

# Simulazione di Esame

Aircraft General Knowledge - Airframe, Systems, Powerplant - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

**01. An aeroplane whose maximum approved configuration is 200 passenger seats must be equipped with:**

- a) 3 hand fire extinguishers in the compartment.
- b) 4 hand fire extinguishers in the passenger compartment.
- c) 7 hand fire extinguishers in the passenger compartment.
- d) 5 hand fire extinguishers in the passenger compartment.

**02. The landing reference speed VREF has, in accordance with CS 25, the following margins above reference stall speed in landing configuration:**

- a) 23%
- b) 10%
- c) 20%
- d) 15%

**03. If you increase the propeller pitch during a glide with idle-power at constant IAS the lift to drag ratio will**

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

**04. 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

**05. Which statement is correct in respect of CL and angle of attack?**

- a) For a symmetrical aerofoil, if the angle of attack is zero, CL is not zero.
- b) For an asymmetrical aerofoil, if the angle of attack is zero, CL is zero.
- c) For a symmetrical aerofoil, if the angle of attack is zero, CL is zero.
- d) For an asymmetrical aerofoil with positive camber, if the angle of attack is greater than zero, CL is zero.

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**06. An aircraft is required to approach a VOR via the 104° radial. Which of the following settings should be made on the VOR/ILS deviation indicator?**

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- a) 284° with the TO flag showing
- b) 104° with the FROM flag showing
- c) 104° with the TO flag showing
- d) 020°

**07. The documents for entry and departure of aircraft:**

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- a) Has to be typewritten
- b) Are accepted in hand-written block lettering in ink
- c) Are accepted at the contracting state discretion
- d) Has to be typewritten or produced by electronic data processing techniques

**08. 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 ...':**

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- 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

**09. The number of hand fire extinguishers which have to be installed in the passenger cabin according to JAR-OPS depends on the number of:**

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- a) Passengers In The Cabin.
- b) Seat rows in the cabin.
- c) Emergency exits in the cabin.
- d) Seats in the cabin.

**10. An aircraft has two certified landing flaps positions, 25° and 35°. If a pilot chooses 35° instead of 25°, the aircraft will have:**

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- a) A reduced landing distance and better go-around performance
- b) A reduced landing distance and degraded go-around performance
- c) An increased landing distance and better go-around performance
- d) An increased landing distance and degraded go-around performance

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**11. The diffuser in a centrifugal compressor is a device in which the:**

---

- a) Pressure Rises At A Constant Velocity.
- b) Velocity, pressure and temperature rise.
- c) Pressure rises and velocity falls.
- d) Velocity Rises And Pressure Falls.

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

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- 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

**13. Parallels of latitude on a Direct Mercator chart are:**

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- a) Parallel straight lines equally spaced
- b) Arcs of concentric circles equally spaced
- c) Parallel straight lines unequally spaced
- d) Straight lines converging above the pole

**14. The crank assembly consists of**

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- a) Crankcase, Crankshaft, Connecting Rods And Pistons.
- b) Propeller, crankshaft, pistons and connecting rods.
- c) Crankshaft, camshaft, valves, valve springs and push rods.
- d) Crankshaft, connecting rods and pistons.

**15. Vitamin A and possibly vitamins B and C are chemical factors and essential to good night vision:1. Vitamin deficiencies may decrease night vision performance2. An excess intake of vitamin A will improve night vision performance significantly3. Pilots should be carefully concerned to take a balanced diet containing sufficient vitamin A4. Vitamin deficiencies may decrease visual acuity in photopic vision but not in scotopic vision**

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

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**16. Given: true course (TC) 017 W/V 340/30 TAS 420 kt Find: wind correction angle (WCA) and ground speed (GS)**

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- a) WCA +2° GS 396 kt
- b) WCA -2° GS 426 kt
- c) WCA -2° GS 396 kt
- d) WCA +2° GS 416 kt

**17. The signal transmitted by a radio altimeter is:**

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- a) An amplitude modulated carrier wave.
- b) A combination of frequency modulation and pulse modulation.
- c) A pulse modulated carrier wave.
- d) A frequency modulated carrier wave.

**18. With regard to the humidity of air in current in a pressurized cabin, we know that it:-1: varies between 40 and 60%-2: varies between 5 and 15%-3: may cause dehydration effecting the performance of the crew-4: has no special effects on crew members**

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

**19. Subject to conditions specified by the appropriate ATS authority, a radar controller may request radar-controlled aircraft to adjust their speed when established on intermediate and final approach. This speed adjustment should not be more than:**

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- a) +/- 10 kt.
- b) +/- 20 kt.
- c) +/- 8 kt.
- d) +/- 15 kt.

**20. 3D RNAV fixing gives you:**

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- a) Horizontal and vertical profile guidance
- b) 2D RNAV plus speed control
- c) 2D RNAV plus time guidance
- d) Horizontal, vertical profile and time guidance

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**21. Just prior to departure, you accept 10 passengers additional on board who will be seated in 'compartment OC' and you have 750 kg unloaded from cargo compartment 5. The take-off centre of gravity in MAC % (Mean Aerodynamic Chord) will be located at:**

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- a) 29.5 %
- b) 27.8 %
- c) 27.2 %
- d) 30.5 %

**22. In compliance with PART-CAT and ICAO annex 18, in order to carry dangerous goods on board a public transport aircraft, they must be accompanied with a:**

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- a) Representative of the company owning the goods.
- b) Transport document for dangerous goods.
- c) System to warn the crew in case of a leak or of an abnormal increase in temperature.
- d) Specialized handling employee.

**23. Which elements of instructions or information shall always be read back ?**

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- a) Runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions
- b) Time check, runway-in-use, altimeter settings, level instructions, SSR codes
- c) Surface wind, visibility, ground temperature, runway-in-use, altimeter settings, heading and speed instructions
- d) Runway-in-use, visibility, surface wind, heading instructions, altimeter settings

**24. When completing an ATC flight plan for a European destination, clock times are to be expressed in:**

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- a) Local mean time
- b) Local standard time
- c) UTC
- d) Central European Time

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

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

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## 26. What elements establish synergy within the crew ?

---

- a) Synergy is independent of the natural individual characteristics of the group members (communication, mutual confidence, sharing of tasks, etc.)
- b) Synergy establishes itself automatically within the crew, right through from briefing to debriefing
- c) It is only the captain's status which allows the establishment of synergy within the crew
- d) Synergy must be built up from the start of the mission (briefing) and be maintained until it comes to an end (debriefing)

## 27. Which of these statements about a gust lock system are correct or incorrect? 1) There is no need for a gust lock on irreversible flight controls. 2) There is no need for a gust lock on manual flight controls.

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

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

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

## 29. In hydraulic systems of large modern transport category aircraft the fluids used are:

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- a) Vegetable Oil.
- b) Mineral oil.
- c) Synthetic oil.
- d) Water And Glycol.

## 30. On what principle does a fuel flow meter work?

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- a) Capacitive Dielectric.
- b) Volume and viscosity.
- c) Pressure and temperature.
- d) Quantity of movement.

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**31. A flight control surface actuator is said to be "reversible" when:**

---

- a) The Pilot Does Not Feel Any Force When Moving That Flight Control Surface In Flight.
- b) There is feedback to the pilot's controls of the aerodynamic forces acting on the control surface.
- c) The Flight Control System Has An Alternate Means Of Control In Case Of A Control Jam.
- d) There Is A Need To Have An Artificial Feel System.

**32. Given: Distance from departure to destination: 210 NM Endurance: 2,5 h True Track: 035 W/V: 250/20 TAS: 105 kt What is the distance of the PSR from the departure point?**

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- a) 64 NM
- b) 88 NM
- c) 172 NM
- d) 127 NM

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

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- 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.

**34. When a strongly swept back wing stalls and the wake of the wing contacts the horizontal tail, the effect on the stall behaviour can be a(n):**

---

- a) Nose down tendency
- b) Increase in sensitivity of elevator inputs
- c) Nose up tendency and / or lack of elevator response
- d) Tendency to increase speed after initial stall

**35. Given: Distance 'A' to 'B' is 325 NM, Planned GS 315 kt, ATD 1130 UTC, 1205 UTC - fix obtained 165 NM along track. What GS must be maintained from the fix in order to achieve planned ETA at 'B'?**

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- a) 375 kt
- b) 395 kt
- c) 355 kt
- d) 335 kt

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**36. The term 'bootstrap', when used to identify a cabin air conditioning and pressurisation system, refers to the:**

---

- a) Means By Which Pressurisation Is Controlled.
- b) Source of the charge air.
- c) Charge air across the inter-cooler heat exchanger.
- d) Cold air unit (air cycle machine) arrangement.

**37. The true airspeed (TAS) is:**

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- a) Higher than the speed of the undisturbed airstream about the aeroplane
- b) Lower than the indicated airspeed (IAS) at ISA conditions and altitudes below sea level
- c) Lower than the speed of the undisturbed airstream about the aeroplane
- d) Equal to the IAS, multiplied by the air density at sea level

**38. A message concerning an aircraft being threatened by grave and imminent danger, requiring immediate assistance is called:**

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- a) Flight safety message.
- b) Distress message.
- c) Class B message.
- d) Urgency message.

**39. Ergonomics are associated with:**

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- a) Cognition
- b) Communications
- c) The human/workplace interface
- d) Information processing

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

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- 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



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**41. Which of the following three speeds of a jet aeroplane are basically identical? The speeds for:**

---

- a) Maximum drag, maximum endurance and maximum climb angle
- b) Maximum range, minimum drag and minimum glide angle
- c) Holding, maximum climb angle and minimum glide angle
- d) Maximum climb angle, minimum glide angle and maximum range

**42. The aspect ratio of the wing:**

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- a) Is the ratio between the wing span and the mean geometric chord
- b) Is the ratio between chord and root chord
- c) Is the ratio between the tip chord and the wing span
- d) Is the ratio between the wing span and the root chord

**43. Given: Dry operating mass (DOM)= 33000 kg Traffic Load= 8110 kg Final reserve fuel= 983 kg Alternate fuel= 1100 kg Contingency fuel 102 kg The estimated landing mass at alternate should be:**

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- a) 41110 kg.
- b) 42195 kg.
- c) 42312 kg.
- d) 42210 kg.

**44. Which of the following radar equipment operate by means of the pulse technique? 1. Aerodrome Surface Movement Radar 2. Airborne Weather Radar 3. Secondary Surveillance Radar (SSR) 4. Aerodrome Surveillance (approach) Radar**

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

**45. The Primary Flight Display (PFD) displays information dedicated to:**

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- a) Piloting.
- b) Systems.
- c) Engines and alarms.
- d) Weather situation.

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## 46. What human function is most sensitive to lack of oxygen?

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- a) Hearing
- b) Motor co-ordination
- c) Touch
- d) Night vision

## 47. Assume that an aircraft is flying in the northern hemisphere at the 500 hPa pressure surface on a heading of 270 degrees. Which of the following statements is correct?

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- a) If in this pressure surface the wind comes from the direction 180 degrees, then true altitude is increasing
- b) If in this pressure surface the wind comes from the direction 360 degrees, then true altitude is increasing
- c) If in this pressure surface the wind comes from the direction 090 degrees, then true altitude is increasing
- d) If in this pressure surface the wind comes from the direction 270 degrees, then true altitude is increasing

## 48. An aircraft experiencing radio communication failure on an IFR flight in IMC is assumed to:

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- a) Proceed to an area from where the flight can be continued according to the visual flight rules
- b) Proceed in accordance with the current flight plan to the designated navigation aid serving the destination aerodrome
- c) Execute a VMC approach at the nearest suitable aerodrome
- d) Divert to the most suitable aerodrome according to the route of flight

## 49. Which statement is correct for a descent without engine thrust at maximum lift to drag ratio speed?

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- a) The higher the gross mass the lower is the speed for descent.
- b) The higher the average temperature (OAT) the lower is the speed for descent.
- c) The higher the gross mass the greater is the speed for descent.
- d) The mass of an aeroplane does not have any effect on the speed for descent.

## 50. The optimum cruise altitude increases

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- a) If the temperature (OAT) is increased.
- b) If the tailwind component is decreased.
- c) If the aeroplane mass is decreased.
- d) If the aeroplane mass is increased.

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**51. An aircraft encountering radio communication failure on an IFR flight in IMC has to commence descent over the designated navigation aid serving the destination aerodrome (no EAT received):**

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- a) At, or as close to, the ETA resulting from the current flight plan
- b) After 3 minutes, if an expected approach time is not acknowledged
- c) Immediately after reaching in any case
- d) 5 minutes after the last expected approach time acknowledged

**52. According to JAR-OPS, on an IFR flight a commander shall not commence take-off unless the expected weather conditions at the destination and/or required alternate aerodrome(s) are at or above:**

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- a) The aerodrome operating minima, at the estimated time of arrival, and for a reasonable period before and after such a predicted time.
- b) The planning minima, at the estimated time of arrival.
- c) The aerodrome operating minima, during a period from 1 hour before to 1 hour after the estimated time of arrival at the aerodrome.
- d) The planning minima, during a period from 1 hour before to 1 hour after the estimated time of arrival at the aerodrome.

**53. Which one of the following disturbances is most likely to cause the greatest inaccuracy in ADF bearings?**

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- a) Quadrantal error
- b) Coastal effect
- c) Precipitation interference
- d) Skywave distortion of the null position and is maximum at dawn and dusk

**54. On a Lambert conformal chart the distance between two parallels of latitude having a difference of 2°, is measured to be 112mm. The distance between two meridians, spaced 2° longitude, is accordance to the chart 70 NM. What is the scale of the chart, in the middle of the square described?**

---

- a) 1:1.984.000
- b) 1:1.056.000
- c) 1:1.233.000
- d) 1:756.000

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**55. A pilot wishes to turn right on to a southerly heading with 20° bank at a latitude of 20° North. Using a direct reading compass, in order to achieve this he must stop the turn on an approximate heading of:**

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- a) 170°
- b) 150°
- c) 200°
- d) 190°

**56. What is the minimum wake turbulence separation criteria when a light aircraft is taking off behind a medium aircraft and both are using the same runway?**

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- a) 1 minute
- b) 3 minutes
- c) 5 minutes
- d) 2 minutes

**57. The reported surface wind from the Control Tower is 240°/35 kt. Runway 30 (300°). What is the cross-wind component?**

---

- a) Is constant along a meridian of longitude
- b) Is constant along a parallel of latitude
- c) Varies slightly as a function of latitude and longitude
- d) Is constant across the whole map

**58. On an aeroplane with 20 or more seats engaged on an inter-continental flight, the 'standard mass' which may be used for passenger baggage is**

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- a) 14 kg per passenger.
- b) 13 kg per passenger.
- c) 11 kg per passenger.
- d) 15 kg per passenger.

**59. Which design features improve static lateral stability? 1. Anhedral. 2. Dihedral. 3. Forward sweep. 4. Sweepback. The combination that regroups all of the correct statements is:**

---

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

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**60. 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

**61. A vibration indicator receives a signal from different sensors (accelerometers). It indicates the:**

---

- a) Acceleration measured by the sensors, expressed in g
- b) Vibration amplitude at a given frequency
- c) Vibration period expressed in seconds
- d) Vibration frequency expressed in Hz

**62. Holding Procedures - Entry** Related to the three entry sectors in a holding pattern, there is a zone of flexibility on either side of the sectors boundaries of:

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- a) 10°.
- b) 15°.
- c) 5°.
- d) 20°.

**63. In the ATC flight plan item 7, for a radio equipped aircraft, the identifier must always:**

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- a) Include the aircraft registration marking
- b) Include the operating agency designator
- c) Be the RTF callsign to be used
- d) Include an indication of the aircraft type

**64. Which one of the statements below is correct regarding the DME?**

---

- a) The DME operating frequencies are in the UHF frequency band.
- b) The DME ground station is always co-located with a VOR station.
- c) The indicated distance is the ground distance measured from the aircraft's projected position on the ground to the DME ground installation.
- d) Two lines of position obtained from two different DME's give an unambiguous fix.

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

---

- a) 200 hours of flight time or 150 hours if completed during a course of approved training as a pilot of aeroplanes
- b) 150 hours of flight time and 100 hours as pilot in command
- c) 200 hours of flight time and 70 hours as pilot in command
- d) 200 hours of flight time and 80 hours as pilot in command

**66. Which parameter will change first, when penetrating an horizontal windshear ?**

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- a) Indicated airspeed.
- b) Groundspeed.
- c) Vertical speed.
- d) Pitch angle.

**67. During climb with constant throttle and RPM lever setting (mixture being constant) the:**

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- a) Rpm Decreases.
- b) Manifold Air Pressure (MAP) decreases.
- c) Manifold Air Pressure (MAP) increases.
- d) Rpm Increases.

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

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- 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

**69. Air passes a normal shock wave. Which of the following statements is correct?**

---

- a) The static temperature increases
- b) The velocity increases
- c) The static temperature decreases
- d) The static pressure decreases

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**70. What is the Q-code for 'magnetic heading to the station (no wind)?**

---

- a) QNE
- b) QDR
- c) QTE
- d) QDM

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## Schema Risposte

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

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