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STUDENT NAME:

DATE AND TIME:

01. Complete line 3 of the 'FLIGHT NAVIGATION LOG', positions 'E' to 'F'. 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 095° - ETA 1155 UTC
- b) HDG 105° - ETA 1205 UTC
- c) HDG 115° - ETA 1145 UTC
- d) HDG 106° - ETA 1215 UTC

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02. During a low level flight 2 parallel roads that are crossed at right angles by an aircraft. The time between these roads can be used to check the aircraft:

- a) Position
- b) Track
- c) Groundspeed
- d) Drift

03. The wind indicator for a weather observation receives the measured value from an anemometer. Where is this instrument placed?

- a) 1 m above the runway.
- b) Close to the station about 2 m above the ground.
- c) On a mast 6-10 m above the runway.
- d) On the roof of the weather station.

04. When taking-off behind a heavy aircraft, with wind coming from the left side, you adopt a path, whenever possible:

- a) Distinct from the preceding airplane, by remaining at the right of and under its path.
- b) Distinct from the preceding airplane, by remaining at the left of and above its path.
- c) Distinct from the preceding airplane, by remaining behind it and under its path.
- d) Identical to the one of the preceding airplane.

05. Full deflection on a glide slope indicator indicates that the aircraft is:

- a) 2.5° above or below the correct glide path.
- b) 0.5° above or below the correct glide path.
- c) 0.7° above or below the correct glide path.
- d) 1.0° to the left.

06. The angle of attack (aerodynamic angle of incidence) of an aerofoil is the angle between the:

- a) Chord line and the relative undisturbed airflow
- b) Bottom surface and the chord line
- c) Bottom surface and the relative airflow
- d) Bottom surface and the horizontal

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07. 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

08. You would use a powder fire-extinguisher for: 1. a paper fire 2. a plastic fire 3. a hydrocarbon fire 4. an electrical fire. The combination regrouping all the correct statements is:

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

09. For the medium range transport aeroplane, from the loading manual, determine the maximum total volume of fuel which can be loaded into the main wing tanks. (Fuel density value 0.78)

	BA (full tanks)	Volume (US Gallons)	Mass (kg)
Left Wing Main Tank 1	650.7	1,499	4,542
Right Wing Main Tank 2	650.7	1,499	4,542
Centre Tank	600.4	2,313	7,008
Max. Total Fuel (assumes 3.03 kg/US gall.)	628.8	5,311	16,092

Caution - If centre tank contains more than 450 kg the wing tanks **must** be full

Figure 4.5 Fuel Tank Location and Maximum Volume

Location	Volume (US Galls)	Mass (kg)	BA
Wing Tank 1	4.6	14.0	599.0
Wing Tank 2	4.6	14.0	599.0
Centre Tank	7.9	24.0	600.9

Figure 4.6 Unusable Fuel Quantities

- a) 11646 litres
- b) 8850 litres
- c) 5674 litres
- d) 11349 litres

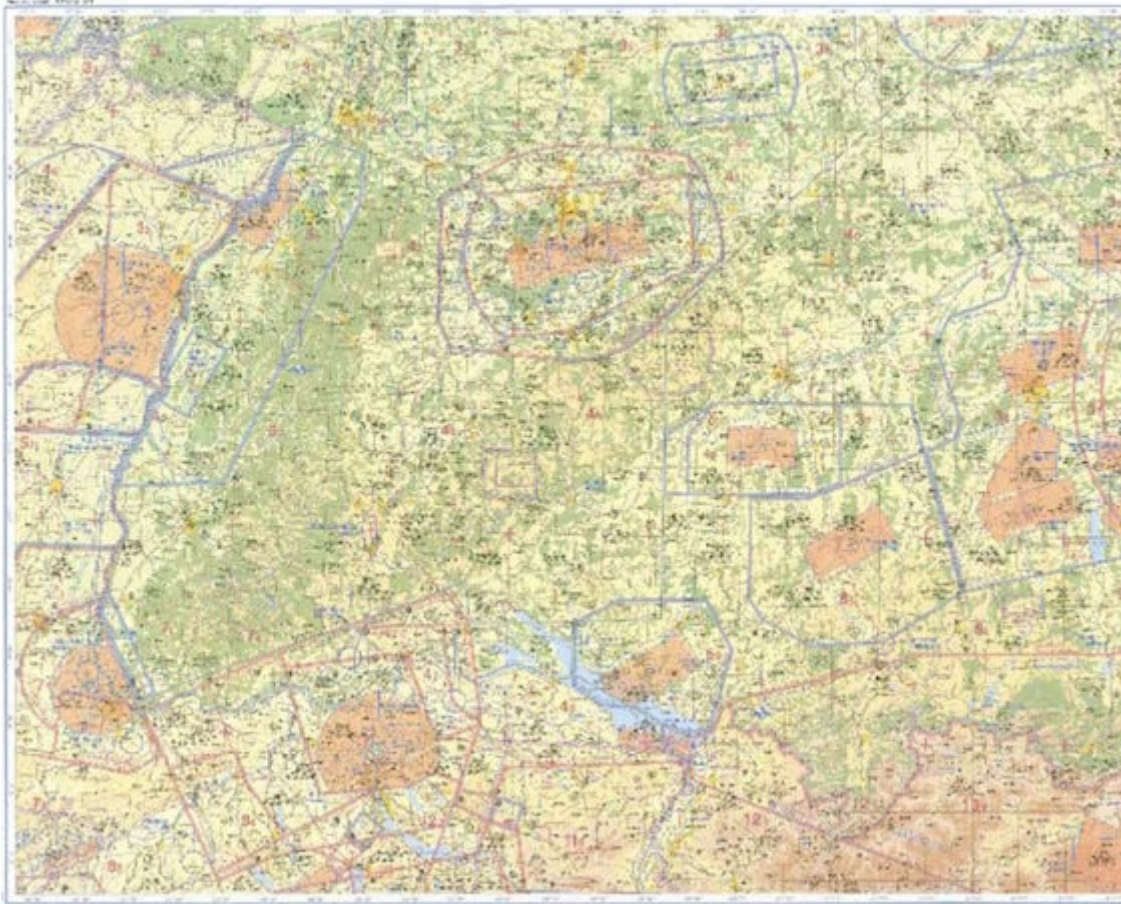
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10. Refer to the General Student Pilot Route Manual - VFR Chart ED-4 Flying VFR from PEITING (47°48.0'N, 010°55.5'E) to IMMENSTADT (47°33.5'N, 010°13.0'E) determine the distance.



- a) 46 NM
- b) 58 NM
- c) 32 NM
- d) 36 NM

11. The function of a NOT logic gate within a circuit is to:

- a) Ensure The Input Signal Is Ac Only.
- b) Ensure the input signal is DC only.
- c) Ensure the output signal is of the same state as the input signal.
- d) Invert the input signal such that the output is always of the opposite state.

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12. If the ground wire between the magnetos and the ignition switch becomes disconnected the most noticeable result will be that:

- a) A Still Operating Engine Will Run Down
- b) The engine cannot be started with the ignition switch in the 'ON' position
- c) The engine cannot be shut down by turning the ignition switch to the 'OFF' position
- d) The Power Developed By The Engine Will Be Strongly Reduced

13. The Maximum Zero Fuel Mass is the mass of the aeroplane with no usable fuel on board. It is a limitation which is:

- a) Governed by the requirements of the centre of gravity limits and the structural limits of the aeroplane.
- b) Tabulated in the Flight Manual against arguments of airfield elevation and temperature.
- c) Listed in the Flight Manual as a fixed value. It is a structural limit.
- d) Governed by the traffic load to be carried. It also provides protection from excessive 'wing bending'.

14. 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

15. An aircraft, following a 215° true track at variation 3°W, must fly over a 10 600 ft obstacle with a minimum obstacle clearance of 1 500 ft. Knowing the QNH received from an airport close by, which is almost at sea-level, is 1035 and the temperature is ISA -15°C, the minimum flight level will be:

- a) 140
- b) 150
- c) 130
- d) 120

16. Which of the messages listed below shall not be handled by the aeronautical mobile service?

- a) Radio teletype messages.
- b) Urgency messages.
- c) Flight safety messages.
- d) Meteorological messages.

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17. On a modern large pressurized transport aircraft, the maximum cabin differential pressure is approximately:

- a) 3 - 5 Psi
- b) 13 - 15 psi
- c) 7 - 9 psi
- d) 22 Psi

18. You plan a flight over a mountain range at a true altitude of 15000 FT/AMSL. The air is on an average 15°C colder than ISA, the pressure at sea level is 1003 hPa. What approximate indication should the altimeter (setting 1013.2 hPa) read?

- a) 14370'
- b) 15690'
- c) 13830'
- d) 16230'

19. A 1211 halon fire-extinguisher can be used for:1. a paper fire2. a fabric fire3. an electric fire4. a wood fire5. 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

20. When excessively leaning the mixture for a better fuel economy, but still on the rich side of the peak EGT, the following engine parameter(s) may exceed their normal operating ranges:

- a) Oil Temperature.
- b) Engine RPM.
- c) Manifold pressure.
- d) Cylinder head and exhaust gas temperature.

21. The induced drag:

- a) Increases as the aspect ratio increases
- b) Has no relation to the lift coefficient
- c) Increases as the lift coefficient increases
- d) Increases as the magnitude of the tip vortices decreases

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22. 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.

23. A VOR is sited at position A (45°00'N, 010°00'E). An aircraft is located at position B (44°00'N, 010°00'E). Assuming that the magnetic variation at A is 10°W and at B is 15°W, the aircraft is on VOR radial:

- a) 195°
- b) 185°
- c) 190°
- d) 020°

24. How long is 25 km at 60°00'N?

- a) 13.5 nautical miles.
- b) 46.3 nautical miles.
- c) 27.0 nautical miles.
- d) 40.2 statute miles.

25. In aviation, the reflection on ionosphere layers phenomenon is used in the following frequencies:

- a) Uhf
- b) VHF
- c) VLF
- d) Hf

26. Aircraft flying along the same track may be separated by DME-distances from the same DME and it is confirmed that the aircraft have passed each other. Specify the shortest difference in DME-distance to make it possible for one aircraft to climb or descend

- a) 12 NM
- b) 15 NM
- c) 10 NM
- d) 20 NM

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27. On the readability scale what does 'readability 1' mean?

- a) Readable
- b) Perfectly readable
- c) Unreadable
- d) Readable but with difficulty

28. For a twin-engine aeroplane, non ETOPS, the take-off alternate, if required, shall be located (in still air conditions) within:

- a) One hour of flight time, at cruising speed with only one engine operative.
- b) Two hours of flight time at cruising speed all engines operating.
- c) One hour of flight time at cruising speed all engines operating.
- d) Two hours of flight time, at cruising speed with only one engine operative.

29. Which of these statements about a gust lock system are correct or incorrect? 1) There is no need for a gust lock on irreversible flight controls. 2) Manual flight controls should have a gust lock.

- a) 1) Is Incorrect, 2) Is Correct.
- b) 1) Is Correct, 2) Is Incorrect.
- c) 1) is correct, 2) is correct.
- d) 1) Is Incorrect, 2) Is Incorrect.

30. The minimum number of hand fire-extinguishers to be located in the passenger compartment of an aircraft with a maximum approved passenger seating configuration of 31 is:

- a) 3
- b) 1
- d) 2

31. 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

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32. The purpose of a compressor bleed valve is to prevent surging:

- a) At low compressor rpm.
- b) With altitude.
- c) Of the first compressor stages.
- d) Generated By Foreign Object Ingestion.

33. A DME station is located 1000' above MSL. An aircraft flying at FL 370 in ISA conditions which is 15 NM away from the DME station, will have a DME reading of:

- a) 14 NM
- b) 15 NM
- c) 16 NM
- d) Beyond 100 NM because insufficient antenna tilt angle is available with the mapping mode

34. What characteristics will the surface winds have in an area where the isobars on the weather map are very close together?

- a) Very weak but gusty and flowing across the isobars.
- b) Strong and flowing across the isobars.
- c) Moderate and flowing parallel to the isobars.
- d) Strong and flowing parallel to the isobars.

35. How should a pilot inform the ATS unit that their aircraft does not have 8.33 KHz capability?

- a) We do not have this frequency
- b) Negative eight point three three
- c) Negative eight point three three frequency equipment
- d) My aircraft is not equipped with eight point three three

36. Which of the following statements about a Mach trimmer is correct?

- a) A straight wing aeroplane always needs a Mach trimmer for flying at Mach numbers close to MMO
- b) A Mach trimmer corrects the change in stick force stability of a swept wing aeroplane above a certain Mach number
- c) The Mach trimmer corrects the natural tendency of a swept wing aeroplane to pitch-up
- d) A Mach trimmer reduces the stick force stability of a straight wing aeroplane to zero at high Mach numbers

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37. At what approximate height above the WGS-84 ellipsoid are NAVSTAR/GPS satellites circling the earth?

- a) 10900 km
- b) 20200 km
- c) 19500 km
- d) 18

38. The use of a slot in the leading edge of the wing enables the aeroplane to fly at a slower speed because:

- a) The laminar part of the boundary layer gets thicker
- b) It decelerates the upper surface boundary layer air
- c) It delays the stall to a higher angle of attack
- d) It changes the camber of the wing

39. Medical conditions such as high blood pressure, coronary problems and diabetes are associated with:

- a) Cholera
- b) Anorexia nervosa
- c) Hypoxia
- d) Obesity

40. To fight a fire in an air-conditioned cargo hold:

- a) Extinguish fire only.
- b) Extinguish fire and reduce air conditioning.
- c) Fire-fighting is not necessary, since the transport of combustible goods in an air-conditioned cargo hold is forbidden.
- d) You turn off the cargo hold ventilation and extinguish fire.

41. Which statement is correct concerning a mountain ridge where a marked mountain wave has been reported ?

- a) There are always rotor clouds
- b) The atmosphere is unstable at the level of the mountain tops
- c) Ragged altocumulus lenticularis is an indication for the presence of moderate/severe turbulence at the level of these clouds
- d) The axis of a rotor is horizontal and perpendicular to the mountains

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42. Given: Maximum allowable take-off mass 64400 kg, Maximum landing mass 56200 kg, Maximum zero fuel mass 53000 kg, Dry operating mass 35500 kg, Traffic load 14500 kg, Trip fuel 4900 kg, Take-off fuel 7400 kg Find: Maximum additional load

- a) 7000 kg
- b) 4000 kg
- c) 5600 kg
- d) 3000 kg

43. An artificial feel system:

- a) Functions in parallel with an irreversible hydraulic actuator.
- b) Functions In Series With An Irreversible Hydraulic Actuator.
- c) Is Mounted In Parallel With A Spring Tab.
- d) Is Necessary In A Reversible Flight Control Actuator Unit.

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

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

45. Aircraft XY-ABC is making a test transmission with Stephenville TOWER on frequency 118.7. What is the correct phrasing for this transmission:

- a) Stephenville TOWER XY-ABC radio check 118.7
- b) Stephenville TOWER XY-ABC frequency check
- c) Stephenville TOWER XY-ABC signal check
- d) Stephenville TOWER XY-ABC pre-flight check

46. What does 'Friction coefficient 45' in a runway report mean:

- a) Braking action good
- b) Braking action not measurable
- c) Braking action poor
- d) Braking action medium

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47. For an inbound aircraft, the PIC can be asked to provide which of the following?

- a) 3 copies of the general declaration, 2 copies of the cargo manifest, 2 copies of a simple stores list.
- b) 2 copies of the general declaration, 2 copies of the cargo manifest, 2 copies of a simple stores list.
- c) 2 copies of the general declaration, 3 copies of the cargo manifest, 2 copies of a simple stores list.
- d) 3 copies of the general declaration, 3 copies of the cargo manifest, 3 copies of a simple stores list.

48. The vertical command bar of a flight director:

- a) Repeats the position information given by the ILS in the horizontal plane.
- b) Repeats the position information given by the ILS in the vertical plane.
- c) Gives information about the direction and the amplitude of the corrections to be applied on the control commands.
- d) Gives information only about the direction of the corrections to be applied on the bank of the aircraft.

49. Which one of the displayed cloud forms is representative of altocumulus lenticularis?

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

50. The jetstream and associated clear air turbulence can sometimes be visually identified in flight by

- a) Long streaks of cirrus clouds.
- b) A high-pressure centre at high level
- c) A constant outside air temperature
- d) Dust or haze at high level

51. If the EPR probe becomes covered with ice, EPR indications will be:

- a) Less than the actual
- b) Equal to the actual
- c) Greater than the actual
- d) Not available

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52. Judgement is based upon:

- a) A decision making process involving physical sensations and their transfer to manually operate the aircraft controls
- b) The development of skills from constant practice of flight manoeuvres
- c) A process involving a pilot's attitude to take and to evaluate risks by assessing the situation and making decisions based upon knowledge, skill and experience
- d) The ability to interpret the flight instruments

53. Given: maximum allowable take-off mass 64400 kg maximum landing mass 56200 kg maximum zero fuel mass 53000 kg dry operating mass 35500 kg estimated load 14500 kg estimated trip fuel 4900kg minimum take-off fuel 7400 kg Find the maximum allowable take-off fuel:

- a) 14400 kg
- b) 11400 kg
- c) 8600 kg
- d) 11100 kg

54. Runway end lights shall be:

- a) Fixed unidirectional lights showing red in the direction of the runway.
- b) Fixed lights showing variable white.
- c) Fixed lights showing variable red.
- d) Fixed unidirectional lights showing white in the direction of the runway.

55. A Radar Information Service (RIS) provides:

- a) The bearing, distance and if known, the altitude of conflicting traffic.
- b) Information for IFR traffic only.
- c) Traffic information and avoiding action.
- d) Radar separation from all other traffic.

56. On the ground, during a right turn, the turn indicator indicates:

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

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57. According to JAR-OPS 1, the lowest minima to be used by an operator for circling with a category A aeroplane is a meteorological visibility of:

- a) 2400 m
- b) 1500 m
- c) 3600 m
- d) 1600 m

58. 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

59. Which of the following is the datum for altitude information when conducting flights under IFR conditions on airways using the NAVSTAR/GPS satellite navigation system?

- a) Barometric altitude
- b) GPS altitude if 4 or more satellites are received otherwise barometric altitude
- c) GPS altitude
- d) Flight envelope and system limits

60. The positive manoeuvring limit load factor for a light aeroplane in the utility category in the clean configuration is:

- a) 3.8
- b) 2.5
- c) 6.0
- d) 4.4

61. The Minimum Equipment List (MEL) is established by:

- a) The airline operator and approved by the authority.
- b) The Civil Aviation Authority of the European states.
- c) The aeronautical authority the airline operator depends on.
- d) The manufacturer and approved by the authority.

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62. If VOR bearing information is used beyond the published protection range, errors could be caused by:

- a) Sky wave interference from the same transmitter
- b) Noise from precipitation static exceeding the signal strength of the transmitter
- c) Sky wave interference from distant transmitters on the same frequency
- d) Interference from other NDBs, particularly at night

63. Given: GS = 510 kt. Distance A to B = 43 NM What is the time (MIN) from A to B?

- a) Mean scale between pole and equator
- b) Mean scale between the parallels of the secant cone
- c) Scale at the standard parallels
- d) Scale at the equator

64. During deceleration following a landing in an easterly direction, a magnetic compass made for the northern hemisphere indicates:

- a) An apparent turn to the north.
- b) A constant heading.
- c) An apparent turn to the south.
- d) A heading fluctuating about 090°.

65. Given: Maximum structural take-off mass: 7400 kg Maximum structural landing mass: 7400 kg Zero Fuel Mass: 5990 kg Taxi Fuel: 15 kg Contingency Fuel: 110 kg Alternate Fuel: 275 kg Final Reserve Fuel: 250 kg Trip Fuel: 760 kg The expected Landing Mass at destination will be:

- a) 7385 kg
- b) 7400 kg
- c) 6625 kg
- d) 7135 kg

66. An aeroplane maintains straight and level flight while the IAS is doubled. The change in lift coefficient will be:

- a) X 0.25
- b) X 4.0
- c) X 0.5
- d) X 2.0

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67. Which statement about reduced thrust is correct?

- a) Reduced thrust is primarily a noise abatement procedure
- b) Reduced thrust can be used when the actual take-off mass is less than the field length limited take-off mass
- c) In case of reduced thrust V1 should be decreased
- d) Reduced thrust is used in order to save fuel

68. The heading read on the dial of a directional gyro is subject to errors, one of which is due to the movement of the aircraft. This error...

- a) Is, in spite of this, insignificant and may be neglected
- b) Is at its greatest value when the aircraft follows a meridional track
- c) Is dependent on the ground speed of the aircraft, its true track and the average latitude of the flight
- d) Shows itself by an apparent rotation of the horizontal axis of the gyroscope which seems to turn at 15° per hour to the right in the northern hemisphere

69. In a ditching situation, except for infants, the passengers shall be instructed to inflate their life jackets:

- a) As soon as ditching is prepared.
- b) Immediately on the opening of the exits.
- c) When exiting the aircraft.
- d) Immediately on ditching.

70. 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

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Response Scheme

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

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