Exam simulation

ATPL - Airline Transport Pilot license - Meteorology

QuizVds.it

STUDENT NAME:	DATE AND TIME:

01. With what type of cloud is 'GR' precipitation most commonly associated?

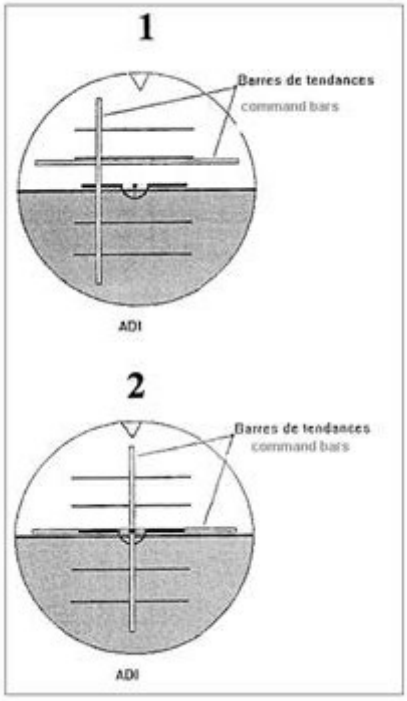
a) ST

b) AS

c) CC

d) CB

02. After having programmed your flight director, you see that the indications of your ADI (Attitude Director Indicator) are as represented in diagram N°1 of the appended annex. On this instrument, the command bars indicate that you must:



a) Decrease the flight attitude and bank your aeroplane to the left until the command bars recentre on the symbolic aeroplane.

b) Increase the flight attitude and bank your aeroplane to the right until the command bars recentre on the symbolic aeroplane.

c) Decrease the flight attitude and bank your aeroplane to the right until the command bars recentre on the symbolic aeroplane.

d) Increase the flight attitude and bank your aeroplane to the left until the command bars recentre on the symbolic aeroplane.

03. What does the word 'cancel' mean?

a) A change has been made to your last clearance

b) Wait and I will call you

c) Annul the previously transmitted clearance

d) Consider that transmission as not sent

04. A stage in an axial compressor:

a) Has a compression ratio in the order of 2.1

b) Is made of row of stator blades followed by a rotor disc

c) Is made of a rotor disc followed by a row of stator blades

d) Has a compression ratio in the order of 0.8

05. An aeroplane has the following flap settings: 0°, 15°, 30° and 45°. Slats can also be selected. Which of the following selections will most adversely affect the CL / CD ratio?

a) Flaps from 30° to 45°

b) Flaps from 15° to 30°

c) Flaps from 0° to 15°

d) The slats

06. How does a NAVSTAR/GPS satellite navigation system receiver recognise which of the received signals belongs to which satellite?

a) Each satellite transmits its signal, on common frequencies, with an individual Pseudo Random Noise code

b) Each satellite transmits its signal on a separate frequency

c) The receiver detects the direction from which the signals are received and compares this information with the calculated positions of the satellites

d) The Doppler shift is unique to each satellite

07. In relation to the NAVSTAR/GPS satellite navigation system, what is involved in the differential technique (D-GPS)?

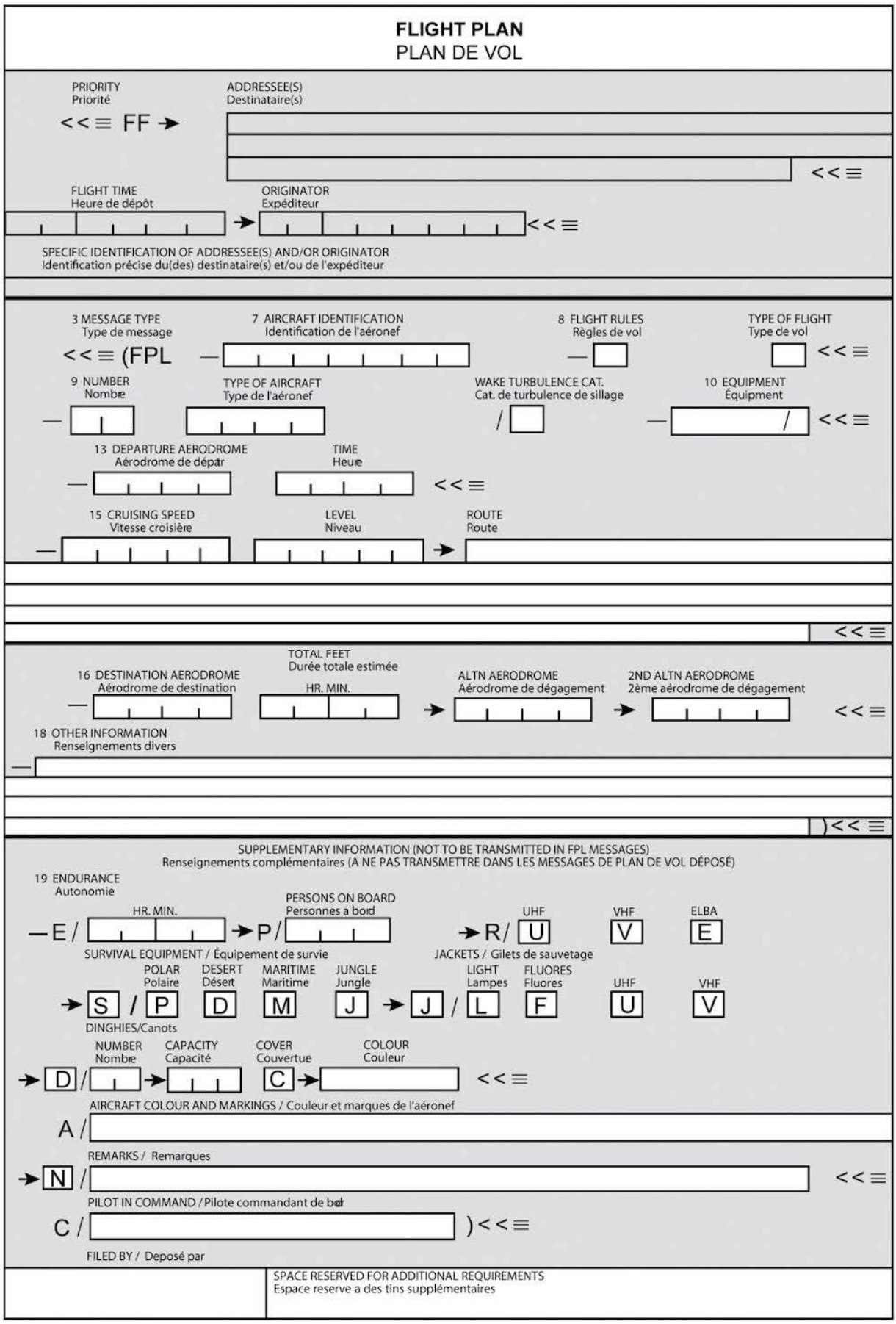
a) Receivers from various manufacturers are operated in parallel to reduce the characteristic receiver noise error

b) The difference between signals transmitted on the L1 and L2 frequencies are processed by the receiver to determine an error correction

c) Signals from satellites are received by 2 different antennas which are located a fixed distance apart. This enables a suitable receiver on the aircraft to recognise and correct for multipath errors

d) Fixed ground stations compute position errors and transmit correction data to a suitable receiver on the aircraft

08. In the ATC flight plan Item 15, for a flight along a designated route, where the departure aerodrome is not on or connected to that route:



FLIGHT PLAN
PLAN DE VOL

PRIORITY
Priorité
<< ≡ FF →

ADDRESSEE(S)
Destinataire(s)
<< ≡

FLIGHT TIME
Heure de dépôt

ORIGINATOR
Expéditeur
<< ≡

SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR
Identification précise du(des) destinataire(s) et/ou de l'expéditeur

3 MESSAGE TYPE
Type de message
<< ≡ (FPL

7 AIRCRAFT IDENTIFICATION
Identification de l'aéronef

8 FLIGHT RULES
Règles de vol

TYPE OF FLIGHT
Type de vol
<< ≡

9 NUMBER
Nombre

TYPE OF AIRCRAFT
Type de l'aéronef

WAKE TURBULENCE CAT.
Cat. de turbulence de sillage

10 EQUIPMENT
Équipment
<< ≡

13 DEPARTURE AERODROME
Aérodrome de départ

TIME
Heure
<< ≡

15 CRUISING SPEED
Vitesse croisière

LEVEL
Niveau

ROUTE
Route
<< ≡

16 DESTINATION AERODROME
Aérodrome de destination

TOTAL FEET
Durée totale estimée
HR. MIN.

ALTN AERODROME
Aérodrome de dégagement

2ND ALTN AERODROME
2ème aérodrome de dégagement
<< ≡

18 OTHER INFORMATION
Renseignements divers
)<< ≡

SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)
Renseignements complémentaires (A NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)

19 ENDURANCE
Autonomie

—E/ HR. MIN.

PERSONS ON BOARD
Personnes a bord
→P/

→R/ UHF U VHF V ELBA E

SURVIVAL EQUIPMENT / Équipement de survie

JACKETS / Gilets de sauvetage

POLAR Polaire S / P
DESERT Désert D
MARITIME Maritime M
JUNGLE Jungle J
→ J / LIGHT Lampes L
FLUORES Fluores F
UHF U
VHF V

DINGHIES/Canots

→D/ NUMBER Nombre
→ CAPACITY Capacité
C → COVER Couvertue
COLOUR Couleur
<< ≡

AIRCRAFT COLOUR AND MARKINGS / Couleur et marques de l'aéronef
A/

REMARKS / Remarques
→N/
<< ≡

PILOT IN COMMAND / Pilote commandant de bord
C/
)<< ≡

FILED BY / Deposé par

SPACE RESERVED FOR ADDITIONAL REQUIREMENTS
Espace reserve a des fins supplémentaires

a) The letters 'DCT' should be entered, followed by the point of joining the ATS route
b) It is not necessary to indicate the point of joining that route as it will be obvious to the ATS unit.
c) The words 'as cleared' should be entered
d) It is necessary only to give the first reporting point on that route

09. In the northern hemisphere, during a take-off run in a westerly direction, a direct reading magnetic compass indicates:

a) An apparent turn to the north.
b) An apparent turn to the south.
c) No apparent turn.
d) An apparent turn to approximately the heading 255°.

10. The landing reference speed VREF has, in accordance with CS-25, the following margins above reference stall speed in landing configuration:

a) 23%
b) 10%
c) 20%
d) 15%

11. Of what use, if any, is a military TACAN station to civil aviation?

a) It can provide DME distance
b) It can provide a magnetic bearing
c) It can provide a DME distance and magnetic bearing
d) It is of no use to civil aviation

12. Given: - Ts the static temperature (SAT)- Tt the total temperature (TAT)- Kr the recovery coefficient- M the Mach numberThe total temperature can be expressed approximately by the formula:

a) Tt = Ts(1-0.2 M2)

b) Tt = Ts(1+0.2 M2)

c) Tt = Ts/(1+0.2 Kr. M2)

d) Tt = Ts(1+0.2 Kr. M2)

13. Which of the following lists all the stages of flight when is it possible to change the route in the active flight plan on an FMS equipped aircraft?

a) Only before the flight plan is activated

b) Only before take-off

c) Only once the aircraft is airborne.

d) At any time before take-off and throughout the flight

14. In the Flight Management Computer (FMC) of the Flight Management System (FMS), data relating to STARs and SIDs is stored in the:

a) Performance database

b) Air data computer

c) Auto flight computers

d) Navigation database

15. Which of the following statements about boundary layers is correct?

a) The turbulent boundary layer has more kinetic energy than the laminar boundary layer

b) The turbulent boundary layer will separate more easily than the laminar boundary layer

c) The turbulent boundary layer gives a lower skin friction than the laminar boundary layer

d) The turbulent boundary layer is thinner than the laminar boundary layer

16. Find the time to the Point of Safe Return (PSR). Given: Maximum useable fuel 15000 kg, Minimum reserve fuel 3500 kg, TAS out 425 kt, Head wind component out 30 kt, TAS return 430 kt, Tailwind component return 20 kt, Average fuel flow 2150 kg/h

a) 2 h 59 min

b) 3 h 43 min

c) 2 h 43 min

d) 2 h 51 min

17. Item D of a SNOWTAM gives the cleared length of a runway in metres. If this is less than the published length, how is this reported:

a) In plain language at item T (the final paragraph) of a SNOWTAM

b) By a four figure group added to item D, which gives the length in metres

c) It is not reported

d) As a percentage of the total length of the runway available as the final item of a SNOWTAM

18. If the centre of gravity is near the forward limit the aeroplane will:

a) Benefit from reduced drag due to the decrease in angle of attack.

b) Require less power for a given airspeed.

c) Require elevator trim which will result in an increase in fuel consumption.

d) Tend to over rotate during take-off.

19. A vibration indicator receives a signal from different sensors (accelerometers). It indicates the:

a) Acceleration measured by the sensors, expressed in g

b) Vibration amplitude at a given frequency

c) Vibration period expressed in seconds

d) Vibration frequency expressed in Hz

20. Before transmitting the pilot should:

a) Always write the message and read it during the transmission

b) Make sure that the aircraft is levelled off

c) Make sure that the emergency frequency is tuned in at the same time

d) Listen out on the frequency to ensure no interference with another station already transmitting will occur

21. The location of the centre of pressure of a positive cambered wing at increasing angle of attack will:

a) Not shift

b) Shift forward

c) Shift in spanwise direction

d) Shift aft

22. When flying at night the first sense to be affected by a slight degree of hypoxia is the

a) Sense of balance
b) Cochlea
c) Proprioceptive sensitivity
d) Vision

23. What is EGNOS (European Global Navigation Overlay System)?

a) Local Area Differential GPS (LADGPS)
b) GLONASS
c) Wide Area Differential GPS (WADGPS)
d) Local Area Augmentation System (LAAS)

24. What does the phrase 'break break' mean?

a) It indicates the separation between portions of a message transmitted to an aircraft station
b) It indicates the separation between messages transmitted to different aircraft in a very busy environment
c) My transmission is ended and I expect a response from you
d) The exchange of transmissions is ended and no response is expected

25. What, if any, is the abbreviated call sign of Fastair 2345?

a) Fastair 345
b) No abbreviated form
c) 2345
d) Fastair 45

26. Search and Rescue. The unit responsible for promoting efficient organisation of search and rescue service is the:

a) Rescue Co-ordination Centre
b) Area Control Centre
c) Flight Information Centre
d) Alerting Centre

27. EHAM 120600Z 02025KT 3000 RA BKN005 OVC015 11/10 Q1012= Which of the following is the correct decode for the Amsterdam METAR?

a) Observation at 06:00 UTC, wind 020° at 25 kts, visibility 3000 m in rain, clouds: broken with base 500 ft AGL and 8 oktas with base 1500 ft AGL, temperature +11°C, dew point +10°C, QNH 1012 hPa.

b) Period of validity between 06:00 UTC and 00:00 UTC; wind 020° at 25 kts, visibility 3000 m in rain, clouds: broken with base 500 ft AGL and 8 oktas with base 1500 ft AGL, temperature +11°C, dew point +10°C, QNH 1012 hPa.

c) Period of validity between 06:00 UTC and 00:00 UTC; wind 020° at 25 kts, visibility 3000 metres in rain; clouds: broken ST with base 500 ft AGL and 8 oktas NS with base 1500 ft AGL, temperature +11°C, dew point +10°C, QNH 1012 hPa.

d) Observation at 06:00 UTC, wind 020° at 25 kts, visibility 3000 m in rain, broken clouds with base 500 ft MSL and 8 oktas of clouds with base 1500 ft MSL, temperature +11°C, dew point +10°C, QNH 1012 hPa.

28. What is the meaning of the phrase 'Radar service terminated'?

a) ATC wants you to reset transponder

b) ATC wants you to continue VFR

c) You are now leaving the Terminal Area

d) You will no longer be provided with radar control

29. An aircraft at FL 370 in NAT HLA cannot continue in accordance with its clearance and cannot obtain a revised clearance. After establishing a 5 NM parallel same-direction offset, if remaining in the NAT level band, the crew should normally:

a) Climb or descend 1 000 ft.

b) Maintain the assigned level without any further vertical offset.

c) Descend 300 ft if tracking east and climb 300 ft if tracking west.

d) Establish a 500 ft vertical offset from normally used flight levels, unless descending below FL 290.

30. A class A fire is a fire of:

a) Liquid or liquefiable solid

b) Electrical origin

c) Solid material, generally of organic nature

d) Metal or gas or chemical (special fires)

31. A lower airspeed at constant mass and altitude requires:

a) Less thrust and a lower coefficient of lift

b) A higher coefficient of lift

c) More thrust and a lower coefficient of drag

d) More thrust and a lower coefficient of lift

32. The maximum certificated take-off mass is:

a) A take-off limiting mass which is governed by the gradient of climb after reaching V2.

b) A take-off limiting mass which is affected by the aerodrome altitude and temperature.

c) Limited by the runway take off distance available. It is tabulated in the Flight Manual.

d) A structural limit which may not be exceeded for any take-off.

33. In relation to the net take-off flight path, the required 35 ft vertical distance to clear all obstacles is:

a) Based on pressure altitudes

b) The minimum vertical distance between the lowest part of the aeroplane and all obstacles within the obstacle domain

c) The height at which power is reduced to maximum climb thrust

d) The height by which acceleration and flap retraction should be completed

34. Complete line 6 of the 'FLIGHT NAVIGATION LOG', positions 'L' to 'M'. What is the HDG°(M) and ETA?

Line No.	Time	Course/ Track (T)	W/V	HDG (T)	VAR	HDG (M)	POSITION FROM	TO	CAS/ MACH	FL OAT	TAS	GS	DIST	TIME	ETA
1	1015	270	050/40		7E		A	B	210	180 -20			300		
2	1050	180	320/50		5W		C	D	175	160 -10			480		
3	1125	090	140/60		10W		E	F	M 0.82	350 -40			300		
4	1210	360	315/70		10E		G	H	M 0.78	310 -35			600		
5	1245	330	240/30		17W		J	K	150	100 -10			275		
6	1355	070	020/60		11W		L	M	M 0.84	390 -55			495		

a) HDG 075° - ETA 1452 UTC

b) HDG 064° - ETA 1449 UTC

c) HDG 070° - ETA 1459 UTC

d) HDG 075° - ETA 1502 UTC

35. The proprioceptive senses (seat-of-the-pants sense) are important for motor coordination. They

a) Indicate the difference between gravity and G-forces

b) Allow the pilot to determine the absolute vertical at flight condition

c) Are completely unreliable for orientation when flying in IMC

d) Are important senses for flight training in IMC

36. An aeroplane which has a maximum certificated take-off mass over 5700 kg, shall be equipped with a cockpit voice recorder capable of retaining information recorded during at least the last:

a) 30 minutes or 2 hours of its operation, depending upon the date of the first issue of its individual Certificate of Airworthiness.

b) 25 hours of its operation.

c) 20 hours of its operation.

d) 30 minutes or 1 hour of its operation, depending upon the date of the first issue of its individual Certificate of Airworthiness.

37. What phrase shall be used when asking for the readability of a transmission?

a) Read back

b) Report readability

c) How do you read?

d) Read you loud and clear

38. Find the SHORT DISTANCE CRUISE ALTITUDE for the twin jet aeroplane. Given: Brake release mass=45000 kg, Temperature=ISA + 20°C, Trip distance=50 Nautical Air Miles (NAM)

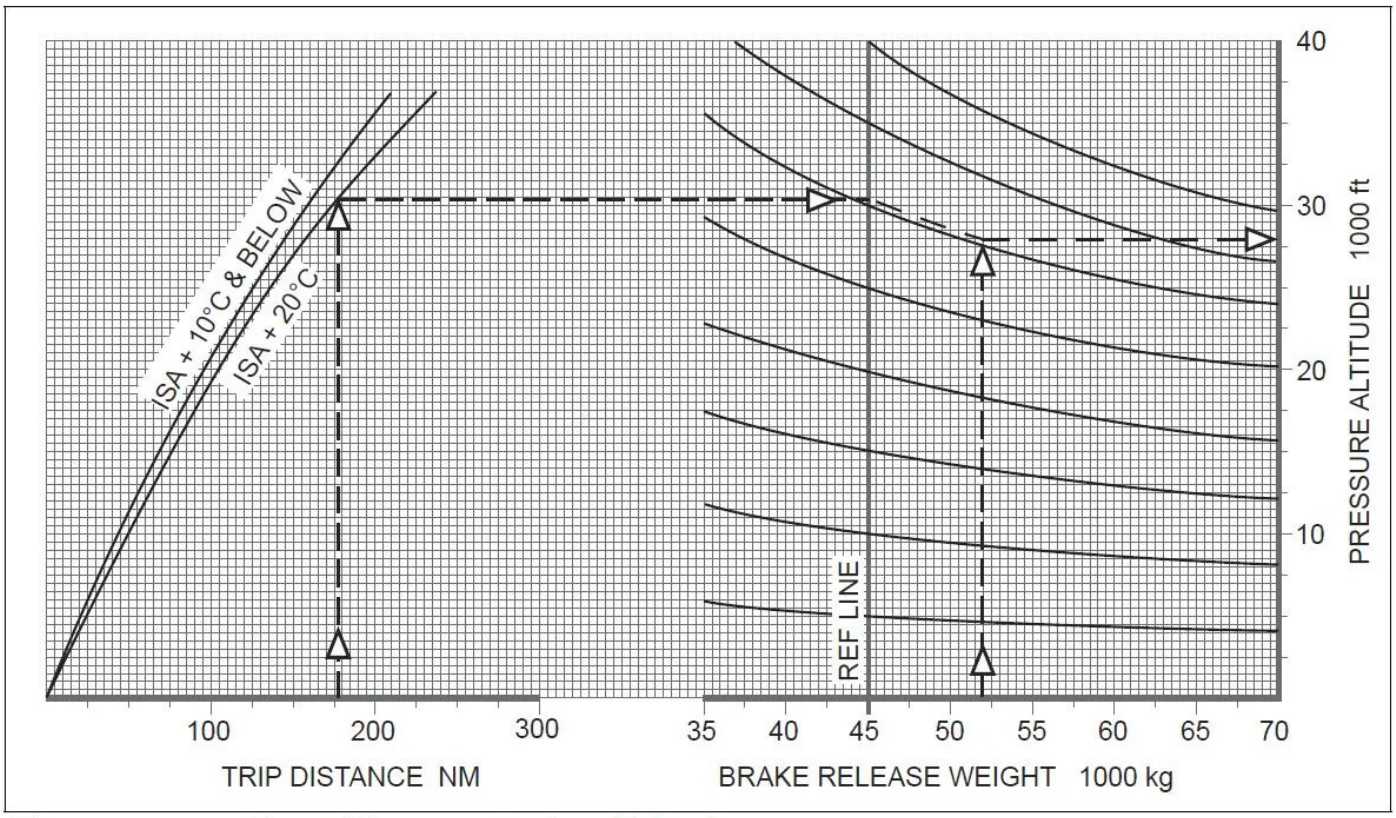


Figure 4.2 Short Distance Cruise Altitude

a) 7500 ft

b) 12500 ft

c) 10000 ft

d) 11000 ft

39. For aeroplane certified before the 1 April 1998, cockpit voice recorder (CVR), when required, must keep the conversations and sound alarms recorded during the last:

a) Flight.

b) 25 hours of operation.

c) 48 hours of operation.

d) 30 minutes of operation.

40. Runway-lead-in lighting should consist:

a) Always of a straight row of lights towards the runway

b) Of group of at least three white lights flashing in sequence towards the runway

c) Of an arbitrary amount of green lights

d) Of flashing lights only

41. Which of the following is NOT an international distress frequency?

a) 121.5 MHz

b) 243 MHz

c) 243 kHz

d) 2182 kHz

42. What is "conversion angle":

a) The angular difference between the rhumb line and the great circle between two positions, measured at any of the two positions.

b) The angle at which speech from another person enters the ear.

c) The angle used to convert from true to compass directions.

d) The difference between the rhumb line and the great circle directions.

43. What is the correct call sign of Fastair 345 in the initial call to the aerodrome control tower and the approach control unit, if the aircraft has a maximum take-off weight of more than 136 tonnes:

a) Fastair 345 heavy

b) Fastair 345 widebody

c) Fastair 345

d) Heavy Fastair 345

44. With the SSR transponder selected ON and "ALT" (Mode C) selected, an ATSU requests: "G-ABCD, Verify your level," this is to:

a) Identify the aircraft position.

b) Calibrate the radar equipment.

c) Verify the accuracy of the Mode C level information displayed to the controller.

d) Check your altimeter setting.

45. If the aircraft mass, in a horizontal unaccelerated flight, decreases:

a) The minimum drag increases and the IAS for minimum drag increases

b) The minimum drag increases and the IAS for minimum drag decreases

c) The minimum drag decreases and the IAS for minimum drag increases

d) The minimum drag decreases and the IAS for minimum drag decreases

46. Which word or phrase shall be used to indicate that a change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof?

a) Cleared

b) Approved

c) Recleared

d) Break break

47. What weather conditions are prevalent during the summer, over the North sea, approximately 300 km behind a quickly moving cold front?

a) Showers and thunderstorms.

b) Rain covering a large area, 8 oktas NS.

c) Cloud cover mostly scattered, isolated showers.

d) 8 oktas CS, AS without precipitation.

48. Over-tensioned cables in a flight control system could result in:

a) Insufficient friction in the system.

b) No appreciable difference.

c) Restricted movement of control surfaces.

d) Excessive friction in the system.

49. Select the air traffic service in charge of control of local traffic, take-offs and landings at an airport.

a) Control

b) Radar

c) Air Traffic Centre

d) Tower

50. Longitudinal separation minima based on distance using DME for aircraft at the same cruising level and track, provided that each aircraft utilises 'on Track' DME stations and separation is checked by obtaining simultaneous DME readings, is:

a) 25 NM

b) 10 NM

c) 40 NM

d) 20 NM

51. At what approximate latitude is the length of one minute of arc along a meridian equal to one NM (1852 m) correct?

a) 90°

b) 0°

c) 30°

d) 45°

52. A thermocouple type thermometer consists of:

a) Two metal conductors of different type connected at two points.

b) A single-wire metal winding.

c) A Wheatstone bridge connected to a voltage indicator.

d) Two metal conductors of the same type connected at two points.

53. In which of the following distances can the length of a stopway be included?

a) In the one-engine failure case, take-off distance

b) In the accelerate-stop distance available

c) In the take-off run available

d) In the all-engine take-off distance

54. The fuel plan gives a trip fuel of 65 US gallons. The alternate fuel, final reserve included, is 17 US gallons. Contingency fuel is 5% of the trip fuel. The usable fuel at departure is 93 US gallons. At a certain moment the fuel consumed according to the fuel gauges is 40 US gallons and the distance flown is half of the total distance. Assume that fuel consumption doesn't change. Which statement is right?

a) The remaining fuel is not sufficient to reach the destination with reserves intact
b) At destination the required reserves remain intact.
c) At departure the reserve fuel was 28 US gallons
d) At the destination there will still be 30 US gallons in the tanks

55. Generally what line lies closer to the poles?

a) Rhumb line.
b) Orthodromic line.
c) Equator.
d) The rhumb line or great circle depending on the chart used.

56. During a phugoid the speed:

a) Remains approximately constant, as during a short period oscillation.
b) Varies significantly, whereas during a short period oscillation it does not.
c) Remains approximately constant, whereas during a short period oscillation it varies significantly.
d) Varies significantly, as during a short period oscillation.

57. In case of engine failure during flight the blades of a constant speed propeller in a single engine aeroplane, not fitted with feathering system

a) Move in low pitch position by oil pressure created by the windmilling propeller.
b) Move in the lowest pitch position by the centrifugal force and/or the spring force.
c) Move in the highest pitch position by the aerodynamic force.
d) Move in a certain pitch position depending on windmilling RPM.

58. According to EASA CS the allowable quantitative average failure probability per flight hour for a HAZARDOUS FAILURE should be on the order of:

a) Between 10-5 and 10-7 (remote probability)
b) Between 10-3 and 10-5 (probable)
c) Between 10-7 and 10-9 (extremely remote probability)
d) Less than 10-9 (extremely improbable)

59. In mass and balance calculations the 'index' is:

a) An imaginary vertical plane or line from which all measurements are taken.
b) A location in the aeroplane identified by a number.
c) The range of moments the centre of gravity (cg) can have without making the aeroplane unsafe to fly.
d) Is a figure without unit of measurement which represents a moment.

60. An aircraft is following a true track of 048° at a constant TAS of 210 kt. The wind velocity is 350° / 30 kt. The GS and drift angle are:

a) 192 kt, 7° right
b) 225 kt, 7° left
c) 192 kt, 7° left
d) 200 kt, 3.5° right

61. What does the phrase 'Verify' mean?

a) Read back VDF bearing
b) Repeat your last transmission
c) Consider that transmission as not sent
d) Check and confirm with originator

62. Astronomic precession is:

a) Independent of the latitude
b) Existing whether the aircraft is on the ground or flying
c) Zero when the aircraft is on the ground
d) Depending on the chart used

63. When an aircraft has turned 360 degrees with a constant attitude and bank, the pilot observes the following on a classic artificial horizon:

a) Attitude and bank correct
b) Too much nose-up and bank too high
c) Too much nose-up and bank correct
d) Too much nose-up and bank too low

64. If Paris reports a wind of 30012KT on the METAR, what wind velocity would you expect to encounter at a height of 2000 feet above the ground?

a) 33025KT
b) 23030KT
c) 27020KT
d) 30025KT

65. Which of the following is not a hazardous attitude?

a) Anti-authority
b) Macho
c) Impulsivity
d) Domination

66. Divided attention is the ability: 1. to execute several mental activities at almost the same time (that is, when switching attention from outside the aircraft to the airspeed indicator on the instrument panel) 2. to monitor the progress of a motor programme (that is, flying or taxiing the aeroplane) on a relatively subconscious level, while making a radio call at the same time (requiring a rather conscious level) 3. to select information and check if it is relevant to the task in hand. At the same time no other operation can be performed. 4. to delegate tasks to the copilot while concentrating on the procedures

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

67. In the event of engine failure below V1, the first action to be taken by the pilot in order to decelerate the aeroplane is to:

a) Apply wheel brakes
b) Reverse engine thrust
c) Deploy airbrakes or spoilers
d) Reduce the engine thrust

68. The primary purpose of the reverse current relay is to:

a) Prevent the generator from delivering current to the generator.
b) Prevent the generator from delivering too much current.
c) Prevent the battery from delivering current to the generator.
d) Allow the battery to be charged.

69. Given a maximum floor loading intensity of 650 kg per square metre, what is the maximum mass of a package that can be safely supported on a pallet measuring 80 cm by 80 cm?

a) 416.0 kg
b) 101.6 kg
c) 41.6 kg
d) 1015.6 kg

70. What does the abbreviation 'FIR' mean?

a) Flight information required.
b) Flight information region.
c) Flight information radar.
d) Flow information received.

Exam simulation

ATPL - Airline Transport Pilot license - Meteorology

QuizVds.it

Response Scheme

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

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

Exam simulation

ATPL - Airline Transport Pilot license - Meteorology

QuizVds.it

Response form

Use this form to mark your answers

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