

Simulazione di Esame

Air Law - ATPL - Airline Transport Pilot license, 70 domande in 70 minuti!



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NOME ALLIEVO:

DATA & ORA:

01. About a twin spool compressor:

- a) The Low Pressure Spool Runs At A Very High Rpm, Thus Preventing The Onset Of Compressor Stall.
- b) Both spools run at the same RPM.
- c) The low pressure spool runs at a lower RPM than the high pressure spool.
- d) When Operating At Very High Rpm's, The Later Stages Within The High Pressure Spool Will Have A Large Negative Angle Of Attack.

02. The mach number is the:

- a) Corrected airspeed (CAS) divided by the local speed of sound
- b) Indicated airspeed (IAS) divided by the local speed of sound
- c) True airspeed (TAS) divided by the local speed of sound
- d) Equivalent airspeed (EAS) divided by the local speed of sound

03. The pressure system indicated when, in a vertical cross section, the lower situated pressure surfaces bulge upward and the higher situated pressure surfaces bulge downward is a:

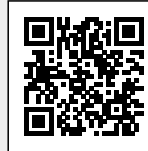
- a) Cold low pressure area
- b) Warm low pressure area
- c) Cold high pressure area
- d) Warm high pressure area

04. What type of low pressure area is associated with a surface front?

- a) A polar front low
- b) A heat low
- c) A low on the lee side of a mountain
- d) A cold air pool

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05. Which of the following is most likely to affect the range of centre of gravity positions on an aeroplane?

- a) Location of the undercarriage.
- b) The need to maintain a low value of stalling speed.
- c) Elevator and tailplane (horizontal stabiliser) effectiveness in all flight conditions.
- d) The need to minimise drag forces and so improve efficiency.

06. An airway 10 NM wide is to be defined by two VORs each having a resultant bearing accuracy of plus or minus 5.5°. In order to ensure accurate track guidance within the airway limits the maximum distance apart for the transmitter is approximately:

- a) 50 NM
- b) 105 NM
- c) 210 NM
- d) Only permitted with certain precautions, to safeguard health of personnel and to protect equipment

07. The maximum zero-fuel mass: 1- is a regulatory limitation 2- is calculated for a maximum load factor of +3.5 g 3- is based on the maximum permissible bending moment at the wing root 4- is defined on the assumption that fuel is consumed from the outer wings tank first 5- is defined on the assumption that fuel is consumed from the centre wing tank first The combination of correct statements is:

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

08. The dangerous goods transport document, if required, shall be drawn up by:

- a) The shipper.
- b) The handling agent.
- c) The captain.
- d) The operator.

09. Which of the alternatives represents the correct relationship?

- a) V_2 and V_1 should not exceed $VMCA$
- b) $VMCG$ and V_1 should not exceed VR
- c) V_2 and V_1 should not exceed $VMCG$
- d) $VMCL$ and V_1 should not exceed VR

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10. The area in front of a threshold descends towards the threshold. Possible danger is:

- a) Approach is lower than normal and may result in a short landing
- b) To drop far below the glide path
- c) To misjudge the length of the runway
- d) Approach is higher than normal and may result in a long landing

11. The operating principle of the vertical speed indicator (VSI) is based on the measurement of the rate of change of:

- a) Dynamic pressure
- b) Static pressure
- c) Kinetic pressure
- d) Total pressure

12. On the ground, during a left turn, the turn indicator indicates:

- a) Needle to the left, ball to the left
- b) Needle to the left, ball to the right
- c) Needle in the middle, ball to the left
- d) Needle in the middle, ball to the right

13. What is the consequence of a microphone button stuck on transmit (switched 'on')?

- a) None
- b) Other stations will have to use the 'words twice' technique
- c) The frequency can not be used by others
- d) Readability will improve for all stations

14. Rudder trim adjustment in an aeroplane with irreversible flight controls is:

- a) An Adjustment Of The Rudder Ratio Changer.
- b) An adjustment of the zero force rudder position.
- c) Unnecessary Because This Aeroplane Does Not Need Rudder Trim.
- d) An Adjustment Of The Rudder Trim Tab.

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15. In the cockpit of a transport airplane, at least one manual fire-extinguisher must be conveniently located containing:

- a) Powder.
- b) Halon.
- c) Special fluids.
- d) Water.

16. The force acting on the needle of a direct reading compass varies:

- a) Inversely with both vertical and horizontal components of the earth's magnetic field
- b) Directly with the vertical component of the earth's magnetic field
- c) Inversely with the horizontal component of the earth's magnetic field
- d) Directly with the horizontal component of the earth's magnetic field

17. 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

18. The minimum radar separation to be provided to aircraft established on the localizer course shall be:

- a) 3.0 NM between aircraft on adjacent localizer course.
- b) 3.0 NM between aircraft on the same localizer course.
- c) 5.0 NM between aircraft on the same localizer course.
- d) 2.0 NM between aircraft on the same localizer course.

19. Refer to the Student Pilot Route Manual - North Atlantic Plotting Chart. On a direct great circle course from Shannon (5243N 00853W) to Gander (4854N 05432W), the (a) average true course, and (b) distance, are:

- a) A) 281° (b) 2730 NM
- b) A) 244° (b) 1520 NM
- c) A) 262° (b) 1720 NM
- d) A) 281° (b) 1877 NM

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

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

21. In the northern hemisphere, during deceleration following a landing in a northerly direction, a direct reading magnetic compass indicates:

- a) No apparent turn.
- b) A heading fluctuating about 360°.
- c) An apparent turn to the west.
- d) An apparent turn to the east.

22. Decision making in emergency situations requires firstly:

- a) Speed of reaction
- b) Delegation of tasks and crew coordination
- c) The whole crew to focus on the problem
- d) Informing ATC thoroughly about the situation

23. If individual masses are used, the mass of an aircraft must be determined prior to initial entry into service and thereafter

- a) Only if major modifications have taken place.
- b) At regular annual intervals.
- c) At intervals of 9 years.
- d) At intervals of 4 years if no modifications have taken place.

24. In the lower levels of the atmosphere when the environmental lapse rate is greater than saturated adiabatic lapse rate but less than dry adiabatic lapse rate - the air mass is described as being:

- a) Stable
- b) Conditionally unstable
- c) Absolutely unstable
- d) Unstable

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25. Which of the aeronautical chart symbols indicates a VORTAC?

- a) 6
- b) 7
- c) 5
- d) 3

26. When a pilot makes a turn in horizontal flight, the stall speed:

- a) Decreases with increasing bank angle
- b) Increases with flap extension
- c) Increases with the load factor squared
- d) Increases with the square root of load factor

27. Find the OPTIMUM ALTITUDE for the twin jet aeroplane. Given: Cruise mass=50000 kg, .78 MACH

- a) 36700 ft
- b) 36200 ft
- c) Maximum operating altitude
- d) 35500 ft[see Annex]

28. If an aircraft maintaining a constant CAS and flight level is flying from a cold air mass into warmer air:

- a) TAS decreases.
- b) Mach number increases.
- c) Mach number decreases.
- d) TAS increases.

29. Evacuation slide inflation is ensured by:

- a) A pressurized gas canister combined with the slide itself.
- b) Pressurized air from the air conditioning system.
- c) A manual pump, used when needed by the cabin crew.
- d) The Aircraft's General Pneumatic Circuit.

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30. Can you suffer from aerodontalgia in the descent?

- a) Only above 10.000 ft
- b) No
- c) Only in pressurised aircraft
- d) Yes

31. An aeroplane executes a steady glide at the speed for minimum glide angle. If the forward speed is kept constant, what is the effect of a lower mass? Rate of descent / Glide angle / CL / CD ratio

- a) Increases / increases / decreases
- b) Increases / constant / increases
- c) Increases / increases / constant
- d) Decreases / constant / decreases

32. An aircraft shall not carry munitions of war:

- a) Unless the written permission of the Authority and the operator is obtained.
- b) At all.
- c) Unless they are unloaded and made safe.
- d) Unless the commander agrees.

33. The minimum climb gradient required on the 2nd flight path segment after the take-off of a jet aeroplane is defined by the following parameters:1 Gear up2 Gear down3 Wing flaps retracted4 Wing flaps in take-off position 5 N engines at the take-off thrust6 (N- 1) engines at the take-off thrust7 Speed over the path equal to $V_2 + 10$ kt 8 Speed over the path equal to $1.3 V_S$ 9 Speed over the path equal to V_2 10 At a height of 35 ft above the runway The correct statements are:

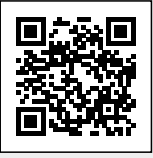
- a) 1, 4, 5, 10
- b) 2, 3, 6, 9
- c) 1, 5, 8, 10
- d) 1, 4, 6, 9

34. Airborne weather radars are generally based on the use of:

- a) Secondary radar in the SHF band
- b) Primary radar in the UHF band
- c) Secondary radar in the VHF band
- d) C/A- and P

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35. In the axial flow compressor of a turbo-jet engine, the flow duct is tapered. Its shape is calculated so as to:

- a) Maintain A Constant Axial Speed Whatever The Engine Rating.
- b) Maintain a constant axial speed in cruising flight.
- c) Reduce the axial speed, whatever the engine rating.
- d) Reduce The Axial Speed In Cruising Flight.

36. About ten identical clouds are in the sky, well isolated from one another, dense, with well defined contours, developing vertically in a cauliflower shape. The side of these clouds lit by the sun is bright white. Their base, relatively dark, is essentially horizontal and at FL 30, and their tops at FL 150. These clouds are

- a) Broken Cumulus humilis
- b) Towering Cumulus
- c) Stratocumulus
- d) Altocumulus castellanus

37. One of the functions ensured by a radar control unit for the provision of approach control service is:

- a) To apply a horizontal separation less than 5 NM.
- b) To conduct precision radar approach (PAR).
- c) To provide instructions to reduce the separation minima.
- d) To apply a reduced vertical separation of 500 feet between IFR and VFR flights.

38. Bernoulli's equation can be written as:(p_t = total pressure, p_s = static pressure and q =dynamic pressure)

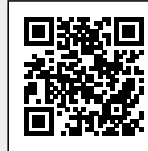
- a) $p_t = p_s - q$
- b) $p_t = q - p_s$
- c) $p_t = p_s + q$
- d) $p_t = p_s / q$

39. When applying carburettor heating:

- a) The mixture becomes richer.
- b) No change occurs in the mixture ratio.
- c) The mixture becomes leaner.
- d) A Decrease In Rpm Results From The Lean Mixture.

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40. The pendulum type detector system of the directional gyro feeds:

- a) A torque motor on the sensitive axis
- b) A nozzle integral with the outer gimbal ring
- c) 2 torque motors arranged horizontally
- d) A levelling erection torque motor

41. 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.

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

42. The percentage of oxygen in the air at an altitude of approximately 34 000 ft is:

- a) 10,5%
- b) 5%
- c) 42%
- d) 21%

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

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

44. If an aeroplane exhibits insufficient stick force per g, this problem can be resolved by installing:

- a) A spring which pulls the stick backwards
- b) A spring which pushes the stick forwards
- c) A bobweight in the control system which pulls the stick forwards
- d) A bobweight in the control system which pulls the stick backwards

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45. Refer to figure: Which figure in the appendix represents the geocentric latitude of position P, which is situated above the surface of the ellipsoid?

- a) Figure
- b) Figure
- c) Figure
- d) Figure

46. In which squares are conditions most likely to cause the occurrence of low level wind shear?

- a) 3 B and 3 C
- b) 3 A and 3 B
- c) 3 B and 3 D
- d) 3 A and 3 C

47. On a reciprocating engine aeroplane, with increasing altitude at constant gross mass, angle of attack and configuration the power required:

- a) Decreases slightly because of the lower air density
- b) Increases but TAS remains constant
- c) Remains unchanged but the TAS increases
- d) Increases and the TAS increases by the same percentage

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

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

49. Bernoulli's law states: (note: rho is the mean sea level density under ISA conditions)

- a) Pstat is static pressure
- b) Pdyn is dynamic pressure
- c) Ptot is total pressure)
- d) $P_{stat} + \frac{1}{2} \rho V^2 = \text{constant}$

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50. The relationship between induced drag and the aspect ratio is:

- a) There is no relationship
- b) A decrease in the aspect ratio increases the induced drag
- c) An increase in the aspect ratio increases the induced drag
- d) Induced drag = 1.3 aspect ratio value

51. The pitch up effect of an aeroplane with swept wing in a stall is due to the

- a) Wing tip stalling first
- b) Wing root stalling first
- c) Forward movement of the centre of gravity
- d) Aft movement of the centre of gravity

52. Which of the following are to be taken into account for the runway in use for take-off?

- a) Airport elevation, runway slope, standard temperature, pressure altitude and wind components
- b) Airport elevation, runway slope, standard temperature, standard pressure and wind components
- c) Airport elevation, runway slope, outside air temperature, standard pressure and wind components
- d) Airport elevation, runway slope, outside air temperature, pressure altitude and wind components

53. Torque can be determined by measuring the computed:

- a) Oil pressure at the fixed crown of an epicycloidal reducer of the main engine gearbox.
- b) Phase difference between 2 impulse tachometers attached to a transmission shaft.
- c) Frequency of an impulse tachometer attached to a transmission shaft.
- d) Quantity of light passing through a rack-wheel attached to a transmission shaft.

54. The maximum load per running metre of an aircraft is 350 kg / m. The width of the floor area is 2 metres. The floor strength limitation is 300 kg per square metre. Which one of the following crates (length x width x height) can be loaded directly on the floor?

- a) A load of 500 kg in a crate with dimensions 1.5 m x 1 m x 1 m.
- b) A load of 400 kg in a crate with dimensions 1.2 m x 1.2 m x 1.2 m.
- c) A load of 700 kg in a crate with dimensions 1.8 m x 1.4 m x 0.8 m.
- d) A load of 400 kg in a crate with dimensions 1.4 m x 0.8 m x 0.8 m.

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55. Changes in blood-pressure are measured by:

- a) Adrenal glands
- b) Arterioles
- c) Pacemakers
- d) Pressoreceptors

56. The block diagram of an auto-pilot is shown in the annex. For each control channel (pitch, roll and yaw) the piloting law is the relationship between the deflection of the control surface commanded by the computer (BETA c) and the:

- a) Pilot command E.
- b) Aircraft response S.
- c) Offset EPSILON at the computer input.
- d) Real deflection of the control surface (BETA control surface feedback).

57. In the ATC flight plan item 15, when entering a route for which standard departure (SID) and standard arrival (STAR) procedures exist:

- a) SIDs should be entered but not STARs
- b) Both should be entered in the ATC plan where appropriate
- c) Neither SID nor STAR should be entered
- d) STARS should be entered but not SIDs

58. 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:

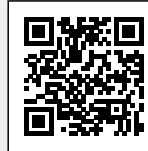
- a) Changing over Fastair 345
- b) Changing to ARRIVAL Fastair 345
- c) 118.0 Fastair 345
- d) Stephenville ARRIVAL Fastair 345

59. What are the standard masses used for crew?

- a) 88 kgs for flight crew, 76 kgs cabin crew, not including baggage
- b) 85 kgs for flight crew, 75 kgs cabin crew, not including hand baggage
- c) 88 kgs for flight crew, 76 kgs cabin crew, including baggage.
- d) 85 kgs for flight crew, 75 kgs cabin crew, including hand baggage

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60. According to PART-FCL, single pilot single-engine class ratings are valid for:

- a) Two years up to age 40 years then one year thereafter.
- b) One year
- c) Five years after licence issue.
- d) Two years

61. Which of the following statements about the difference between Krueger flaps and slats is correct?

- a) Deploying a Krueger flap will form a slot, deploying a slat does not
- b) Deploying a slat will form a slot, deploying a Krueger flap does not
- c) Deploying a Krueger flap will increase critical angle of attack, deploying a slat does not
- d) Deploying a slat will increase critical angle of attack, deploying a Krueger flap does not

62. The expression 'transmitting blind due to receiver failure' implies that no answer is expected. It shall be used by:

- a) An aircraft station doing blind transmissions at a 'non-towered' airfield
- b) A radar controller performing a PAR or SRE final approach
- c) An aircraft station being aware of receiver failure
- d) A ground station broadcasting information to all listening stations

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

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

64. The maximum floor loading for a cargo compartment in an aircraft is given as 750 kg per square metre. A package with a mass of 600 kg is to be loaded. Assuming the pallet base is entirely in contact with the floor, which of the following is the minimum size pallet that can be used?

- a) 40 cm by 200 cm
- b) 40 cm by 300 cm
- c) 30 cm by 200 cm
- d) 30 cm by 300 cm

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65. For an aircraft flying a true track of 360° between the 5°S and 5°N parallels, the precession error of the directional gyro due to apparent drift is equal to:

- a) $-5^\circ/\text{hour}$
- b) $+5^\circ/\text{hour}$
- c) $15^\circ/\text{hour}$
- d) Approximately $0^\circ/\text{hour}$

66. Which of the following combinations basically has an effect on the angle of descent in a glide?(Ignore compressibility effects.)

- a) Configuration and angle of attack
- b) Configuration and mass
- c) Altitude and configuration
- d) Mass and altitude

67. When shall the pilot of an aircraft experiencing communications failure keep a watch for instructions passed by visual signals ?

- a) When flying VFR above clouds
- b) When the aircraft is forming part of the aerodrome traffic at a controlled aerodrome
- c) When entering a FIR during an IFR flight
- d) When the aircraft is entering the traffic pattern of an uncontrolled airport

68. In accordance with OPS 1 430 (Aerodrome Operating Minima - General), it is established, among other considerations, that an Operator must take full account of Aeroplane Categories. The criteria taken into consideration for classification of Aeroplanes by Categories is the indicated airspeed at threshold (V_{at}), which is equal to the stalling speed at the maximum landing mass (V_{so}) multiplied by 1,3. Corresponding Aeroplane Category when V_{at} is from 141 kt to 165 kt is:

- a) B
- b) D
- c) E
- d) C

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69. Which word or phrase shall be used when giving authorization to proceed under specified conditions?

- a) Approved
- b) Go ahead
- c) I say again: proceed
- d) Cleared

70. In which of the following situations is an aircraft most susceptible to icing ?

- a) Flying in dense cirrus clouds.
- b) Level flight below a rain producing cloud when OAT is below zero degrees
- c) Flying in heavy drizzle.
- d) Level flight in snowfall below a nimbostratus layer.

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