

# Simulazione di Esame

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



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NOME ALLIEVO:

DATA & ORA:

**01. What airborne equipment, if any, is required to be fitted in order that a VDF let-down may be flown?**

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- a) VOR
- b) VHF radio
- c) VOR/DME
- d) None

**02. In the ATC flight plan Item 10 (equipment), the letter to indicate the carriage of a serviceable transponder - mode A (4 digits-4096 codes) and mode C, is:**

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- a) B
- b) A
- c) C
- d) P

**03. From summer to winter the average geographic position of the polar front jet stream over the North Atlantic moves**

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- a) Towards the south and the speed increases
- b) Towards the north and the speed decreases
- c) Towards the south and the speed decreases
- d) Towards the north and the speed increases

**04. The STOPWAY is a defined rectangular area on the ground at the end of take-off run available prepared as a suitable area where:**

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- a) An aircraft can be stopped in the case of an abandoned take-off.
- b) An aircraft taking-off or landing can be stopped.
- c) A landing aircraft can be stopped only in emergency.
- d) A landing aircraft can be stopped if overcoming the end of runway.

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**05. The ILS frequency and identifier for RWY 26R are:**

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- a) 108.7 IMSW
- b) 108.3 IMNW
- c) 108.7 IMNW
- d) 108.3 IMSW[see Annex]

**06. When completing an ATC flight plan for a flight commencing under IFR but possibly changing to VFR, the letters entered in Item 8 (FLIGHT RULES) would be:**

---

- a) G
- b) N/S
- c) X
- d) Y

**07. Refer to CAP697 Section 4 - MRJT1 Page 21 Figure 4.5.1 En-route Climb 280/0.74 (continued) Find: Time, Fuel, Still Air Distance and TAS for an enroute climb 280/.74 to FL 350. Given: Brake release mass 64000 kg, ISA +10°C, airport elevation 3000'**

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- a) 20 min, 1750 kg, 117 Nautical Air Miles (NAM), 288 KT
- b) 26 min, 2050 kg, 157 Nautical Air Miles (NAM), 399 KT
- c) 25 min, 1875 kg, 148 Nautical Air Miles (NAM), 391 KT
- d) 26 min, 1975 kg, 157 Nautical Air Miles (NAM), 399 KT[see Annex]

**08. Which one of the following types of cloud is most likely to produce heavy precipitation ?**

---

- a) NS.
- b) ST.
- c) S
- d) CS.

**09. The main reason that day and night, throughout the year, have different duration, is due to the:**

---

- a) Inclination of the ecliptic to the equator
- b) Gravitational effect of the Sun and Moon on the speed of rotation of the Earth
- c) Relative speed of the Sun along the ecliptic
- d) Earth's rotation

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**10. The ignition system generally used for small aircrafts is a:**

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- a) Battery Ignition System.
- b) Low tension system.
- c) High intensity system.
- d) High tension system.

**11. What does 'Friction coefficient 20' in a runway report mean:**

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- a) Braking action poor
- b) Braking action unreliable
- c) Braking action good
- d) Braking action medium

**12. Barotrauma of the middle ear most likely will occur**

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- a) When descending rapidly
- b) In sudden steep turns
- c) When climbing
- d) During a long high altitude flight

**13. The principle of aeroplane propulsion is to generate a propelling force by:**

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- a) Pressurising Air Or Gas In Order To Obtain A Reaction Force.
- b) Generating a high velocity jet pushing against the outside air.
- c) Accelerating air or gas in order to obtain a reaction force.
- d) Heating Up Air In Order To Obtain A Reaction Force.

**14. What does the term 'blind transmission' mean?**

---

- a) A transmission of information relating to air navigation that is not addressed to a specific station or stations.
- b) A transmission from one station to another station in circumstances where two-way communication cannot be established but it is believed that the called station is able to receive the transmission.
- c) A transmission where no reply is required from the receiving station.
- d) A transmission of messages relating to en-route weather information which may affect the safety of aircraft operations that is not addressed to a specific station or stations.

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**15. Consider the steady flow through a stream tube where the velocity of the stream is  $V$ . An increase in temperature of the flow at a constant value of  $V$  will:**

---

- a) Increase the mass flow
- b) Not affect the mass flow
- c) Decrease the mass flow
- d) Increase the mass flow when the tube is divergent in the direction of the flow

**16. Altimeter setting procedures - Transition Altitude**The transition altitude of an aerodrome shall be as low as possible but normally not less than:

---

- a) 2500 ft.
- b) 3000 ft.
- c) 1000 ft.
- d) 1500 ft.

**17. Concerning the NAVSTAR/GPS satellite navigation system, what is the meaning of the term 'Receiver Autonomous Integrity Monitoring' (RAIM)?**

---

- a) It is a technique by which a receiver ensures the integrity of the navigation information
- b) It is a technique whereby the receivers of the world-wide distributed monitor stations (ground segment) automatically determines the integrity of the navigation message
- c) It is a method whereby a receiver ensures the integrity of the Pseudo Random Noise (PRN) code transmitted by the satellites
- d) 6

**18. Which is the procedure to be followed when symptoms of decompression sickness occur?**

---

- a) Descend to the lowest possible level and land as soon as possible
- b) Only the prompt supply of oxygen is necessary
- c) Only medical treatment is of use
- d) Descend to the lowest possible level and wait for the symptoms to disappear before climbing again

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**19. An island appears 30° to the right of the centre line on an airborne weather radar display. What is the true bearing of the aircraft from the island if at the time of observation the aircraft was on a magnetic heading (MH) of 355° with the magnetic variation (VAR) 15°E?**

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- a) 160°
- b) 220°
- c) 190°
- d) 130°

**20. What is the radiotelephony call sign for the aeronautical station indicating area control centre (no radar)?**

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

**21. A departing aircraft experiencing radio communication failure on an IFR flight under radar vectors has to:**

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- a) Squawk 7600 and thereafter return to the route indicated in the current flight plan in the most direct manner
- b) Squawk 7600 and thereafter, regardless of any limitation instructed by ATC, return to the route indicated in the current flight plan on the shortest way
- c) Squawk 7600, maintain present heading for 1 minute and thereafter return to the route indicated in the current flight plan on the shortest way
- d) Squawk 7600 and maintain the heading last assigned by ATC for a period of 3 minutes and then return to the flight path in accordance with the current flight plan

**22. Dizziness and tumbling sensations, when making head movements in a tight turn, are symptoms of**

---

- a) 'Pilot's vertigo'
- b) 'Oculogravic illusion'
- c) 'Flicker-vertigo'
- d) 'Nystagmus'

**23. Which phraseology is to be used to ask the control tower for permission to taxi on a runway in the direction opposite to that in use ?**

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- a) 'Request backtrack on runway'.
- b) 'Backtrack clearance'.
- c) 'To enter back runway'.
- d) 'Clearance to backtrack'.

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**24. A system providing information on Rules of the Air, Air Traffic Services and Air Navigation Procedures and distributed in advance of its effective date is known as:**

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- a) AIRA
- b) An Advisory NOTAM.
- c) An Advisory NOTAM. an ATS NOTAM.
- d) A NOTAM RA

**25. In relation to an aircraft, the term ' Basic Empty Mass' includes the mass of the aircraft structure complete with its powerplants, systems, furnishings and other items of equipment considered to be an integral part of the particular aircraft configuration. Its value is**

---

- a) Found in the latest version of the weighing schedule as corrected to allow for modifications.
- b) Printed in the loading manual and includes unusable fuel.
- c) Found in the flight manual and is inclusive of unusable fuel plus fluids contained in closed systems.
- d) Inclusive of an allowance for crew, crew baggage and other operating items. It is entered in the loading manifest.

**26. When shall the phrase 'Take-off' be used by a pilot:**

---

- a) To inform TOWER when ready for departure
- b) Never, it is used only by the control tower
- c) Only when the aircraft has already moved onto the active runway
- d) To acknowledge take-off clearance only

**27. A 'trip-free' type circuit breaker is a circuit protection device which:**

---

- a) Will not allow the contacts to be held closed while a current fault exists in the circuit.
- b) Will allow the contacts to be held closed in order to clear a fault in the circuit.
- c) Can be reset at any time.
- d) Is Free From The Normal Cb Tripping Characteristic.

**28. In accordance to CS 25 which of the following listed speeds are used for determination of V2min:**

---

- a) VMCG, V2
- b) VSR, VMCA
- c) V1, VR
- d) VLOF, VMC

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**29. 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:**

---

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

**30. What does the instruction 'Fastair 345 recycle 1240' mean?**

---

- a) Fastair 345 is requested to set new code 1240
- b) Fastair 345 is requested to reselect assigned mode and code 1240
- c) RADAR instructs Fastair 345 to stop squawk 1240 immediately
- d) RADAR informs Fastair 345 that radar service is terminated at time 1240

**31. Given: maximum allowable take-off mass 64400 kg maximum landing mass 56200 kg maximum zero fuel mass 53000 kg dry operating mass 35500 kg estimated load 14500 kg estimated trip fuel 4900kg minimum take-off fuel 7400 kg Find the maximum allowable take-off fuel:**

---

- a) 14400 kg
- b) 11400 kg
- c) 8600 kg
- d) 11100 kg

**32. The level at which a pilot will experience a situation as stressful**

---

- a) Depends on the individual's perception of available abilities in comparison to the perceived demands
- b) Depends on self-confidence alone
- c) Depends on the level of demand but not on individual interpretation of the situational demands
- d) Does not depend on his capacity to absorb information

**33. The fire extinguisher types which may be used on class A fires are: 1 - H2O2 - CO23 - dry-chemical4 - halon Which of the following combinations contains all of the correct statements?**

---

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

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**34. With all engines out, a pilot wants to fly for maximum time. Therefore he has to fly the speed corresponding to:**

---

- a) The minimum power required
- b) The maximum lift
- c) The minimum angle of descent
- d) The critical Mach number

**35. In accordance with OPS 1, the noise abatement procedures specified by the operator should be:**

---

- a) For all aeroplane types, the same for a specific aerodrome.
- b) For an aeroplane type, the same for all aerodromes.
- c) Different according to aerodromes and aeroplane types.
- d) For all aeroplane types, the same for all aerodromes.

**36. What is the Q-code for 'magnetic bearing from the station'?**

---

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

**37. An aircraft is on radial 120 with a magnetic heading of 300°, the track selector (OBS) reads:330. The indications on the Course Deviation Indicator (CDI) are 'fly':**

---

- a) Left with 'TO' showing
- b) Left with 'FROM' showing
- c) Right with 'FROM' showing
- d) 180°

**38. What weather is prevalent in easterly waves?**

---

- a) Thunderstorms and rain.
- b) Frontal weather.
- c) Clear skies.
- d) Continuous rain.



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**39. A gravity type erector is used in a vertical gyro device to correct errors on:**

---

- a) A directional gyro unit
- b) An artificial horizon
- c) A gyromagnetic indicator
- d) A turn indicator

**40. Given the following: D = flight distance X = distance to Point of Equal Time GSo = groundspeed out GSr = groundspeed return The correct formula to find distance to Point of Equal Time is:**

---

- a)  $X = (D/2) \times GSo / (GSo + GSr)$
- b)  $X = D \times GSo / (GSo + GSr)$
- c)  $X = (D/2) + GSr / (GSo + GSr)$
- d)  $X = D \times GSr / (GSo + GSr)$

**41. The aft movement of the centre of pressure during acceleration through the transonic range will:**

---

- a) Decrease the longitudinal stability.
- b) Increase the static lateral stability.
- c) Increase the static longitudinal stability.
- d) Decrease the static lateral stability.

**42. In a gas turbine engine, the maximum gas temperature is attained:**

---

- a) Across The Turbine
- b) In the cooling airflow around the flame tube
- c) Within the combustion chamber
- d) At The Entry To The Exhaust Unit

**43. The take-off mass of an aeroplane is 141000 kg. Total fuel on board is 63000 kg including 14000 kg reserve fuel and 1000 kg of unusable fuel. The traffic load is 12800 kg. The zero fuel mass is:**

---

- a) 79000 kg
- b) 65200 kg.
- c) 93000 kg
- d) 78000 kg

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**44. What is the correct way of transmitting the number 13500 to indicate an altitude or cloud height?**

---

- a) One three five zero zero
- b) One three five hundred
- c) Thirteen thousand five hundred
- d) One three thousand five hundred

**45. The frequency range of a VOR receiver is:**

---

- a) 108 to 111.95 MHz
- b) 108 to 117.95 MHz
- c) 108 to 135.95 MHz
- d) 118 to 135.95 MHz

**46. A category III A precision approach (CAT III A) is an approach which may be carried out with a runway visual range of at least:**

---

- a) 100 m
- b) 200 m
- c) 50 m
- d) 250 m

**47. 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

**48. Moment (balance) arms are measured from a specific point to the body station at which the mass is located. That point is known as**

---

- a) The focal point.
- b) The datum.
- c) The centre of gravity of the aircraft.
- d) The axis.

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**49. In a vapour cycle cooling system what is the purpose of the condenser?**

---

- a) To convert the refrigerant from a gas to a liquid.
- b) To raise the pressure of the gas to allow efficient cooling.
- c) To convert the refrigerant from a liquid to a gas.
- d) To Remove Moisture From The Air By Centrifugal Action.

**50. 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

**51. The angle of attack of a fixed pitch propeller blade increases when:**

---

- a) Velocity and RPM increase
- b) Forward velocity increases and RPM decreasing
- c) RPM increases and forward velocity decreases
- d) Velocity and RPM decrease

**52. If you are requested to report your height, to which Q-code-setting would you refer?**

---

- a) QNH
- b) QFE
- c) QBI
- d) QDM

**53. A descent is planned from 7500 ft AMSL so as to arrive at 1000 ft AMSL 6 NM from a VORTAC. With a GS of 156 kts and a rate of descent of 800 ft/min. The distance from the VORTAC when descent is started is:**

---

- a) 15,0 NM
- b) 27,1 NM
- c) With a GS of 156 kts and a rate of descent of 800 ft/min. The distance from the VORTAC when descent is started is: 15,0 NM 27,1 NM 30,2 NM
- d) 11,7 NM

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**54. An aircraft wishes to obtain a bearing from a VDF station that will be plotted on the chart relative to True North. The correct RT call is:**

---

- a) True bearing, true bearing, G-BNKD request true bearing, G-BNK
- b) G-BNKD request QGH, G-BNK
- c) G-BNKD training fix, training fix, training fix, G-BN
- d) G-BNKD request QGH, G-BNK G-BNKD training fix, training fix, training fix, G-BNK G-BNKD request QDM, G-BNK

**55. 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

**56. Under the weather conditions depicted, which of the following statements is likely to apply?**

---

- a) Moderate to strong Foehn in the Alps.
- b) Severe gradient wind likely over central Europe.
- c) Radiation fog is unlikely in central Europe in the winter.
- d) Thunderstorms may occur in the summer months over central Europe.

**57. What mass has to be entered in the loading chart for aviation fuel F 34 if 170 l may be refuelled? (Fuel density = 0.78 kg/l)**

---

- a) 133 kg
- b) 218 kg
- c) 170 kg
- d) 133 daN

**58. For an inbound aircraft, the PIC can be asked to provide which of the following?**

---

- a) 3 copies of the general declaration, 2 copies of the cargo manifest, 2 copies of a simple stores list.
- b) 2 copies of the general declaration, 2 copies of the cargo manifest, 2 copies of a simple stores list.
- c) 2 copies of the general declaration, 3 copies of the cargo manifest, 2 copies of a simple stores list.
- d) 3 copies of the general declaration, 3 copies of the cargo manifest, 3 copies of a simple stores list.

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**59. Isolated thunderstorms of a local nature are generally caused by**

---

- a) Frontal lifting (warm front).
- b) Thermal triggering.
- c) Frontal occlusion.
- d) Frontal lifting (cold front).

**60. RADAR informs aircraft X-BC: 'X-BC identified'. What does this mean:**

---

- a) X-BC should perform an identification turn
- b) X-BC is not visible on the radar screen
- c) X-BC should operate the IDENT-button
- d) Radar identification has been achieved

**61. Refer to the Jeppesen General Student Pilot Route Manual - VFR Chart ED-4 Flying VFR from VILLINGEN (48°03.5'N, 008°27.0'E) to FREUDENSTADT (48°28.0'N, 008°24.0'E) determine the magnetic course.**

---

- a) 176°
- b) 355°
- c) 185°
- d) 004°

**62. Which of the following calls is a "GENERAL CALL"?**

---

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

**63. What does the word 'releared' mean?**

---

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

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**64. On the display of a TCAS 2 (Traffic alert and Collision Avoidance System), a resolution advisory (RA) is represented by:**

---

- a) A white or cyan empty lozenge.
- b) A red full square.
- c) An amber solid circle.
- d) A white or cyan solid lozenge.

**65. Which FL corresponds with the 850 hPa pressure level ?**

---

- a) FL 50
- b) FL 390
- c) FL 300
- d) FL100

**66. Pressure altitude is obtained by:**

---

- a) Correcting the altimeter for temperature deviation from IS
- b) Setting the altimeter to QFF pressure.
- c) Setting the altimeter to a station pressure which has been corrected to sea level.
- d) Setting the altimeter to standard sea level pressure.

**67. A laser gyro consists of:**

---

- a) A laser generating two light waves.
- b) Two moving cavities provided with mirrors.
- c) 2 electrodes (anode and cathode).
- d) A gyro with 2 degrees of freedom.

**68. On a high by-pass ratio (fan) engine, due to the distribution of the thrust, it is normal for reverse thrust to be achieved by reversing:**

---

- a) Only the direction of the fan airflow.
- b) The direction of both the exhaust gas flow (hot stream) and the fan airflow (cold stream).
- c) The direction of rotation of the fan.
- d) Only The Direction Of The Exhaust Gas Flow.

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**69. Which of the following is true according to regulations for turbo propeller powered aeroplanes not performing a steep approach?**

---

- a) Maximum Landing Distance at destination is  $0,95 \times \text{LDA}$  (Landing Distance Available).
- b) Maximum use of clearway is  $1,5 \times \text{runway}$ .
- c) Maximum Landing Distance at the destination aerodrome and at any alternate aerodrome is  $0,7 \times \text{LDA}$  (Landing Distance Available).
- d) Maximum Take-off Run is  $0,5 \times \text{runway}$ .

**70. What does the term 'way point' mean:**

---

- a) A defined position on an aerodrome used for the calibration of the inertial navigation system
- b) A signal indicating the direction of the runway-in-use
- c) A specified geographical position used to define an area navigation route or the flight path of an aircraft employing area navigation
- d) A general term meaning the taxiway- and the runway-system of an international airport

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## Schema Risposte

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

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