

Simulazione di Esame

Human Performance and Limitations - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. Refer to the Student Pilot Route Manual - VFR Chart ED-4 Flying VFR from VILLINGEN (48°03.5'N, 008°27.0'E) to FREUDENSTADT (48°28.0'N, 008°24.0'E). Determine the minimum altitude within a corridor 5 NM left and 5 NM right of the course line in order to stay 1000' clear of obstacles.

- a) 4300 ft
- b) 1500 ft
- c) FL045
- d) 3300 ft

02. Considering the route from Lisbon to Freetown, the Harmattan is a

- a) SW monsoonal wind causing extensive areas of advection fog along the West African coast south of 15°N.
- b) NE wind affecting north-west Africa during November to April reducing visibility in rising dust.
- c) Localised depression giving squally winds.
- d) Warm southerly dust-bearing wind affecting the coast of North Africa.

03. The required 24 NAVSTAR/GPS operational satellites are located on:

- a) 4 orbital planes with 6 satellites in each plane
- b) 3 orbital planes with 8 satellites in each plane
- c) 6 orbital planes with 3 satellites in each plane plus 6 reserve satellites positioned in a geostationary orbital plane
- d) Timing the period that is taken for a transmission from the aircraft's transmitter/receiver to reach and return from a satellite in a known position

04. The diagram which shows a 40° left bank and 15° nose down attitude is n°

- a) 1
- b) 4
- c) 3
- d) 2

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05. The effects of the following are cumulative:

- a) Stressors, pain and poor night vision
- b) Stressors, carbon monoxide and sleep deficit
- c) Carbon monoxide, altitude and alcohol
- d) Stressors , altitude and pain

06. What mean temperature (°C) is likely on a course of 360° (T) from 40°N to 50°N at 040°E ?

- a) -46
- b) -47
- c) -50
- d) -49

07. In the event of an en-route HF communication failure in an MNPS (Minimum Navigation Performance Specification) airspace, the appropriate VHF frequency for air to air communications is:

- a) 121.800 MHz.
- b) 118.800 MHz.
- c) 128.800 MHz.
- d) 123.45 MHz.

08. The unit of measurement of pressure is:

- a) Psi
- b) Kg/dm²
- c) Lb/gal
- d) Kg/m³

09. The speed limitation for VFR flights inside ATS airspace classified as C, when flying below 3.050 m (10.000 ft) AMSL, is:

- a) 250 KT TAS
- b) 250 KT IAS
- c) 240 KT IAS
- d) Not applicable

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10. Refer to the Student Pilot Route Manual: E LO 2An appropriate flight level for flight on airway B3 from CHATILLON CTL 117.6 (49°08'N 003°35'E) to CAMBRAI CMB 112.6 (50°14'N 003°09'E) is:

- a) FL50
- b) FL80
- c) FL170
- d) FL60

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

- a) 247 kt.
- b) 307 kt.
- c) 595 kt.
- d) 686 kt.

12. What does the instruction 'Go around' mean?

- a) Carry out a missed approach
- b) Proceed with your message
- c) Make a 360° turn
- d) Overtake the aircraft ahead

13. Considering a primary radar system, what kind of aeriels are used?

- a) A directional antenna for transmitting, and an omni-directional antenna for receiving.
- b) One directional antenna for transmitting and one for receiving.
- c) One directional antenna both for transmitting and for receiving.
- d) Multichannel

14. When an aircraft is no longer in distress, it shall transmit a message cancelling the distress condition. Which words shall this message include?

- a) ... MAYDAY, resuming normal operations
- b) ... MAYDAY cancelled
- c) ... cancel distress
- d) ... distress condition terminated

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15. Airborne weather radars are generally based on the use of:

- a) Secondary radar in the SHF band
- b) Primary radar in the UHF band
- c) Secondary radar in the VHF band
- d) C/A- and P

16. An aircraft which is not engaged in scheduled international air services and which is making a flight to or through any designated airport of a Contracting State and is admitted temporarily free of duty shall be allowed to remain within that State without security for customs duty:

- a) For a period of 12 hours.
- b) For a period to be established by that State.
- c) For a period of 24 hours.
- d) For a period of 48 hours.

17. Where on the surface of a typical aerofoil will flow separation normally start at high angles of attack?

- a) Upper side trailing edge
- b) Lower side leading edge
- c) Lower side trailing edge
- d) Upper side leading edge

18. The Ram Air Turbine (RAT) provides emergency hydraulic power for:

- a) Undercarriage Selection And Automatic Brake System.
- b) Flight controls in the event of loss of engine driven hydraulic power.
- c) Flap Extension Only.
- d) Nose Wheel Steering After The Aeroplane Has Landed.

19. What is the radiotelephony call sign for the aeronautical station indicating approach control radar arrivals?

- a) ...ARRIVAL
- b) ...DIRECTOR
- c) ...RADAR
- d) ...APPROACH

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20. When turning right from 330°(C) to 040°(C) in the northern hemisphere, the reading of a direct reading magnetic compass will:

- a) Under-indicate the turn and liquid swirl will increase the effect
- b) Over-indicate the turn and liquid swirl will increase the effect
- c) Under-indicate the turn and liquid swirl will decrease the effect
- d) Over-indicate the turn and liquid swirl will decrease the effect

21. Given: True heading = 310° TAS = 200 kt GS = 176 kt Drift angle 7° right. Calculate the W/V?

- a) 090° / 33 kt
- b) 360° / 33 kt
- c) 180° / 33 kt
- d) 270° / 33 kt

22. The CG of an aeroplane is in a fixed position forward of the neutral point. Which of these statements about the stick force stability is correct?

- a) Maintaining a steady speed above the trim speed requires a pull force
- b) An increase of 10 KT from the trimmed position at low speed has more effect on the stick force than an increase of 10 KT from the trimmed position at high speed
- c) Stick force stability is not affected by trim
- d) Aeroplane nose up trim decreases the stick force stability

23. The cornea and the crystalline lens of the eye:

- a) Allow for the regulation of the amount of light admitted into the eye
- b) Keep the retina clean and healthy
- c) Permit the reception and conversion of visual stimuli to images interpreted by the brain
- d) Cause the convergence of light rays onto the retina

24. To measure the mass and CG-position of an aircraft, it should be weighed with a minimum of:

- a) 3 points of support
- b) 4 point of support
- c) 1 point of support
- d) 2 points of support

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25. What do the spoken words " PAN PAN MEDICAL " mean ?

- a) The message which follows concerns a protected medical transport operated by aircraft assigned exclusively to medical transportation
- b) The phrase/signal is inadmissible in radiotelephony
- c) The aircraft has an urgent need of medical care upon landing at destination airport
- d) The aircraft has a sick passenger on board and requests priority to land

26. How many clocks are installed in each NAVSTAR GPS satellite?

- a) 3
- b) 2
- c) 1
- d) Yellow to amber to blue

27. A runway is contaminated by a 0.5 cm layer of wet snow. The take-off is nevertheless authorized by a light-twin's flight manual. The take-off distance in relation to a dry runway will be:

- a) Unchanged
- b) Decreased
- c) Increased
- d) Very significantly decreased

28. A message preceded by the phrase 'Transmitting blind due receiver failure' shall be transmitted:

- a) On the regional guard frequency
- b) On the international emergency frequency
- c) On the frequency presently in use
- d) On all available aeronautical stations

29. The ATC transponder system, excluding Mode S, contains:

- a) Four modes, each 4096 codes
- b) Two modes, each of 4096 codes
- c) Four modes, each 1024 codes
- d) The radar frequency used.

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30. At the commencement of final approach, if the controller possesses wind information in the form of components, significant changes in the mean surface wind direction and speed shall be transmitted to aircraft. The mean tail-wind component significant change is:

- a) 5 KT
- b) 4 KT
- c) 3 KT
- d) 2 KT

31. The radiation of the Sun heats:

- a) The air in the troposphere only directly if no clouds are present.
- b) The air in the troposphere directly.
- c) The surface of the Earth, which heats the air in the troposphere.
- d) The water vapour in the air of the troposphere.

32. An applicant for a commercial pilot licence shall have completed in aeroplanes not less than:

- a) 20 hours of instrument instruction time of which not more than 5 hours may be instrument ground time.
- b) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time
- c) 15 hours of instrument time of which not more than 5 hours as pilot in command
- d) 20 hours of instrument instruction time of which not more than 10 hours may be instrument ground time

33. The distance between two waypoints is 200 NM, To calculate compass heading, the pilot used 2°E magnetic variation instead of 2°W. Assuming that the forecast W/V applied, what will the off track distance be at the second waypoint?

- a) 7 NM
- b) 14 NM
- c) 21 NM
- d) 0 NM

34. Calibrated Air Speed (CAS) is obtained from Indicated Air Speed (IAS) by correcting for the:

- a) Position and instrument errors.
- b) Position and density errors.
- c) Density error.
- d) Instrument error.

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35. In order to align an inertial reference system (IRS), it is required to insert the local geographical coordinates. This enables the IRS to:

- a) Find True North.
- b) Compare the longitude it finds with that entered by the operator.
- c) Initialize the FMS flight plan.
- d) Compare the latitude it finds with that entered by the operator.

36. The purpose of a battery control unit is generally to isolate the battery 1 - from the bus when the battery charge has been completed 2 - when there is a battery overheat condition 3 - in case of an internal short circuit 4 - in case of a fault on the ground power unit The combination which regroups all of the correct statements is:

- a) 1 - 2 - 3
- b) 1
- c) 1 - 2 - 3 - 4
- d) 1 - 2

37. In straight and level flight, as speed is increased:

- a) The elevator and trim tab do not move.
- b) Both elevator and trim tab are deflected further downwards.
- c) The elevator is deflected further upwards and the trim tab further downwards.
- d) The elevator is deflected further downwards and the trim tab further upwards.

38. During the flight preparation the climb limited take-off mass (TOM) is found to be much greater than the field length limited TOM using 5° flap. In what way can the performance limited TOM be increased? There are no limiting obstacles.

- a) By selecting a higher V2
- b) By selecting a lower V2
- c) By selecting a higher flap setting
- d) By selecting a lower flap setting

39. A gravity type erector is used in a vertical gyro device to correct errors on:

- a) A directional gyro unit
- b) An artificial horizon
- c) A gyromagnetic indicator
- d) A turn indicator

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40. In relation to the polar front jet stream, the greatest rate of wind shear is most likely to occur

- a) Well below the core
- b) On the tropical side of the core
- c) Close to the core on the polar side
- d) 5000 FT or more above the core

41. Which of the following statements with regard to the actual acceleration height at the beginning of the 3rd climb segment is correct?

- a) A lower height than 400 ft is allowed in special circumstances e.g. noise abatement
- b) The minimum value according to regulations is 1000'
- c) The minimum value according to regulations is 400'
- d) There is no legal minimum value, because this will be determined from case to case during the calculation of the net flight path

42. The point at which a tangent out of the origin touches the power required curve

- a) Is the point where Drag coefficient is a minimum.
- b) Is the point where the Lift to Drag ratio is a minimum.
- c) Is the point where the Lift to Drag ratio is a maximum.
- d) Is the maximum drag speed.

43. Which word or phrase shall be used if you want to say: 'Reduce your rate of speech'?

- a) Repeat
- b) Words twice
- c) Say again
- d) Speak slower

44. The equipment of an oxygen supply installation must be kept absolutely free of oil or grease traces as:

- a) These Substances Mixed With Oxygen Could Catch Fire In The Presence Of A Spark.
- b) The oxygen system would be contaminated.
- c) These substances could plug the oxygen masks filters.
- d) These substances catch fire spontaneously in the presence of oxygen under pressure.

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45. Which statement with respect to the speed of sound is correct ?

- a) Varies with the square root of the absolute temperature.
- b) Doubles if the temperature increases from 9° to 36° Centigrade.
- c) Is independent of altitude.
- d) Increases always if the density of the air decreases.

46. On a long distance flight the gross mass decreases continuously as a consequence of the fuel consumption. The result is:

- a) The specific range increases and the optimum altitude decreases.
- b) The speed must be increased to compensate the lower mass.
- c) The specific range and the optimum altitude increases.
- d) The specific range decreases and the optimum altitude increases.

47. An aircraft is descending down a 6% slope whilst maintaining a GS of 300 KT. The rate of descent of the aircraft is approximately:

- a) 3600 fpm
- b) 10800 fpm
- c) 900 fpm
- d) 1800 fpm

48. Refer to CAP697 Section 4 - MRJT1 Page 21 Figure 4.5.1 En-route Climb 280/0.74 (continued) Find: Time, Fuel, Still Air Distance and TAS for an enroute climb 280/.74 to FL 350. Given: Brake release mass 64000 kg, ISA +10°C, airport elevation 3000'

- a) 20 min, 1750 kg, 117 Nautical Air Miles (NAM), 288 KT
- b) 26 min, 2050 kg, 157 Nautical Air Miles (NAM), 399 KT
- c) 25 min, 1875 kg, 148 Nautical Air Miles (NAM), 391 KT
- d) 26 min, 1975 kg, 157 Nautical Air Miles (NAM), 399 KT[see Annex]

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49. Concerning the NAVSTAR/GPS satellite navigation system, what is the meaning of the term 'Receiver Autonomous Integrity Monitoring' (RAIM)?

- a) It is a technique by which a receiver ensures the integrity of the navigation information
- b) It is a technique whereby the receivers of the world-wide distributed monitor stations (ground segment) automatically determines the integrity of the navigation message
- c) It is a method whereby a receiver ensures the integrity of the Pseudo Random Noise (PRN) code transmitted by the satellites
- d) 6

50. At the destination aerodrome the landing distance available is 3000 m. The appropriate weather forecast indicates that the runway at the estimated time of arrival will be wet. For a commercial flight the mass of a turbojet aeroplane at landing must be such that the aeroplane can be landed within:

- a) 2609 m
- b) 1800 m
- c) 2 070 m
- d) 1565 m

51. A temperature sensor has a recovery factor of 0,95. The temperature measured is equal to:

- a) Ram air temperature (RAT) + 95 % of the ram rise.
- b) Static air temperature (SAT) + 95% of the ram rise.
- c) 95 % of the ram air temperature (RAT).
- d) 95 % of the static air temperature (SAT).

52. The scale quoted on a Lambert's chart is:

- a) The scale at the standard parallels.
- b) The mean scale at the parallel of the secant of the cone.
- c) The mean scale between the pole and the equator.
- d) The scale at the equator.

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53. Which of the following sequences shows the correct elements of a position report in the correct order? 1) call sign 2) reported position 3) heading (°M) 4) level or altitude 5) next position 6) ETA of the next position 7) aircraft type 8) time of reported position

- a) 1, 2, 3, 4, 5, 6
- b) 1, 2, 8, 4, 5, 6,
- c) 1, 7, 2, 6, 4
- d) 1, 2, 4, 5, 6

54. With regard to the take-off performance of a twin jet aeroplane, why does the take-off performance climb limit graph show a kink at 30°C and PA 0'?

- a) At lower temperatures one has to take the danger of icing into account
- b) At higher temperatures the VMBE determines the climb limit mass
- c) At higher temperatures the flat rated engines determines the climb limit mass
- d) The engines are pressure limited at lower temperature, at higher temperatures they are temperature limited[see Annex]

55. When a jet transport aeroplane takes off with the CG at the forward limit and the trimmable horizontal stabiliser (THS) is positioned at the maximum allowable nose up position for take-off:

- a) There will be a tendency to over-rotate.
- b) Rotation will be normal using the normal rotation technique.
- c) Rotation will require a higher than normal stick force.
- d) Early nose wheel raising will take place.

56. An engine fire warning will switch on the relevant fire shut off-handle. The fire shut-off handle will be switched off when:

- a) The fire shut-off handle has been pulled.
- b) The fire-extinguisher has been triggered.
- c) Fire is no longer detected.
- d) All the fire-extinguishers connected to this engine have been triggered.

57. In ISA conditions, approximately what is the maximum theoretical range at which an aircraft at FL210 may expect to receive signals from a VOR facility sited 340 feet above mean sea level?

- a) 245 NM
- b) 204 NM
- c) 183 NM
- d) 352

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58. Given: A is N55° 000° B is N54° E010° The average true course of the great circle is 100°. The true course of the rhumbline at point A is:

- a) 096°
- b) 100°
- c) 107°
- d) 104°

59. Compared with a conventional gyro, a laser gyro:

- a) Is influenced by temperature
- b) Has a longer life cycle
- c) Consumes a lot of power
- d) Has a fairly long starting cycle

60. In the ATC flight plan Item 10 (equipment), the letter to indicate the carriage of a serviceable transponder - mode A (4 digits-4096 codes) and mode C, is:

- a) B
- b) A
- c) C
- d) P

61. At a high ambient temperature (+ 30° C) and with a relative humidity as low as 40 %, in clear air, free of fog and precipitation, serious carburettor icing:

- a) Can occur, but only at a low power setting
- b) Is possible at any setting
- c) Can occur, but only at full power or cruise settings
- d) Cannot occur

62. A braking action of 0.25 and below reported on a SNOWTAM is:

- a) Unreliable
- b) Medium
- c) Poor
- d) Good

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63. An aeroplane executes a steady glide at the speed for minimum glide angle. If the forward speed is kept constant, what is the effect of a lower mass? Rate of descent / Glide angle / CL / CD ratio

- a) Increases / increases / decreases
- b) Increases / constant / increases
- c) Increases / increases / constant
- d) Decreases / constant / decreases

64. You are flying from A (30°S 20°E) to B (30°S 20°W). What is the initial GC track?

- a) 260° (T)
- b) 300° (T)
- c) 290° (T)
- d) 270° (T)

65. The altimeter of your aircraft indicates 11000 ft with a subscale-setting of 1013,25 mb. QNH is 1023 hPa. OAT is +3°C. The pressure altitude of the aircraft is:

- a) 11740 ft.
- b) 10260 ft.
- c) The pressure altitude of the aircraft is: 11740 ft. 10260 ft. 11000 ft.
- d) 670 hPa.

66. SSR - Transponder Pilots shall not SQUAWK IDENT unless they:

- a) Operate within controlled airspace
- b) Are requested by ATC
- c) Operate outside controlled airspace
- d) Operate a transponder with Mode C

67. What is the procedure to be followed if, on a flight under IFR conditions using the NAVSTAR/GPS satellite navigation system, the number of satellites required to maintain the RAIM (Receiver Autonomous Integrity Monitoring) function are not available?

- a) The flight has to be continued under VFR conditions
- b) The flight may be continued using other certificated navigation systems
- c) The flight may be continued as planned if at least 4 satellites are available and the pilot monitors the GPS-System manually
- d) +/- 2NM or better for 75% of the flight time

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68. Which statement is correct? I. Propeller gyroscopic effect occurs during aeroplane yaw changes. II. Propeller gyroscopic effect is most noticeable during low speed flight at high propeller RPM.

- a) I is correct, II is incorrect.
- b) I is correct, II is correct.
- c) I is incorrect, II is incorrect.
- d) I is incorrect, II is correct.

69. An aeroplane is said to be 'neutrally stable'. This is likely to:

- a) Be caused by a centre of gravity which is towards the forward limit
- b) Be totally unrelated to the position of the centre of gravity
- c) Be caused by a centre of gravity which is towards the rearward limit
- d) Cause the centre of gravity to move forwards

70. An aircraft is squawking 7600. This indicates:

- a) It is diverting to the alternate aerodrome
- b) It is requesting immediate level change
- c) It is unable to establish communication due to radio equipment failure
- d) It is about to make a forced landing

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Schema Risposte

Confronta le risposte fornite con il seguente schema e segna il tuo punteggio!

01: C	02: B	03: D	04: A
05: B	06: B	07: D	08: A
09: B	10: C	11: C	12: A
13: C	14: C	15: D	16: B
17: A	18: B	19: A	20: A
21: D	22: B	23: D	24: A
25: A	26: D	27: C	28: C
29: B	30: D	31: C	32: B
33: B	34: A	35: D	36: A
37: D	38: C	39: B	40: C
41: C	42: C	43: D	44: D
45: A	46: C	47: D	48: D
49: A	50: D	51: B	52: A
53: B	54: D	55: B	56: A
57: B	58: B	59: B	60: C
61: A	62: C	63: A	64: A
65: C	66: B	67: B	68: B
69: C	70: C		