

Simulazione di Esame

Flight Planning and Monitoring - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. Constant-speed propellers provide a better performance than fixed-pitch propellers because they:

- a) Produce a greater maximum thrust than a fixed-pitch propeller.
- b) Have a higher maximum efficiency than a fixed-pitch propeller.
- c) Have more blade surface area than a fixed-pitch propeller.
- d) Produce an almost maximum efficiency over a wider speed range.

02. Which statement concerning the inclusion of a clearway in take-off calculation is correct?

- a) The field length limited take-off mass will increase
- b) V1 remains constant
- c) V1 is increased
- d) The usable length of the clearway is not limited

03. Approach procedures - MDH / OCH For a non-precision or circling approach, the Minimum Descent Height (MDH) cannot be lower than:

- a) 350 ft
- b) 200 ft
- c) 400 ft
- d) The Obstacle Clearance Height (OCH)

04. An aircraft at latitude 10° South flies north at a GS of 890 kph. What will its latitude be after 1.5 h?

- a) 12°15'N
- b) 02°00'N
- c) 03°50'N
- d) 22°00'N

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05. A water fire extinguisher can be used without restriction for:1. a paper fire2. a hydrocarbon fire3. a fabric fire4. an electrical fire5. a wood fireThe combination regrouping all the correct statements is:

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

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

- a) Mach number of the aircraft.
- b) Aircraft attitude.
- c) Time passed at this altitude.
- d) Static temperature.

07. A climb gradient required is 3.3%. For an aircraft maintaining 100 KT true airspeed, no wind, this climb gradient corresponds to a rate of climb of approximately:

- a) 3 300 fpm
- b) 330 fpm
- c) 33.0 m/s
- d) 3.30 m/s

08. If an aeroplane is at a higher mass than anticipated, for a given airspeed the angle of attack will

- a) Be decreased, drag will decrease and endurance will increase.
- b) Remain constant, drag will decrease and endurance will decrease.
- c) Be greater, drag will increase and endurance will decrease.
- d) Remain constant, drag will increase and endurance will increase.

09. Refer to CAP697 Section 4 - MRJT1 Page 2 Figure 4.1 / 4.2 and Page 41 Figure 4.5.3.2Given: Estimated take-off mass 57000 kg, Ground distance 150 NM, Temperature ISA -10°C, Cruise at 0.74 MachFind: Cruise altitude and expected true air speed

- a) 24000', 445 KT
- b) 25000', 435 KT
- c) 33900', 420 KT
- d) 33500', 430 KT[see Annex]

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10. Which sensations does a pilot get, when he is rolling out of a prolonged level turn?

- a) Flying straight and level
- b) Turning in the opposite direction
- c) Turning into the original direction
- d) Climbing

11. On a polar stereographic chart whose grid is parallel with the Greenwich meridian in the direction of the true North pole, the 'true' orientation of the great circle linking point 62N 010E to point 66N 050W is 305. The grid route at the starting point of this great circle is:

- a) 301
- b) 298
- c) 292
- d) 295

12. Given: Course Deviation Indicator (CDI) for a VOR is selected to 090°. From/To indicator indicates 'TO'. CDI needle is deflected halfway to the right. On what radial is the aircraft?

- a) 085
- b) 265
- c) 275
- d) L2-coarse acquisition (C/A)

13. Must a 'general call' be acknowledged'?

- a) Yes, from all stations in the sequence they have been addressed
- b) Yes, but only from the station first called
- c) Yes, from all stations in a random sequence
- d) No

14. One of the tasks of the space segment of the satellite navigation system NAVSTAR/GPS is to:

- a) Transmit signals to suitable receivers and to monitor the orbital planes autonomously
- b) Compute the user position from the received user messages and to transmit the computed position back to the user segment
- c) Transmit signals which can be used, by suitable receivers, to determine time, position and velocity
- d) Monitor the satellites' orbits and status

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15. One method to compensate adverse yaw is:

- a) A differential aileron.
- b) A balance panel.
- c) An anti-balance tab.
- d) A balance tab.

16. In relation to the satellite navigation system NAVSTAR/GPS, which of the following statements correctly describes the term 'Pseudo Random Noise (PRN)' signal?

- a) PRN is the atmospheric jamming that affects the signals transmitted by the satellites
- b) PRN describes the continuous electro-magnetic background noise that exists in space
- c) PRN is a code used for the identification of the satellites and the measurement of the time taken by the signal to reach the receiver
- d) PRN occurs in the receiver. It is caused by the signal from one satellite being received from different directions (multipath effect)

17. An aircraft station fails to establish radio contact with an aeronautical station on the designated frequency. What action is required by the pilot:

- a) Return to the airport of departure
- b) Continue the flight to the destination airport without any communication
- c) Land at the nearest airport without an ATC unit
- d) Attempt to establish contact with the station on an alternative frequency

18. What is the name of the functional connection between neurones?

- a) By-pass.
- b) Synapse.
- c) Occlusion.
- d) Interconnection.

19. Which area of a polar front jet stream in the northern hemisphere has the highest probability of turbulence?

- a) Looking downstream, the area to the right of the core.
- b) In the core of the jet stream.
- c) Looking downstream, the area to the left of the core.
- d) Above the core in the boundary between warm and cold air.

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20. Mcrit is the free stream Mach Number at which:

- a) Somewhere about the airframe Mach 1 is reached locally.
- b) The critical angle of attack is reached.
- c) Shockstall occurs.
- d) Mach buffet occurs.

21. A laminar boundary layer is a layer, in which:

- a) No velocity components exist, normal to the surface
- b) The temperature varies constantly
- c) The velocity is constant
- d) The vortices are weak

22. In the Flight Management Computer (FMC) of the Flight Management System (FMS), data relating to aircraft flight envelope computations is stored in the:

- a) Navigation database
- b) Air data computer
- c) Auto flight computers
- d) Within the coverage of station-referenced navigation aids provided that it is equipped with a minimum of one serviceable self-contained navigation aid

23. The two standard parallels of a conical Lambert projection are at N10°40'N and N41°20'. The cone constant of this chart is approximatively:

- a) 0.44
- b) 0.18
- c) 0.66
- d) 0.90

24. How is the direction and speed of upper winds described in forecasts ?

- a) The direction is relative to true north and the speed is in knots.
- b) The direction is relative to true north and the speed is in miles per hour.
- c) The direction is relative to magnetic north and the speed is in miles per hour.
- d) The direction is relative to magnetic north and the speed is in knots.

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25. Wake turbulence risk is highest:

- a) If just before landing a much lighter aircraft has landed at the same runway with heavy crosswind.
- b) When a heavy aircraft has just performed a take-off at a closely situated parallel runway with a light crosswind.
- c) When a preceding aircraft has briefly applied reverse-thrust just prior to take-off.
- d) Following a preceding aircraft at high speed.

26. A mass of 500 kg is loaded at a station which is located 10 metres behind the present Centre of Gravity and 16 metres behind the datum. (Assume: $g=10 \text{ m/s}^2$) The moment for that mass used in the loading manifest is:

- a) 50000 Nm
- b) 80000 Nm
- c) 130000 Nm
- d) 30000 Nm

27. A TCAS 2 (Traffic Collision Avoidance System) provides:

- a) A simple intruding airplane proximity warning.
- b) The intruder relative position and possibly an indication of a collision avoidance manoeuvre within the vertical plane only.
- c) The intruder relative position and possibly an indication of a collision avoidance manoeuvre within the horizontal plane only.
- d) The intruder relative position and possibly an indication of a collision avoidance manoeuvre within both the vertical and horizontal planes.

28. 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

29. When the term 'Overcast' is used in an aviation routine weather report (METAR), the amount of clouds covering the sky is:

- a) Less than 50%
- b) 50% or more
- c) No clouds but poor ground visibility
- d) 100%

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30. What is the SI unit of measurement for power?

- a) Pa/m²
- b) Kg/m/s²
- c) N/m
- d) Nm/s

31. An airborne weather radar installation makes it possible to detect the location of

- a) Zones of precipitation, particularly liquid-state precipitation, and also their intensity
- b) Stratocumulus and its vertical development
- c) Cumulonimbus, but provided that cloud of this type is accompanied by falls of hail
- d) All clouds

32. When the term 'CAVOK' is used in an aviation routine weather report (METAR), the values of visibility and clouds are:

- a) Visibility 10 km or more, no clouds below 5000 feet/GND
- b) Visibility more than 5000 m, no clouds below 1500 m/GND
- c) Visibility more than 8 km, no clouds below 3000 feet/GND
- d) Visibility 10 km or more, no clouds below 1500 feet/GND

33. 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.

34. Which of the following statements is correct?

- a) The performance limited take-off mass is independent of the wind component
- b) The accelerate stop distance required is independent of the runway condition
- c) The climb limited take-off mass is independent of the wind component
- d) The take-off distance with one engine out is independent of the wind component

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35. An aeroplane performs a steady horizontal turn with a TAS of 200 KT. The turn radius is 2000m. The load factor (n) is approximately:

- a) 1.4
- b) 1.1
- c) 1.8
- d) 2.0

36. 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

37. To ensure correct load sharing between AC generators operating in parallel:

- a) The Matching Of Loads Is Unimportant.
- b) Only reactive loads need to be matched.
- c) Both real and reactive loads must be matched.
- d) Only Real Loads Need To Be Matched.

38. The positive manoeuvring limit load factor for a light aeroplane in the utility category in the clean configuration is:

- a) 3.8
- b) 2.5
- c) 6.0
- d) 4.4

39. What is the colour sequence when passing over an Outer, Middle and Inner Marker beacon?

- a) Amber - white - green
- b) Blue - amber - white
- c) Blue - green - white
- d) White - amber - blue

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40. TVOR is a

- a) Test VOR transmitting such a signal that the reference- and variable signal are always in phase.
- b) High power VOR in the frequency range 108 MHz - 112 MHz.
- c) VOR with a limited range used in the terminal area.
- d) Low power DVOR in the frequency range 112 MHz - 118 MHz.

41. What does the phrase 'Go ahead' mean:

- a) Proceed with your message
- b) Yes
- c) Pass me the following information...
- d) Taxi on

42. During an explosive decompression at flight level 370 (FL 370), your first action will be:

- a) To warn the ATC
- b) To set the transponder to 7700
- c) To comfort your passengers
- d) To put on the oxygen mask

43. An aircraft leaves 0°N/S 45°W and flies due South for 10 hours at a speed of 540 kts. What is its position?

- a) North Pole.
- b) 30°S.
- c) South Pole.
- d) 45°S.

44. According to JAR-FCL, the validity of type ratings and multi-engine class ratings will be one year from the date:

- a) Of the skill test
- b) The application is received by the Authority.
- c) Of issue
- d) Of the last medical certificate

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

- a) Higher than the true altitude.
- b) Equal to the standard altitude.
- c) The same as the true altitude.
- d) Lower than the true altitude.

46. What is the effect of increased mass on the performance of a gliding aeroplane?

- a) There is no effect
- b) The gliding angle decreases
- c) The speed for best angle of descent increases
- d) The lift / drag ratio decreases

47. The vertical command bar of a flight director:

- a) Repeats the position information given by the ILS in the horizontal plane.
- b) Repeats the position information given by the ILS in the vertical plane.
- c) Gives information about the direction and the amplitude of the corrections to be applied on the control commands.
- d) Gives information only about the direction of the corrections to be applied on the bank of the aircraft.

48. The closure of a runway for a year, because of maintenance, will be published:

- a) NOTAM, AIP and MAL.
- b) Only in AIP.
- c) Only in NOTAM.
- d) In NOTAM and AIP, inclusive Supplement.

49. Under what runway conditions is the braking action reported to be 'Unreliable':

- a) Runway covered with wet snow and slush
- b) Runway conditions normal
- c) Runway covered with dry snow
- d) Runway covered with ice

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50. The principle of operation of an ILS localiser transmitter is based on two overlapping lobes that are transmitted on (i)..... frequencies and carry different (ii).....

- a) (i) different (ii) modulation frequencies
- b) (i) the same (ii) phases
- c) (i) different (ii) phases
- d) 095

51. The function of the rudder limiter system is:

- a) To Restrict The Rudder Deflection During Flight At High Altitudes.
- b) To Limit Pedal Movement In Heavy Turbulence.
- c) To restrict rudder deflection during flight at high ias.
- d) To Reduce Pilot's Workload During Engine Failure.

52. The general information, instructions and recommendations on the transport of dangerous goods are specified in the:

- a) Flight manual.
- b) Operations manual.
- c) Air operator certificate.
- d) AIP (Aeronautical Information Publication).

53. Which of the following statements is (are) correct with regard to computer flight plans 1. The computer takes account of bad weather on the route and adds extra fuel. 2. The computer calculates alternate fuel sufficient for a missed approach, climb, cruise, descent and approach and landing at the destination alternate.

- a) Statement 2 only
- b) Neither statement
- c) Statement 1 only
- d) Both statements

54. A four jet-engine aeroplane (mass = 150 000 kg) is established on climb with all engines operating. The lift-to-drag ratio is 14. Each engine has a thrust of 75 000 Newton. The gradient of climb is: (given: $g = 10 \text{ m/s}^2$)

- a) 27%.
- b) 1.286%.
- c) 7.86%.
- d) 12.86%.

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55. Halon is used as a fire extinguishing agent because it:

- a) Is Highly Volatile.
- b) Uses the cooling effect created by the venturi during discharge.
- c) Is an electrical conductor.
- d) Acts as a very effective flame inhibitor.

56. One of the waste products of the metabolic process in the cell is:

- a) Sugar
- b) Protein
- c) Fat
- d) Carbon dioxide

57. The final reserve fuel for aeroplanes with turbine engines is

- a) Fuel to fly for 30 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.
- b) Fuel to fly for 60 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.
- c) Fuel to fly for 45 minutes at holding speed at 1000 ft (300 m) above aerodrome elevation in standard conditions.
- d) Fuel to fly for 45 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.

58. A high degree of cockpit automation may alter the traditional tasks of the pilots in a way, that

- a) The attention of the cockpit crew will become reduced with the consequence of 'being out of the loop'
- b) The crew can pay more attention to solve the problem in an abnormal situation without monitoring the automatic systems
- c) Crew Coordination can be neglected on long haul flights without compromising safety
- d) It is guaranteed that the crew maintains always situational awareness

59. Alert phase is defined as follows:

- a) A situation related to an aircraft which reports that the fuel on board is exhausted.
- b) A situation where an apprehension exists as to the safety of an aircraft and its occupants.
- c) A situation related to an aircraft and its occupants are considered to be in a state of emergency.
- d) An emergency event in which an aircraft and its occupants are considered to be threatened by a danger.

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60. Divergence in the upper air results, near the surface, in:

- a) Rising pressure and likely formation of clouds
- b) Rising pressure and likely dissipation of clouds
- c) Falling pressure and likely formation of clouds
- d) Falling pressure and likely dissipation of clouds

61. The distance between a NAVSTAR/GPS satellite and receiver is:

- a) Determined by the time taken for the signal to arrive from the satellite multiplied by the speed of light
- b) Determined by the phase shift of the Pseudo Random Noise code multiplied by the speed of light
- c) Calculated, using the WGS-84 reference system, from the known positions of the satellite and the receiver
- d) 4

62. The floor of the main cargo hold is limited to 4000 N/m². It is planned to load a cubic container each side of which measures 0.5 m. Its maximum gross mass must not exceed: (assume $g=10\text{m/s}^2$)

- a) 1000 kg
- b) 100 kg
- c) 5000 kg
- d) 500 kg

63. 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).

64. In the ATC flight plan Item 15 (Cruising speed), when not expressed as a Mach number, cruising speed is expressed as:

- a) IAS
- b) TAS
- c) Groundspeed
- d) CAS

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65. A plain in Western Europe with an average height of 500 m (1600 FT) above sea level is covered with a uniform CC layer of cloud during the summer months. At what height above the ground is the base of this cloud to be expected?

- a) 15000 - 35000 FT above the terrain
- b) 100 - 1500 FT above the terrain
- c) 1500 - 7000 FT above the terrain
- d) 7000 - 15000 FT above the terrain

66. 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

67. Which type of flap is shown in the picture?

- a) Double slotted flap
- b) Fowler flap
- c) Split flap
- d) Plain flap

68. What does the phrase 'Squawk 1234' mean:

- a) Make a test transmission on 123.4 MHz
- b) Give a short count for DF (direction finder)
- c) Standby on frequency 123.4 MHz
- d) Select code 1234 on the SSR transponder

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69. The time taken for the transmission of an interrogation pulse by a Distance Measuring Equipment (DME) to travel to the ground transponder and return to the airborne receiver was 2000 micro-second, including time delay. The slant range from the ground transponder was:

- a) 186 NM
- b) 296 NM
- c) 158 NM
- d) The pulse recurrence rates are varied

70. Which of the following (1) aerofoils and (2) angles of attack will produce the lowest Mcrit values?

- a) (1) thin and (2) large.
- b) (1) thick and (2) small.
- c) (1) thin and (2) small.
- d) (1) thick and (2) large.

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Schema Risposte

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

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