

Simulazione di Esame

Radio Navigation - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. Which typical weather situation is shown on the weather chart? (Spacing of the isobars: 5 hPa)

- a) Cutting wind.
- b) Flat pressure pattern.
- c) Warm south wind condition (Foehn).
- d) West wind condition.

02. The distress message shall contain as many as possible of the following elements/details:

- a) Aircraft call sign, route of flight, destination airport
- b) Aircraft call sign, aerodrome of departure, position and level
- c) Aircraft call sign, nature of distress, pilot's intention, present position, level and heading
- d) Aircraft call sign, present position, assistance required

03. A jet aeroplane is climbing with constant IAS. Which operational speed limit is most likely to be reached?

- a) The Stalling speed
- b) The Maximum operating Mach number
- c) The Mach limit for the Mach trim system
- d) The Minimum control speed air

04. The advantage of the use of slotted antennas in modern radar technology is to:

- a) Virtually eliminate lateral lobes and as a consequence concentrate more energy in the main beam
- b) Eliminate the need for azimuth slaving
- c) Have a wide beam and as a consequence better target detection
- d) Increase in area and move to the top of the screen

05. A ground radar transmitting at a PRF of 1200 pulses/second will have a maximum unambiguous range of approximately:

- a) 135 NM
- b) 67 NM
- c) 27 NM
- d) 400 FT/MIN

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06. Extension of FOWLER type trailing edge lift augmentation devices, will produce:

- a) A nose-up pitching moment
- b) No pitching moment
- c) A force which reduces drag
- d) A nose-down pitching moment

07. Given: TAS 487kt, FL 330, Temperature ISA + 15. Calculate the MACH Number?

- a) 0.84
- b) 0.76
- c) 0.81
- d) 0.78

08. In the Flight Management Computer (FMC) of the Flight Management System (FMS), data relating to flight plans is stored in the:

- a) Performance database
- b) Air data database
- c) Auto flight database
- d) Height based on QFE

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

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

10. The validity period of a night-time organised track system in MNPS (Minimum Navigation Performance Specification) airspace is normally at 30°W, between:

- a) 11H30 UTC to 18H00 UTC
- b) 10H30 UTC to 19H00 UTC
- c) 00H00 UTC to 08H00 UTC
- d) 01H00 UTC to 08H00 UTC

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11. Which phrase shall be used if you want to say: 'Pass me the following information...':

- a) Request
- b) Say again
- c) Report
- d) Check

12. Which of the following combinations basically has an effect on the angle of descent in a glide?(Ignore compressibility effects.)

- a) Configuration and angle of attack
- b) Configuration and mass
- c) Altitude and configuration
- d) Mass and altitude

13. If the nose of an aeroplane yaws left, this causes:

- a) A decrease in relative airspeed on the right wing.
- b) An increase in lift on the left wing.
- c) A roll to the left.
- d) A roll to the right.

14. The elements which take part in the local vertical alignment of an inertial strap-down unit are:

- a) The accelerometers and gyroscopes.
- b) The flow inductors.
- c) The accelerometers.
- d) The gyroscopes.

15. After flying for 16 min at 100 kt TAS with a 20 kt tail wind component, you have to return to the airfield of departure. You will arrive after:

- a) 10 min 40 sec
- b) 20 min
- c) 16 min
- d) 24 min

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16. What does 'SELCAL' mean:

- a) A system which permits the selective calling of individual aircraft over radiotelephone channels linking a ground station with the aircraft
- b) A system provided for direct exchange of information between air traffic services (ATS) units
- c) A system in which radiotelephony communication between two stations can take place in both directions simultaneously
- d) A system in which radiotelephony communication can be established between aircraft only

17. The code transmitted by a SSR transponder consists of:

- a) Pulses
- b) Amplitude differences
- c) Frequency differences
- d) It is of no use to civil aviation

18. What is the radiotelephony call sign for the aeronautical station indicating approach control radar departures?

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

19. During an ILS procedure, if the information transmitted by the appropriate services and received by the crew contains parameters below the crew's operational minimums, the point beyond which the approach must not be continued is:

- a) The middle marker.
- b) The FAF.
- c) The start final descent point (glide slope intersection).
- d) The outer marker (OM).

20. maximum take-off mass is:

- a) 4 200 kg
- b) 4 100 kg
- c) 4 700 kg
- d) 4 300 kg

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21. A VOR is sited at position A (45°00'N, 010°00'E). An aircraft is located at position B (44°00'N, 010°00'E). Assuming that the magnetic variation at A is 10°W and at B is 15°W, the aircraft is on VOR radial:

- a) 195°
- b) 185°
- c) 190°
- d) 020°

22. Given: TAS = 170 kt, HDG(T) = 100°, W/V = 350/30kt. Calculate the Track (°T) and GS?

- a) 091 - 183 kt
- b) 109 - 182 kt
- c) 098 - 178 kt
- d) 103 - 178 kt

23. In a METAR message, the wind group is 23010MPS. This means:

- a) Wind from 230° true at 20 knots.
- b) Wind from 230° magnetic at 20 knots.
- c) Wind from 230° true at 10 miles per hour.
- d) Wind from 230° magnetic at 10 miles per hour.

24. How many feet you have to climb to reach FL 75? Given: FL 75 departure aerodrome elevation 1500' QNH = 1023 hPa temperature = ISA 1 hPa = 30'

- a) 6000'
- b) 6300'
- c) 7800'
- d) 5700'

25. A jet aeroplane, with the geometrical characteristics shown in the appendix, has a take-off weight (W) of 460 000 N and a centre of gravity (point G on annex) located at 15.40 m from the zero reference point. At the last moment the station manager has 12 000 N of freight added in the forward compartment at 10 m from the zero reference point. The final location of the centre of gravity, calculated in percentage of mean aerodynamic chord AB (from point A), is equal to:

- a) 16.9 %.
- b) 27.5 %.
- c) 35.5 %.
- d) 30.4 %.

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26. Fuel pumps submerged in the fuel tanks of a multi-engine aircraft are:

- a) Low Pressure Variable Swash Plate Pumps.
- b) Centrifugal high pressure pumps.
- c) Centrifugal low pressure type pumps.
- d) High Pressure Variable Swash Plate Pumps.

27. The stall speed:

- a) Decreases with an increased weight
- b) Increases with an increased weight
- c) Increases with the length of the wingspan
- d) Does not depend on weight

28. Wind shear is:

- a) A variation in vertical wind velocity variation over a short distance
- b) A horizontal wind velocity variation over a short distance
- c) A vertical or horizontal wind velocity and / or wind direction over a large distance
- d) A large variation in vertical or horizontal wind velocity and / or wind direction over a short distance

29. A pilot successfully completes a difficult and stressful landing at an aerodrome. The next time a landing is attempted under the same conditions and at the same aerodrome, is the pilot likely to experience:

- a) A lower level of stress
- b) The pilot should only attempt a landing at the same aerodrome if the conditions are improved
- c) The same stress level as the first landing
- d) A higher level of stress

30. What is synergy in a crew ?

- a) The coordinated action of unrelated individual performances in achieving a non-standard task
- b) A behavioural expedient associated with the desynchronisation of the coordinated actions
- c) The uncoordinated action of the crewmembers towards a common objective
- d) The coordinated action of all members towards a common objective, in which collective performance is proving to be more than the sum of the individual performances

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31. Consider the graphic representation of the power required versus true air speed (TAS), for a piston engine aeroplane with a given mass. When drawing the tangent from the origin, the point of contact (A) determines the speed of:

- a) Maximum specific range
- b) Critical angle of attack
- c) Maximum thrust
- d) Maximum endurance

32. ICAO recommendations are that range errors indicated by Distance Measuring Equipment (DME) should not exceed:

- a) + or - 0.5 NM or 3% of the distance measured whichever is the greater
- b) + or - 0.25 NM plus 1.25% of the distance measured
- c) + or - 0.25 NM plus 3% of the distance measured up to a maximum of 5 NM
- d) + or - 1.25 NM plus 0.25% of the distance measured

33. Hypoxia can affect night vision:

- a) Less than day vision
- b) And causes the autokinetic phenomena
- c) At approximately 5000'
- d) And causes hyperventilation

34. Given: CON VOR/DME (N5354.8 W00849. 1) Abbey Shrule aerodrome (N5335 W00739) What is the CON radial and DME distance when overhead Abbey Shrule aerodrome?

- a) 296° - 46 NM
- b) 116° - 47 NM
- c) 304° - 47 NM
- d) 123° - 46 NM [see Annex]

35. While approaching a mountainous airfield, the captain of a transport aircraft notices a fast and high increase in the indicated airspeed without any change in the pre-selected engine and attitude parameters. The preceding crews had reported the occurrence of windshears in final phase. you must:

- a) Take a level flight attitude to reduce speed, then come back to glide path from above.
- b) Reduce rapidly the selected thrust, maintain on the glide path.
- c) Reduce rapidly the selected thrust in order to reach 1.2 Vs and try a precision landing.
- d) Maintain the aircraft on the glide path, accept a positive speed deviation, monitor the speed evolution.

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36. 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

37. The minimum climb gradient required on the 2nd flight path segment after the take-off of a jet aeroplane is defined by the following parameters: 1 Gear up 2 Gear down 3 Wing flaps retracted 4 Wing flaps in take-off position 5 N engines at the take-off thrust 6 (N- 1) engines at the take-off thrust 7 Speed over the path equal to $V_2 + 10$ kt 8 Speed over the path equal to $1.3 V_S$ 9 Speed over the path equal to V_2 10 At a height of 35 ft above the runway The correct statements are:

- a) 1, 4, 5, 10
- b) 2, 3, 6, 9
- c) 1, 5, 8, 10
- d) 1, 4, 6, 9

38. Given: Distance from departure to destination 2800 NM True track 140W/V 140/100 TAS 500 k What is the distance and time of the PET from the departure point?

- a) Distance: 1400 NM Time: 168 min
- b) Distance: 1120 NM Time: 112 min
- c) Distance: 1120 NM Time: 134 min
- d) Distance: 1680 NM Time: 252 min

39. Given: Standard Empty Mass 1764 lbs Optional Equipment 35 lbs Pilot + Passenger 300 lbs Cargo 350 lbs Ramp Fuel (Block Fuel) 60 Gal Trip Fuel 35 Gal Taxi Fuel 1.7 Gal Final Reserve Fuel 18 Gal Fuel density 6 lbs/Gal Determine the expected landing mass.

- a) 2589 lbs
- b) 2557 lbs
- c) 2472 lbs
- d) 2599 lbs

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40. Low intensity obstacle lights on mobile objects shall be:

- a) Fixed red or preferably blue.
- b) Fixed red or preferably orange.
- c) Flashing blue.
- d) Flashing red or preferably yellow.

41. The volume of air exchanged during a normal breathing cycle (tidal volume) is about:

- a) 350 ml of air
- b) 150 ml of air
- c) 500 ml of air
- d) 75 ml of air

42. Given: TAS = 485 KT OAT = ISA +10°C FL 410 calculate the Mach Number

- a) 195 °/61 kt
- b) 355 °/15 kt
- c) 195 °/63 kt
- d) 190 °/63 kt

43. With respect to multi-engine piston powered aeroplane, determine the ramp mass (lbs) in the following conditions: Basic empty mass: 3 210 lbs Basic arm: 88.5 Inches One pilot: 160 lbs Front seat passenger: 200 lbs Centre seat passengers: 290 lbs One passenger rear seat: 110 lbs Baggage in zone 1: 100 lbs Baggage in zone 4: 50 lbs Block fuel: 100 US Gal. Trip fuel: 55 US Gal. Fuel for start up and taxi (included in block fuel): 3 US Gal. Fuel density: 6 lbs/US Gal.

- a) 4120
- b) 4390
- c) 4720
- d) 4372

Simulazione di Esame

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44. The climb gradient of an aircraft after take-off is 6% in standard atmosphere, no wind, at 0' pressure altitude. Using the following corrections: '+ 0.2 % / 1000' field elevation' - 0.1 % / °C from standard temperature' - 1 % with wing anti-ice' - 0.5% with engine anti-ice' The climb gradient after take-off from an airport situated at 1000', 17°C

- a) QNH 1013.25 hPa, with wing and engine anti-ice operating for a functional check is:
- b) 4.7 %
- c) 4.3 %
- d) 4.9 %

45. If the centre of gravity is near the forward limit the aeroplane will:

- a) Benefit from reduced drag due to the decrease in angle of attack.
- b) Require less power for a given airspeed.
- c) Require elevator trim which will result in an increase in fuel consumption.
- d) Tend to over rotate during take-off.

46. Considering VR, which statement is correct?

- a) VR is the lowest climb speed after engine failure
- b) In case of engine failure below VR the take-off should be aborted
- c) VR is the speed at which rotation should be initiated
- d) VR is the lowest speed for directional control in case of engine failure

47. How should a pilot inform the ATS unit that their aircraft does not have 8.33 KHz capability?

- a) We do not have this frequency
- b) Negative eight point three three
- c) Negative eight point three three frequency equipment
- d) My aircraft is not equipped with eight point three three

48. Whenever ATIS is provided, the broadcast information shall be updated

- a) At least every half an hour independently of any significant change
- b) Immediately a significant change occurs
- c) As prescribed by the state
- d) As prescribed by the meteorological office

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Radio Navigation - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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49. Given: For take-off an aircraft requires a headwind component of at least 10 kt and has a cross-wind limitation of 35 kt. The angle between the wind direction and the runway is 60°, Calculate the minimum and maximum allowable wind speeds?

- a) 12 kt and 38 kt
- b) 20 kt and 40 kt
- c) 18 kt and 50 kt
- d) 15 kt and 43 kt

50. 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]

51. On a TCAS 2 (Traffic Collision Avoidance System) the preventive 'resolution advisory' (RA) is a 'resolution advisory':

- a) That advises the pilot to avoid certain deviations from the current vertical rate but does not require any change to be made to that rate.
- b) Asking the pilot to modify the speed of his aircraft.
- c) Asking the pilot to modify the heading of his aircraft.
- d) Asking the pilot to modify effectively the vertical speed of his aircraft.

52. The urgency message to be sent by an aircraft reporting an urgency condition shall contain at least the following elements/details:

- a) Aircraft call sign, destination airport, ETA at destination, route of flight
- b) Aircraft call sign, nature of the urgency condition, pilot's intention, present position, level and heading
- c) Aircraft identification, aerodrome of departure, level and heading
- d) Name of the station addressed, present position, assistance required

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53. Which abbreviation is used for the term 'control zone'?

- a) CZ
- b) CTZ
- c) CTR
- d) CTA

54. The system notifying in advance the circumstances requiring important changes in the methods of operation, based on common effective dates, is identified by the acronym:

- a) NOTAM
- b) PANS
- c) AIRAC
- d) IFPS

55. How shall a pilot inform a radar control unit that the aircraft is not equipped with transponder:

- a) Negative transponder
- b) Negative squawk
- c) Transponder not available
- d) No SSR

56. 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.

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

- a) 60°N to 50°N
- b) 60°N to 60°N
- c) 30°S to 25°S
- d) 30°S to 30°N

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58. Given: True HDG = 002°, TAS = 130 kt, Track (T) = 353°, GS = 132 kt. Calculate the W/V?

- a) 090/20kt
- b) 090/15kt
- c) 095/25kt
- d) 095/20kt

59. The component that converts hydraulic pressure into linear motion is called:

- a) A Hydraulic Pump.
- b) An accumulator.
- c) A pressure regulator.
- d) An actuator or jack.

60. From the data contained in the attached appendix, the maximum allowable take - off mass and traffic load is respectively:

- a) 61600 kg and 12150 kg
- b) 60425 kg and 10975 kg
- c) 66770 kg and 17320 kg
- d) 68038 kg and 18588 kg[see Annex]

61. When planning a flight at FL 110, which upper wind and temperature chart would be nearest your flight level ?

- a) 300 hPa
- b) 850 hPa
- c) 500 hPa
- d) 700 hPa

62. During the approach, a crew reads on the radio altimeter the value of 650 ft. This is an indication of the true:

- a) Height of the lowest wheels with regard to the ground at any time.
- b) Altitude of the aircraft.
- c) Height of the aircraft with regard to the runway.
- d) Height of the aircraft with regard to the ground at any time.

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63. What does the word 'recleared' mean?

- a) Permission for proposed action granted
- b) An error has been made in my last transmission
- c) A change has been made to your last clearance
- d) Consider that transmission as not sent

64. A VMO-MMO warning device consists of an alarm connected to:

- a) A barometric aneroid capsule subjected to a dynamic pressure and an airspeed sensor subjected to a static pressure.
- b) A barometric aneroid capsule and an airspeed sensor subjected to dynamic pressure.
- c) A barometric aneroid capsule subjected to a static pressure and an airspeed sensor subjected to a dynamic pressure.
- d) A barometric aneroid capsule and an airspeed sensor subjected to a static pressure.

65. Flight Information Region (FIR) is an airspace within which the following services are provided:

- a) Flight Information Service and Alerting Service.
- b) Flight Information Service and Advisory Service.
- c) Flight Information Service only.
- d) Flight Information Service, Alerting Service and Advisory Service.

66. Which of the following statements best characterise a self-centered cockpit ?

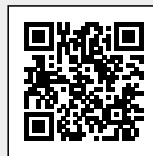
- a) The communication between crew members always increases when the captain takes charge of a situation
- b) The egoistic and self-centered personality of the captain often leads to a synergetic cockpit
- c) While decreasing communication, the independence of each member bolsters the crew's synergy
- d) Without taking note of what the other members are doing, each one does his own thing while at the same time assuming that everyone is aware of what is being done or what is going on

67. A directional gyro is:1- a gyroscope free around two axis 2- a gyroscope free around one axis3- capable of self-orientation around an earth-tied direction 4- incapable of self-orientation around an earth-tied directionThe combination which regroups all of the correct statements is:NB: the degree(s) of freedom of a gyro does not take into account its rotor spin axis.

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

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68. A propeller blade is twisted, so as to

- a) Decrease The Blade Tangential Velocity From The Blade Root To The Tip.
- b) Avoid the appearance of sonic phenomena.
- c) Allow a higher mechanical stress.
- d) Keep the local angle of attack constant along the blade.

69. In which screen modes of an Electronic Horizontal Situation Indicator (EHSI) on a B737-400 will radar returns not be shown?

- a) FULL NAV, PLAN and MAP
- b) EXP VOR/ ILS, PLAN and MAP
- c) FULL VOR/ILS, EXP VOR/ILS and PLAN
- d) 1620 pps

70. The holdover time of an anti-icing procedure will vary considerably depending on the ambient temperature and the weather conditions. For a given ambient temperature, the longest protection will be in weather conditions of:

- a) Rain on a cold soaked wing
- b) Freezing fog
- c) Steady snow
- d) Frost

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Schema Risposte

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

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