means...

**a) Transmission of a station at a frequency, in case that two way communication cannot be established, but it is expected that the called station may be able to receive the transmission.**

- b) A method in which telecommunication between two stations ,at a given time, is made only one way - known as Single Direction Telecommunication (SIMPLEX).
- c) Every transmission, emission or reception of signs, signals, text, images, sounds or information of any nature by wire, optical means or other electromagnetic systems.
- d) The process by which the person who receives the message, retransmits it to determine whether he copied it right (Part of it or the entire message).

F44. What does the acronym F.I.R. mean ?

- a) **Flight Information Region.**
- b) Flight Information Service.
- c) Flight Information Unit.
- d) Flight Information Radio.

F45. Which statement is it used by a pilot ,according to standard phraseology, when he receives a command that he cannot perform?

- a) Negative instruction.
- b) **Unable to comply.**
- c) Impossible to make it.
- d) Disregard.

F46. During take-off or final stage of approach or final stage of landing, no broadcasting is performed by the Control Tower to the aircraft unless...

- a) **It concerns information about wind direction and speed on the runway.**
- b) The controller asks the commander if someone is onboard the aircraft.
- c) The controller wants to know the number of occupants.
- d) None of the above.

47. In radiotelephony, according to the standard phraseology the correct way to report 100.3 is...

- a) ONE HUNDRED POINT THREE
- b) ONE DOUBLE OOU POINT THREE
- c) ONE ZERO ZERO DECIMAL THREE
- d) **WUN ZE-RO ZE-RO DAY-SEE-MAL TREE.**

F48. All aircraft must directly contact the Aeronautical Station relevant to the area they fly in. But if this is not possible ...

- a) Must READBACK.
- b) **Must make a BLIND TRANSMISSION.**
- c) Must change frequency and contact MAMBO or JOKER according to his geographical position.
- d) Must be used as intermediate station, any available and appropriate means for the relay transmission of their message (RELAY).

F49. In case of a trial broadcast on frequency 119.700, which of the following examples is Correct, according to standard phraseology?

- a) ATHINAI RADIO SX-UAC READABILITY CHECK ON 119.700.
- b) **ATHINAI RADIO SX-UAC RADIO CHECK 119.700.**
- c) ATHINAI RADIO SX-UAC REQUEST READABILITY CHECK ON 119.700.
- d) ATHINAI RADIO SX-UAC HOW DO YOU READ ME ON 119.700.

F50. The hours, mentioned in the flight plan, that we submit to the competent authority, are usually in...

- a) Local Greek time.
- b) The local time of regions that may be traversed.
- c) **Coordinated Universal Time (UTC).**
- d) There is no rule, depending on the TMA we operate within.

F51. In radiotelephony according to the standard phraseology the correct way to report frequency 122.850 is...

- a) ONE TWO TWO DECIMAL EIGHT.
- b) **WUN TOO TOO DAYSEEMAL AIT FIFE ZERO.**
- c) ONE TWO TWO POINT EIGHT FIVE ZERO.
- d) ONE TWO TWO POINT EIGHT FIVE

F52. The YPAM SX-UFO, in flight, starts an emergency landing procedure, transmitting emergency message: "MAYDAY- MAYDAY-MAYDAY" at the frequency in use. The acknowledgment of the message is as follows...

**a) SX- UFO ALMYROS TOWER ROGER MAYDAY.**

b) SX- UFO ALMYROS TOWER / ACKNOWLEDGE RECEIPT.

c) SX- UFO ALMYROS TOWER COPIED MAYDAY.

d) SX- UFO ALMYROS TOWER YOUR MAYDAY RECEIVED.

F53. In radiotelephony the phrase "Orbit Right (Right 360)" means...

a) Turn right to avoid traffic.

b) Make a clockwise 3600 deg turn.

**c) Continue to make clockwise circles until notified.**

d) Clockwise circles in use.

F54. In radiotelephony the phrase STANDBY means...

a) The position STANDBY at the SSR transmitter (Transponder) has been selected.

**b) Wait and I will call you.**

c) Keep your current position - ORBIT if necessary.

d) Continue on your present course and keep listening all the time.

F55. One of the most common mistakes in radiotelephony is to answer with a simple "ROGER" instead of a complete READBACK. "ROGER" is only used for very simple communication exchange of small importance not involving procedures or matters affecting flight safety. The word "ROGER" means:

a) That's right.

b) Go Ahead (your message).

c) Your message was received and understood.

**d) I have received all your last transmission.**

F56. Which of the following gives permission but under certain conditions ?

**a) G-BOJR, after European Jersey 146 taxi to holding point D runway 26.**

b) Redwing-42, take off at will.

c) G-ZZ, report on final, two preceding.

d) Fastair 345, line up and wait.

F57. The acronym A.T.I.S. means...

a) Air Traffic Information Service.

b) Aerodrome Traffic Information Service.

c) Aircraft Technical Information Service.

**d) Automatic Terminal Information Service.**

F58. In case of radio-failure, the SSR transmitter (transponder) must be set to read

a) 7700

b) 7500

**c) 7600**

d) 7000

F59. We transmit an urgency message with the following words...

**a) Pan Pan, Pan Pan, Pan Pan.**

b) Mayday, Mayday, Mayday.

c) Pan, Pan, Pan.

d) Emergency.

F60. The time is 04:15 pm. What is the true way of transmitting this figure, without any possibility of confusion?

a) A quarter past four pm.

**b) One six one five.**

c) Sixteen Fifteen.

d) Four fifteen afternoon

F61. How should a pilot inform Control Tower that he is ready for takeoff?

**a) Ready for departure.**

b) Ready for takeoff.

- c) Ready for line up.
- d) Ready to go.

F62. Which of the following frequencies is the international Emergency frequency?

- a) 6500 kHz.
- b) 122.500 MHz.
- c) 121.500 MHz.**
- d) 121.050 MHz.

F63. An YPAM pilot receives from Tower CAVOK conditions. That means...

- a) No cloud below 5000 feet or under the minimum sector altitude, whichever is higher. No trace of cumulonimbus (CB), storms or precipitation. Visibility 10 Km or more, no shallow fog or low level snowfall.**
- b) The runway is dry.
- c) No destination alternate is available.
- d) No departure airport alternate is available.

F64. The phrase "BREAK" is used...

- a) It is not an aviation standardized phraseology used to indicate someone's understanding the diplomatic importance of a request.
- b) To demonstrate to a recipient the interval between parts of a message or messages.**
- c) To mark that hijackers are on board the aircraft and assistance is required after landing.
- d) To indicate the entrance to a military combat zone under military radar control.

F65. How is the number 330 transmitted according to standard phraseology?

- a) TREE TREE AND ZEERO.
- b) THREE HUNDRED THIRTY.
- c) TREE TREE ZERO.**
- d) TREE TREE OOU.

66. How will you request for a repetition of a message given to you by an Aeronautical Station e.g. Control Tower?

- a) REPEAT YOUR MESSAGE.
- b) SAY AGAIN.**
- c) SAY AGAIN TEXT.
- d) REQUEST FULL RERETITION.

F67. According to the readability scale for communications what does "READING YOU 3" mean?

- a) You are unreadable.
- b) Readable.
- c) Readable but with difficulty.**
- d) Readable sometimes.

F68. The pilot who is well familiar with the radiotelephony procedures and wants to make a routine communication ....

- a) Knows that the responsibility for making contact, directly lies with the radio station that has to transmit a message.
- b) Before each transmission, he has to listen carefully to make sure that he does not interrupt transmissions in progress by other stations.
- c) If he listens to a transmission in progress, he has to wait until finished, or at least wait for the first pause, before he transmits, provided he has something more urgent to communicate.
- d) All the above.**

F69. Just the report of your call-sign (e.g. SX-UAT) after a message has been received from a ground station means...

- a) My Call sign is: .....
- b) Message received.**
- c) Repeat your message.
- d) None of the above.

70. Is it possible for an YPAM pilot, while a frequency is used for an emergency situation, to use this frequency for any not so important communication?

- a) **In no case.**
- b) Yes, after permission from the Radio Station Director.
- c) It depends.
- d) None of the above

F71. YPAMs equipped with radio have VHF equipment capable of transmitting and receiving air frequencies (AIRBAND) from 118.000 to 136.975 MHz with AM modulation. The quality of VHF communications in VFR flights is mainly affected by ...

- a) The ionosphere.
- b) Electrical discharges, often occurring in thunderstorms.
- c) The increased number of solar storms.
- d) **The flight level of the aircraft, in relation to obstacles height and distance from station to station.**

F72. In an YPAM equipped with transponder, the pilot sets code 7600 indicating that...

- a) Is proceeding to an alternate aerodrome.
- b) Is requesting an immediate level change.
- c) It is necessary to make an emergency landing.
- d) **Has a communication failure.**

73. The termination of transmissions during distress situations is given as follows:

- a) TO ALL STATIONS ATHINAI RADIO DISTRESS ENDED AT ...
- b) **ALL STATIONS ATHINAI RADIO DISTRESS TRAFFIC ENDED.**
- c) ALL STATIONS ATHINAI RADIO END OF SILENCE PERIOD.
- d) ALL STATIONS ATHINAI RADIO BACK TO NORMAL OPERATION

F74. What is the Location Indicator?

- a) Coded group of 10 letters.
- b) Location name of an aeronautical station only.
- c) **Coded group of four letters, which specifies the location of a fixed aeronautical station, e.g. LGAV for El. Venizelos airport.**
- d) None of the above.

75. The responsibility for establishing communication is of

- a) **The station that has a message for transmission.**
- b) The manager of the communications station.
- c) The station addressing a general broadcast (Broadcast Transmission).
- d) The station transmitting a message with blind broadcast (Blind Transmission)

F76. The pilot of YPAM SX-UAB is positive that someone called him but unsure about the caller's call-sign. What should he do?

- a) **Say "Station calling SX-UAB repeat your Call-Sign".**
- b) Say "Station calling repeat your Call-Sign".
- c) If we listen that someone is calling us but we are not positive about the caller's call-sign, we do not respond until they call us again just to be sure.
- d) None of the above is part of the standard phraseology.

F77. According to procedures applicable on frequency changes, which of the following examples is correct?

- a) SX-UAP ATHINAI RADIO COMMUNICATE ATHINAI TOWER ON 118.100.
- b) **SX-UAP ATHINAI RADIO CONTACT ATHINAI TOWER 118.100.**
- c) SX-UAP ATHINAI RADIO CONTINUE CONTACT ON ATHINAI TOWER 118.100.
- d) SX-UAP ATHINAI RADIO CONTACT TO ATHINAI TOWER ON 118.100

F78. Which station is permitted to impose silence on the frequencies, when there is an emergency situation in progress?

- a) The aircraft in danger only.

- b) Any station using the frequency.
- c) The station managing the emergency response.
- d) The endangered aircraft or the station that is managing the emergency situation.**

F79. When a pilot makes a general broadcast (Broadcast Transmission) he is ...

- a) Transmitting information, relating to air navigation, that is not addressed to a specific station or stations.**
- b) Transmitting a repetition broadcast for confirmation of correct reception (Read back), during which he repeats all or part of the message to the broadcasting station, so to confirm the correct reception.
- c) Making a blind transmission, intended to be transmitted from one station to another, in circumstances that is not possible to perform two-way communication, but it is considered that the called station is able to receive the broadcast.
- d) None of the above.

F80. YPAM pilots flying aircraft equipped with VHF radio, are able under normal circumstances, to contact other ground/air stations on frequencies from 118.000MHz up to 136.975MHz. if ...

- a) The YPAM has a radio station license.
- b) The pilot has a limited but valid radiotelephony license.
- c) The pilot follows strictly provisioned procedures.
- d) All the above are true.**

F81. Based on AIP Greece (ENR 1.2) any VFR flight below FL195 should have an operating Transponder with Code 7000 and Mode C (altitude reference). This is true for...

- a) Flights within Athens FIR.**
- b) Flights in Terminal Areas (TMA) of airports with approach Radar in 24 hour operation. (Athens, Thessaloniki, Heraklion, Rhodes and Corfu).
- c) This only applies to IFR flights and not to YPAM flights not flying below FL195.
- d) For YPAMs, Transponder MODE A is provided exclusively.

F82. Aircraft with communications failure has implemented the RADIO FAILURE procedure (loss of communications). A steady green light signal is observed from the Control Tower. That means...

- a) Clear to Land.**
- b) Airport unsafe, do not land.
- c) Give priority to another aircraft.
- d) Return for landing.

F83. Aircraft with a communications failure is taxiing and observes a steady red light signal coming from the Control Tower. That means...

- a) Clear for takeoff.
- b) Continue taxiing.
- c) Return to the apron.
- d) Stop the aircraft.**

END OF QUESTIONNAIRE

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