

# 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. The minimum requirements for Supplemental Oxygen to be supplied in pressurised aeroplanes during and following an emergency descent are that for pilots it shall be available for the entire flight time that the cabin pressure altitude exceeds a minimum of X feet. That minimum of X feet is:**

- a) 14000 ft
- b) 15000 ft
- c) 13000 ft
- d) 25000 ft

**02. In the transonic range lift will decrease at the shock stall due to the**

- a) Attachment of the shock wave on the trailing edge of the wing.
- b) First appearance of a shock wave at the upper side of the wing.
- c) Separation of the boundary layer at the shock waves.
- d) Appearance of the bow wave.

**03. RADAR instructs aircraft X-BC:'X-BC squawk ident'. What does this mean:**

- a) Radar identification has been achieved by correlating an observed radar blip with aircraft XY-ABC
- b) X-BC should perform an identification turn of at least 020 degrees
- c) X-BC shall operate the IDENT button
- d) X-BC shall reselect his assigned mode and code

**04. The Autonomic Nervous System (ANS) regulates:**

- a) Motor programmes and reflexes.
- b) Sweating, arterial pressure, body temperature and the General Adaption Syndrome.
- c) Reflexes, body temperature and reasoning.
- d) Reflexes only.

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

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

**06. Is there any difference between the vertical speed versus forward speed curves for two identical aeroplanes having different masses ? (assume zero thrust and wind)**

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- a) Yes, the difference is that the heavier aeroplane will always glide a greater distance.
- b) No difference.
- c) Yes, the difference is that the lighter aeroplane will always glide a greater distance.
- d) Yes, the difference is that for a given angle of attack both the vertical and forward speeds of the heavier aeroplane will be larger.

**07. The speed  $V_2$  is defined for jet aeroplane as:**

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- a) Take-off decision speed
- b) Lift off speed
- c) Critical engine failure speed
- d) Take-off climb speed or speed at 35'

**08. Which of the following errors is associated with the use of VOR?**

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- a) Coastal refraction.
- b) Scalloping.
- c) Night effect.
- d) Quadrantal error.

**09. Considering the sector Rome to 25°N on the route indicated, what mean upper winds may be expected at FL 300 during winter?**

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- a) Light westerlies
- b) Variable easterlies
- c) Easterlies at 40 kt
- d) Westerly jet streams in excess of 70 kt

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**10. Which of these statements regarding cockpit windows are correct or incorrect? I. On some aeroplanes the cockpit windows have an additional speed restriction, related to bird impact, when window heating is inoperative. II. Cockpit side windows are always provided with a de-icing system.**

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- a) I Is Correct, II Is Correct.
- b) I is correct, II is incorrect.
- c) I is incorrect, II is correct.
- d) I Is Incorrect, II Is Incorrect.

**11. Under which of the following circumstances shall an aircraft squawk 7700 ?**

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- a) When flying within controlled airspace
- b) When following a SID
- c) When passing the transition level
- d) In distress

**12. A higher outside air temperature (OAT):**

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- a) Increases the climb limited take-off mass
- b) Increases the field length limited take-off mass
- c) Decreases the take-off distance
- d) Decreases the brake energy limited take-off mass

**13. The pencil shaped beam of an airborne weather radar is used in preference to the mapping mode for the determination of ground features:**

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- a) Beyond 50 to 60 NM because more power can be concentrated in the narrower beam
- b) When approaching coast-lines in polar regions
- c) Beyond 150 NM because the wider beam gives better definition
- d) 1030 MHz 1030 MHz

**14. Flight Zurich to Rome, ETD 1600 UTC, ETA 1800 UTC. At what flight level would you first expect to encounter clear air turbulence on the climb out from Zurich?**

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- a) FL 220
- b) FL 140
- c) At what flight level would you first expect to encounter clear air turbulence on the climb out from Zurich? FL 220 FL 140 FL 320
- d) FL 160[see Annex]

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**15. When considering the effects of increased mass on an aeroplane, which of the following is true?**

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- a) Flight endurance will be increased.
- b) Stalling speeds will be higher.
- c) Gradient of climb for a given power setting will be higher.
- d) Stalling speeds will be lower.

**16. The transition from SW to NE monsoon in India occurs in**

---

- a) September, October, November
- b) February, March, April
- c) December, January, February
- d) July, August, September

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

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

**18. Medical conditions such as high blood pressure, coronary problems and diabetes are associated with:**

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- a) Cholera
- b) Anorexia nervosa
- c) Hypoxia
- d) Obesity

**19. What does the word 'recleared' mean?**

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- 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

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## 20. The stalling speed in IAS will change according to the following factors:

---

- a) Decrease in a forward c.g. location, higher altitude and due to the slip stream from a propeller on an engine located forward of the wing
- b) Increase during turn, increased mass and forward c.g. location
- c) Increase with increased load factor, more flaps but will not increase due to the bank angle in a turn
- d) Increase with increased load factor, icing conditions and an aft c.g. location

## 21. When an airline crew member, in the exercise of her/his duties, travels to another Contracting State as a passenger in order to join an aircraft, she/he must carry for identification purposes:

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- a) A CM
- b) A valid flight crew license.
- c) A valid flight crew license. a CMC together with a valid passport and visa if required.
- d) A temporary admission certificate issued by ICAO.

## 22. 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:

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- 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

## 23. 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%

## 24. Which statement is correct for a side slip condition at constant speed and side slip angle, where the geometric dihedral of an aeroplane is increased ?

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- a) The required lateral control force does not change.
- b) The required lateral control force decreases.
- c) The stick force per g decreases.
- d) The required lateral control force increases.

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**25. If coping with a stress situation is impossible, one will remain in the state of:**

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- a) Adaptation
- b) Eustress
- c) Hypoxia
- d) Distress

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

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

**27. A minimum vertical separation shall be provided until aircraft are established inbound on the ILS localizer course and/or MLS final approach track. This minimum is, when independent parallel approaches are being conducted:**

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- a) 200 m (660 ft)
- b) 150 m (500 ft)
- c) 300 m (1000 ft)
- d) 100 m (330 ft)

**28. Planning an IFR-flight from Paris to London (Heathrow).Name the identifier and frequency of the initial approach fix (IAF) of the BIG 2A arrival route.**

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- a) EPM 316 kHz
- b) BIG 115.1 MHz
- c) BIG 115.1 kHz
- d) OCK 115.3 MHz[see Annex]

**29. The main factor which contributes to the formation of very low clouds ahead of a warm front is the:**

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- a) Saturation of the cold air by rain falling into it and evaporating
- b) Warm air moving over a cold surface
- c) Reduction of outgoing radiation due to clouds
- d) Saturation of the warm air by rain falling into it and evaporating

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**30. Assuming ISA conditions, climbing at a constant Mach Number up to FL 350 the TAS will:**

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- a) Increase
- b) First increase, then decrease
- c) Remain constant
- d) Decrease

**31. 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.**

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

**32. The minimum visibility required by JAR OPS 1 and 3 to commence a special VFR flight is:**

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- a) 5 km
- b) 1.5 km
- c) 2.5 km
- d) 3 km

**33. The deviation of the magnetic compass is due to the action of:**

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- a) The hard iron pieces influenced by the geomagnetic field
- b) The hard iron pieces and the soft iron pieces influenced by the hard iron pieces
- c) The hard iron pieces influenced by the mild iron pieces
- d) The soft iron pieces influenced by the geomagnetic field

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

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

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**35. Approach procedures - final approach segment**In a precision approach (ILS), generally glide path interception occurs at heights above runway elevation from:

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- a) 300m (984 ft) to 600m (1968 ft).
- b) 150m (492 ft) to 300m (984 ft).
- c) 300m (984 ft) to 900m (2955 ft).
- d) 150m (492 ft) to 900m (2955 ft).

**36. Decision-making results in:**

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- a) A choice between different options to achieve a goal
- b) A subjective choice between options to achieve a goal
- c) A totally objective choice between options to achieve a goal proposed by the Pilot in Command
- d) A choice always based on the experience of the Pilot in Command

**37. The critical Mach number for an aerofoil equals the free stream airfoil Mach number at which:**

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- a) The maximum operating temperature is reached.
- b) A shock-wave appears on the upper surface.
- c) Sonic speed ( $M=1$ ) is reached at a certain point on the upper side of the aerofoil.
- d) A 'supersonic bell' appears on the upper surface.

**38. The procedure to be followed in the event of decompression when flying above 10,000 ft must:**

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- a) Allow for the rapid supply of oxygen in order to prevent hypoxia
- b) Make it possible to eliminate the risk of fogging due to the sudden pressure changes
- c) Make it possible to prevent hyperventilation owing to the inhalation of 100 % oxygen
- d) Allow for a rapid descent independent from sufficient supply of oxygen in order to prevent disorders due to hypoxia

**39. To perform a VFR flight in airspace classification E :**

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- a) A clearance is required.
- b) A clearance and two-way radio communication is required.
- c) Two way radio communication is not required.
- d) A clearance and/or two-way radio communication is required.



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**40. In accordance with EU-OPS, which of the following are included in the Aerodrome Operating Minima for a non-precision approach? 1 - the required RVR 2 - the ceiling 3 - the minimum descent height (MDH) 4 - the decision height (DH)**

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

**41. The determination of the maximum mass on brake release, of a certified turbojet aeroplane with 5°, 15° and 25° flap angles on take-off, leads to the following values: Flap angle: 5° 15° 25° Runway limitation (kg): 66000 69500 71500 2nd segment climb limitation: 72200 69000 61800 Wind correction: Headwind: +120 kg / KT Tailwind: -360 kg / KT Given that the tailwind component is equal to 5 KT, the maximum mass on brake release and corresponding flap angle will be:**

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- a) 69000 kg / 15 deg
- b) 67700 kg / 15 deg
- c) 69700 kg / 25 deg
- d) 72200 kg / 5 deg

**42. See Flight Planning Manual SEP 1 Figure 2.5. Given: FL 75, Lean mixture, Full throttle, 2300 RPM. Take-off fuel: 444 lbs, Take-off from MSL. Find: Endurance in hours and minutes.**

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- a) 05 hours 12 minutes
- b) 05 hours 23 minutes
- c) 04 hours 42 minutes
- d) 05 hours 20 minutes

**43. Which line represents the total drag line of an aeroplane?**

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- a) Line c
- b) Line d
- c) Line b
- d) Line a

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**44. How, if at all, is the relative humidity of an unsaturated air mass influenced by temperature changes?**

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- a) It decreases with increasing temperature.
- b) It is only influenced by the amount of water vapor.
- c) It is not influenced by temperature changes.
- d) It increases with increasing temperature.

**45. The International Date Line is located:**

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- a) At the apparent sun's anti meridian.
- b) At the 180° E/W meridian, or in the vicinity of this meridian.
- c) At latitudes on the 180° E/W meridian.
- d) At the Greenwich meridian.

**46. Which of these statements about a gust lock system are correct or incorrect? 1) Irreversible flight controls should have a gust lock. 2) Manual flight controls should have a gust lock.**

---

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

**47. In mature Cb's the probability of severe icing, according to meteorological rules, is greatest in the following temperature range:**

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- a) -23°C to -40°C
- b) +5°C to 0°C
- c) -40°C to -60°C
- d) 0°C to -23°C

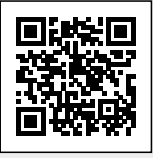
**48. Given: True course 300° drift 8°R variation 10°W deviation -4° Calculate the compass heading.**

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- a) 322°
- b) 306°
- c) 278°
- d) 294°

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**49. Which of the following laws explains bubbles of nitrogen coming out of solution in body tissues due to a decrease in atmospheric pressure?**

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- a) Dalton's law
- b) Boyle's law
- c) Gay Lussac's law
- d) Henry's law

**50. For an ATC flight plan filed before the flight, the indicated time of departure is:**

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- a) The time at which the flight plan is filed.
- b) The estimated off-block time
- c) The time overhead the first reporting point after take-off.
- d) The time of take-off.

**51. Which take-off speed is affected by the presence or absence of stopway and / or clearway?**

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- a) V1
- b) VMCA
- c) VMCG
- d) V2

**52. Which phraseology shall a pilot use if he receives an instruction from ATC which he cannot carry out:**

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- a) Negative instruction
- b) Impossible to make it
- c) Unable to comply
- d) Disregard

**53. The distress signal and the distress message to be sent by an aircraft in distress be on:**

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- a) The emergency frequency in any case
- b) The air-ground frequency in use at the time
- c) The FIS frequency designated for the airspace concerned
- d) The regional guard frequency

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**54. Which of these statements regarding most gust lock systems is correct?**

---

- a) When the gust lock is on there is protection to prevent take-off.
- b) A Gust Lock Is Only Fitted On The Elevator And The Rudder.
- c) On Reversible Flight Controls, There Is No Need For A Gust Lock.
- d) A Gust Lock Can Be Used In Flight To Reduce The Effect Of Turbulence.

**55. Which facility associated with the ILS may be identified by a two-letter identification group?**

---

- a) Locator.
- b) Glide path.
- c) Outer marker.
- d) "Request QDR".

**56. Except for airplanes under 5,7 t airworthiness certificate of which is subsequent to 31 march 1998, a flight data recording system must be able to store the recorded data for a minimum of the last:**

---

- a) 30 minutes.
- b) 10 hours.
- c) 60 minutes.
- d) 25 hours.

**57. An aeroplane carries out a descent from FL 410 to FL 270 at cruise Mach number, and from FL 270 to FL 100 at the IAS reached at FL 270. How does the angle of descent change in the first and in the second part of the descent? Assume idle thrust and clean configuration and ignore compressibility effects.**

---

- a) Increases in the first part
- b) is constant in the second.
- c) Is constant in the first part
- d) Decreases in the second.

**58. AIP Which part contains a brief description of areas and/or routes for which meteorological service is provided?**

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- a) METEO
- b) ENR
- c) AD
- d) GEN

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**59. Aircraft told to contact Stephenville Radar on 132.010. Response if unable to comply:**

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- a) Negative channel 132.010
- b) Negative frequency 132.008
- c) Negative 8 point 3 3
- d) Negative on 132.010

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

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

**61. In accordance with IR-OPS (Aerodrome Operating Minima), an operator must ensure that system minima for 'non-precision approach procedures', which are based upon the use of ILS without glidepath (LLZ only), MLS, GLS, VOR/DME, NDB, SRA, and VDF are no lower than MDH following value with:**

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- a) VOR facility, lowest MDH=250 ft
- b) ILS facility without glidepath (localizer) lowest MDH=200 ft
- c) VOR/DME facility, lowest MDH=300 ft
- d) NDB facility, lowest MDH=350 ft

**62. When a pilot is staring at an isolated stationary light for several seconds in the dark he might get the illusion that:**

---

- a) The light is moving
- b) The colour of the light is varying
- c) The intensity of the light is varying
- d) The size of the light is varying

**63. An aircraft lands at an airport (airport elevation 1240 FT, QNH 1008 hPa). The altimeter is set to 1013 hPa. The altimeter will indicate:**

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- a) 1375 FT.
- b) 1280 FT.
- c) 1105 FT.
- d) 1200 FT.

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**64. Longitudinal separation minima based on time for aircraft at the same cruising level when navigation aids permit frequent determination of position and speed provided that the preceding aircraft is maintaining a true air speed of 20 Kt or more faster than the succeeding aircraft will be**

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- a) 10 minutes
- b) 3 minutes
- c) 2 minutes
- d) 5 minutes

**65. What is the approximate distance from A to B, given: Direct mercator chart with a scale of 1:200.000 at the Equator. Chart length from A to B, in the vicinity of the Equator = 11cm.**

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- a) 12 NM
- b) 22 NM
- c) 14 NM
- d) 21 NM

**66. On an instrument approach chart, a minimum sector altitude (MSA) is defined in relation to a radio navigation facility. Without any particular specification on distance, this altitude is valid to:**

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- a) 20 NM
- b) 25 NM
- c) 10 NM
- d) 15 NM

**67. The most dangerous form of airframe icing is**

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- a) Hoar frost.
- b) Dry ice.
- c) Clear ice.
- d) Rime ice.

**68. Given: FL 330 long range cruise OAT -63°C gross mass 50 500 kg. Find: true airspeed (TAS)**

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- a) 433 kt
- b) 420 kt
- c) 418 kt
- d) 431 kt[see Annex]

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**69. Holding procedures - Offset Entry**Above 14000 ft in still air, the outbound time on a 30° offset track is limited to:

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- a) 1 minute 30 seconds.
- b) 3 minutes.
- c) 2 minutes.
- d) 1 minute.

**70. In aviation, the reflection on ionosphere layers phenomenon is used in the following frequencies:**

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- a) Uhf
- b) VHF
- c) VLF
- d) Hf

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## Schema Risposte

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

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