

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. For a given configuration, the stall speed of an aeroplane will be highest when loaded:

- a) To the maximum allowable mass with the most forward CG
- b) To the maximum allowable mass with the most aft CG
- c) To a low total mass with the most aft CG
- d) To a low total mass with the most forward CG

02. The expression "secondary flight control" applies to the: 1) elevator 2) speed brake 3) lift-augmentation devices 4) roll spoilers. The combination that regroups all of the correct statements is:

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

03. A commander shall not take-off for an IFR flight unless information is available indicating that the expected weather conditions at the destination and/or required alternate aerodrome(s) are:

- a) At the estimated time of arrival, at or above the planning minima.
- b) During a period from 1 hour before to 1 hour after the estimated time of arrival at the aerodrome, at or above the planning minima.
- c) At the estimated time of arrival better than the minimum conditions required for aerodrome use.
- d) At the estimated time of arrival, and for a reasonable period before and after such a predicted time, equal to or better than the minimum conditions required for aerodrome use.

04. A flight has to be made with a multi engine piston aeroplane (MEP 1 Fig. 3. 3). For the fuel calculations take 5 US gallons for the taxi, and an additional 13 minutes at cruise condition to account for climb and descent. Calculated time overhead to overhead is 2h37min. Power setting is 65%, 2500 RPM. Calculated reserve fuel is 30% of the trip fuel. FL 120. Temperature 1°C. Find the minimum block fuel.

- a) 91 US gallons
- b) 118 US gallons
- c) Find the minimum block fuel. 91 US gallons 118 US gallons 76 US gallons
- d) 86 US gallons

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05. A 'Balanced Field Length' is said to exist where:

- a) The clearway does not equal the stopway
- b) The accelerate stop distance is equal to the all engine take-off distance
- c) The accelerate stop distance is equal to the take-off distance available
- d) The one engine out take-off distance is equal to the all engine take-off distance

06. According to PART-CAT, which one of the following statements concerning the landing distance for a turbojet aeroplane is correct?

- a) When determining the maximum allowable landing mass at destination, 60% of the available landing runway length should be taken into account.
- b) The landing distance is the distance from 35 ft above the surface of the runway to the full stop.
- c) Malfunctioning of an anti-skid system has no effect on the required runway length.
- d) Reverse thrust is one of the factors always taken into account when determining the landing distance required.

07. The poles on the surface of The Earth may be defined as:

- a) The points on the surface of The Earth where all meridians intersect at right angles.
- b) The points from where the distance to the equator is equal.
- c) The position where The Earth's axis of rotation cuts the surface of the Earth.
- d) The point at which the vertical lines run through the centre of The Earth.

08. At which time, if any, are polar front jet streams over the South Pacific usually strongest?

- a) July
- b) October
- c) There is no annual variation
- d) January

09. How should a pilot terminate the read-back of an ATC clearance ?

- a) With his own aircraft call sign
- b) With the word 'roger'
- c) With the ATC ground station call sign
- d) With the word 'wilco'

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10. The prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the licence authority, provided that such deferment shall only be made as an exception and shall not exceed:

- a) Two consecutive periods each of three month in the case a flight crew member of an aircraft engaged in non-commercial operations.
- b) A single period of three month in the case of a flight crew member of an aircraft engaged in commercial operations.
- c) A single period of six month in the case of a flight crew member of an aircraft engaged in non- commercial operations.
- d) Two consecutive periods each of six month in the case of a flight crew member of an aircraft engaged in non-commercial operations.

11. One advantage of a movable-stabilizer system compared with an elevator trim system is that:

- a) It leads to greater stability in flight
- b) The complete system (structure and control mechanism) weighs less
- c) The system's complexity is reduced
- d) It is a more effective means of trimming

12. Which of the following is the correct suffix for the ATC unit controlling the traffic on the ground at an airport?

- a) Radar
- b) Approach
- c) Ground
- d) Delivery

13. While taxiing an aircraft receives the following light signal from the control tower: series of red flashes. This signal means that the aircraft:

- a) Must stop.
- b) Must vacate the landing area in use.
- c) May continue to taxi to the take-off area.
- d) Must return to its point of departure.

14. If you push forward the RPM lever of a constant speed propeller during a glide with idle power and constant speed, the propeller pitch will:

- a) Increase and the rate of descent will increase.
- b) Increase and the rate of descent will decrease.
- c) Decrease and the rate of descent will decrease.
- d) Decrease and the rate of descent will increase.

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15. Which of the following factors determines the maximum flight altitude in the 'Buffet Onset Boundary' graph?

- a) Service ceiling
- b) Theoretical ceiling
- c) Economy
- d) Aerodynamics

16. Which of the following radar equipment operate by means of the pulse technique?1. Aerodrome Surface Movement Radar2. Airborne Weather Radar3. Secondary Surveillance Radar (SSR)4. Aerodrome Surveillance (approach) Radar

- a) 1, 2 and 4 only
- b) 1, 2, 3 and 4
- c) 2 and 4 only
- d) 2, 3 and 4 only

17. One minute separation may be used between departing aircraft if they are to fly on tracks diverging by at least:

- a) 30° immediately after take-off.
- b) 45° immediately after take-off.
- c) 25° immediately after take-off.
- d) 15° immediately after take-off.

18. When will the surface wind in a METAR record a gust factor ?

- a) When gusts are at least 15 knots above the mean wind speed
- b) With gusts of at least 25 knots
- c) When gusts are at least 10 knots above the mean wind speed
- d) With gusts of at least 35 knots

19. An NDB transmits a signal pattern in the horizontal plane which is:

- a) Omnidirectional
- b) A beam rotating at 30 Hz
- c) A cardioid balanced at 30 Hz
- d) Bi-lobal circular

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20. Given: Waypoint 1. 60°S 030°W Waypoint 2. 60°S 020°W What will be the approximate latitude shown on the display unit of an inertial navigation system at longitude 025°W?

- a) 060°11'S
- b) 060°06'S
- c) 060°00'S
- d) 059°49'S

21. 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

22. The angle between the aeroplane longitudinal axis and the chord line is the:

- a) Angle of incidence
- b) Climb path angle
- c) Angle of attack
- d) Glide path angle

23. Dry Operating Mass is the mass of the aircraft less

- a) Usable fuel and traffic load.
- b) Usable fuel, potable water and lavatory chemicals.
- c) Traffic load, potable water and lavatory chemicals.
- d) Usable fuel.

24. In a Satellite-Assisted Navigation system (GNSS/GPS) a position line is obtained by:

- a) The aircraft's receiver measuring the phase angle of the signal received from a satellite in a known position
- b) Timing the period that is taken for a satellite's transmission to reach the aircraft's receiver
- c) The aircraft's receiver measuring the time difference between signals received from a minimum number of satellites
- d) 200 FT

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25. Given: GS = 435 kt. Distance from A to B = 1920 NM. What is the time from A to B?

- a) 3 HR 26 MIN
- b) 3 HR 25 MIN
- c) 4 HR 10 MIN
- d) 4 HR 25 MIN

26. Whenever ATIS is provided, the preparation and dissemination of the ATIS message shall be the responsibility of

- a) The meteorological office serving the aerodrome (s)
- b) Both air traffic services and the meteorological office
- c) The air traffic services
- d) The unit as prescribed by the state

27. Given: True course from A to B = 090°, TAS = 460 KT, W/V = 360/100 KT, Average variation = 10°E, Deviation = -2°. Calculate the compass heading and GS?

- a) Great circles
- b) Both Rhumb lines and Great circles
- c) Rhumb lines
- d) Are neither Rhumb lines nor Great circles

28. 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

29. What does the phrase 'break break' mean?

- a) It indicates the separation between portions of a message transmitted to an aircraft station
- b) It indicates the separation between messages transmitted to different aircraft in a very busy environment
- c) My transmission is ended and I expect a response from you
- d) The exchange of transmissions is ended and no response is expected

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30. A CG location beyond the aft limit leads to:

- a) A too high pulling stick force during rotation in the take off
- b) An unacceptable low value of the manoeuvre stability (stick force per g, Fe/g)
- c) A better recovery performance in the spin
- d) An increasing static longitudinal stability

31. Which measure(s) will help to compensate for hypoxia? 1. Descend below 10 000 FT. 2. Breathe 100 % oxygen. 3. Climb to or above 10 000 FT. 4. Reduce physical activities.

- a) 1, 2 and 3 are correct
- b) 1, 2 and 4 are correct
- c) 1 and 2 are correct, 3 and 4 are false
- d) Only 1 is correct

32. In order to avoid CB a pilot wants to turn right to a magnetic heading of 100 degrees. The correct way to ask the ATC unit for permission is:

- a) Request right turn to heading one-double-0
- b) Request right turn to heading one-hundred degrees
- c) Request right turn to heading one-point-zero-zero
- d) Request right turn, heading one-zero-zero

33. What does the term 'Expected Approach Time' mean:

- a) The time at which an arriving aircraft, upon reaching the radio aid serving the destination aerodrome, will commence the instrument approach procedure for a landing
- b) The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding point to complete its approach for a landing
- c) The holding time over the radio facility from which the instrument approach procedure for a landing will be initiated
- d) The time at which an arriving aircraft expects to arrive over the appropriate designated navigation aid serving the destination aerodrome

34. Refer to the General Student Pilot Route Manual - VFR Chart ED-4: Flying from SAULGAU airport (48°02'N, 009°31'E) to ALTENSTADT airport (47°50'N, 010°53'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

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35. Which of the following calls is a 'general call'?

- a) ALL STATIONS Stephenville CONTROL
- b) YX-EFG, YX-FGH over
- c) YX-DEF Stephenville CONTROL
- d) YX-ABC, YX-BCD, YX-CDE Stephenville CONTROL

36. The weight of an aircraft, which is in level non accelerated flight, is said to act

- a) Vertically through the centre of pressure.
- b) Vertically through the centre of gravity.
- c) Always along the vertical axis of the aircraft.
- d) Vertically through the datum point.

37. See TRM (VFR), Aberdeen (Dyce) Information Page (19- 6)What is the designated departure route when using Runway 23 in bad weather and/or low visibility?

- a) H3
- b) H6
- c) H5
- d) H1

38. 'Integrated range' curves or tables are presented in the Aeroplane Operations Manuals. Their purpose is

- a) To determine the flight time for a certain leg under consideration of temperature deviations.
- b) To determine the fuel consumption for a certain still air distance considering the decreasing fuel flow with decreasing mass.
- c) To determine the optimum speed considering the fuel cost as well as the time related cost of the aeroplane.
- d) To determine the still air distance for a wind components varying with altitude.

39. 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

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40. An aircraft at FL370, M0.86, OAT -44°C, headwind component 110 kt, is required to reduce speed in order to cross a reporting point 5 MIN later than planned. If the speed reduction were to be made 420 NM from the reporting point, what Mach Number is required?

- a) M0.75
- b) M0.73
- c) M0.79
- d) M0.81

41. What is the correct call sign of Fastair 345 in the initial call to the aerodrome control tower and the approach control unit, if the aircraft has a maximum take-off weight of more than 136 tonnes:

- a) Fastair 345 heavy
- b) Fastair 345 widebody
- c) Fastair 345
- d) Heavy Fastair 345

42. Which word shall be used to ask a station whether you have correctly received a message, clearance, instruction, etc?

- a) Correct
- b) Acknowledge
- c) Confirm
- d) Verify

43. Which of the aeronautical chart symbols indicates a TACAN?

- a) Before an aircraft goes on any flight that involves a large change of magnetic latitude
- b) After an aircraft has passed through a severe electrical storm, or has been struck by lightning
- c) Whenever an aircraft carries a large freight load regardless of its content
- d) After any of the aircraft radio equipment has been changed due to unserviceability

44. The probe used to measure the air intake pressure of a gas turbine engine powerplant is:

- a) An aneroid capsule.
- b) A bellows sensor.
- c) A Bourdon tube.
- d) A differential capsule.

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45. What is the frequency separation between consecutive frequencies in the VHF band:

- a) 25 KHz
- b) 75 KHz
- c) 8.33 KHz
- d) 50 KHz

46. Even at normal cabin altitudes (i.e. around 8000 ft) you can get severe abdominal pain and flatulence after eating gas forming foods or fizzy drinks. The correct counter-measure is:

- a) Descend to a lower altitude
- b) Use supplemental oxygen
- c) Perform 'Valsalva manoeuvre'
- d) Climb to a higher altitude

47. In the NAVSTAR/GPS satellite navigation system, receiver clock error:

- a) Is the biggest part of the total error
- b) It cannot be corrected
- c) Can be minimised by synchronisation of the receiver clock with the satellite clocks
- d) Is corrected by using signals from four satellites

48. Which of these statements about structure design principles are correct or incorrect? 1) In structural design, FAIL SAFE implies redundant load paths. 2) A SAFE LIFE structure is based on a declared number of cycles or time period.

- a) 1) is correct, 2) is correct.
- b) 1) is incorrect, 2) is correct.
- c) 1) is correct, 2) is incorrect.
- d) 1) Is Incorrect, 2) Is Incorrect.

49. The true statement among the following in relation to the application of Ohm's law is:

- a) Current in a circuit is directly proportional to the applied electromotive force.
- b) Current in a circuit is inversely proportional to the applied electromotive force.
- c) The current in a circuit is directly proportional to the resistance of the circuit.
- d) Power In The Circuit Is Inversely Proportional To The Square Of The Current.

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50. In accordance with OPS 1, an operator shall ensure that all relevant operational and technical information for a individual flight is preserved on ground for a predetermined period of time. Consequently, if practicable, a copy of the operational flight plan shall be retained, during at least:

- a) 15 months
- b) 12 months
- c) 24 months
- d) 3 months

51. The function of the generator breaker is to close when the voltage of the:

- a) Battery Is Greater Than The Generator Voltage And To Open When The Opposite Is True.
- b) Generator is greater than battery voltage and to open when the opposite is true.
- c) Battery is greater than the alternator voltage and to open when the opposite is true.
- d) Alternator Is Greater Than The Battery Voltage And To Open When The Opposite Is True.

52. Considering the route indicated from Recife to Dakar the mean height of the tropopause during January is approximately

- a) 43 000 FT
- b) 36 000 FT
- c) 56 000 FT
- d) 29 000 FT

53. Given: Maximum structural take-off mass= 146 900 kg Maximum structural landing mass= 93 800 kg Maximum zero fuel mass= 86 400 kg Trip fuel= 27 500 kg Block fuel= 35 500 kg Engine starting and taxi fuel = 1 000 kg The maximum take-off mass is equal to:

- a) 113 900 kg
- b) 121 300 kg
- c) 120 300 kg
- d) 120 900 kg

54. Disturbance of the biological clock appears after a:
1. bad night's sleep
2. day flight Amsterdam - New York
3. day flight Amsterdam - Johannesburg
4. night flight New York - Amsterdam

- a) 2 and 4 are correct
- b) 1,2,3 and 4 are correct
- c) 1 and 3 are correct
- d) 1,2 and 3 are correct

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55. A map is conformal when:

- a) The meridians are straight lines and the scale is constant.
- b) The variation information is printed on the map as isogonals.
- c) When it conforms to the specifications.
- d) The meridians and the parallels of latitude intersect at right angles and when the scale from any selected point is the same in all directions.

56. 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

57. Runway-lead-in lighting should consist:

- a) Always of a straight row of lights towards the runway
- b) Of group of at least three white lights flashing in sequence towards the runway
- d) Of an arbitrary amount of green lights

58. Given: GS = 120 kt. Distance from A to B = 84 NM. What is the time from A to B?

- a) 00 HR 43 MIN
- b) 00 HR 44 MIN
- c) 00 HR 42 MIN
- d) 00 HR 45 MIN

59. The power output of a piston engine can be calculated by:

- a) Torque times rpm.
- b) Pressure times arm.
- c) Force times distance.
- d) Work Times Velocity.

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60. In an ATC flight plan, Item 15 (route), a cruising pressure altitude of 32000 feet would be entered as:

- a) S3200
- b) FL320
- c) 32000
- d) F320

61. If installed, the flight crew compartment door of all aeroplanes operated for the purpose of carrying passengers shall be capable of being:

- a) Locked from within the compartment
- b) Remotely locked from either inside or outside the compartment
- c) Remotely locked by cabin crew operation from outside the compartment
- d) Directly locked from outside the compartment

62. Given: Distance from departure to destination 1950 NM GS Out 400 ktGS Home 300 kt What is the time of the PET from the departure point?

- a) 223 min
- b) 167 min
- c) 125 min
- d) 29 min

63. The height of the marks on the fuselage (or equivalent structure) and on the vertical tail surfaces of heavier than air aircraft shall be:

- a) At least 40 centimetres
- b) At least 20 centimetres
- c) At least 30 centimetres
- d) At least between 20 centimetres and 40 centimetres

64. Altimeter setting procedures - transition level The transition level:

- a) Is published on the approach and landing chart for each aerodrome
- b) Will be passed to aircraft by ATS units
- c) Is published and updated in the NOTAM
- d) Is calculated by the Pilot-in command

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65. An aircraft whose maximum approved configuration for passenger seats is 200 seats must be equipped with:

- a) 3 hand fire extinguishers in the compartment.
- b) 5 hand fire extinguishers in the passenger compartment.
- c) 4 hand fire extinguishers in the passenger compartment.
- d) 7 Hand Fire Extinguishers In The Passenger Compartment.

66. What is the temperature deviation (°C) from ISA over 50° N 010°E ?

- a) -55
- b) -10
- c) +10
- d) +2

67. Which of the following combinations adversely affects take-off and initial climb performance?

- a) High temperature and high relative humidity
- b) Low temperature and low relative humidity
- c) High temperature and low relative humidity
- d) Low temperature and high relative humidity

68. Equivalent Air Speed (EAS) is:

- a) Calibrated Air Speed (CAS) corrected for compressibility error.
- b) True Air Speed (TAS) corrected for compressibility error.
- c) Calibrated Air Speed (CAS) corrected for density error.
- d) True Air Speed (TAS) corrected for compressibility and density errors.

69. A VOR is sited at position 58°00'N 073°00'W where the magnetic variation equals 32°W. An aircraft is located at position 56°00'N 073°00'W where the magnetic variation equals 28°W. The aircraft is on VOR radial:

- a) 208
- b) 212
- c) 180
- d) 360

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70. How does a NAVSTAR/GPS satellite navigation system receiver recognise which of the received signals belongs to which satellite?

- a) Each satellite transmits its signal, on common frequencies, with an individual Pseudo Random Noise code
- b) Each satellite transmits its signal on a separate frequency
- c) The receiver detects the direction from which the signals are received and compares this information with the calculated positions of the satellites
- d) True airspeed

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Schema Risposte

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

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