Exam Simulation

ATPL - Airline Transport Pilot license - Aircraft General Knowledge - Airframe, Systems, Powerplant

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STUDENT NAME:	DATE AND TIME:

01. The aim of aviation security is the following:

a) Ensure that adequate maintenance standards are applied by all operators.

b) Safeguard international civil aviation operations against acts of unlawful interference.

c) Ensure that commercial flight operations are safe end secure.

d) Regulate the transportation of dangerous goods by air.

02. Motivation is a quality which is often considered vital in the pilot's work to maintain safety.

a) Motivation reduces the intensity of sensory illusions

b) A high degree of motivation makes it possible to make up for insufficient knowledge in complete safety

c) However, excessive motivation leads to stress which adversely affects performance

d) A high degree of motivation lowers the level of vigilance

03. What is the name of the northerly, cold and strong wind, that sometimes blows over a certain part of Europe (France)?

a) Foehn.

b) Bora.

c) Mistral.

d) Typhoon.

04. An OBS is set to 048 with a TO flag showing. The VOR deviation bar is showing almost full right deflection. Approximately what radial are you on?

a) 038

b) 058

c) 238

d) 218

05. In ISA conditions, what is the maximum theoretical range at which an aircraft at FL80 can expect to obtain bearings from a ground VDF facility sited 325' above MSL?

a) 158 NM

b) 134 NM

c) 114 NM

d) 107 NM

06. When letters are used for registration mark combinations shall not be used which might be confused with urgent signals for example:

a) TTT

b) LLL

c) RCC

d) FFF

07. When descending at a constant Mach number:

a) The difference between surrounding conditions and ISA must be known to deduce the CAS variation.

b) CAS decreases.

c) CAS increases.

d) CAS remains constant.

08. Wind shear is:

a) A variation in vertical wind velocity variation over a short distance

b) A horizontal wind velocity variation over a short distance

c) A vertical or horizontal wind velocity and / or wind direction over a large distance

d) A large variation in vertical or horizontal wind velocity and / or wind direction over a short distance

09. Holding Procedures - EntryRelated to the three entry sectors in a holding pattern, there is a zone of flexibility on either side of the sectors boundaries of:

a) 10°.

b) 15°.

c) 5°.

d) 20°.

10. For a pressurised aircraft, the first-aid oxygen is designed to:

a) Protect all the occupants against the effects of accidental depressurisation.

b) Protect the flight crew and cabin attendants against fumes and noxious gases.

c) Provide oxygen to 10% of passengers at a cabin altitude exceeding 13000 ft after 30 minutes.

d) Provide undiluted oxygen to passengers for physiological reasons following a cabin depressurisation.

11. Which definition describes best the notion "poles"?

a) The poles are the points of intersection between the surface of the earth and the extended line joining the star polaris with the centre of the Earth.

b) The poles are the points on the surface of the Earth which have the same distance to all points of the ecliptic.

c) The poles are the points of intersection between the earth's axis and the surface of the Earth.

d) The poles are the points on the surface of the Earth where gravity acts under an angle of exactly 90°.

12. According to the JAR-OPS requirements, an IFR flight with no alternate aerodrome can be undertaken only if the minimum weather conditions (VMC) are effective for at least:

a) 2 hours before to at least 2 hours after the expected time of arrival

b) 3 hours before to at least 1 hour after the expected time of arrival

c) 1 hour before to at least 1 hour after the expected time of arrival

d) 3 hours before to at least 3 hours after the expected time of arrival

13. What is the minimum field length required for the worst wind situation, landing a twin jet aeroplane with the anti-skid inoperative?Elevation: 2000 ftQNH: 1013 hPaLanding mass: 50 000 kgFlaps: as required for minimum landing distance Runway condition: dryWind:Maximum allowable tailwind: 15 kt Maximum allowable headwind: 50 kt

a) 2600 m.

b) 3100 m.

c) 2900 m.

d) 2700 m.[see Annex]

14. The message to an aeronautical ground station 'please call a taxi-cab for us. We will arrive at 1045' is:

a) A flight regularity message.

b) A flight safety messages.

c) An unauthorized message.

d) An urgency message.

15. Increase of the delta load factor due to a given vertical upgust at a given EAS occurs when:

a) The slope of the CL - alpha graph becomes steeper

b) The wing loading increases

c) The altitude increases

d) The weight increases

16. For the purposes of Item 9 (Wake turbulence category) of the ATC flight plan, an aircraft with a maximum certificated take-off mass of 62000 kg is:

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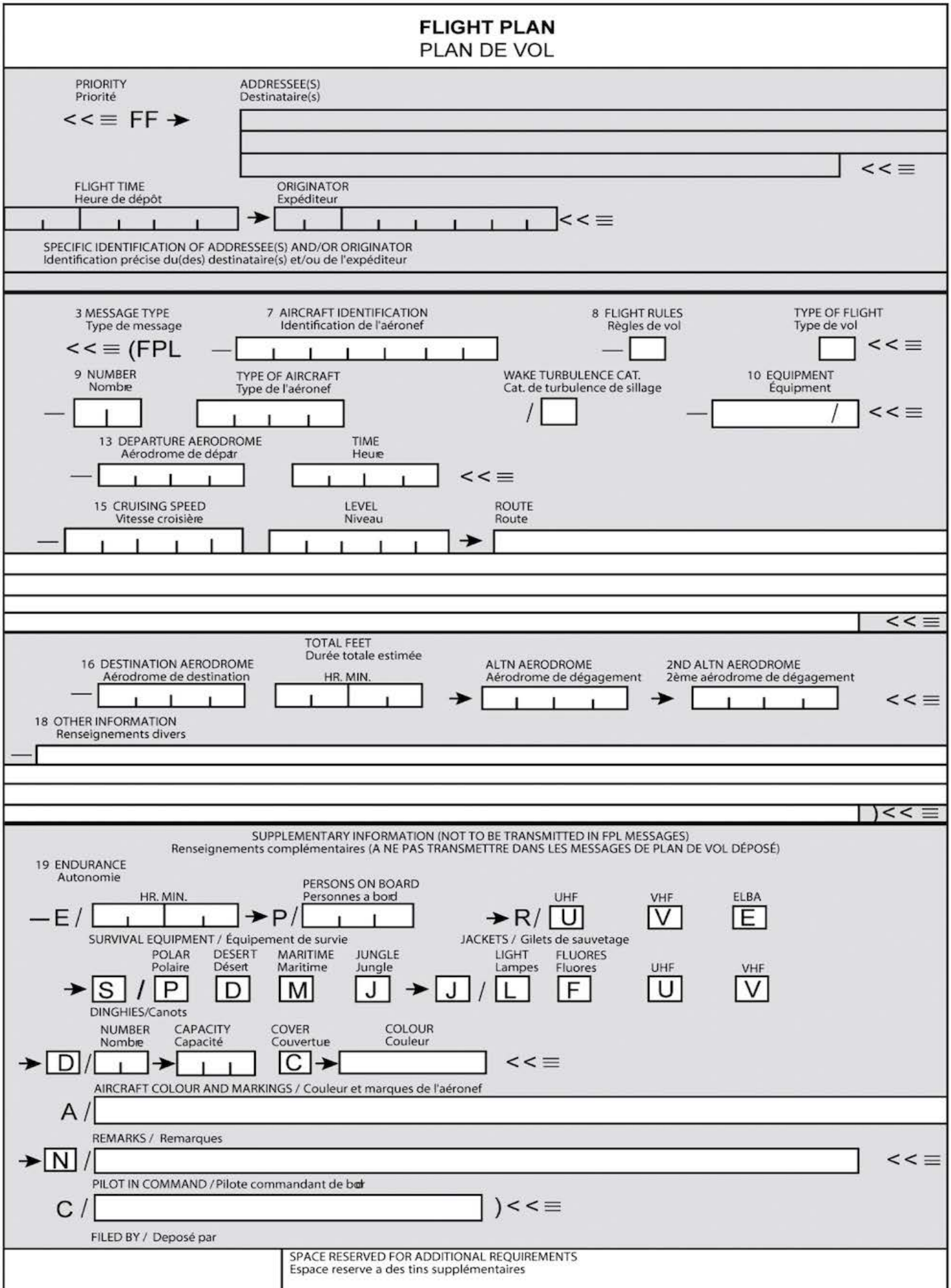
FLIGHT PLAN
PLAN DE VOL
PRIORITY
Priorité
<< ≡ FF →
ADDRESSEE(S)
Destinataire(s)
<< ≡
FLIGHT TIME
Heure de dépôt
ORIGINATOR
Expéditeur
<< ≡
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR
Identification précise du(des) destinataire(s) et/ou de l'expéditeur
3 MESSAGE TYPE
Type de message
<< ≡ (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
HR. MIN.
PERSONS ON BOARD
Personnes a bord
UHF
VHF
ELBA
—E/
P/
R/ U
V
E
SURVIVAL EQUIPMENT / Équipement de survie
JACKETS / Gilets de sauvetage
POLAR
Polaire
DESERT
Désert
MARITIME
Maritime
JUNGLE
Jungle
LIGHT
Lampes
FLUORES
Fluores
UHF
VHF
S / P
D
M
J
J / L
F
U
V
DINGHIES/Canots
NUMBER
Nombre
CAPACITY
Capacité
COVER
Couvertue
COLOUR
Couleur
D/
C
<< ≡
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 tins supplémentaires

a) Heavy 'H'

b) Light 'L'

c) Medium 'M'

d) Unclassified 'U'

17. The disadvantages of axial flow compressors compared to centrifugal flow compressors are 1 - expensive to manufacture 2 - limited airflow 3 - greater vulnerability to foreign object damage 4 - limited compression rati The combination of correct answers is:

a) 1 And 2

b) 2 and 3

c) 1 and 3

d) 2 And 4

18. On hearing an urgency message a pilot shall:

a) Acknowledge the message immediately

b) Impose radio silence on the frequency in use

c) Monitor the frequency to offer assistance if required

d) Change the frequency, because radio silence will be imposed on the frequency in use

19. The expression "secondary flight control" applies to the: 1) trimmable stabilizer 2) rudder 3) speed brake 4) aileronThe combination that regroups all of the correct statements is:

a) 1, 2, 3, 4

b) 1, 3

c) 2, 4

d) 2, 3

20. 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.

21. An aircraft transmitting a distress message is required to give its position as:

a) The most accurate possible using GPS if fitted.

b) Present or last known position, altitude or level and heading.

c) Position relative to a VRP.

d) Latitude and longitude.

22. When the transponder appears to be unserviceable prior to departure and repair at departure airport is impossible, then:

a) Departure to the nearest suitable airport where repair can be effected is allowed

b) You are not allowed to commence the flight

c) The flight can only continue in the most direct manner

23. During initiation of a turn with speedbrakes extended, the roll spoiler function induces a spoiler deflection:

a) Upward on the upgoing wing and downward on the downgoing wing.

b) Downward on the upgoing wing and upward on the downgoing wing.

c) On the downgoing wing only.

d) On the upgoing wing only.

24. The time between inadequate oxygen supply and incapacitation is called TUC (Time of Useful Consciousness). It

a) Varies individually and depends on cabin pressure altitude

b) Varies individually and does not depend on altitude

c) Is not dependent on physical or psychological pressure

d) Is the same amount of time for every person

25. Given:E = electromotive force (emf) Tc = cold junction temperature Th = hot junction temperature K = constantThe relationship that applies to a thermocouple is:

a) E = K x Tc2

b) E = K x Th2

c) E = K x Tc

d) E = K x Th

26. If an aircraft flies along a VOR radial it will follow a:

a) Rhumbline track

b) Great circle track

c) Constant magnetic track

d) 140°

27. Which phenomena will normally influence the reception of VHF transmission ?

a) Electrical discharges as they happen frequently in thunderstorms

b) The ionosphere

c) Day- and night effect

d) Level of aircraft and terrain elevations

28. Which design features improve static lateral stability?1. Anhedral.2. Dihedral.3. Forward sweep.4. Sweepback.The combination that regroups all of the correct statements is:

a) 1, 4.

b) 2, 3.

c) 1, 3.

d) 2, 4.

29. When being engaged, and without selecting a particular mode, an automatic pilot enables:

a) Aeroplane stabilisation with attitude hold or maintaining vertical speed and possibly automatic trim.

b) Aeroplane piloting and guidance functions.

c) All aeroplane piloting and guidance functions except maintaining radio-navigation course lines.

d) A constant speed on track, wings horizontal.

30. Given are:- Maximum structural take-off mass: 72 000 kg- Maximum structural landing mass: 56 000 kg- Maximum zero fuel mass: 48 000 kg- Taxi fuel: 800 kg- Trip fuel: 18 000 kg- Contingency fuel: 900 kg- Alternate fuel: 700 kg- Final reserve fuel: 2 000 kgThe actual take-off mass can never be higher than:

a) 69 600 kg

b) 70 400 kg

c) 72 000 kg

d) 74 000 kg

31. If an aircraft is flying (with flaps and landing gear retracted) in proximity to terrain and its GPWS (Ground Proximity Warning System) get activated, because it is detecting that the aeroplane has an excessive rate of descent, the system provides the following aural warning signals:

a) 'SINK RATE, SINK RATE' followed by 'WHOOP WHOOP PULL UP' (twice)

b) 'TOO LOW, TERRAIN' (twice) followed by 'TOO LOW GEAR' (twice)

c) 'TERRAIN, TERRAIN' followed by 'WHOOP WHOOP PULL UP' (twice)

d) 'DON'T SINK, DON'T SINK'

32. Which statement concerning the inclusion of a clearway in take-off calculation is correct?

a) The field length limited take-off mass will increase

b) V1 remains constant

c) V1 is increased

d) The usable length of the clearway is not limited

33. Evacuation slide normal inflation is achieved by:

a) A pressurised gas canister.

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.

34. Which phrase shall be used if the repetition of an entire message is required:

a) Say again

b) Repeat your last transmission

c) What was your message?

d) Repeat your message

35. What wing shape or wing characteristic is the least sensitive to turbulence:

a) Swept wings
b) Elliptical wing
c) Wing dihedral
d) Straight wings

36. When the term 'CAVOK' is used in an aviation routine weather report (METAR), the values of visibility and clouds are:

a) Visibility 10 km or more, no clouds below 5000 feet/GND
b) Visibility more than 5000 m, no clouds below 1500 m/GND
c) Visibility more than 8 km, no clouds below 3000 feet/GND
d) Visibility 10 km or more, no clouds below 1500 feet/GND

37. An aircraft flies a great circle track from 56° N 070° W to 62° N 110° E. The total distance travelled is?

a) 5420 NM
b) 3720 NM
c) 2040 NM
d) 1788 NM

38. A pilot wishes to turn right on to a southerly heading with 20° bank at a latitude of 20° North. Using a direct reading compass, in order to achieve this he must stop the turn on an approximate heading of:

a) 170°
b) 150°
c) 200°
d) 190°

39. The result of a higher flap setting up to the optimum at take-off is:

a) An increased acceleration
b) A higher V1
c) A shorter ground roll
d) A longer take-off run

40. An island appears 30° 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 020° with the magnetic variation (VAR) 25°W?

a) 195°

b) 145°

c) 325°

d) 205°

41. In straight horizontal steady flight, at speeds below that for minimum drag:

a) A lower speed requires a higher thrust.

b) The aeroplane cannot be controlled manually.

c) A higher speed, but still below that for minimum drag, requires a higher thrust.

d) The aeroplane can be controlled only in level flight.

42. What is the radiotelephony call sign for the aeronautical station indicating approach control radar departures?

a) ...CONTROL

b) ...RADAR

c) ...DEPARTURE

d) ...APPROACH

43. Given:Distance from departure to destination: 2000 NM Endurance: 5 hTAS: 500 ktGround Speed Out: 480 kt Ground Speed Home: 520 ktWhat is the distance of the PSR from the departure point?

a) 1248 NM

b) 752 NM

c) 624 NM

d) 1040 NM

44. The aircraft has started a descent. Select the correct radiotelephony transmission:

a) LEAVING FL 200

b) LEAVING LEVEL 200 FOR LEVEL 120

c) LEAVING FL 200, DESCENDING TO FL 120

d) STARTING DESCENT

45. Aircraft X-BC has been instructed to listen on ATIS frequency 123.25, on which information are being broadcast. What is the correct response to indicate that it will follow this instruction ?

a) Changing to 123.25 X-BC

b) Monitoring 123.25 X-BC

c) Checking 123.25 X-BC

d) Will contact 123.25 X-BC

46. The principle used in VOR bearing measurement is:

a) Phase comparison

b) Difference in depth of modulation

c) Beat frequency discrimination

d) Envelope matching

47. A message concerning a protected medical transport operated by aircraft assigned exclusively to medical transportation shall be preceded by the signal:

a) MEDICAL TRANSPORT

b) PAN PAN MEDICAL

c) PAN PAN TRANSPORT

d) PROTECTED TRANSPORT

48. In general transport aeroplanes with power assisted flight controls are fitted with an adjustable stabilizer instead of trim tabs on the elevator. This is because:

a) The pilot does not feel the stick forces at all

b) Effectiveness of trim tabs is insufficient for those aeroplanes

c) Trim tab deflection increases Mcrit

d) Mechanical adjustment of trim tabs creates too many problems

49. On the QDR of 075° (in the vicinity of the station) with a magnetic heading of 295°, the relative bearing on the ADF indicator is:

a) 320°

b) 220°

c) 040°

d) Range within "line of sight", and maximum of 200 NM

50. High speed buffet is induced by

a) Boundary layer control.

b) Expansion waves on the wing upper surface.

c) Boundary layer separation due to shock wave formation.

d) A shift of the centre of gravity.

51. At which altitude, at temperate latitudes, may hail be expected in connection with a CB?

a) From the ground up to about FL 200.

b) From the ground up to about FL 100.

c) From the ground up to a maximum of FL 450.

d) From the base of the clouds up to about FL 200.

52. Which of the following gases is fundamentally responsible for decompression sickness?

a) Carbon dioxide.

b) Oxygen.

c) Sodium.

d) Nitrogen.

53. Flight Information Region (FIR) is an airspace within which the following services are provided:

a) Flight Information Service and Alerting Service.

b) Flight Information Service and Advisory Service.

c) Flight Information Service only.

d) Flight Information Service, Alerting Service and Advisory Service.

54. With regard to the drift down performance of the twin jet aeroplane, why does the curve representing 35000 kg gross mass in the chart for drift down net profiles start at approximately 4 minutes at FL370?

a) Due to higher TAS at this mass it takes more time to develop the optimal rate of descent, because of the inertia involved

b) Because at this mass the engines slow down at a slower rate after failure, there is still some thrust left during four minutes

c) All the curves start at the same point, which is situated outside the chart

d) Because at this mass it takes approximately 4 minutes to decelerate to the optimum speed for drift down at the original cruising level[see Annex]

55. Given:Pt: total pressure Ps: static pressurePd: dynamic pressure The altimeter is fed by:

a) Ps-Pt
b) Ps
c) Pd-Ps
d) Pd

56. An aeroplane exhibits static longitudinal stability, if, when the angle of attack changes:

a) The change in total aeroplane lift acts through the centre of gravity
b) The resulting moment is positive
c) The change in total aeroplane lift acts aft of the centre of gravity
d) The change in wing lift is equal to the change in tail lift

57. The great circle distance between position A (59°34.1'N 008°08.4'E) and B (30°25.9'N 171°51.6'W) is:

a) 10 800 km
b) 2 700 NM
c) 5 400 NM
d) 10 800 NM

58. What does the word 'Monitor' mean:

a) Wait and I will call you
b) Establish radio contact with...
c) Listen out on (frequency).
d) Examine a system or procedure

59. What does the word 'check' mean?

a) Confirm your last transmission
b) Read back my last instruction
c) Examine a system or procedure
d) I understand your message

60. An aeroplane is to depart from an airfield at a take-off mass of 302550 kg. Fuel on board at take-off (including contingency and alternate of 19450 kg) is 121450 kg. The Dry Operating Mass is 161450 kg. The useful load will be

a) 19650 kg

b) 141100 kg

c) 39105 kg

d) 121450 kg

61. Whenever a distress signal and/or message or equivalent transmission is intercepted by the PIC of an aircraft, he shall:

a) If possible take a bearing on the transmission.

b) Record the position of the craft in distress if given and if possible take a bearing on the transmission.

c) Record the position of the craft in distress if given.

d) Enter into a holding pattern and wait for an SAR aircraft to arrive.

62. The Chinook is a

a) Warm and dry wind that forms as air descends on the leeward side of the Rocky Mountains

b) Warm anabatic wind up the slopes of snowfields or glaciers

c) Downslope wind that occurs particularly at night as air cools along mountain slopes

d) Very cold wind with blowing snow

63. What does the term 'way point' mean:

a) A defined position on an aerodrome used for the calibration of the inertial navigation system

b) A signal indicating the direction of the runway-in-use

c) A specified geographical position used to define an area navigation route or the flight path of an aircraft employing area navigation

d) A general term meaning the taxiway- and the runway-system of an international airport

64. The landing field length required for jet aeroplanes at the alternate (wet condition) is the demonstrated landing distance plus

a) 92%

b) 67%

c) 70%

d) 43%

65. You may act as a flight instructor to carry out flight instruction for the issue of a PPL

a) With a PPL plus CPL theory

b) With a PPL plus flight instructor rating

c) With a valid licence plus flight instructor rating

d) With a CPL

66. The angle between True North and Magnetic North is called:

a) Variation

b) Drift

c) Compass error

d) Deviation

67. The data that needs to be inserted into an Inertial Reference System in order to enable the system to make a successful alignment for navigation is:

a) 9

b) 10

c) 11

d) 12

68. Which statement is correct about the laminar and turbulent boundary layer:

a) Friction drag will be equal in both types of layers

b) Friction drag is lower in the laminar layer

c) Separation point will occur earlier in the turbulent layer

d) Friction drag is lower in the turbulent layer

69. An aircraft is 100 NM from a VOR facility. Assuming no error when using a deviation indicator where 1 dot = 2° deviation, how many dots deviation from the centre line of the instrument will represent the limits of the airway boundary? (Assume that the airway is 10 NM wide)

a) 1.5

b) 6.0

c) 4.5

d) 3.0

70. 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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Answer scheme

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

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

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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:
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57:	58:	59:	60:
61:	62:	63:	64:
65:	66:	67:	68:
69:	70:		