

# Exam simulation

ATPL - Airline Transport Pilot license - Performance



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STUDENT NAME:

DATE AND TIME:

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**01. The angle between Magnetic North and Compass North is called:**

- a) Magnetic variation
- b) Compass error
- c) Compass deviation
- d) Alignment error

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**02. If Paris reports a wind of 16020KT on the METAR, what wind velocity would you expect to encounter at a height of 2000 feet above the ground?**

- a) 14020KT
- b) 16030KT
- c) 17015KT
- d) 19040KT

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**03. Traffic load is the difference between:**

- a) The operating mass and the basic empty mass.
- b) The take-off mass and the basic empty mass.
- c) The take-off mass and the basic empty mass plus trip fuel.
- d) The take-off mass and the operating mass.

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**04. Pilot stress reactions:**

- a) Are related to an internationally recognized list of stressors where the top-ten items should be avoided by every means
- b) Seem to be always the same for most pilots
- c) Do not change with the environment or different situations but mainly with the characters themselves
- d) Differ from pilot to pilot, depending on how a person manages the particular stressors

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**05. Minimum planned take-off fuel is 160 kg (30% total reserve fuel is included). Assume the groundspeed on this trip is constant. When the aircraft has done half the distance the remaining fuel is 70 kg. Is diversion to a nearby alternate necessary?**

- a) Diversion to a nearby alternate is not necessary, because it is allowed to calculate without reserve fuel.
- b) Diversion to a nearby alternate is not necessary, because the reserve fuel has not been used completely.
- c) Diversion to a nearby alternate is necessary, unless the captain decides to continue on his own responsibility.
- d) Diversion to a nearby alternate is necessary, because the remaining fuel is not sufficient.

**06. What values are used for the forecasted wind at higher levels?**

- a) Direction relative to magnetic north and speed in knots
- b) Direction relative to true north and speed in knots
- c) Direction relative to grid north and speed in km/h
- d) Direction relative to magnetic north and speed in km/h

**07. Approach procedures - Minimum Sector Altitudes / MSA**Minimum Sector Altitudes are established for each aerodrome. The MSA provides an obstacle clearance of at least 300m (984 ft) within a circle, associated with the homing facility for the approach procedure of that aerodrome. How many NM is the radius of this circle?

- a) 20 NM
- b) 25 NM
- c) 5 NM
- d) 10 NM

**08. 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.

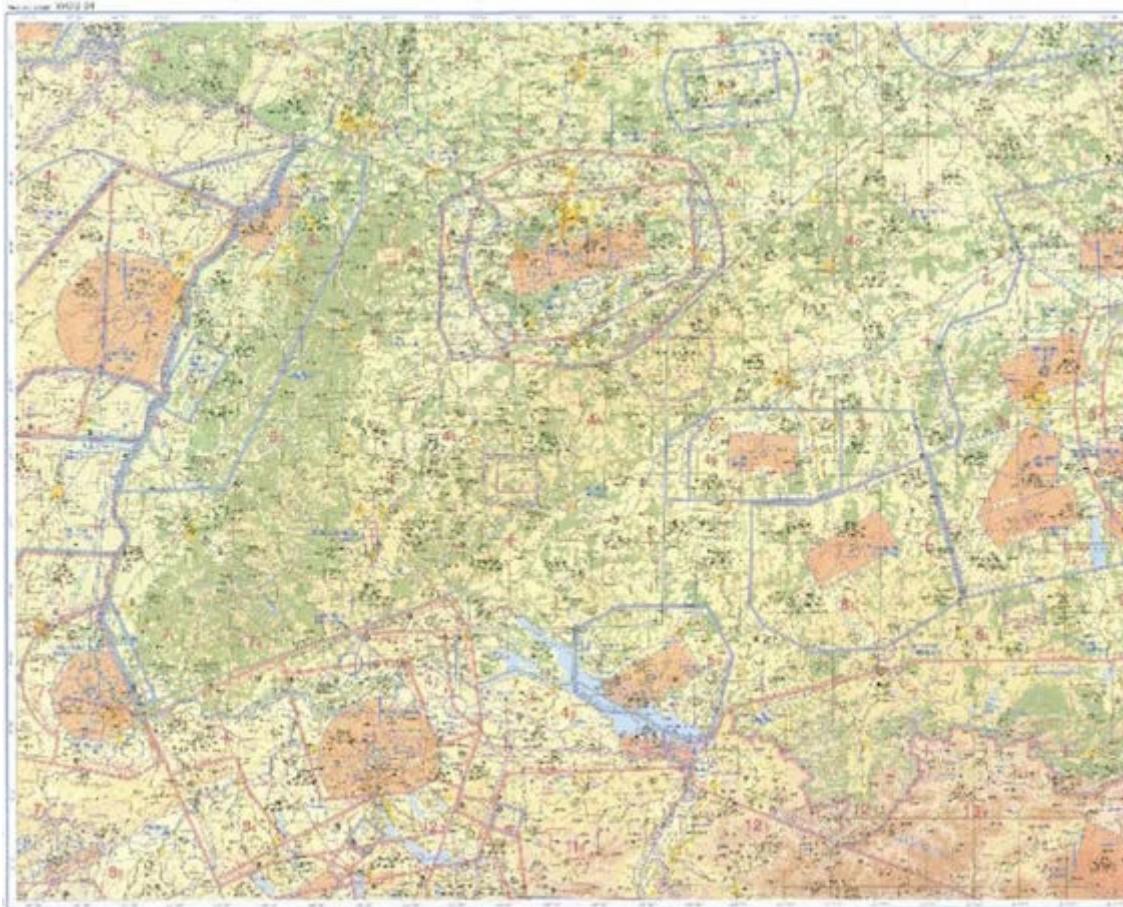
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09. Refer to the General Student Pilot Route Manual - VFR Chart ED-4 Give the frequency of STUTTGART ATIS.



- a) 119.05 MHZ
- b) 135.775 MHz
- c) 116.12 kHz
- d) 126.12 MHz

10. The Master Minimum Equipment List (MMEL) defines the equipment which can be inoperative when undertaking a flight and the conditions under which this allowance can be accepted. This MMEL is drawn up by:

- a) The operator and approved by the certification authority
- b) The operations manual
- c) The operator from a main list drawn up by the manufacturer
- d) The manufacturer and approved by the certification authority

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**11. A message concerning aircraft parts and material urgently required is:**

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

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**12. If you are flying at FL 100 in an air mass that is 10°C warmer than a standard atmosphere, what is the outside temperature likely to be?**

- a) +15°C
- b) -10°C
- c) +5°C
- d) -15°C

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**13. On an aircraft, the Krueger flap is a:**

- a) Trailing Edge Flap Close To The Wing Tip
- b) Leading edge flap
- c) Trailing Edge Flap
- d) Leading Edge Flap Close To The Wing Tip

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**14. An applicant for a commercial pilot licence shall hold**

- a) A current class II medical assessment
- b) A current class I medical assessment
- c) A current class medical assessment as prescribed by the state issuing the licence
- d) A current class III medical assessment

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**15. 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

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## 16. Galactic Radiation is:

- a) Unsteady and reasonably predictable
- b) Steady but unpredictable
- c) Steady and reasonably predictable
- d) Unsteady and unpredictable

17. On a given path, it is possible to choose between four flight levels (FL), each associated with a mandatory flight Mach Number (M). The flight conditions, static air temperature (SAT) and headwind component (HWC) are given below: FL 370 - M = 0.80 Ts = -60°C HWC = -15 kt FL 330 - M = 0.78 Ts = -60°C HWC= - 5 kt FL 290 - M = 0.80 Ts = -55°C HWC = -15 ktFL 270 - M = 0.76 Ts = -43°C HWC = 0 The flight level allowing the highest ground speed is:

- a) FL290
- b) FL270
- c) FL370
- d) FL330

## 18. The radar controller shall not request the pilot to adjust the speed where the aircraft has passed:

- a) 2 NM from the threshold on final approach.
- b) 5 NM from the threshold on final approach.
- c) 3 NM from the threshold on final approach.
- d) 4 NM from the threshold on final approach.

19. The operator shall include in the operations manual a Minimum Equipment List which shall be approved by the Authority of:

- a) The country of the operator.
- b) It is not mandatory that such a book be approved by aviation authorities.
- c) The country where the aircraft was manufactured.
- d) The country where the aircraft is operated.

## 20. What does the word 'report' mean?

- a) Pass me the following information
- b) Examine a system or procedure
- c) Say again
- d) Repeat all of this message back to me exactly as received

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**21. When flaps are deployed at constant angle of attack the lift coefficient will:**

- a) Increase
- b) Vary as the square of IAS
- c) Remain the same
- d) Decrease

**22. An island appears  $60^\circ$  to the left 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  $276^\circ$  with the magnetic variation (VAR)  $10^\circ\text{E}$ ?**

- a)  $046^\circ$
- b)  $026^\circ$
- c)  $226^\circ$
- d)  $086^\circ$

**23. Wind is caused by**

- a) The rotation of the earth
- b) Friction between the air and the ground
- c) Horizontal pressure differences
- d) The movements of fronts

**24. Refer to CAP 697 Section 2 SEP1 Page 3 Figure 2.1 Time, Fuel and Distance to Climb. Given: Take-off mass 3500 lbs, aerodrome pressure altitude 2500 ft, OAT  $+10^\circ\text{C}$ , First cruising level: FL 140, OAT  $-5^\circ\text{C}$  Find the time, fuel and still air dista**

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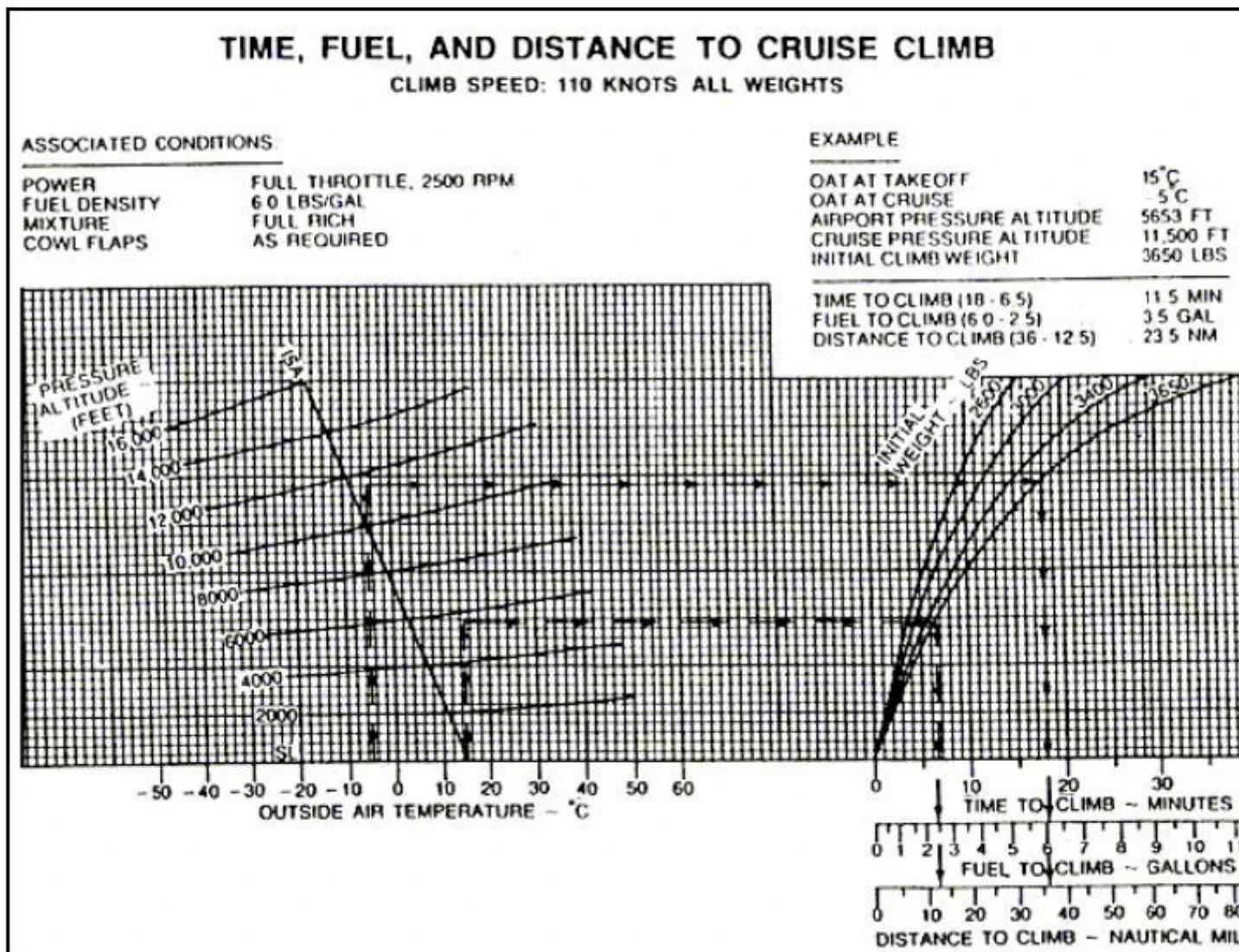


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CIVIL AVIATION AUTHORITY  
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DATA SHEET  
SFP 1

FIGURE 2.1 TIME FUEL AND DISTANCE TO CLIMB



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- a) 24 min, 7.7 GAL, 47 NAM
- b) 16.5 min, 4.9 GAL, 34.5 NAM
- c) 23.5 min, 7.1 GAL, 48.5 NAM
- d) 23 min, 7.7 GAL, 50 NAM

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**25. Generally northern hemisphere winds at 5000 FT/AGL are south-westerly while most of the surface winds are southerly. What is the primary reason of difference between these two wind directions?**

- a) Friction between the wind and the surface.
- b) The influence of warm air at the lower altitude.
- c) Stronger Coriolis force at the surface.
- d) A strong pressure gradient at higher altitudes.

**26. Comparing a forward CG position with an aft one, the forward cg position will cause a**

- a) Decrease in the landing speed.
- b) Decrease in range.
- c) Tendency to yaw to the right on take-off.
- d) Decrease of the stalling speed.

**27. In a Satellite-Assisted Navigation system (GNSS/GPS) a position line is obtained by:**

- a) The aircraft's receiver measuring the phase angle of the signal received from a satellite in a known position
- b) Timing the period that is taken for a satellite's transmission to reach the aircraft's receiver
- c) The aircraft's receiver measuring the time difference between signals received from a minimum number of satellites
- d) 200 FT

**28. Vents in oil tanks are primarily to**

- a) Prevent Overthrow
- b) Allow for expansion of hot oil
- c) Prevent excessive pressure from building up in tank
- d) Eliminate Foaming.

**29. At which levels may Reduced Vertical Separation Minimum (RVSM) be used within the NAT region?**

- a) Between FL275 and FL400 inclusive.
- b) Between FL245 and FL410 inclusive.
- c) Between FL290 and FL410 inclusive.
- d) Below FL290.

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**30. A 1211 halon fire-extinguisher can be used for:**  
1. a paper fire  
2. a fabric fire  
3. an electric fire  
4. a wood fire  
5. a hydrocarbon fire  
The combination regrouping all the correct statements is:

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

**31. An applicant holding a private or commercial pilot licence aeroplane for the issue of an instrument rating, shall have completed .... hours of cross-country flight time as pilot-in-command of aircraft in categories acceptable to the licensing Authority, of which not less than .... hours shall be in aeroplanes. The said hours, are respectively**

- a) 40 hours and 10 hours
- b) 50 hours and 10 hours
- c) 50 hours and 15 hours
- d) 40 hours and 15 hours

**32. Which of the following mechanisms regulate body temperature when exposed to extreme high environmental temperatures?**  
-1: Shivering-2: Vaso-constriction of peripheral blood vessels-3: Sweating-4: Vaso-dilation of peripheral blood vessels

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

**33. When the weather is foggy, on approach, a pilot may get a feeling of:**

- a) The airfield being further away than actually is
- b) Aircraft altitude being lower than it actually is
- c) His/her eyes focusing on infinity
- d) His/her visual field shrinking (i.e. tunnel vision)

**34. The use of professional languages offers:**

- a) Longer attention span
- b) More precise meaning
- c) Quick comprehension and simplified grammar
- d) Better communication even if professionals are not from the same field

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**35. Below its design speed an axial compressor:**

- a) Has A Tendency To Surge In The Center Stages.
- b) Has no tendency to surge.
- c) Has a tendency to surge in the rear stages.
- d) Has a tendency to surge in the front stages.

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**36. A directional gyro consists of a: NB: the degree(s) of freedom of a gyro does not take into account its rotor spin axis.**

- a) 2 degrees-of-freedom vertical axis gyro.
- b) 1 degrees-of-freedom horizontal axis gyro.
- c) 2 degrees-of-freedom horizontal axis gyro.
- d) 1 degrees-of-freedom vertical axis gyro.

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**37. During deceleration following a landing in a northerly direction, a magnetic compass made for the southern hemisphere indicates:**

- a) An apparent turn to the west.
- b) An apparent turn to the east.
- c) No apparent turn only on southern latitudes.
- d) No apparent turn.

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**38. Arrival and departure documentation is acceptable in the form of:**

- a) Type-written only.
- b) Hand-written in block capitals and in ink.
- c) Type-written and electronic form only.
- d) Electronic form only.

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

- 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

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**40. Induced drag at constant IAS is affected by:**

- a) Aeroplane wing location
- b) Aeroplane weight
- c) Engine thrust
- d) Angle between wing chord and fuselage centre line

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**41. What is the effect of a head wind component, compared to still air, on the maximum range speed (IAS) and the speed for maximum climb angle respectively?**

- a) Maximum range speed decreases and maximum climb angle speed increases
- b) Maximum range speed decreases and maximum climb angle speed decreases
- c) Maximum range speed increases and maximum climb angle speed stays constant
- d) Maximum range speed increases and maximum climb angle speed increases

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**42. What does the abbreviation 'ATIS' mean?**

- a) Airport terminal information service
- b) Automatic terminal information service
- c) Air traffic information service
- d) Automatic terminal information system

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**43. A public transport passengers aeroplane, with a seating configuration of more than 61 seats, must have in its passenger compartment(s), at least 3 hand fire-extinguishers including:**

- a) 1 halon fire-extinguisher or equivalent.
- b) 3 halon fire-extinguishers or equivalent.
- c) 2 halon fire-extinguishers or equivalent.
- d) No halon fire-extinguisher.

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**44. The urgency message to be sent by an aircraft reporting an urgency condition shall contain at least the following elements/details:**

- a) Aircraft call sign, destination airport, ETA at destination, route of flight
- b) Aircraft call sign, nature of the urgency condition, pilot's intention, present position, level and heading
- c) Aircraft identification, aerodrome of departure, level and heading
- d) Name of the station addressed, present position, assistance required

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**45. Given: Course 040°(T), TAS is 120 kt, Wind speed 30 kt. Maximum drift angle will be obtained for a wind direction of:**

- a) 130°
- b) 120°
- c) 115°
- d) 145°

**46. A direct Mercator graticule is based on a projection that is:**

- a) Spherical
- b) Cylindrical
- c) Conical
- d) Concentric

**47. Reduced take-off thrust should normally not be used when:**

- a) The runway is wet
- b) It is dark
- c) The OAT is ISA +10°C
- d) Anti-skid is not usable

**48. Normally, temperature readings are taken at a height of \_\_\_\_ in a Stevenson screen.**

- a) 2 m
- b) 40 cm
- c) 10 m
- d) 4 m

**49. When flying in straight and level flight at FL 290 for some considerable time a small leak develops in the cabin which causes a slow depressurisation, this can be seen on the cabin rate of climb indicator which will indicate:**

- a) A rate of climb
- b) A rate of descent dependent upon the cabin differential pressure
- c) Zero
- d) A rate of descent of approximately 300 fpm

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## 50. What does the word " WILCO" mean?

- a) I read you fine.
- b) I understand your message and will comply with it.
- c) I have received all of your last transmission.
- d) As communication is difficult, I will call you later.

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## 51. A pitot tube covered by ice which blocks the ram air inlet will affect the following instrument (s):

- a) Vertical speed indicator only.
- b) Altimeter only.
- c) Airspeed indicator, altimeter and vertical speed indicator.
- d) Airspeed indicator only.

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## 52. Isogonals are lines of equal:

- a) Pressure.
- b) Compass deviation.
- c) Wind velocity.
- d) Magnetic variation.

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## 53. Given:Distance 'A' to 'B' 1973 NM Groundspeed 'out' 430 kt Groundspeed 'back' 385 kt The time from 'A' to the Point of Equal Time (PET) between 'A' and 'B' is:

- a) 130 MIN
- b) 181 MIN
- c) 162 MIN
- d) 145 MIN

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## 54. Mark the correct statement concerning the flight through an inversion caused by subsidence.

- a) During climb, the increased air density above the inversion layer will cause a certain increase in the aircraft performance (i.e. lift and thrust) and the pilot will experience a gradual change of the cross wind component.
- b) During climb, the reduced air density above the inversion layer will cause a certain decrease in the aircraft performance (i.e. lift and thrust) and the pilot will experience a sudden improvement of visibility.
- c) During climb, the pilot of an aircraft probably will experience a slight deterioration of flight visibility when breaking through the top of the inversion layer and the general aircraft performance will decrease.
- d) The pilot of an aircraft probably will experience a gradual increase of the cross wind component and a gradual improvement of flight visibility when breaking through the base of the inversion layer during descent.

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**55. The length of a clearway may be included in:**

- a) The take-off distance available
- b) The distance to reach V1
- c) The take-off run available
- d) The accelerate-stop distance available

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**56. Flight safety messages are:**

- a) Messages concerning the safety of an aircraft, a vessel, any other vehicle or a person.
- b) Operation messages concerning non-routine landings.
- c) Messages relating to direction finding.
- d) Air traffic control messages.

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**57. Because of the input/output relationship of an OR gate, it is often referred to as the:**

- a) Inhibited' Or 'negated' Gate.
- b) State indicator' gate.
- c) Any or all' gate.
- d) All Or Nothing' Gate.

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**58. In a steep turn, the northerly turning error on a magnetic compass on the northern hemisphere is:**

- a) None on a 270° heading in a left turn.
- b) None on a 090° heading in a right turn.
- c) Equal to 180° on a 090° heading in a right turn.
- d) Equal to 180° on a 270° heading in a right turn.

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**59. The term Decision Height (DH) is used for:**

- a) A conventional approach followed by a visual manoeuvre.
- b) An indirect approach.
- c) A conventional approach.
- d) A precision approach.

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## 60. A barotrauma of the middle ear

- a) Is more likely, when the pilot is flying with a respiratory infection and during descent
- b) Is to be expected during rapid decompressions, but an emergency descent immediately following the decompression will eliminate the problem
- c) Causes severe pain in the sinuses
- d) Is only caused by large pressure changes during climb

## 61. 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.

## 62. What does the instruction:'Fastair 345 standby 118.9 for TOWER' mean:

- a) Fastair 345 should change frequency to 118.9, on which aerodrome data are being broadcast
- b) Fastair 345 should contact TOWER on 118.9
- c) Fastair 345 should listen on frequency 118.9 on which TOWER will initiate further communications
- d) Fastair 345 should standby on the current frequency

## 63. In a aeroplane, each crew member shall be properly secured by all safety belts and harnesses provided1 - during taxiing 2 - during take-off 3 - during landing4 - whenever deemed necessary by the commander in the interest of safety 5 - during other phases of the flight while at his stationThe combination regrouping all the correct statements is:

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

## 64. The rate and depth of breathing is primarily controlled by:

- a) The amount of carbon dioxide in the blood
- b) The total atmospheric pressure
- c) The amount of nitrogen in the blood
- d) The amount of carbon monoxide in the blood

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## 65. Why is a secondary radar display screen free of storm clutter?

- a) The principle of 'echo' return is not used in secondary radar
- b) The frequencies employed are too low to give returns from moisture sources
- c) A moving target indicator facility suppresses the display of static or near static returns
- d) 2 and 4

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## 66. 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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## 67. 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

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## 68. A constant headwind:

- a) Increases the angle of descent
- b) Increases the rate of descent
- c) Increases the angle of the descent flight path
- d) Increases the descent distance over ground

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

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

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**70. When the weather conditions require an alternate aerodrome to be available on take-off, the latter shall be located, for aircraft with three or more engines, at an equivalent distance not exceeding:**

- a) 2 hours of flight time at cruising speed
- b) 1 hour of flight time at single engine cruising speed
- c) 2 hours of flight time at one-engine-inoperative cruising speed
- d) 1 hour of flight time at cruising speed

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## Response Scheme

Compare your answers with the following diagram and mark your score!

01: **C**

02: **D**

03: **D**

04: **D**

05: **D**

06: **B**

07: **B**

08: **A**

09: **D**

10: **B**

11: **A**

12: **C**

13: **B**

14: **B**

15: **A**

16: **C**

17: **B**

18: **D**

19: **A**

20: **A**

21: **A**

22: **A**

23: **C**

24: **C**

25: **A**

26: **B**

27: **B**

28: **C**

29: **C**

30: **A**

31: **B**

32: **D**

33: **A**

34: **C**

35: **D**

36: **C**

37: **D**

38: **B**

39: **C**

40: **B**

41: **C**

42: **B**

43: **C**

44: **A**

45: **A**

46: **B**

47: **D**

48: **A**

49: **A**

50: **B**

51: **D**

52: **D**

53: **A**

54: **B**

55: **A**

56: **D**

57: **C**

58: **C**

59: **D**

60: **A**

61: **A**

62: **C**

63: **B**

64: **A**

65: **A**

66: **B**

67: **D**

68: **C**

69: **A**

70: **C**

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## Response form

Use this form to mark your answers

01: \_\_\_\_\_

02: \_\_\_\_\_

03: \_\_\_\_\_

04: \_\_\_\_\_

05: \_\_\_\_\_

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