

Simulazione di Esame

Principles of Flight - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. An aeroplane whose maximum approved passenger seating configuration is 61 to 200 seats must be equipped with at least:

- a) 2 Hand Fire-extinguishers Conveniently Located In The Passenger Compartment.
- b) 4 hand fire-extinguishers conveniently located in the passenger compartment.
- c) 3 hand fire-extinguishers conveniently located in the passenger compartment.
- d) 5 Hand Fire-extinguishers Conveniently Located In The Passenger Compartment.

02. Two points A and B are 1000 NM apart. TAS = 490 kt. On the flight between A and B the equivalent wind is -20 kt. On the return leg between B and A, the equivalent wind is +40 kt. What distance from A, along the route A to B, is the Point of Equal Time (PET)?

- a) 600 kt
- b) 435 kt
- c) 450 kt
- d) 535 kt

03. 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

04. Given: Mach number $M = 0.70$ measured impact temperature = $-48\text{ }^{\circ}\text{C}$ the recovery factor (K_r) of the temperature probe = 0.85 The OAT is:

- a) $-68\text{ }^{\circ}\text{C}$
- b) $-45\text{ }^{\circ}\text{C}$
- c) $-51\text{ }^{\circ}\text{C}$
- d) $-65\text{ }^{\circ}\text{C}$

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05. What is the heading bug selected to?

- a) 272°(M)
- b) 260°(M)
- c) 300°(M)
- d) FL50

06. Other factors remaining constant and not limiting, how does increasing pressure altitude affect allowable take-off mass?

- a) Allowable take-off mass increases
- b) There is no effect on allowable take-off mass
- c) Allowable take-off mass decreases
- d) Allowable take-off mass remains uninfluenced up to 5000' pressure altitude

07. Which component of the Electronic Flight Instrument System generates the visual displays on the EADI and EHSI?

- a) Flight Control Computer
- b) Flight Management Computer
- c) Navigation database
- d) 17 NM

08. The purpose of static wick dischargers is to:

- a) Dissipate Static Charge From The Aircraft Skin After Landing.
- b) Provide a path to ground for static charges when refuelling.
- c) Dissipate static charge of the aircraft in flight thus avoiding radio interference as a result of static electricity.
- d) Be Able To Fly Higher Because Of Less Electrical Friction.

09. In the ATC flight plan item 15, it is necessary to enter any point at which a change of cruising speed takes place. For this purpose a 'change of speed' is defined as:

- a) 20 km per hour or 0.1 Mach or more
- b) 10 % TAS or 0.05 Mach or more
- c) 20 knots or 0.05 Mach or more
- d) 5% TAS or 0.01 Mach or more

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10. Consider an aeroplane with: 1 a trim tab. 2 fully powered hydraulic controls and an adjustable horizontal stabiliser. For both cases and starting from a trimmed condition, how will the neutral position of the control column change, after trimming for a speed increase?

- a) 1 moves forward, 2 moves forward.
- b) 1 does not change, 2 moves forward.
- c) 1 does not change, 2 does not change.
- d) 1 moves forward, 2 does not change.

11. V1 has to be:

- a) Equal to or higher than VMCG
- b) Equal to or higher than V2
- c) Higher than VR
- d) Equal to or higher than VMCA

12. A VOR and DME are co-located. You want to identify the DME by listening to the callsign. Having heard the same callsign 4 times in 30 seconds the:

- a) DME callsign is the one with the higher pitch that was broadcast only once
- b) VOR and DME callsigns were the same and broadcast with the same pitch
- c) DME callsign is the one with the lower pitch that was broadcast several times
- d) 6.8 km

13. An Air Traffic Control Unit:

- a) May ask an aircraft to temporarily change its call sign for safety reasons when there is a risk of confusion between two or more similar call signs.
- b) Must not ask an aircraft to change its call sign.
- c) May require to change the call sign for safety reasons when there is a risk of confusion between two or more similar call signs providing the aircraft is on a repetitive flight plan.
- d) May not ask an aircraft to change its call sign after accepting the flight plan.

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14. Holding procedures (entry) You have received instructions to hold over a radio fix. The published procedure is: **All turns to the right, 1 minute outbound, inbound Magnetic Track 052°. You are approaching the fix on Magnetic Track 232°. Select the appropriate entry procedure:**

- a) Parallel or direct.
- b) Offset only.
- c) Direct only.
- d) Either offset or parallel.

15. In a convergent tube with an incompressible sub-sonic airflow, the following pressure changes will occur: P_s = static pressure. P_{dyn} = dynamic pressure. P_{tot} = total pressure.

- a) P_s increases, P_{dyn} decreases, P_{tot} remains constant
- b) P_s decreases, P_{dyn} increases, static temperature increases
- c) P_s decreases, P_{dyn} increases, P_{tot} remains constant
- d) P_s decreases, P_{tot} increases, static temperature decreases

16. Select the air traffic service in charge of control of local traffic, take-offs and landings at an airport.

- a) Control
- b) Radar
- c) Air Traffic Centre
- d) Tower

17. The value of the saturated adiabatic lapse rate is closest to that of the dry adiabatic lapse rate in:

- a) Freezing fog
- b) Stratus
- c) Cirrus
- d) Cumulus

18. Given: True HDG = 074°, TAS = 230 kt, Track (T) = 066°, GS = 242 kt. Calculate the W/V?

- a) 185/35kt
- b) 180/30kt
- c) 180/40kt
- d) 180/35kt

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19. In case of a SSR transponder failure occurring after departure of an IFR flight, the pilot shall:

- a) Inform the current ATC unit immediately
- b) Continue the flight in VMC
- c) Squawk 7600
- d) Land at the nearest suitable aerodrome for repair

20. The changes in atmospheric gas pressure with altitude are:

- a) Non-linear, with a higher rate of change at lower levels
- b) Decreases more slowly at lower altitudes compared with at higher levels
- c) Decreases in a linear manner with altitude
- d) Rises with altitude

21. An aircraft on an IFR flight in VMC experiences radio communication failure. The aircraft is assumed to:

- a) Return to the aerodrome of departure
- b) Land at the alternate aerodrome
- c) Land at the nearest suitable aerodrome
- d) Land at the destination aerodrome

22. Absolute pressure is:

- a) The amount the pressure has been raised with reference to an initial level.
- b) The difference between two pressures.
- c) Pressure in a confined area.
- d) Measured from zero pressure (vacuum).

23. The clearance: 'cleared for immediate take-off runway 03' is:

- a) An urgency message.
- b) An unauthorized message.
- c) A flight safety message.
- d) A flight regularity message.

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24. The ISO-ECHO facility of an airborne weather radar is provided in order to:

- a) Give an indication of cloud tops
- b) Detect areas of possible severe turbulence in cloud
- c) Extend the mapping range
- d) 666 km

25. Which of the following frequencies is an international emergency frequency:

- a) 6500 KHz
- b) 122.500 MHz
- c) 121.050 MHz
- d) 121.500 MHz

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

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

27. The unit used to measure the capacitance of a capacitor is the:

- a) Joule.
- b) Farad.
- c) Watt.
- d) Hz.

28. Minimum planned take-off fuel is 160 kg (30% total reserve fuel is included). Assume the groundspeed on this trip is constant. When the aircraft has done half the distance the remaining fuel is 70 kg. Is diversion to a nearby alternate necessary?

- a) Diversion to a nearby alternate is not necessary, because it is allowed to calculate without reserve fuel.
- b) Diversion to a nearby alternate is not necessary, because the reserve fuel has not been used completely.
- c) Diversion to a nearby alternate is necessary, unless the captain decides to continue on his own responsibility.
- d) Diversion to a nearby alternate is necessary, because the remaining fuel is not sufficient.

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29. Among the systematic errors of the 'directional gyro', the error due to the earth rotation make the north reference turn in the horizontal plane. At a mean latitude of 45°N, this reference turns by...

- a) 7.5°/hour to the right.
- b) 15°/hour to the right.
- c) 7.5°/hour to the left.
- d) 10.5°/hour to the right.

30. 'Standard Mass' as used in the computation of passenger load establish the mass of a child as

- a) 35 kg only if they are over 2 years old and occupy a seat.
- b) 35 kg irrespective of age provided they occupy a seat.
- c) 35 kg for children over 2 years occupying a seat and 10 kg for infants (less than 2 years) occupying a seat.
- d) 35 kg for children over 2 years occupying a seat and 10 kg for infants (less than 2 years) not occupying a seat.

31. Knowing that: Dry operating mass: 110000 kg. Basic index: 119.1. Number of passengers: 185 distributed as shown in the annex (75 kg per PAX). Cargo load + luggage: 14000 kg distributed as shown in the annex. Fuel: 42000 kg (Fuel shift -20) Stages (1) to (7) and (1 1) having already been calculated, the centre of gravity in % MAC (Mean Aerodynamic Chord) at take-off is located at:

- a) 26.0 %
- b) 28.0 %
- c) 32.5 %
- d) 33.5 %

32. Given: aircraft height 2500 FT, ILS GP angle 3°. At what approximate distance from THR can you expect to capture the GP?

- a) 13.1 NM
- b) 7.0 NM
- c) 14.5 NM
- d) 8.3 NM

33. Given the following: True track: 192° Magnetic variation: 7°E Drift angle: 5° left What is the magnetic heading required to maintain the given track?

- a) 204°
- b) 194°
- c) 180°
- d) 190°

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34. According to JAR-OPS 1, the lowest minima to be used by an operator for circling with a category A aeroplane is a meteorological visibility of:

- a) 2400 m
- b) 1500 m
- c) 3600 m
- d) 1600 m

35. Which kind of boundary layer has the strongest change in velocity close to the surface?

- a) No difference
- b) Laminar boundary layer
- c) Transition boundary layer
- d) Turbulent boundary layer

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

- a) Decreases if QNH > 1013 hPa.
- b) Decreases if QNH
- c) Increases.
- d) Decreases.

37. Which phrase shall be used if you want to say: 'An error has been made in this transmission (or message indicated). The correct version is ...':

- a) QNH 1017, negative QNH 1016
- b) QNH 1017, negative 1016
- c) QNH 1017, correction QNH 1016
- d) QNH 1017, negative I say again 1016

38. If you are requested to report your height, to which Q-code-setting would you refer?

- a) QNH
- b) QFE
- c) QBI
- d) QDM

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39. At which altitude (within the "indifferent zone") may a degradation of night vision occur?

- a) From approximately 1 600m
- b) Up to 5 000m
- c) 5 000m - 7 000m
- d) 3 000m - 5 000m

40. How does the Electronic Flight Instrument System display of a B737-400 respond to the failure of a VHF navigation (VOR) receiver?

- a) The pointer rotates around the display and a VOR 1 or 2 failure warning bar appears
- b) It removes the associated magenta deviation bar and/or pointer from the display
- c) The pointer flashes and a VOR 1 or 2 failure warning bar appears
- d) The deviation bar and/or pointer change colour to red and flash intermittently

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

- a) Fail-operational.
- b) Fail-safe.
- c) Fail-passive.
- d) Fail-redundant.

42. When an aircraft is experiencing difficulties, triggering of the alert phase is the responsibility of

- a) Air traffic control and flight information centres.
- b) Air traffic coordination centres.
- c) Control centres only.
- d) Search and rescue coordination centres.

43. The ICAO annex which deals with entry and departure of persons and their baggage in international flights is:

- a) Annex 8
- b) Annex 6
- c) Annex 9
- d) Annex 15

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44. An air temperature of -55°C at the 200 hPa level over central Europe in summer is

- a) High
- b) Low
- c) Within $\pm 5^{\circ}\text{C}$ of ISA
- d) Very high

45. OPS 1 applies to:

- a) Aircraft used by police, customs and defence departments.
- b) Aircraft proceeding from European states or flying over them.
- c) The operation by a EASA state member of any civil aircraft.
- d) The operation by a EASA state member of any civil commercial transport aeroplane.

46. Refer to the General Student Pilot Route Manual - VFR Chart ED-4: Flying from SAULGAU airport ($48^{\circ}02'\text{N}$, $009^{\circ}31'\text{E}$) to ALTENSTADT airport ($47^{\circ}50'\text{N}$, $010^{\circ}53'\text{E}$). Find magnetic course and the distance.

- a) Magnetic course 282° , distance 112 KM
- b) Magnetic course 092° , distance 82 NM
- c) Magnetic course 091° , distance 54 NM
- d) Magnetic course 078° , distance 82 NM

47. 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

48. What is the radiotelephony call sign for the aeronautical station indicating area control centre (no radar)?

- a) ...CONTROL
- b) ...RADAR
- c) ...APPROACH
- d) ...CENTRE

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49. Given:SHA VOR/DME (N5243.3 W00853. 1) radial 025°/49 NM.What is the aircraft position?

- a) 000/05kt
- b) 000/10kt
- c) 180/05kt
- d) 180/10kt

50. At 50 feet AGL during an auto-land, what happens to the glideslope signal?

- a) Is disconnected.
- b) Is used to flare the aircraft.
- c) Is factored for range.
- d) Is used until the nose landing gear touches the ground.

51. On arriving overhead an isolated aerodrome, the commander of a turbojet engine aircraft should have a minimum quantity of fuel (additional reserve including the final reserve) sufficient for flying during:

- a) 2 hours with normal cruise consumption
- b) 30 minutes with normal cruising consumption
- c) 30 minutes at holding flight speed and 1500 ft
- d) 2 hours at holding flight speed and 1500 ft

52. An aircraft transmitting a distress message is required to give its position as:

- a) The most accurate possible using GPS if fitted.
- b) Present or last known position, altitude or level and heading.
- c) Position relative to a VRP.
- d) Latitude and longitude.

53. Refer to CAP697 Section 4 - MRJT1 Page 13 Figure 4.3.3C Simplified Flight Planning - Trip Distances Given: ground distance to destination aerodrome 1600 NM headwind component 50 KTFL 330cruise 0.78 MachISA +20 ° Cestimated landing weight 55000 kg.Find: simplified flight planning to determine estimated trip fuel and trip time.

- a) 12 400 kg, 04h 12 min
- b) 11 400 kg, 04h 12 min
- c) 11 400 kg, 03h 55 min
- d) 12 400 kg, 03h 55 min[see Annex]

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54. The maximum floor loading for a cargo compartment in an aircraft is given as 750 kg per square metre. A package with a mass of 600 kg is to be loaded. Assuming the pallet base is entirely in contact with the floor, which of the following is the minimum size pallet that can be used?

- a) 40 cm by 200 cm
- b) 40 cm by 300 cm
- c) 30 cm by 200 cm
- d) 30 cm by 300 cm

55. The sleep cycles repeat during the course of a night's sleep.1. Each succeeding cycle contains a greater amount of REM-sleep.2. Frequent interruption of the REM-sleep may be harmful.

- a) 1 and 2 are both correct
- b) 1 and 2 are both not correct
- c) 1 is not correct 2 is correct
- d) 1 is correct 2 is not correct

56. Generally, on modern jet transport aircraft, how can the landing gear be extended if there is a complete hydraulic system failure.

- a) Mechanically
- b) By hydraulic accumulators
- c) Pneumatically
- d) Electrically

57. Which of these phrases is used to inform the control tower that a pilot perform a missed approach:

- a) Overshooting
- b) Going around
- c) Pulling up
- d) Will make another approach

58. In mass and balance calculations which of the following describes the datum?

- a) It is the most forward position of the centre of gravity.
- b) It is the most aft position of the centre of gravity.
- c) It is the point on the aircraft designated by the manufacturers from which all centre of gravity measurements and calculations are made.
- d) It is the distance from the centre of gravity to the point through which the weight of the component acts.

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59. Given: Distance from departure to destination: 950 NM Endurance: 3,5 h TAS: 360 kt Ground Speed Out: 320 kt Ground Speed Home: 400 kt What is the distance and time of the PSR from the departure point?

- a) Distance: 622 NM Time: 117 min
- b) Distance: 328 NM Time: 62 min
- c) Distance: 311 NM Time: 52 min
- d) Distance: 528 NM Time: 79 min

60. During a night flight at 10,000 feet you notice that your visual acuity has decreased. In this case you can increase your acuity by:

- a) Scanning sectors of the field of vision
- b) Closing one eye
- c) Dim the instrument lights
- d) Breathing extra oxygen through the oxygen mask.

61. What is the average height of the arctic jet stream core?

- a) 30000 FT.
- b) 20000 FT .
- c) 50000 FT.
- d) 40000 FT.

62. A static inverter is a:

- a) Static Discharger.
- b) Device for reversing the polarity of the static charge.
- c) Filter against radio interference.
- d) Transistorized unit used to convert dc into ac.

63. Refer to the Student Pilot Route Manual - North Atlantic Plotting Chart. On a direct great circle course from Shannon (5243N 00853W) to Gander (4854N 05432W), the (a) average true course, and (b) distance, are:

- a) A) 281° (b) 2730 NM
- b) A) 244° (b) 1520 NM
- c) A) 262° (b) 1720 NM
- d) A) 281° (b) 1877 NM

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64. The pressurization of tanks is maintained by the fuel:

- a) Tank Drains.
- b) Top off unit.
- c) Vent system.
- d) Dump System.

65. When it becomes apparent that an aircraft is in difficulty, the decision to initiate the alert phases is the responsibility of the:

- a) Operational air traffic control centres
- b) Search and rescue co-ordination centres
- c) Air traffic co-ordination services
- d) Flight information or control organisations

66. Symptoms caused by gas bubbles in the lungs, following a decompression are called:

- a) Bends
- b) Leans
- c) Creeps
- d) Chokes

67. 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

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

- a) Heading indicator.
- b) Erecting system.
- c) Amplifier.
- d) Error detector.

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69. If your destination airport has no ICAO indicator, in the appropriate box of your ATC flight plan, you write:

- a) ZZZZ
- b) XXXX
- c) AAAA
- d) ////

70. When considering the eating-habits of pilots:

- a) Low fibre and low protein/carbohydratediet is ideal
- b) Breakfast should bring about 25% of the daily calorie intake
- c) High intake of chocolate is recommended before flight to prevent reactional hypoglycemia
- d) A heavy supper is best

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Schema Risposte

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

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