

Exam simulation

ATPL - Airline Transport Pilot license - Aircraft General Knowledge - Instrumentation



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STUDENT NAME:

DATE AND TIME:

01. A descent is planned from 7500 ft AMSL so as to arrive at 1000 ft AMSL 6 NM from a VORTAC. With a GS of 156 kt and a rate of descent of 800 ft/min. The distance from the VORTAC when descent is started is:

- a) 15,0 NM
- b) 27,1 NM
- c) 30,2 NM
- d) 11,7 NM

02. Given: FL 350, Mach 0.80, OAT -55°C. Calculate the values for TAS and local speed of sound (LSS)?

- a) 461 kt, LSS 576 kt
- b) 461 kt, LSS 296 kt
- c) 490 kt, LSS 461 kt
- d) 237 kt, LSS 296 kt

03. A directional gyro is: 1- a gyroscope free around two axis 2- a gyroscope free around one axis 3- capable of self-orientation around an earth-tied direction 4- incapable of self-orientation around an earth-tied direction. The combination which regroups all of the correct statements is: NB: the degree(s) of freedom of a gyro does not take into account its rotor spin axis.

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

04. A VOR and DME are co-located. You want to identify the DME by listening to the callsign. Having heard the same callsign 4 times in 30 seconds the:

- a) DME callsign is the one with the higher pitch that was broadcast only once
- b) VOR and DME callsigns were the same and broadcast with the same pitch
- c) DME callsign is the one with the lower pitch that was broadcast several times
- d) DME callsign was not transmitted, the distance information is sufficient proof of correct operation

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05. The 'estimated total time' in block 16 of a VFR flight plan is the estimated time:

- a) Required by the aircraft from take-off to arrive overhead the destination airport.
- b) Of endurance at cruising power taking into account pressure and temperature on that day.
- c) Required by the aircraft from brake release at take-off until landing.
- d) Required by the aircraft from the moment it moves by its own power until it stops at the end of the flight (block time).

06. During a flight to Europe scheduled in NAT HLA, you expect to cross the 30°W meridian at 0300 UTC. You will normally be:

- a) Within the organised daytime track system.
- b) Outside the validity period of the organised track system.
- c) Within the organised night-time track system.
- d) Within a polar track system.

07. In accordance with Air OPS, for a pressurised aeroplane, the minimum requirement for supplemental oxygen needed to supply 100 % of the passengers following a cabin pressurisation failure, is:

- a) 30 minutes.
- b) The entire flight time when the cabin pressure altitude exceeds 13000 ft.
- c) The entire flight time where the cabin pressure altitude exceeds 15000 ft, but in no case less than 10 minutes.
- d) The entire flight time after 30 minutes at pressure altitude greater than 10000 ft but not exceeding 13000ft.

08. A message preceded by the phrase 'Transmitting blind due to receiver failure' shall be transmitted:

- a) On the regional guard frequency
- b) On the international emergency frequency
- c) On the frequency presently in use
- d) On all available aeronautical stations

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09. 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°

10. The take-off safety speed V2 for two-engine or three-engine turbo propeller powered aeroplanes may not be less than:

- a) 1.13 VSR
- b) 1.15 VSR
- c) 1.15 VS1
- d) 1.2 VS

11. The time of useful consciousness in case of an explosive decompression at an altitude of 40 000 ft is:

- a) 1 minute.
- b) 30 seconds.
- c) 5 minutes.
- d) 12 seconds.

12. If the outside temperature at 35 000 feet is -40°C, the local speed of sound is:

- a) 247 kt.
- b) 307 kt.
- c) 595 kt.
- d) 686 kt.

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13. Shimmy occurs on the nose wheel landing gear during taxiing when 1. the wheels tend to describe a sinusoidal motion on the ground 2. the wheels no longer respond to the pilot's actions This effect is overcome by means of: 3. the torque link 4. a damper associated with the steering cylinder. The combination of correct statements is:

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

14. Following a take-off determined by the 50' (15 m) screen height, a light twin climbs on a 10% over-the-ground climb gradient. It will clear a 900 m high obstacle in relation to the runway (horizontally), situated at 10000 m from the 50' clearing point with an obstacle clearance of:

- a) 100 m
- b) 115 m
- c) It will not clear the obstacle
- d) 85 m

15. An urgency message shall be preceded by the radiotelephony urgency signal:

- a) URGENCY, spoken three times
- b) PAN PAN, spoken three times
- c) ALERFA, spoken three times
- d) MAYDAY, spoken three times

16. To be as accurate as possible, an anemometer must be calibrated according to the following formula:

- a) Bernoulli, taking into account the air compressibility.
- b) Saint-Venant, considering the air as an incompressible fluid.
- c) Saint-Venant, taking into account the air compressibility.
- d) Bernoulli, considering the air as an incompressible fluid.

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17. A climb gradient required is 3.3%. For an aircraft maintaining 100 KT true airspeed, no wind, this climb gradient corresponds to a rate of climb of approximately:

- a) 3300 fpm
- b) 330 fpm
- c) 33.0 m/s
- d) 3.30 m/s

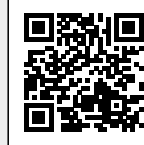
18. Loads must be adequately secured in order to:

- a) Avoid unplanned centre of gravity (CG) movement and aircraft damage.
- b) Prevent excessive g-loading during the landing flare.
- c) Avoid any centre of gravity (CG) movement during flight.
- d) Allow steep turns.

19. Refer to Performance Manual MRJT1 Page 19 Figure 4.5.1 En-route Climb 280/0.74 Given: brake release mass 57500 kg temperature ISA -10°C headwind component 16 kt initial FL 280 Find: still-air distance (NAM) and ground distance (NGM) for the climb

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ISA -6°C TO -15°C

Press. Alt. ft	Units Min/kg. NAM/Kt	BRAKE RELEASE WEIGHT KG										
		68000	66000	64000	62000	60000	58000	56000	52000	48000	44000	40000
37000	Time/Fuel				30/2100	25/1800	22/1650	20/1550	17/1350	15/1200	13/1050	12/950
	Dist/TAS				184/391	148/387	130/385	117/383	98/381	85/379	73/378	64/377
36000	Time/Fuel			28/2050	24/1800	22/1650	20/1550	19/1450	16/1300	14/1150	13/1100	11/900
	Dist/TAS			166/388	142/385	127/383	115/381	106/380	91/378	79/377	69/376	60/375
35000	Time/Fuel	32/2350	27/2000	24/1850	22/1700	20/1600	19/1500	17/1400	16/1350	14/1200	13/1100	12/1000
	Dist/TAS	195/390	156/385	139/383	125/381	114/380	105/378	97/377	85/376	74/375	65/374	57/373
34000	Time/Fuel	26/2000	23/1850	21/1700	20/1600	19/1500	17/1400	16/1350	14/1200	13/1100	11/950	10/850
	Dist/TAS	152/383	136/381	123/379	113/378	105/376	97/375	90/375	79/373	70/372	61/371	54/371
33000	Time/Fuel	23/1850	21/1750	20/1650	19/1550	17/1450	16/1350	15/1300	14/1150	12/1050	11/950	10/850
	Dist/TAS	133/378	121/376	112/375	104/374	97/373	90/372	84/372	74/371	66/370	58/369	51/368
32000	Time/Fuel	21/1750	20/1650	19/1550	17/1500	16/1400	16/1300	15/1250	13/1150	12/1000	11/900	9/800
	Dist/TAS	120/374	111/373	103/372	96/371	90/370	84/369	79/369	70/368	62/367	55/366	48/366
31000	Time/Fuel	20/1700	19/1600	18/1500	17/1400	16/1350	15/1300	14/1200	13/1100	11/1000	10/900	9/800
	Dist/TAS	110/370	102/369	95/368	89/367	84/367	79/366	74/366	66/365	58/364	52/364	46/363
30000	Time/Fuel	19/1600	18/1550	17/1450	16/1350	15/1300	14/1250	13/1200	12/1050	11/950	10/850	9/800
	Dist/TAS	101/366	95/365	89/364	83/364	78/363	74/363	70/362	62/362	55/361	49/361	43/360
29000	Time/Fuel	17/1550	16/1450	16/1400	15/1300	14/1250	13/1200	13/1150	11/1050	10/950	9/850	8/750
	Dist/TAS	92/361	87/360	81/360	77/359	72/359	68/358	64/358	57/357	51/357	46/357	41/356
28000	Time/Fuel	16/1450	15/1400	15/1300	14/1250	13/1200	13/1150	12/1100	11/1000	10/900	9/800	8/750
	Dist/TAS	84/356	79/356	75/355	70/355	67/355	63/354	59/354	53/353	48/353	42/353	38/352
27000	Time/Fuel	15/1400	14/1350	14/1250	13/1200	12/1150	12/1100	11/1050	10/950	9/850	8/800	8/700
	Dist/TAS	77/352	73/351	69/351	65/351	61/350	58/350	55/350	49/349	44/349	39/349	35/348
26000	Time/Fuel	14/1350	14/1250	13/1200	12/1150	12/1100	11/1050	11/1000	10/900	9/850	8/750	7/700
	Dist/TAS	71/348	67/347	63/347	60/347	57/347	54/346	51/346	46/346	41/345	37/345	33/345
25000	Time/Fuel	13/1300	13/1200	12/1150	12/1100	11/1050	11/1000	10/950	9/900	8/800	8/750	7/650
	Dist/TAS	65/344	61/343	58/343	55/343	52/343	50/343	47/342	42/342	38/342	34/342	30/341
24000	Time/Fuel	13/1200	12/1150	11/1100	11/1050	10/1000	10/950	10/950	9/850	8/750	7/700	6/650
	Dist/TAS	60/340	56/340	54/340	51/339	48/339	46/339	43/339	39/339	35/338	32/338	28/338
23000	Time/Fuel	12/1150	11/1100	11/1050	10/1000	10/1000	9/950	9/900	8/800	7/750	7/700	6/600
	Dist/TAS	55/336	52/336	49/336	47/336	44/336	42/335	40/335	36/335	33/335	29/335	26/335
22000	Time/Fuel	11/1100	11/1050	10/1000	10/1000	9/950	9/900	9/850	8/800	7/700	6/650	6/600
	Dist/TAS	50/333	48/333	45/333	43/332	41/332	39/332	37/332	33/332	30/332	27/332	24/331
21000	Time/Fuel	10/1050	10/1000	10/1000	9/950	9/900	8/850	8/800	7/750	7/700	6/650	6/550
	Dist/TAS	46/330	44/329	42/329	40/329	38/329	36/329	34/329	31/329	28/328	25/328	22/328
20000	Time/Fuel	10/1000	9/950	9/950	9/900	8/850	8/800	8/800	7/700	6/650	6/600	5/550
	Dist/TAS	42/326	40/326	38/326	36/326	35/326	33/326	31/326	28/326	26/325	23/325	21/325
19000	Time/fuel	9/950	9/950	8/900	8/850	8/800	7/800	7/750	7/700	6/650	6/600	5/500
	Dist/TAS	39/323	37/323	35/323	33/323	32/323	30/323	29/323	26/323	24/322	21/322	19/322
18000	Time/Fuel	9/900	8/900	8/850	8/800	7/800	7/750	7/700	6/650	6/600	5/550	5/500
	Dist/TAS	35/320	34/320	32/320	31/320	29/320	28/320	26/320	24/320	22/320	19/319	17/319
17000	Time/Fuel	8/900	8/850	8/800	7/800	7/750	7/700	6/700	6/650	5/600	5/550	5/500
	Dist/TAS	32/317	31/317	29/317	28/317	27/317	25/317	24/317	22/317	20/317	18/317	16/317
16000	Time/Fuel	8/850	7/800	7/750	7/750	7/700	6/700	6/650	6/600	5/550	5/500	4/450
	Dist/TAS	29/314	28/314	27/314	25/314	24/314	23/314	22/314	20/314	18/314	16/314	15/314
15000	Time/Fuel	7/800	7/750	7/750	6/700	6/700	6/650	6/650	5/600	5/550	4/500	4/450
	Dist/TAS	26/312	25/312	24/312	23/311	22/311	21/311	20/311	18/311	16/311	15/311	13/311
14000	Time/Fuel	7/750	6/700	6/700	6/650	6/650	6/600	5/600	5/550	5/500	4/450	4/400
	Dist/TAS	24/309	23/309	22/309	21/309	20/309	19/309	18/309	16/309	15/309	13/309	12/309
13000	Time/Fuel	6/700	6/700	6/650	6/650	5/600	5/600	5/550	5/500	4/500	4/450	4/400
	Dist/TAS	21/306	20/306	19/306	19/306	18/306	17/306	16/306	15/306	13/306	12/306	11/306
12000	Time/Fuel	6/650	6/650	5/600	5/600	5/600	5/550	5/550	4/500	4/450	4/400	3/400
	Dist/TAS	19/304	18/304	17/304	17/304	16/304	15/304	14/304	13/304	12/304	11/304	10/304
11000	Time/Fuel	5/650	5/600	5/600	5/550	5/550	5/500	4/500	4/450	4/450	3/400	3/350
	Dist/TAS	17/301	16/301	15/301	15/301	14/301	13/301	13/301	12/301	11/301	10/301	9/301
10000	Time/Fuel	5/600	5/550	5/550	5/550	4/500	4/500	4/500	4/450	4/400	3/350	3/350
	Dist/TAS	15/299	14/299	13/299	13/299	12/299	12/299	11/299	10/299	9/299	8/299	7/299
8000	Time/Fuel	4/500	4/500	4/500	4/450	4/450	4/450	3/400	3/400	3/350	3/350	3/300
	Dist/TAS	11/294	10/294	10/294	9/294	9/294	9/294	8/294	7/294	7/294	6/294	6/294
6000	Time/Fuel	4/450	3/400	3/400	3/400	3/400	3/350	3/350	3/350	3/300	2/300	2/250
	Dist/TAS	7/290	7/290	6/290	6/290	6/290	6/290	5/290	5/290	5/290	4/290	4/290
1500	Time/Fuel	2/250	2/250	2/250	2/250	2/250	2/250	2/250	2/200	2/200	2/200	1/150

Fuel Adjustment for high elevation airports	Airport Elevation	2000	4000	6000	8000	10000	12000
Effect on time and distance is negligible	Fuel Adjustment	-50	-100	-150	-250	-300	-350

Figure 4.5.1 En-route Climb 280/.74

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- a) 59 NAM 62 NGM
- b) 62 NAM 59 NGM
- c) 71 NAM 67 NGM
- d) 67 NAM 71 NGM

20. Considering VR, which statement is correct?

- a) VR is the lowest climb speed after engine failure
- b) In case of engine failure below VR the take-off should be aborted
- c) VR is the speed at which rotation should be initiated
- d) VR is the lowest speed for directional control in case of engine failure

21. 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

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22. An aircraft was over 'Q' at 1320 hours flying direct to 'R'. Given: Distance 'Q' to 'R' 3016 NM True airspeed 480 kt Mean wind component 'out' -90 kt Mean wind component 'back' +75 kt The ETA for reaching the Point of Equal Time (PET) between 'Q' and 'R' is:

- a) 1756
- b) 1752
- c) 1742
- d) 1820

23. An aircraft flying at FL 45 (OAT 6°C) obtains a reading of 1860 ft on its radio altimeter (ground elevation 3090 ft). What is the value of the QNH, to the nearest hPa, at that point?

- a) 1030
- b) 1042
- c) 1013
- d) 996

24. How shall a pilot inform the control tower that they have to abandon the take-off manoeuvre:

- a) Stopping
- b) Cancelling take-off
- c) Aborting take-off
- d) Abandoning take-off

25. Which type wind flows downslope becoming warmer and dryer?

- a) Valley wind.
- b) Land breeze.
- c) Anabatic wind.
- d) Foehn wind.

26. Lights on and in the vicinity of aerodromes may be turned off, provided that they can be again brought into operation:

- a) At least 15 minutes before the expected arrival of an aircraft
- b) At least 30 minutes before the expected arrival of an aircraft
- c) At least 5 minutes before the expected arrival of an aircraft
- d) At least one hour before the expected arrival of an aircraft

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27. The optimum altitude:

- a) Decreases as mass decreases
- b) Increases as mass decreases and is the altitude at which the specific range reaches its maximum
- c) Is the altitude up to which cabin pressure of 8 000 ft can be maintained
- d) Is the altitude at which the specific range reaches its minimum

28. A water fire-extinguisher (straight jet) can be used on a fire of: 1 - solids (fabric, carpet,...). 2 - liquids (ether, gasoline,...). 3 - gas. 4 - metals (sodium,...). The combination regrouping all the correct statements is:

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

29. An ADF provides the aircraft with bearing information with respect to a ground station. To do this, the ground station emits a signal pattern which is:

- a) Frequency modulated at 30 Hertz
- b) A beam rotating at 30 Hertz
- c) Omnidirectional
- d) Unidirectional

30. An aircraft departing A(N40° 00' E080° 00') flies a constant true track of 270° at a ground speed of 120 KT. What are the coordinates of the position reached in 6 h?

- a) N40° 00' E064° 20'
- b) N40° 00' E068° 10'
- c) N40° 00' E060° 00'
- d) N40° 00' E070° 30'

31. On a TCAS2 (Traffic Collision Avoidance System), a corrective 'resolution advisory' (RA) is a 'resolution advisory':

- a) Asking the pilot to modify effectively the vertical speed of his aircraft.
- b) Asking the pilot to modify the speed of his aircraft.
- c) Asking the pilot to modify the heading of his aircraft.
- d) Which does not require any action from the pilot but on the contrary asks him not to modify his current vertical speed rate.

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32. 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

33. An IFR aircraft in controlled airspace experiences complete radio communication failure after departure. Which action is the current general priority?

- a) Set transponder Code 7600 and follow any published radio communication failure procedure, or the applicable rules and last acknowledged clearance if no specific procedure applies.
- b) Always maintain the last assigned level for exactly 3 minutes and then climb according to the flight plan.
- c) Immediately climb to the planned cruising level in every case.
- d) Return to the departure aerodrome in every case.

34. 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.

35. Which statement regarding V1 is correct?

- a) V1 must not exceed VMCG
- b) V1 must not exceed VR
- c) The V1 correction for up-slope is negative
- d) When determining the V1, reverse thrust is only allowed to be taken into account on the remaining symmetric engines

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36. Vortex generators on the upper side of the wing:

- a) Increase wave drag
- b) Increase critical Mach Number
- c) Decrease wave drag
- d) Decrease critical Mach Number

37. Under which of the following circumstances may you expect a solid reception of the TOWER frequency 118.2 MHz:

- a) Aircraft at high level in the vicinity of the ground station
- b) Aircraft at low level, in the vicinity of the ground station, in the radio shadow zone of a hill
- c) Aircraft at low level, far away from the ground station, in the radio shadow zone of a hill
- d) Aircraft at low level but far away from the ground station

38. In case of a hi-jack, the squawk code is:

- a) A 7600
- b) A 7500
- c) A 2000
- d) A 7700

39. At night an aircraft observes a luminous signal requesting help. To indicate that he has received these search and rescue ground signals, the pilot shall:

- a) Fly over the group of people in difficulty as low as possible.
- b) Make at least one complete turn over the group of people in difficulty.
- c) Switch his landing lights on and off twice or, if he is not so equipped, his navigation lights twice.
- d) Transmit, by luminous Morse signal, a series of the letter "R" using his navigational lights.

40. Control Area (CTA) is defined as follows:

- a) A controlled airspace extending upwards from a height of 900 feet above the Earth.
- b) A controlled airspace extending upwards from a height of 1.000 feet above the Earth.
- c) A controlled airspace extending upwards from the surface of the Earth to a specified limit.
- d) A controlled airspace extending upwards from a specified limit above the Earth.

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41. ATC clears Fastair 345 to descend from FL 100 to FL 80. What is the correct read back by the pilot:

- a) Leaving flight level 100 descending to flight level 80, Fastair 345
- b) Leaving 100 to 80, Fastair 345
- c) Down to flight level 80, Fastair 345
- d) Descending to 80, Fastair 345

42. What is the correct way of transmitting 1001 as a QNH?

- a) QNH one double 'O' one
- b) QNH one zero zero one
- c) QNH one double zero one
- d) QNH one thousand and one

43. One of the waste products of the metabolic process in the cell is:

- a) Sugar
- b) Protein
- c) Fat
- d) Carbon dioxide

44. What is the local mean time, position 65°25'N 123°45'W at 2200 UTC?

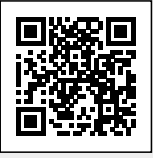
- a) 2200
- b) 1345
- c) 0815
- d) 0615

45. Anxiety and fear can cause

- a) Hypoxia
- b) Hyperventilation
- c) Hypoglycaemia
- d) Spatial disorientation

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46. The total gas volume of the lung is the sum of: 1. tidal volume 2. inspiratory reserve volume 3. expiratory reserve volume 4. residual volume Which of the following lists the correct combination?

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

47. Regarding Ohm's law:

- a) The current in a circuit is directly proportional to voltage.
- b) The current in a circuit is inversely proportional to voltage.
- c) The power in the circuit is inversely proportional to the square of the current.
- d) The current in a circuit is directly proportional to the resistance of the circuit.

48. Approach Procedures - Non-precision - straight-in. A so-called 'straight-in-approach' is considered to be acceptable for a non-precision approach, if the angle between the final approach track and the runway centreline is:

- a) 40° or less
- b) 30° or less
- c) 10° or less
- d) 20° or less

49. A flight control system which can, in the event of a failure, complete automatically the approach, flare and landing is called fail...

- a) Passive.
- b) Soft.
- c) Operational.
- d) Hard.

50. Which of the following will probably not result in a deviation change on a DRC:

- a) A walk-man headset placed close to the compass.
- b) Turning the ADF on in flight.
- c) Letting a passenger in the cockpit jump-seat put his mobile phone next to the DR
- d) Relocating a steel iron construction in the cargo compartment close to the DR

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51. The TCAS II (Traffic Collision Avoidance System) gives avoidance resolutions:

- a) Only in the horizontal plane
- b) In horizontal and vertical planes
- c) Only in the vertical plane
- d) Based on speed control

52. Which of the following clouds may extend into more than one layer?

- a) Stratus
- b) Nimbostratus
- c) Cirrus
- d) Altocumulus

53. During deceleration following a landing in a southerly direction, a magnetic compass made for the northern hemisphere indicates:

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

54. Which of the following sets of factors will increase the climb-limited TOM (every factor considered independently)?

- a) Low flap setting, low pressure altitude, low OAT
- b) Low flap setting, high pressure altitude, low OAT
- c) Low flap setting, high pressure altitude, high OAT
- d) High flap setting, low pressure altitude, low OAT

55. What happens to the drag of a jet aeroplane if, during the initial climb after take-off, constant IAS is maintained? (Assume a constant mass)

- a) The drag decreases
- b) The drag increases considerably
- c) The drag increases initially and decreases thereafter
- d) The drag remains almost constant

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56. Given: Total mass: 7500 kg. Centre of gravity (cg) location station: 80.5. Aft CG limit station: 79.5. How much cargo must be shifted from the aft cargo compartment at station 150 to the forward cargo compartment at station 30 in order to move the cg location to the aft limit?

- a) 65.8 kg.
- b) 62.5 kg.
- c) 73.5 kg.
- d) 68.9 kg.

57. Longitudinal separation minima based on time for aircraft at the same cruising level when navigation aids permit frequent determination of position and speed will be

- a) 10 minutes
- b) 3 minutes
- c) 5 minutes
- d) 15 minutes

58. 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.

59. An aircraft experiencing radio communication failure on an IFR flight in IMC is assumed to:

- a) Proceed to an area from where the flight can be continued according to the visual flight rules
- b) Proceed in accordance with the current flight plan to the designated navigation aid serving the destination aerodrome
- c) Execute a VMC approach at the nearest suitable aerodrome
- d) Divert to the most suitable aerodrome according to the route of flight

60. Given: TAS = 90 kt, HDG (T) = 355°, W/V = 120/20kt. Calculate the Track (°T) and GS?

- a) 006 - 95 kt
- b) 346 - 102 kt
- c) 359 - 102 kt
- d) 358 - 101 kt

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61. 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

62. What is the name for the sensation of rotation occurring during flight and which is caused by multiple stimulation of several semicircular canals at the same time?

- a) 'Seat-of-the-Pants' illusions
- b) Sudden incapacitation
- c) Graveyard spin
- d) 'Pilot's' Vertigo

63. What does the abbreviation 'HJ' mean?

- a) No specific working hours.
- b) Sunset to sunrise.
- c) Continuous day and night service.
- d) Sunrise to sunset.

64. When flaps are extended in a straight and level flight at constant IAS, the lift coefficient will eventually:

- a) Increase
- b) Decrease
- c) Remain the same
- d) First increase and then decrease

65. During a flight at FL 100 from Marseille (QNH 1012 hPa) to Palma de Mallorca (QNH 1015 hPa), an aircraft remains at a constant true altitude. The reason for this is that:

- a) The air at Marseille is colder than that at Palma de Mallorca.
- b) The altimeters are erroneous, and need to be tested.
- c) One of the two QNH values may be incorrect.
- d) The air at Marseille is warmer than that at Palma de Mallorca.

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66. What is the correct way to transmit and read back frequency 120.375 MHz (VHF channel separated by 25 kHz):

- a) One two zero decimal three seven five
- b) One twenty decimal three seven
- c) One two zero three seven
- d) One two zero decimal three seven

67. A frequency of 10 GHz is considered to be the optimum for use in an airborne weather radar system because:

- a) The larger water droplets will give good echoes
- b) Enables the aircraft to detect clear air turbulence
- c) Static interference is minimised
- d) Greater detail can be obtained at the more distant ranges of the smaller water droplets

68. Which of the following frequencies is an international emergency frequency:

- a) 6500 kHz
- b) 122.500 MHz
- c) 121.050 MHz
- d) 121.500 MHz

69. The loading limitations shall include:

- a) All limiting mass and centres of gravity
- b) All limiting mass, centres of gravity position, mass distributions and floor loading
- c) All limiting mass, centres of gravity position and floor loading
- d) All limiting mass, mass distributions and centres of gravity

70. 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.

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Response Scheme

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

01: **B**

02: **A**

03: **D**

04: **A**

05: **A**

06: **C**

07: **C**

08: **C**

09: **C**

10: **A**

11: **C**

12: **C**

13: **A**

14: **B**

15: **B**

16: **C**

17: **B**

18: **A**

19: **B**

20: **C**

21: **D**

22: **B**

23: **A**

24: **A**

25: **D**

26: **D**

27: **B**

28: **B**

29: **C**

30: **A**

31: **A**

32: **B**

33: **A**

34: **D**

35: **B**

36: **C**

37: **A**

38: **B**

39: **C**

40: **D**

41: **A**

42: **B**

43: **D**

44: **B**

45: **B**

46: **D**

47: **A**

48: **B**

49: **C**

50: **B**

51: **C**

52: **B**

53: **C**

54: **A**

55: **D**

56: **B**

57: **A**

58: **A**

59: **B**

60: **B**

61: **C**

62: **D**

63: **D**

64: **C**

65: **D**

66: **A**

67: **A**

68: **D**

69: **B**

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: _____		