

Simulazione di Esame

Aircraft General Knowledge - Instrumentation - ATPL - Airline Transport Pilot Licence, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. Generally, for large aeroplanes, electrical heating for ice protection is used on:

- a) Slat Leading Edges.
- b) Pitot tubes.
- c) Elevator leading edges.
- d) Fin Leading Edges.

02. Consider a jet engine whose control is based on the Engine Pressure Ratio (EPR) 1. with a constant EPR, the thrust decreases when the altitude increases 2. with a constant EPR, the thrust is independent of the Mach number 3. At same environmental conditions, a given EPR setting maintains the thrust irrespective of engine wear due to ageing. 4. the EPR is determined by the impact pressure difference between the turbine outlet and the compressor inlet 5. on take-off, in the event of icing not detected by the crew, the indicated EPR is lower than the real EPR The combination regrouping all the correct statements is:

- a) 2, 3, 2004.
- b) 1, 3.
- c) 1, 5.
- d) 3, 4, 2005.

03. The speed limitation for IFR flights inside ATS airspace classified as E, when flying below 3.050 m (10.000 ft) AMSL, is:

- a) 250 KT IAS
- b) 260 KT IAS
- c) Not applicable
- d) 250 KT TAS

04. According to JAR-OPS 1, a windshield wiper or equivalent means to maintain a clear portion of the windshield during precipitation is required at each pilot station to operate an aeroplane with a:

- a) Maximum certificated take-off mass is greater than 15,000 kg
- b) Maximum certificated take-off mass is greater than 5,700 kg
- c) Maximum approved passenger seating configuration is greater than 30 after January 1st, 2000
- d) Maximum approved passenger seating configuration is greater than 9

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05. To perform a VFR flight in airspace classification E :

- 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.

06. The amplitude modulation and the colour of an outer marker (OM) is:

- a) 3000 Hz, blue
- b) 400 Hz, blue
- c) 400 Hz, amber
- d) DME callsign was not transmitted, the distance information is sufficient proof of correct operation

07. What shall the pilot's read back be for 'Climb to FL 280':

- a) Climbing to flight level two eighty
- b) Climbing to flight level two eight zero
- c) Climbing to two eighty
- d) Climbing two eight zero

08. How do you understand the statement 'one cannot not communicate'?

- a) You cannot influence your own communication.
- b) Each situation requires communication.
- c) The statement above is a misprint.
- d) Being silent as well as inactive are nonverbal behaviour patterns which express a meaning.

09. Minimum Navigation Performance Specification (MNPS) airspace of the North Atlantic is defined within:

- a) Flight levels 285 and 420 from the 27° North to the pole
- b) Flight levels 280 and 475 from 27° North to the pole
- c) Sea level and FL660 from 27° North to the pole
- d) Flight levels 270 and 400 from the equator to the pole

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10. Due to a cabin pressurisation defect the maximum differential pressure is limited to 3 psi. Assuming the oxygen masks will be deployed at 14000 feet, the maximum achievable flight altitude is approximately:

- a) 22500 ft
- b) 24500 ft
- c) 29000 ft
- d) 27000 ft

11. Given: Z_p = pressure altitude Z_d = density altitude CAS can be obtained from the following data:

- a) EAS and Z_p .
- b) TAS and Z_d .
- c) TAS and Z_p .
- d) EAS and Z_d .

12. What is the transponder code to be used by the commander of an aircraft that is subject to unlawful interference (hijacked)?:

- a) A 7500
- b) A 7800
- c) A 7700
- d) A 7600

13. 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.

14. The zero fuel mass of an aeroplane is always:

- a) The take-off mass minus the wing fuel mass.
- b) The take-off mass minus the fuselage fuel mass.
- c) The take-off mass minus the mass of take-off fuel.
- d) The maximum take-off mass minus the take-off fuel mass.

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15. Which biases relate to human decision making?1. Personal experience tends to alter the perception of the risk of an event occurring2. There is a natural tendency to want to confirm our decision even in the face of facts which contradict it3. The group to which an individual belongs tends to influence the particular decision4. There is natural tendency to select only objective facts for decision-making purposes

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

16. Please check the following statements:1. A stressor causes activation2. Activation stimulates a person to cope with it

- a) 1 is correct, 2 is not correct
- b) 1 and 2 are both correct
- c) 1 and 2 are both not correct
- d) 1 is not correct, 2 is correct

17. Given: True Heading = 180° TAS = 500 kt W/V 225° / 100 kt Calculate the GS?

- a) 600 kt
- b) 435 kt
- c) 450 kt
- d) 535 kt

18. Induced drag may be reduced by:

- a) An increase in the taper ratio of the wing
- b) A decrease of the aspect ratio
- c) An increase in aspect ratio
- d) The use of a wing tip with a much thinner aerofoil

19. An aeroplane is provided with spoilers and in- and outboard ailerons. Roll control during cruise is provided by:

- a) Outboard ailerons and roll-spoilers.
- b) Inboard and outboard ailerons.
- c) Inboard ailerons and roll-spoilers.
- d) Outboard ailerons only.

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20. The aeroplane drag in straight and level flight is lowest when the:

- a) Induced drag is equal to zero
- b) Parasite drag equals twice the induced drag
- c) Induced drag is lowest
- d) Parasite drag is equal to the induced drag

21. For a VFR aircraft, the conditions in which it could encounter severe airframe icing are:

- a) Flight into supercooled rain, resulting in rime ice formation
- b) Flight into an area outside of clouds where the temperature is below 0°C, resulting in rime ice formation
- c) Flight into freezing rain, resulting in clear ice formation
- d) Flight between two cloud layers, without precipitation, resulting in clear ice formation

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

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

23. Given: AGL = above ground level AMSL = above mean sea level FL = flight level within uncontrolled airspace, the first usable level in IFR must provide a 500' margin above the following two levels:

- a) FL30 or 100' AGL
- b) 3000' AMSL or 1500' AGL
- c) FL30 or 1500' AGL
- d) 3000' AMSL or 1000' AGL

24. The term 'Maximum Zero Fuel Mass' consist of:

- a) The maximum permissible mass of an aeroplane with no usable fuel.
- b) The maximum mass for some aeroplanes including the fuel load and the traffic load
- c) The maximum mass authorized for a certain aeroplane not including the fuel load and operational items
- d) The maximum mass authorized for a certain aeroplane not including traffic load and fuel load.

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25. The principle of 'Schuler Tuning' as applied to the operation of Inertial Navigation Systems/ Inertial Reference Systems is applicable to:

- a) 265° - 17 NM
- b) 086° - 18 NM
- c) 257° - 17 NM
- d) 077° - 18 NM

26. In the event of an en-route HF communication failure in an MNPS (Minimum Navigation Performance Specification) airspace, the appropriate VHF frequency for air to air communications is:

- a) 121.800 MHz.
- b) 118.800 MHz.
- c) 128.800 MHz.
- d) 123.45 MHz.

27. The ISO-ECHO facility of an airborne weather radar is provided in order to:

- a) Give an indication of cloud tops
- b) Detect areas of possible severe turbulence in cloud
- c) Extend the mapping range
- d) 666 km

28. To minimize the risk of hydroplaning during landing the pilot should:

- a) Use maximum reverse thrust, and should start braking below the hydroplaning speed.
- b) Use normal landing-, braking- and reverse technique.
- c) Make a 'positive' landing and apply maximum reverse thrust and brakes as quickly as possible.
- d) Postpone the landing until the risk of hydroplaning no longer exists.

29. The circumference of the parallel of latitude at 60°N is approximately:

- a) 20000 NM
- b) 18706 NM
- c) 34641 NM
- d) 10800 NM

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30. When engaged in the lateral navigation mode (LNAV) the autopilot uses:

- a) The FMS active (TO) waypoint coordinates.
- b) The FMS computation of the aircraft position and the FMS active (TO) waypoint bearing.
- c) The FMS roll or heading command.
- d) The FMS path angle command.

31. According to CS 25 the landing reference speed VREF may not be less than:

- a) 1.23 VSRO and must be maintained down to 50' height
- b) 1.2 VMCA
- c) 1.23 VSRO for turbojet powered and 1.3 for turboprop powered aeroplanes
- d) VSRO and must be maintained down to 35' height

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

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

33. Which type of air mass never occurs over central Europe ?

- a) Arctic air
- b) Equatorial air
- c) Tropical air
- d) Polar air

34. Which of these markers has the highest audible frequency?

- a) Inner
- b) Airways
- c) Middle
- d) Outer

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35. An aeroplane accelerates from 80 KT to 160 KT at a load factor equal to 1. The induced drag coefficient (i) and the induced drag (ii) alter with the following factors:

- a) (i) 1/2 (ii) 1/16
- b) (i) 1/4 (ii) 2
- c) (i) 4 (ii) 1/2
- d) (i) 1/16 (ii) 1/4

36. What is the maximum speed adjustment that a pilot should be requested to make when under radar control and established on intermediate and final approach?

- a) ± 15 KT
- b) ± 20 KT
- c) ± 25 KT
- d) ± 10 KT

37. What does the abbreviation 'HJ' mean?

- a) No specific working hours.
- b) Sunset to sunrise.
- c) Continuous day and night service.
- d) Sunrise to sunset.

38. The ICAO annex which deals with entry and departure of cargo and other articles on international flights is:

- a) Annex 8
- b) Annex 9
- c) Annex 16
- d) Annex 15

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

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

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40. Where a 'Secondary Surveillance Radar' (SSR) is not available, radar identification may be achieved by one of the following procedures:

- a) To instruct the pilot to execute one or more changes of 20° or more.
- b) To instruct the pilot to execute one or more changes of 10°.
- c) To instruct the pilot to execute one or more changes of 30° or more.
- d) To instruct the pilot to execute one or more changes of 45°.

41. A life jacket is mandatory for each person on board an aeroplane when flying over water at a distance from the shore of more than:

- a) 100 NM
- b) 200 NM
- c) 50 NM
- d) 400 NM

42. A radar facility transmitting at a Pulse Recurrence Frequency (PRF) of 1200 pulses/second will have a maximum unambiguous range of approximately:

- a) 135 NM
- b) 69 NM
- c) 27 NM
- d) Envelope matching

43. The accumulation of frost, snow or ice on an aeroplane in flight induces an increase in the:

- a) Value of the stall angle of attack
- b) Stalling speed
- c) Roll rate
- d) Tuck under

44. Which Q-code is used to report altitude ?

- a) QFE
- b) QNH
- c) QNJ
- d) QFF

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45. The compressor surge effect during acceleration is prevented by the:

- a) Inlet Guide Vanes.
- b) Fuel Control Unit (FCU)
- c) U.S. variable setting type nozzle guide vanes.
- d) Surge Bleed Valves.

46. The radiation of the sun heats

- a) The surface of the earth, which heats the air in the troposphere
- b) The air in the troposphere only directly if no clouds are present
- c) The water vapour in the air of the troposphere
- d) The air in the troposphere directly

47. Aeroplane Dry Operating mass 85000 kg Performance limited take-off mass 127000 kg Performance limited landing mass 98500 kg Maximum zero fuel mass 89800 kg Fuel requirements for flight - Trip fuel 29300 kg Contingency and final reserve fuel 3600 kg Alternate fuel 2800 kg. The maximum traffic load that can be carried on this flight is:

- a) 6300 kg
- b) 7100 kg
- c) 12700 kg
- d) 4800 kg [see Annex]

48. See Flight Planning Manual MRJT 1 Figure 4.5.2 and 4.5.3.4 Given: Distance B - C: 350 NM Cruise 300 KIAS at FL 210 Temperature: - 40°C Tailwind component: 70 kt Gross mass at B: 53 200 kg The fuel required from B - C is:

- a) 1810 kg
- b) 2800 kg
- c) 1940 kg
- d) 2670 kg

49. The authorization for the transport of dangerous goods is specified on the:

- a) Registration certificate.
- b) Airworthiness certificate.
- c) Air operator certificate.
- d) Insurance certificate.

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50. An aeroplane, with a C.G. location behind the centre of pressure of the wing can only maintain a straight and level flight when the horizontal tail loading is:

- a) Zero.
- b) Downwards.
- c) G. location behind the centre of pressure of the wing can only maintain a straight and level flight when the horizontal tail loading is: zero. downwards. upwards.
- d) Upwards or downwards depending on elevator deflection.

51. 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.

52. The distance between two waypoints is 200 NM, To calculate compass heading, the pilot used 2°E magnetic variation instead of 2°W. Assuming that the forecast W/V applied, what will the off track distance be at the second waypoint?

- a) 7 NM
- b) 14 NM
- c) 21 NM
- d) 0 NM

53. The International Civil Aviation Organisation (I.C.

- a) O.) was established by the international convention of: The Hague
- b) Warsaw
- c) O.) was established by the international convention of: The Hague Warsaw Chicago
- d) Montreal

54. Flap selection at constant IAS whilst maintaining straight and level flight will increase the:

- a) Lift coefficient and the drag
- b) Maximum lift coefficient (CLmax) and the drag
- c) Lift and the drag
- d) Stall speed

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55. Urgency is defined as:

- a) A condition concerning the safety of an aircraft other vehicles or of a person on board, but which does not require immediate assistance
- b) A condition of being threatened by serious and/or imminent danger and of requiring immediate assistance
- c) A condition concerning the attitude of an aircraft when intercepting the localizer during an ILS approach
- d) A condition concerning the safety of a person on board or within sight and requiring immediate assistance

56. The mass of an aircraft is 1950 kg. If 450 kg is added to a cargo hold 1.75 metres from the loaded centre of gravity (cg). The loaded cg will move:

- a) 40 cm.
- b) 33 cm.
- c) 34 cm.
- d) 30 cm.

57. During a night flight at 10,000 feet you notice that your visual acuity has decreased. In this case you can increase your acuity by:

- a) Scanning sectors of the field of vision
- b) Closing one eye
- c) Dim the instrument lights
- d) Breathing extra oxygen through the oxygen mask.

58. The take-off runway performance requirements for transport category aeroplanes are based upon:

- a) All engines operating only
- b) One engine inoperative only
- c) Failure of the critical engine or all engines operating whichever requirement gives the greater distance
- d) Failure of the critical engine only

59. Which statement is correct?

- a) The lower limit of a TMA shall be established at a height of at least 700ft AGL
- c) The lower limit of an UIR may coincide with an IFR cruising level
- d) The upper limit of a CTR shall be established at a height of at least 3000ft AMSL

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60. Fastair 345 has been instructed to contact Stephenville ARRIVAL on frequency 118.0. What is the correct way to indicate it will follow this instruction:

- a) Changing over Fastair 345
- b) Changing to ARRIVAL Fastair 345
- c) 118.0 Fastair 345
- d) Stephenville ARRIVAL Fastair 345

61. The time of useful consciousness in case of an explosive decompression at an altitude of 40 000 ft is:

- a) 1 minute.
- b) 30 seconds.
- c) 5 minutes.
- d) 12 seconds.

62. The highest value of longitude is found:

- a) Along equator.
- b) At Greenwich anti meridian.
- c) Close to the prime meridian.
- d) Close to the poles.

63. If all attempts to establish radio contact with a ground station fail, the pilot of an aeroplane shall transmit messages preceded by the phrase:

- a) 'Read you one, read you one'
- b) 'How do you read?'
- c) 'Transmitting blind'
- d) PAN PAN, PAN PAN, PAN PAN

64. During a climb, the total pressure probe of the airspeed indicator becomes blocked

- a) If the pilot maintains a constant indicated airspeed, the true airspeed:
- b) Increases until reaching VMO.
- c) Decreases by 1% per 600 FT.
- d) Decreases until reaching the stall speed.

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65. During a flight over the sea at FL 100 from Marseille (QNH 1016 hPa) to Palma de Mallorca (QNH 1016 hPa), the true altitude is constantly decreasing. What is the probable reason for this ?

- a) The altimeter is faulty
- b) One of the QNH values must be wrong
- c) The air at Palma de Mallorca is warmer than that at Marseille
- d) The air at Marseille is warmer than that at Palma de Mallorca

66. Which of the following satellite navigation systems has Full Operational Capability (FOC) and is approved for specified flights under IFR conditions in Europe?

- a) COSPAS-SARSAT
- b) NNSS-Transit
- c) GLONASS
- d) Satellite to ground time lag

67. Independent parallel approaches may be conducted to parallel runways provided that:

- a) The missed approach track for one approach diverges by at least 25° (degrees) from the missed approach track of the adjacent approach
- b) The missed approach track for one approach diverges by at least 20° (degrees) from the missed approach track of the adjacent approach
- c) The missed approach track for one approach diverges by at least 45° (degrees) from the missed approach track of the adjacent approach
- d) The missed approach track for one approach diverges by at least 30° (degrees) from the missed approach track of the adjacent approach

68. For an operation in MNPS airspace along notified special routes, unless otherwise specified, an aircraft must be equipped with at least:

- a) Two Inertial Navigation Systems (INS)
- b) Three Inertial Navigation System (INS)
- c) Two independent Long Range Navigation Systems (LRNS)
- d) One Long Range Navigation System (LNRS)

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69. 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

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

70. The north and south magnetic poles are the only positions on the Earth's surface where:

- a) A position where the horizontal component of the earth's magnetic field is a maximum
- b) A freely suspended compass needle will stand horizontal
- c) A freely suspended compass needle would stand vertical
- d) The value of magnetic variation equals 90°

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Schema Risposte

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

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