AIRBUS A319/320/321
Sample Oral Questions
June 1, 2003
(Updated 06/03/04)

Pre Departure

1. During the exterior aircraft inspection, ensure that the Fan Cowl Doors are: PH 3.1.2

Fan Cowl Doors – Closed/latched

2. During the exterior aircraft inspection, the green disk associated with the crew oxygen system is missing. What does this signify? PH 15.1.2

A green over-pressure blowout disk is located on the lower left side of the forward fuselage, to provide visual indication of a thermal discharge.

3. During preflight of the air conditioning panel, select the PACK FLOW selector (319/320) – LO when the number of passengers is less than _50_ or during _long haul flights_. Select the ECON FLOW selector (A321) – ON when the number of passengers is less than _140_. PH 3.4.1

PACK FLOW Selector (A319/320)
- LO: if number of pax is less than 50 or for long haul flights.
- HI: for abnormally hot and humid conditions.
- NORM: for all other operating cases.

ECON FLOW Selector (A321)
- ON: ECON FLOW if number of pax is less than 140.
- OFF: for normal flow

Note: If the APU is supplying bleed air for air conditioning, pack controllers select high flow (A319/320) or normal flow (A321) automatically, regardless of selector position.

4. Is it permissible to use external (LP) conditioned air simultaneously with the air conditioning packs? PH 2.9.3

Do not use external conditioned air simultaneously with the airplane air conditioning packs.

5. During preflight of the electrical panel during the Originating flow, select BAT 1 and BAT 2 pushbutton switches OFF then ON. Ten seconds after selecting ON, check on the ECAM ELEC page both battery charge currents are below _60_ amps and _decreasing_. PH 3.4.1

Ten seconds after selecting ON, Check on the ECAM ELEC page both battery charge currents are below 60 amps and decreasing.

6. Name the three hydraulic systems and describe how they are powered. PH 11.1

GREEN	BLUE	YELLOW
1. Engine 1 pump		1. Engine 2 pump
2. PTU		2. PTU
	1. Blue Electric pump	3. Yellow Electric pump
	2. Ram Air Turbine (RAT)	
		4. Hand pump for cargo door operation

7. During preflight panel preparation of the ECAM control panel, press the RCL pushbutton for at least 3 seconds to recall any warnings that have been cleared or cancelled. What action should be taken if an ENG TYPE DISAGREE message is displayed? PH 21.1.4

This caution is triggered when a rating discrepancy is detected between two engines. Crew Awareness.
Note: If on the ground, flight is not permitted. Contact maintenance.
The EMER CANC pb should only be used in flight to suppress spurious MASTER CAUTIONS.

8. While at the gate with the aft cargo door open, the crew receives an ECAM, SMOKE AFT CARGO SMOKE. Should the crew initiate AGENT DISCHARGE? PH 21.1.4

If the SMOKE warning is displayed on the ground with the cargo doors open, do not initiate AGENT DISCH. Request the ground crew to investigate and eliminate the smoke source.

9. What occurs when the Radio Management Panel (RMP) NAV key is engaged? PH 13.4.4

- Pressing this key engages the radio navigation backup mode. It takes control of the VOR and ILS receivers away from the FMGC and gives it to the RMP.
- The green monitor light illuminates.
- Pressing the NAV key a second time returns control of the navigation radios to the FMGC.

Note: The flight crew must select this backup mode on both RMP1 and RMP2 if both FMCSs or both MCDUs fail. In the emergency electrical configuration, only RMP1 receives power.

10. During Automatic Flight Plan Initialization, what action should be taken as soon as the CRZ field changes from dashes to amber boxes? PH 3.4.1

Enter the initial cruise flight level.

11. If a fuel boost pump circuit breaker trips, is reset permitted? PH 2.7.2

WARNING: Do not reset a tripped C/B for any fuel boost pump.
If all fuel boost pumps fail, use the GRAVITY FUEL FEEDING procedure in the QRH.

12. When the APU ECAM page LOW OIL LEVEL message appears, the remaining oil quantity permits normal APU operation for how many additional hours? PH 2.14.9

Ten additional hours.

13. When validating TPS, the actual altimeter setting can be no lower than TPS QNH minus 0.1 . PH 4.5.2

QNH – 0.10

For example, if the TPS QNH is 30.03, you can use the TPS data as long as the current altimeter setting is 29.93 or higher.

14. When validating TPS, if the actual OAT is above the TPS TEMP, when can the data in the THRUST/V-SPEED Section still be used? PH 4.5.2

- If the current OAT is at or below the TEMP, no other temperature needs to be checked.
- If the current OAT is above the TEMP, the data in the THRUST/V-SPEED Section can still be used if an AT (Assumed Temperature) is listed for your departure runway in the THRUST/V-SPEED Section and the current OAT is at or below that AT.

15. A Domestic VFR Target Arrival Fuel (No Alternate) has been established and is based on maximum landing weight, no destination alternate, no expected delays, and landing with 75 minutes of fuel. This target arrival fuel is 5,600 lbs for the A319, 5,900 lbs for the A320, and 7,100 lbs for the A321. FOB 02-03

16. If there is a dangerous goods spill at your gate, do not take chances or risk exposure. Alert employees who are working in the area and expedite the movement of passengers from the area . FOM 7.28.1

17. Upon arrival at the aircraft, maintenance advises that they have been trying to repair SEC 3 but will have to MEL the system. Refer to the following MEL information to determine the actions that are required by the flight crew. FOM 11/PH 4.3

MEL	ITEM	REPAIR CATEGORY	QUANTITY INSTALLED	MINIMUM REQUIRED
27-9401	Spoiler Elevator Computer 3 (SEC 3)	B	1	0

May be inoperative provided:
1. SEC 1 and SEC 2 are operative.
2. All ailerons and all roll spoilers associated with SEC 1 and SEC 2 are operative.
3. SFCS 2 flap channel is operative.
4. Sidestick transducers associated with ELACs and SEC 1 and SEC 2 are operative. And
5. ELACs, ADIRs, SFCCs, LCCIUs, FACs, and RAs are operative.

Maintenance Procedure – Accomplish during the initial application of the MEL (May be accomplished by the Flight Crew when advised by Maintenance Control)

1. Open FLIGHT CONTROLS / SEC3 SPLY circuit breaker 21CE3 (panel 121VU, location Q19). Collar at first maintenance station with mechanics on duty.

Operations Procedure – Accomplish each flight
Prior to departure, accomplish the following:
1. Refer to SPAR
2. Ensure SEC 3 pb on overhead FLT CTL panel 24VU is OFF.

END	Revision Date 03/01/69

17a. What does the term "Refer to SPAR" mean?

An MEL/CDL item containing "Refer to SPAR" indicates that the item has a performance adjustment (weight, speed, runway length, altitude, etc.) or W&B adjustment (CG, ZFW, cargo, loading, etc.). Refer to SPAR Procedures in PHB Chapter 4.

17b. The Flight Release and TPS do not document this MEL. Are they valid?

No. For MEL 27-9401 the MEL/CDL SPAR Table (PHB 4-4) has a three letter code of GS2.
If the MEL/CDL has a three letter code in the table, ensure the code appears in the TPS Departure Plan and the Final TOW and W&B Message. If the code is not present in the TPS, call the dispatcher and do not use the existing TPS.
An amended Flight Release is required when a change is made in MEL/CDL items.

17c. What affect does this MEL have on takeoff procedures?

The above MEL item in the SPAR Table has a "T" (takeoff adjustment), requiring reference to the SPAR Matrix to ensure takeoff is authorized under current conditions.

18. The TPS should be reviewed prior to conducting the Departure Review. If the current weather is 330010 3SM BR OVC 008 27/25 A29.65, is the TPS in the RLF-G Document Package in this guide valid? PH 4.5

No. The actual altimeter setting must be greater than or equal to the TPS QNH, with an allowable variance of minus 0.1. In this example, the actual altimeter setting must be greater than 30.00 (30.10 – 0.10).

19. Assume there is a need to apply takeoff precautions for windshear. Using the weather observation from the question above, and the weight and balance information in the RLF-G Document Package, calculate an increased V_R for runway 31 based on a CONF 2 takeoff. FOM 10.6.4

R31 DRY 150,400, CONF 2
Basic V-Speeds: V_R = 144
Region A based on Pressure Altitude of 0 feet and Temp of 20 C, ΔV_R = 0
V-speed corrections for Runway Slope, Condition, and Open MEL Items, ΔV_R = 0
Increased V_R = 144

20. What is the minimum flight crew oxygen pressure for 2 crewmembers + 2 observers with reference temperature of 20 degrees C? PHB 3.4

MIN BOTTLE PRESSURE = 846 PSI

Pushback/Taxi

1. When planning a single engine taxi, which engine is started first? PH 3.5.1

Eng 1 must be used for all single engine taxi operations to ensure steering and braking (GREEN hydraulics).

2. During delayed engine start operations, why must the PARKING BRAKE be selected ON prior to starting engine 2? PH 3.6.1, FOB 2-04

The requirement for PARKING BRAKE ON prior to starting or shutting the down an engine has been eliminated.

3. If during engine start with the parking brake ON, the aircraft starts to move due to parking brake failure, the pilot should: PH 3.5

Immediately release the PARKING BRK handle to restore braking by pedals.

4. When TAKEOFF DATA UPLINK data is inserted for an intersection departure runway, is the Takeoff Shift automatically loaded? PH 3.6

No. Manually enter TO SHIFT.

5. Maximum taxi speed is: PH 18.2.3

Do not exceed 30 knots on straight tracks and limit speed to approximately 10 knots in turns.
Maximum breakaway thrust is 40% N_1

6. Single engine taxi is not permitted with APU OFF or inoperative. (True or False) PH 18.2.4, FOB 2-04

APU must be running during single engine taxi-out.
APU operation during single engine taxi-in is no longer required.

Single-Engine Taxi is not authorized when:
- APU electric and/or bleed inoperative (taxi-out only), or
- Stations use power out (no pushback) procedures.

7. During single engine taxi operations, what is the required engine warm-up period after starting the non-running engine and before takeoff? PH 18.2.4, FOB 2-04

- A 5 minute warm-up period between starting the non-running engine and takeoff.
- Engine 2 should be shutdown when AFTER LANDING checklist is completed but never less than 1 minute after using reverse thrust above idle.

8. Is single engine taxi authorized when engine anti-ice is required? PH 18.2.4, FOB 2-04

Yes

Caution: Airplane must be taxied with no braking or steering inputs or stopped with the parking brake set during engine start or shutdown. Unwanted steering and/or braking response may occur during electrical power source transfer.

9. In the event a Crew Awareness ECAM displays while the aircraft is on the ground, dispatch may not be permitted or an MEL/CDL may apply. PH 21.1.4

Comply with the FOM "Discrepancies – After Dispatch Before Takeoff" procedure.

10. If a Predictive Windshear Caution or Warning occurs during takeoff, reject the takeoff. (<u>True</u> or False) PH 18.8.3, QRH OD-4

Predictive Windshear Procedures			
	ADVISORY	**CAUTION**	**WARNING**
INDICATIONS:			
ND	Windshear icon		
PFD	(N/A)	<u>Amber</u> **W/S AHEAD**	<u>Red</u> **W/S AHEAD**
AURAL		**"MONITOR RADAR DISPLAY"**	**"WINDSHEAR AHEAD"** (twice on takeoff) **"GO AROUND WINDSHEAR AHEAD"** on approach
PHASE OF FLIGHT:			
ALIGNED FOR TAKEOFF	Delay the takeoff until the alert no longer exists.		
DURING TAKEOFF	<u>TOGA.</u> <u>Continue</u> the takeoff	<u>Reject</u> the takeoff	
AFTER LIFT-OFF At or ABOVE V1	<u>TOGA</u>. Follow SRS commands. Retract gear & flaps on schedule. Roll wings level if a PWS warning occurs.		
DURING APPROACH	<u>Continue</u> the approach	Execute a TOGA <u>go-around</u> using TOGA thrust. Retract gear and flaps/slats on schedule. Roll wings level if a PWS warning occurs.	

In all cases, notify ATC and if windshear is encountered, as evidenced by the Reactive Windshear aural warning "WINDSHEAR, WINDSHEAR, WINDSHEAR" and red WINDSHEAR message on both PFDs, initiate windshear escape maneuver.

11. If a <u>NAV</u> FM/GPS POS DISAGREE ECAM occurs during takeoff initiation, how should the pilot respond? PH 18.3.2

If the <u>NAV</u> FM/GPS POS DISAGREE ECAM occurs at any time during takeoff, disregard it and continue the takeoff. The <u>NAV</u> FM/GPS POS DISAGREE ECAM is inhibited from 80 knots to 1,500 feet.

12. If CG is > 34%, what action is required on takeoff? PH 18.3.2

For operations with CG > 34%, full forward sidestick must be maintained. Remove forward sidestick input starting at 80 knots, to be neutral by 100 knots.

13. Is FLEX takeoff thrust permitted with engine anti-ice ON? PH 4.3

Yes, per the SPAR Matrix.

14. If the Captain elects to reject the takeoff below <u>_72_</u> knots, autobrake activation will not occur and manual braking must be used. PH 18.3.6

15. A tailstrike can occur on takeoff with struts compressed at what pitch attitude on an A321 aircraft? PH 18.3.2

	A319	**A320**	**A321**
Critical Pitch Attitude (Struts Extended)	15.5	13.5	11.2
Critical Pitch Attitude (Struts Compressed)	13.9	11.7	**9.7**
Demonstrated Lift-Off Pitch Attitude	12.5	9.5	8.5

16. Upon completion of pushback, the captain gives the thumbs up signal when the ground crew is no longer required. The captain must verbally state to the first officer when receiving the thumbs up signal from the ground crew. The first officer must <u>_verbally acknowledge the captain's statement_</u>. FOM 5.4.1

17. At least one pilot must monitor the aircraft during low workload and both pilots must monitor the aircraft as much as possible during <u>high workload and in areas of vulnerability (vertical flight, FMS entries, taxiing, etc.)</u>. Monitoring Section of the guide

18. Both pilots must be thoroughly familiar with airport orientation and taxi route. In addition, both pilots will have taxi charts in view , when taxiing the aircraft. FOB 01-03, FOM 5.5

- Both pilots will have the airport diagram/taxi chart in view and will crosscheck the diagram/chart against the aircraft displays and signage.
- Minimize "heads down" time. The F/O will advise the captain when continuing with non-monitoring tasks.

19. When a turn below 400 feet AGL is operationally required, the Jeppesen 10-7 procedure will specify that the turn commence either at a specific point (e.g., at .6 DME), or the term "turn as soon as practical" will be used. FOM 5.7.8

20. If an engine failure occurs after turning from either the runway centerline or the engine failure takeoff ground track as defined on the Jeppesen 10-7 page, the crew must determine the safest lateral flight path . As a guide, the closer the aircraft is to the runway, the more likely the extended runway centerline or Engine Failure Takeoff ground track is the safest lateral path. However, as altitude increases and ATC/departure turns are accomplished, other lateral flightpaths may provide the safer option. FOM 7.12.2

21. In PIT, the surface RVR is 600. Is it permissible to taxi to Runway 28R even though PIT does not have a Surface Movement Guidance and Control System (SMGCS)? If the surface RVR is < 600, is it permissible to taxi? FOM 5.5.6

Yes - Policy: Taxi operations are authorized if the captain decides visibility is sufficient. Conduct checklists only when the aircraft is stopped or taxiing straight ahead without complex intersections.

During reduced visibility, communicate with ATC before crossing all runways.

22. The ACARS fails before the crew receives their final weight and balance data; however, they have a valid TPS. What form should be used to assist in obtaining the abbreviated final weight and balance information necessary via the radio? FOM 13, 9.1.4

Form OF-11B shaded items.

23. While taxiing to the runway, the ACARS fails. Since this failure occurs prior to takeoff, are there any specific procedures to follow? FOM 5.4.3

Discrepancy – After Dispatch Before Takeoff	
Step	**Action**
1	Does the captain want to continue the flight? • If no, goto Step 2 • If yes, goto Step 3
2	Return for maintenance action. • Enter the discrepancy in the Maintenance Logbook. • Obtain a new/amended Flight Release, if appropriate.
3	Contact the controlling dispatcher via phone patch, relay through Operations, or ACARS to discuss flight issues.
4	Can the flight be safely executed? • If no, return to Step 2. • If yes, goto Step 5
5	Comply with any applicable MEL/CDL and supplemental/non-normal procedures
6	When time permits and not in a critical phase of flight • Enter the discrepancy in the Maintenance Logbook, and … • Send an ACARS message of the discrepancy using the procedures outline in FOM 5, "Mechanical Discrepancies In-Flight"

Climb

1. What are the recommended severe turbulence airspeeds for A319/320/321? PH 3a.3.3

	A319/320	A321
At or above 20,000 feet	**275 KIAS/.76M**	**300 KIAS/.76M**
Below 20,000 feet	**250 KIAS**	**270 KIAS**

2. What are visual indications that indicate airframe icing is occurring? PH 3a.1.3

Check the visual ice detector and windshield wipers to determine if airframe icing is occurring.

Cruise

1. When an RA occurs, the pilot flying should respond immediately to RA displays and maneuver as indicated, unless doing so would jeopardize the safe operation of the flight or the flight crew can assure separation with help of definitive visual acquisition of the aircraft causing the RA. Pilot response to an RA should be immediate, even if the action conflicts with an ATC clearance. FOM 12.2.1

2. The REC MAX altitude on the PROG Page provides what? PH 17.6.40

The recommended maximum altitude based on present GW and deviation from ISA. It gives the aircraft a 0.3g buffet margin, a minimum rate of climb at MAX CL thrust, and level flight at MAX CRZ thrust. It is limited to FL 390. With an engine out, it shows the recommended maximum EO altitude, computed for long-range cruise, anti-icing off.

3. What action must be taken to ensure proper stowage after oxygen mask use? PH 3.4.1

- Check doors are closed and OXY ON flag is not extended.
- With the mask in the box, press the EMERGENCY PRESSURE selector to ensure the valve is closed and the mask is no longer supplied with oxygen (there should be no continual O_2 flow).
- If there is continual O_2 flow, press the RESET/TEST button to reset. Repeat the steps listed above.
- Report any reset problems in the maintenance logbook.

4. If GPS PRIMARY is lost during cruise, check the PROG page for navigation accuracy. Is any action required if navigation accuracy is HIGH? PH 3.10

If HIGH – no further action required. Continue to monitor.

5. When does the Ram Air Turbine (RAT) automatically deploy? PH 7.1.7

If both AC bus 1 and 2 are lost and the airspeed is above 100 kts, the RAT automatically deploys and pressurizes the Blue hydraulic system, which drives the hydraulically driven emergency generator. A generator control unit controls generator output, which is considerably lower than that of the main generators.

Once the emergency generator is up to speed it will supply power to the AS ESS BUS and DC ESS BUS (via the ESS TR). During RAT deployment and emergency generator coupling (approximately 8 seconds), the batteries supply power to these buses.

After landing, the DC BAT bus is automatically connected to the batteries when airspeed drops below 100 knots. When the speed decreases below 50 knots, the AC ESS bus is automatically shed, and power is lost to the CRTs.

6. What occurs by depressing the MAN ON pb on the EMER ELEC PWR panel? PH 7.2.3

This selects manual RAT extension. Emergency generator coupling occurs three seconds after the RAT is supplying the emergency generator.

7. What does an amber MODE SEL FAULT light on the A319/320 and A321 fuel panel indicate? PH 9.2.1

A319/320

- Center tank has more than 550 lbs of fuel and the left or right wing tank has less than 11,000 lbs.

A321

- Center tank has more than 550 lbs of fuel and the left or right wing tank has less than 11,000 lbs *and*
- The MODE SEL pb is AUTO.

8. What does an amber ACT FAULT p/b light indicate on the A321 fuel panel? PH 9.2.1

- The center tank has less than 6,614 lbs of fuel and one ACT has more than 550 lbs of fuel and
- The ACT pb is in AUTO.

9. Where is the fuel leak procedure located? QRH

QRH 34

10. If the Approach phase of flight is activated inadvertently, (by manually activating and confirming, for example), how can the Cruise phase be reactivated? PH 17.3.2

Reselect a CRZ FL on the PROG page to reactivate the CRZ phase.

11. If you were advised that smoke came out of a galley oven and then received a SMOKE/AVNCS SMOKE ECAM, what procedure should be followed? QRH/ PH 21

Since non-avionics smoke is suspected, the flight crew must refer to the QRH SMOKE/AVIONICS SMOKE procedure.

12. What is the maximum altitude for APU bleed operation? PH 2.14.8

APU bleed air may be provided up to 20,000 feet.

13. If an engine fails during cruise flight, where can the target Drift Down Altitude be found? QRH

- MCDU PROG page (EO MAX ALT)
- QRH 20-21: GROSS DRIFTDOWN/LEVEL OFF PROCEDURES

14. How is the Optimum Flight Level (OPT) on the MCDU PROG page defined? PH 17.3.3

The optimum flight level indicates the most economic flight level for a given cost index, weight, and weather data and is continuously updated in flight. It is a compromise between fuel and time saving, and may show steps due to slight GW, ISA, or wind changes. As a consequence, the pilot may observe jumps in optimum flight level.

15. Doors of the passenger chemical oxygen generator containers open automatically when the cabin altitude exceeds what altitude? PH 15.1.3

Each container has an electrically activated door that opens automatically when the cabin altitude exceeds 14,000 feet. The doors can also be opened manually by pressing the MASK MAN ON pb on the oxygen overhead panel. Illumination of the SYS ON light does not necessarily mean all masks have deployed. Flight Attendants may have to manually deploy some masks.

Descent

1. If the Captain decides it is necessary to divert to another airport, he should contact the controlling dispatcher if possible, prior to selecting a diversion airport. Normally ATC facilities will not relay this information to OCC. FOM 7.16.1

2. If there is an emergency situation that could require an evacuation, at a minimum, what information should be communicated to the flight attendants? FOB 01-03

T = how much **T**ime is available
E = what type of **E**mergency
S = what is the brace **S**ignal
T = **T**ake special instructions

3. During the preliminary landing flow, the flight crew will evaluate the need for autobrakes during landing. In general, when should autobrakes be used? PH 3.12

When landing on a short or contaminated runway or when operating in low visibility, use the autobrake. The captain will determine the type and level of braking to use. The following is provided as selection criteria:

- OFF – To be used for bare and dry runways where landing distance is not a factor
- LO – To be used when moderate deceleration is required
- MED – to be used for contaminated runways or when landing distance is a factor
- MAX – not to be used for landing

4. During a managed descent, if the aircraft is above the descent profile, the intercept symbol displayed on the ND (blue lightning bolt symbol) indicates the point where the aircraft will intercept the descent profile based on what assumption? PH 17.4.3

The prediction is based on the assumption that the pilot will extend half speedbrakes. If necessary, the message "MORE DRAG" comes up on the PFD and MCDU, and remains there as long as more drag (speedbrakes) is required. The pilot should respond to this message by deploying half speedbrakes.

5. When does an amber SPD BRK memo appear on ECAM? PH 12.1.3

A green SPD BRK memo appears on the ECAM when the speedbrakes are extended. The memo flashes amber if the speedbrakes are extended when the thrust is above idle.

6. What does the Energy circle symbol (green dashed arc) on the ND indicate? PH 17.3.3

Represents the Required Distance to Land. Only displayed in descent and approach phase when a selected lateral mode is engaged (HDG or TRK).

FYI: The Energy Circle indicates the amount of distance required for the aircraft to descend and reduce speed based on current altitude and airspeed, and then a three degree glide slope from 1,500 feet AGL.

7. When flying in NAV and managed descent (DES) mode, what vertical reversion occurs when heading (HDG) is selected, (causing a loss of NAV)? PH 14.1.5

CONDITIONS	EVENT	CONSEQUENCE
CLB engaged	Loss of NAV mode	OP CLB engages
DES engaged		V/S engages

8. During an Emergency Descent which pilot assumes PF duties? PH 18.5.2

The captain will assume PF duties for all emergency descents.

Approach

1. What is the definition of a Stabilized Approach? FOM 5.10.12

Rate of Descent
- By 1,000' AFE, the descent rate is transitioning to no greater than 1,000 fpm.

Flight Parameters – Below 1,000' AFE (IMC) or 500' AFE (VMC), the aircraft is:
- On a proper flight path (visual or electronic) with only small changes in pitch and heading required to maintain that path,
- At a speed no less than V_{REF} and not greater than V_{REF} + 20 (except when complying with Airbus FMGC generated speed) allowing for transitory conditions with engines spooled up,
- In trim, and
- In an approved landing configuration

Execute a go-around when the rate of descent is excessive or the flight parameters can not be maintained.

2. If not stabilized at 1,000 ft AFE in IMC conditions go-around . In VMC conditions, compliance with flight parameters (shown above) may be delayed until 500 ft AFE when the deviation is verbalized . However, by 1,000 ft AFE, the descent rate must be transitioning to no greater than 1,000 fpm. FOB 03-03, FOM 5.10.12

3. If not stabilized at or below 500 ft AFE, the first pilot recognizing the unstable condition will call unstabilized . The PF will execute a go-around . FOB 03-03, FOM 5.10.12

4. If the Captain is on "High Minimums" and the RVR RWY10L at PIT is reported at 1200 ft, can the crew accept the approach? FOM 4.14.8

CAT II – Yes
- If the approach coupler and autoland operable and used, and
- The crosswind component is 15 knots or less, then
- Use published CAT II minimums to DH.

CAT III – Not authorized.

5. The PF may call "LANDING" when the aircraft is cleared to land, in a position to land safely, and the runway environment (as defined in the Glossary section of the FOM) will remain in sight until touchdown. FOM 5.10.2

6. How is the flightdeck-to-cabin signal for "Brace for Impact" given? FOB 01-03. FOM 4.6.11, 7.19.12

A captain's PA announcement stating "Brace for Impact" 30 seconds prior to emergency landing.

7. Speedbrake extension is inhibited during which flap configuration(s)? PH 12.1.3

Speedbrake extension is inhibited if:
- SEC 1 and 3 have failed
- An elevator (L or R) has failed (only spoilers 3 and 4 are inhibited)
- Angle of attack protection is active
- **Flaps are in configuration FULL (A319/320) or**
- **Flaps are in configuration 3 or FULL (A321)**
- Thrust levers are above MCT position, or
- Alpha floor is active

If an inhibiting condition occurs, the speedbrakes retract automatically. To regain control of the speedbrakes, the inhibiting condition must be corrected and the SPEED BRAKE lever must be moved to the RET position for ten seconds.

8. When is the use of OPEN DES prohibited on approach? PH 2.13.2

- Inside the FAF, or
- Below 1,000' AGL during a visual approach.

9. What is the maximum crosswind component (including gusts) for CAT II/III approaches? PH 2.3.1

Maximum Winds for Autoland	
Headwind	30 knots
Tailwind	10 knots
Crosswind other than CAT II/III	20 knots
Crosswind CAT II/III	**15 knots**

10. LDA approaches must have a usable _glideslope_ to a DA and are not authorized if it is inoperative. PH 18.6.8

11. If a landing is made in the emergency electrical configuration, what is the flap lever position for landing, the approach speed increment, and landing distance multiplier? QRH 51

For the A320:

- FLAPS LEVER POSITION: 3
- APPR SPD INCREMENT: 10
- LDG DIST MULT: 1.7

12. During a CAT I approach, when the weather is at or better than 1,000' / 3 miles, the final flap setting (3 or FULL) may be delayed no lower than _1,000' AFE_. PH 18.6.6

13. When speedbrakes are extended, extending the flaps may induce a slight _roll_. PH 18.6.1

Note: a 5° to 7° roll is not unreasonable. In calm conditions, a small lateral control asymmetry may remain until disturbed by a control input or by an atmospheric disturbance.

14. During a CAT II approach where "RA NA" or "RA NOT AUTH," the decision height is predicated on the _inner marker_. During this approach, the "100 ABOVE" and "MINIMUMS" callouts must be made by the _FO_. PH 18.6.9

To improve approach awareness and aid in "100 ABOVE" and "MINIMUMS" callouts, the crew may enter the inner marker altitude in the PERF APPR page MDA field.

15. A319/320/321 aircraft are certified for engine-out _CAT IIIa_ approaches that require a _DH_ of _50_ feet. PH 18.6.9

16. An ECAM, "FM/GPS POS DISAGREE" is received after the FAF during an RNAV approach. What action is required? PH 18.6.12

Execute a go-around.

17. During an RNAV approach, after FINAL APP is annunciated on the FMA, what altitude should be set in the FCU altitude window? PH 18.6.13

Missed approach altitude

18. During an ASR approach, if the missed approach altitude is set when the FMA vertical mode is ALT*, what vertical reversion occurs? PH 14.1.5

V/S on current V/S

19. What is the correct procedure if a predictive windshear warning is received during an approach? PH 18.8.3, QRH OD-4

- ADVISORY - Continue the approach.
- CAUTION / WARNING - Execute a normal go-around using TOGA thrust. Retract gear and flaps/slats on schedule.

(Note: See Pushback / Taxi question number 10).

Landing/Go-Around

1. During landing, the PM will call "PITCH" if the following pitch attitude is reached: A319/320: 10 degrees, A321: 7.5 degrees. PH 18.7.1

2. If a TCAS RA, "CLIMB" or "INCREASE CLIMB" is triggered on final approach, the PF should execute a go-around. (True or False) PH 18.13

True

3. The thrust levers may be retarded to the CL detent during a go around when TOGA thrust is not required. This would be accomplished only after verifying that MAN TOGA \| SRS \| GA TRK is annunciated on the FMA. PH 18.6.18

4. During landing, when does partial ground spoiler extension occur? PH 12.1.3

Partial ground spoiler extension occurs when:

- Reverse thrust is selected on at least one engine with the other at or near idle, and
- One main landing gear strut is compressed.

Full ground spoiler extension automatically at touchdown of both main gear or in the case of a rejected takeoff (speed above 72 knots) when:

- Both thrust levers are at idle (if the ground spoilers are ARMED), or
- Reverse thrust is selected on at least one engine with the other thrust lever at idle (if the ground spoilers are not ARMED)

Taxi–in/Parking

Please refer to pages 151 to 157 in the Introduction section of the Jeppesen Route Manual, Volume 2 to answer the following airport signage questions.

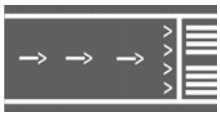
1. As you taxi off the runway, you notice a series of parallel dashed and parallel solid yellow lines painted on the taxiway. Adjacent to these lines is a yellow sign with black stripes identical in design to those painted on the taxiway. The purpose of this sign is to help you identify when you are clear of the _runway_.

2. As you taxi to the gate, you observe a sign with a black background and a yellow B. This sign identifies the taxiway _you are on_.

3. As you continue to taxi, you observe a red sign with white numbering. Painted on the taxiway adjacent to this sign are parallel yellow dashed lines and parallel solid yellow lines. This indicates that you are approaching an _intersecting runway_.

4. If you see a red sign with a white circle and a dash in the middle, it indicates that entry into this area is _Prohibited_.

5. A series of arrows painted on the approach end of a runway indicates a _displaced_ threshold that is usable for taxi and takeoff but not for landing.



6. If brake temperature exceeds 300 degrees C, brake fan selection should be delayed for a minimum of _5_ minutes or accomplished at the _gate_, whichever occurs first (unless turnaround times are short or brake temperatures are likely to exceed 500 degrees C). PH 3.15, FIL 11-03

Note: Disregard the above. Per FIL 11-03: Brake fans selection should be delayed for a minimum of 5 minutes or just prior to the turn into the gate area.

CAUTION: Do not select brake fans ON if any ground personnel are in the area of the wheel wells. If a BRAKES HOT ECAM occurs after gate arrival, coordinate with ground crew before turning brake fans on.

7. Prior to shutting down engine number 2 in preparation for single engine taxi after landing, wait at least _1_ minute after reverser operation PH 3.15.1, FOB 02-04

Engine 2 should be shutdown when AFTER LANDING checklist is completed but never less than 1 minute after using reverse thrust above idle.

Caution: Airplane must be taxied with no braking or steering inputs or stopped with the parking brake set during engine start or shutdown. Unwanted steering and/or braking response may occur during electrical power source transfer.

8. After the aircraft is parked, perform an ADIRS residual groundspeed check within _2_ minutes following aircraft stop. PH 3.16

Note: The groundspeed check must be performed within the two minutes following aircraft stop (Groundspeed resets to zero after two minutes).

9. The Display Units (EFIS, ECAM and MCDU) should be turned OFF during a Securing Checklist. (True or False) PH 3.16

False - **DIM** EFIS, ECAM, and MCDU display units.

ADDITIONAL MEMORY LIMITATIONS

OPERATION LIMITS

Structural Weight Limits	A319	A320	A321
Maximum Takeoff	**166,400 LBS**	**169,700 LBS**	**205,000 LBS**
Maximum Landing	**137,800 LBS**	**142,200 LBS**	**171,500 LBS**

Maximum 90 degree crosswind component (including gusts) for takeoff and landing: **29 knots**
Maximum 90 degree crosswind component (including gusts) for CAT II/III approaches: **15 knots**
Limiting tailwind component for takeoff and landing: **10 knots**
Maximum operating altitude: **39,000 feet**

SPEED LIMITS

Maximum operating airspeed (V_{MO}): **350 KIAS**
Maximum operating mach number (M_{MO}): **0.82M**
Maximum gear extension speed (V_{LO}): **250 KIAS**
Maximum gear retraction speed (V_{LO}): **220 KIAS**
Maximum gear extended speed (V_{LE}): **280 KIAS/0.67M**

Maximum Flaps/Slats Extended Speeds (V_{FE})					
FLAPS	1	1+F	2	3	4
A319/320 V_{FE}	**230 KIAS**	**215 KIAS**	**200 KIAS**	**185 KIAS**	**177 KIAS**
A321 V_{FE}	**235 KIAS**	**225 KIAS**	**215 KIAS**	**195 KIAS**	**190 KIAS**

Turbulence Penetration Speeds	A319/320	A321
At or above 20,000 feet	275 KIAS/.76M	300 KIAS/.76M
Below 20,000 feet	250 KIAS	270 KIAS

ICE & RAIN PROTECTION

Engine Anti-ice ON when OAT (Ground) / TAT (Flight): **10 degrees C or below**
(except during climb and cruise when the temperature is below –40 degrees C SAT)

Engine anti-ice must be ON prior to and during descent in icing conditions
(including temperatures below –40 degrees C SAT)

FUEL

Usable Fuel Tank Quantity		
	A319/320	A321
Wing Tanks	27,500 lb	27,500 lb
Center Tank	14,500 lb	14,500 lb
ACT	-	10,500 lb
TOTAL	**42,000 lb**	**52,500 lb**

Maximum allowable fuel imbalance between left and right wing tanks (outer + inner): **1,000 lbs**

HYDRAULICS, BRAKES, & LANDING GEAR

Maximum landing gear extension altitude: **25,000 feet**

FLIGHT CONTROLS

Maximum operating altitude with slats, or flaps and slats extended: **20,000 feet**

AUTO FLIGHT SYSTEM

Autopilot Engaged – Minimum Height: **100 feet AGL** After Takeoff (if SRS is indicated)

Maximum Winds for Automatic Approach, Landing, and Rollout	
Headwind	**30 knots**
Tailwind	**10 knots**
Crosswind other than CAT II/III	**20 knots**

POWERPLANT

Minimum oil quantity for dispatch: 12.5 quarts

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