

## **A Few Notes on Preparing for a Delta Interview**

*In our ongoing efforts to assist pilots with questions we receive commonly, the following information is offered to you free of charge to assist you in your preparation for a Delta interview, and has been compiled primarily from the feedback of others. Sheppard Air, Inc. does not guarantee the accuracy of the information presented below as it relates to your interview, nor does Sheppard Air, Inc. warrant the information in any way or make any guarantees as to your success.*

- ◆ For preparing for the one-on-one interviews, consider calling:  
Emerald Coast Interview Consulting ([www.emeraldcoastinterviewconsulting.com](http://www.emeraldcoastinterviewconsulting.com))
  
- ◆ For the 12-part Cognitive Skills test, the information out there on the web for the cognitive test is pretty decent but not sufficient alone. Textual description isn't enough. One person said, "I prepared for that by doing brain exercises on Lumosity.com. Although they were different, they were similar in concept to the test Delta used."
  
- ◆ We have no advice to offer you at this time for preparing for the Personality Test, or the 567-question Psychological Test.
  
- ◆ Technical Test (Job Knowledge test) Preparation:  
Delta will give you the following link to a subject outline:  
[http://www.airlineapps.com/documents\\_archive/Delta/Study\\_Guide\\_12\\_03\\_07.pdf](http://www.airlineapps.com/documents_archive/Delta/Study_Guide_12_03_07.pdf)  
It lists a number of possible references at the end which could be studied to prepare for the test. Here are three publications that interviewees have said were good study references:
  - Everything Explained for the Professional Pilot by Richie Lengel (available at many retailers)**
  - Pilot's Rules of Thumb by Art Parma (available at many retailers)
  - FAA Handbook FAA-H-8083-25A, Pilot's Handbook of Aeronautical Knowledge (electronic copy available for free at <http://www.sheppardair.com/PilotReferences.htm>)

Here are some questions representative of those you will see on the Job Knowledge test. They do not exactly match those you will see. We've been told the test is 60 questions, and you will be given 60 minutes.

1. If you hold a constant Mach during climbout, what happens to TAS, IAS, and AOA as you approach your level-off altitude?
  - a) TAS increases, IAS decreases, AOA increases
  - b) TAS increases, IAS decreases, AOA decreases
  - c) TAS decreases, IAS decreases, AOA increases
  - d) TAS decreases, IAS decreases, AOA increases

2. If you hold 360 KTAS in a descent from FL360 to FL200,
  - a) Mach number increases, IAS increases, AOA decreases
  - b) Mach number decreases, IAS decreases, AOA decreases
  - c) Mach number decreases, IAS decreases, AOA increases
  - d) Mach number decreases, IAS increase, AOA decrease
3. Your pitot-static system loses all electricity. What are the indications in the cockpit?
  - a) Airspeed is unreliable.
  - b) Airspeed acts as an altimeter.
  - c) All indications remain fixed.
  - d) All indications are unaffected.
4. Which statement is INCORRECT about holding?
  - a) Use a standard rate turn of 3 degrees per second in IFR conditions.
  - b) You enter holding via parallel, direct, or teardrop entries.
  - c) timing below 14,000' is one minute
  - d) timing at or above 14,000' is one and one-half minutes
5. According to the figure (AIM Figure 2-3-31),
  - a) you are on taxiway Tango, if you turn right you will be on runway 18, and if



you

turn left you will be on runway 36

b) you are on taxiway Tango, if you turn left you will be on runway 18, and if you turn right you will be on runway 36

c) if you turn right you will be on taxiway Tango headed north

d) if you turn left you will be on taxiway Tango headed north

6. You see a picture of an aircraft with the horizon behind it and arrows pointing up at the wingtips. The arrows illustrate the wing

a) dihedral

b) angle of incidence

c) sweep angle

d) angle of attack

7. Your tire pressure is 144 psi. What is your minimum dynamic hydroplaning speed?

a) 70 knots

b) 96 knots

c) 108 knots

d) 144 knots

[The answer is 108 which is 9 times the square root of the tire pressure... see FAA-H-8083-25A, page 10-13.]

8. Centerline lights

a) are yellow, spaced at 50-foot intervals, alternate red at 3000' remaining, and turn red for the last 1000' remaining.

b) are white, spaced at 100-foot intervals, alternate red at 3000' remaining, and turn red for the last 1000' remaining.

c) are white, spaced at 50-foot intervals, alternate red at 3000' remaining, and turn red for the last 2000' remaining.

d) are white, spaced at 50-foot intervals, alternate red at 3000' remaining, and turn red for the last 1000' remaining.

9. Which of the following statements is correct with respect to control tower light gun signals?

a) Flashing red in flight means "do not land", steady red in flight means "continue circling", and flashing green means "return for landing."

b) Flashing red in flight means "continue circling", steady red in flight means "do not land", and flashing green means "return for landing."

c) Flashing red in flight means "do not land", steady red in flight means "continue circling", and flashing green means "cleared to land"

d) Flashing red in flight means "continue circling", steady red in flight means "do not land", and flashing green means "exercise caution."

10. You are on the XYZ VOR 090° radial at 20 DME. You are instructed to proceed direct to the XYZ VOR 180° radial at 70 DME. The direct, no wind heading is:

a) 185°

b) 190°

c) 195°

d) 200°

11. Your height above touchdown (HAT) is 450 feet, and you wish to maintain a 3° visual glidepath to the runway. How far from the runway must you plan to descend?

a) 1.6 NM

b) 1.5 NM

c) 1.4 NM

d) 1.3 NM

12. The FAF for the RWY 25L approach is the XYZ VOR located south of RWY 36. The LOC MAP point for the LOC 36 approach is 4.5 DME from the XYZ VOR, over the runway threshold. If the field elevation is 1360 feet, and the TDZE for RWY 36 is 1220 feet, and your MDA will be 1740 feet, when should you plan to descend to maintain a 3° glidepath to the runway threshold.

a) 3.25 DME

b) 3.3 DME

c) 2.75 DME

d) 2.9 DME

13. What does a transformer-rectifier do?

14. What does an inverter do?

15. Why are hydraulics better than pneumatics?

16. When should you start slowing down for holding?

17. What component changes AC power to DC?
- a) Transformer Rectifier
  - b) Inverter
  - C/D. Something else
18. What changes DC power to AC?
- a) Transformer Rectifier
  - b) Inverter
  - c) Something else
  - d) Something else
19. You have a full electrical (generator) failure on a modern jet aircraft. You have 2 voltmeters, one AC powered and the other DC powered. What indications will the voltmeters show?
- a) Both the AC and DC voltmeter will indicate 0 volts
  - b) The AC will read 28 and the DC will read 0 volts
  - c) The DC will read 28 and the AC will read 0 volts
  - d) Both voltmeters will read 28 volts
20. How many volts is a modern aircraft electrical system?
- a) 5
  - b) 12
  - c) 28
  - d) 100
21. You are at airport A located at 33'20"N 108'02"W. You are flying to airport B located at 35'55"N 107'58"W. Approximately how many miles is it from airport A to airport B?
- a) 4
  - b) 120
  - c) 155
  - d) 200
22. For an aircraft in straight and level flight, which of the following statements is not correct?
- a) A decrease in airspeed will cause a decrease in drag
  - b) Lift is not affected by AOA
  - c) Something else
  - d) Something else
23. In what section of a modern jet engine does the greatest increase in air flow velocity occur?
- a) Compressor section
  - b) Stator section
  - c) Inter-turbine guide vane section
  - d) Turbine blade wheel
24. From front to back, which is the proper order for the following engine components in a modern turbofan aircraft engine?
- a) Compressor, Stator, Diffuser, Turbine (I Googled this and couldn't come

up with a definitive definition/ location of the diffuser.)

- b) Different variation of above
- c) Different variation of above
- d) Different variation of above

25. Your aircraft pitot heat becomes inoperative at FL370 and subsequently you have to descend through known icing. You expect:

- a) The airspeed indication to read 0
- b) The airspeed indication to not change.
- c) The airspeed indication to decrease as you descend.
- d) The VSI to be frozen.

26. You are told to taxi to RW22 via XYZ when you call for taxi. Taxiway X crosses runway 9L. Taxiway Z crosses RW 22 at midfield and continues to RW 22 departure end. What are you expected to do? ("There are two of these taxi questions. I used the old method because I know they started interviewing before this rule change and I assumed that they had not changed the test since they started. Further, the second question had verbatim taxi instructions that were of the old format.")

- a) Hold short of RW9L on Twy X
- b) Hold short of RW22 at midfield until cleared across
- c) Taxi to RW22L departure end, crossing all RWs and Twys enroute and hold short of RW22L.
- d) Taxi to RW 22L departure end crossing all RWs and Twys enroute then taxi onto RW 22L to hold.

27. You are at FL360 on the 180 radial from XYZ Vortac for 100 DME. You are cleared to descend to cross the XYZ 360/10 fix at 10,000'. When should you start your descent to maintain a 3° descent?

- a) 58 DME from XYZ
- b) 68 DME from XYZ
- c) 78 DME from, XYZ
- d) 88 DME from XYZ

28. You are landing on a runway which has reduced braking action due to ice. Which is the proper landing/stopping technique?

- a) Grease the landing
- b) Start maximum wheel braking early
- c) Minimize use of maximum thrust reversers to prevent engine damage from ice ingestion
- d) Something else

29. You unknowingly blow your right main landing gear tire on Takeoff at V1. What is a probable outcome when landing?

- a) Jet pulls to the right and landing distance is increased
- b) Jet pulls to the right and landing distance is decreased
- c) Jet pulls to the left and landing distance is increased
- d) Jet pulls to the left and landing distance is decreased

30. You lose your right engine after V1 while taking off from Runway 30. Which of the following wind conditions would make a continued takeoff most challenging?
- a) Winds 180/30
  - b) Winds 240/30
  - c) Winds 330/30
  - d) Winds 360/30
31. How would aircraft performance be affected by relative location of the Center of Gravity and the Center of Lift?
- a) Aircraft will be more stable and have greater endurance with the Cg forward of the Cp
  - b) Aircraft will be more stable and have greater endurance with the Cp forward of the Cg
  - c) Aircraft would be at max endurance with the Cg and the Cp collocated
  - d) Aircraft will be less stable and have greater endurance with the Cp forward of the Cg
32. You are informed the ground crew has moved some cargo from the forward hold to the aft hold. How does this affect your aircraft performance?
- a) The aircraft will be more stable and maximum range will increase
  - b) The aircraft will be less stable and maximum range will decrease
  - c) The aircraft will be less stable and the maximum range will increase
  - d) The aircraft will be more stable and the maximum range will decrease
33. What is the purpose of the (aileron?)/spoiler mixer?
- a) It allows ground spoiler deployment on landing
  - b) It assists in coordinated roll control
  - c) It allows deployment of flight spoilers for speed control
  - d) Something else
34. What does a black number or number and letter inscription centered on a pink circle with a white inner ring and black border signify. [It's a geographic position marking used to identify the location of taxiing aircraft during low visibility operations. The markings are positioned to the left of the taxiway centerline in the direction of taxiing. AIM 2-3-4g]
35. What is the theory behind using hydraulic fluid to control flight controls?
- a) Due to it's incompressibility it transfers power immediately to flight controls located away from the pump
  - b) Due to it's compressibility, it dampens disturbances to flight controls
  - c) Something else
  - d) Something else
36. You are in a skidding turn. What is true?
- a) The moment of the yaw vector is oriented toward the inside of the turn and the turn rate decreases.
  - b) The moment of the yaw vector is oriented toward the inside of the turn and the turn rate increases.
  - c) The moment of the yaw vector is oriented toward the outside of the turn

and the turn rate decreases.

d) The moment of the yaw vector is oriented toward the outside of the turn and the turn rate increases.

37. If you lose air while starting a jet engine after ignition has occurred but before the completion of the start cycle, what is the most probably outcome?

- a) Low EGT
- b) Hung start/Hot start
- c) Something else
- d) Something else

38. The primary function of a Fowler flap is

- a) It increases lift by allowing airflow through a slot to energize the airflow and prevent premature airflow separation
- b) It extends aft and slightly downward from the wing increasing wing area and camber
- c) It pivots down about its hinge line to increase wing camber
- d) It travels down from beneath the wing increasing wing camber

39. What speed is described as the velocity which, if exceeded, could result in structural failure due to factors such as wing or tail deformation or due to aeroelastic 'flutter'.

- a)  $V_r$
- b)  $V_{MO}$
- c)  $V_{so}$
- d)  $V_{NE}$

40. What is the relationship between AOA and TAS as altitude increases?

41. When do engine compressor stalls usually occur?

42. Why does take-off roll increase with a tailwind?

43. If you have a total AC power failure, and get a generator back online, how do you know how much power the generator is creating?

44. You have to perform a high speed abort. What determines the amount of brake energy that is absorbed by the brakes?

- a) The speed at which the brakes are applied
- b) The ambient temperature
- c) The runway grade
- d) The headwind component

45. How is EPR measured, and what is it used for?

a) Ratio of pressure from exhaust vs pressure at compressor face, used to measure thrust

46. You are flying at 350 Knots at FL 250. You slow to 250 knots, then descend to 13,000' What happens to Ram Air Temperature (RAT).

- a) RAT decreases as you decelerate, then increases as you descend.
- b) RAT increases... then decreases
- c) RAT increases... and increases...
- d) RAT decreases... and decreases...

47. You are at FL 380 inbound on the 180Radial to XYZ. At what range should you start a 3 degree descent gradient to cross the XYZ 180 at 25 DME fix at 13,000'MSL?
- a) 50 DME
  - b) 75 DME
  - c) 100 DME
  - d) 125 DME
48. You are on a visual approach to LGA RWY 31. The winds are 020/15. Landing aircraft have reported braking action as "fair" due to a recent snow storm. The aircraft landing immediately in front of you calls the braking action as "poor." Your crosswind limit for "poor" is 10 knots. You are 3NM from landing, and your approach speed is 140Kts. What do you do?
- a) Use the previously reported "fair" braking conditions and land
  - b) Divert
  - c) Have your copilot look up the crosswind component... if it is under 10 knots, continue and land
  - d) Go around
49. What is the most dangerous hazard presented to jet aircraft by volcanic ash?
- a) Turbine blade glazing
  - b) Loss of pitot static systems
  - c) Visibility
  - d) ???
50. You are flying at high altitude and notice the fuel temperature is dropping. At what temperature does fuel freezing become a concern (Jet A)?
- a) -10C
  - b) -20C
  - c) -30C
  - d) -40C
51. You are on the XYZ 270 radial at 30 DME. You are cleared to fly the 30 DME arc to the 300 radial, and hold. You are flying at .6 Mach and it is 1800z. At what time will you arrive at the holding fix?
- a) 1805z
  - b) 1810z
  - c) 1815z
  - d) 1820z
52. What is the correct statement about wing aspect?
- a) An aircraft with a high aspect wing will have a higher L/D Max and a lesser glide distance
  - b) An aircraft with a low aspect wing will have a higher L/D max and a lesser glide distance
  - c) Other variations of the two questions
53. Question with lots of data to tempt you into TAS calculations and XW/TW component calculations, but all you need is this: Heading inbound on 020 radial,

cleared to hold SW of XYZ on the 210 radial, right turns. Wind is 270/40. What is the outbound course/timing for your initial turn?

- a) 220/1:08
- b) 220/0:52
- c) 200/1:08
- d) 220/0:52

[Turn into the xw, lengthen the leg for the inbound tailwind]

54. Your right tank is showing 1700 lbs, and your left tank has 1900. What is the corrective action?
- a) Open the crossfeed valve and turn off the left pumps
  - b) Open the crossfeed valve and turn off the right pumps
  - c) Increase power on the left engine and decrease power on the right engine
  - d) right/left engine
55. You are above V1 but below Vr when you lose your left engine. What control inputs will you need?
- a) More right rudder
  - b) Less right rudder
  - c) More left rudder
  - d) ???
56. What is the proper start sequence for a turbine engine?
- a) Starter, fuel, ignition
  - b) Fuel, starter, ignition
  - c) Ignition, starter, fuel
  - d) ??? (other variation)
57. During a start, rising EGT and slower-than-normal RPM increase is a sign of what?
- a) Hung start
  - b) Hot start
  - c) Engine fire
  - d) ???
58. What part of the VASI should a 777 use?
- a) Middle and far bars
  - b) near and far bars
  - c) near and middle bars
  - d) all three bars
59. In a thrust-limited transport aircraft, at what angle does all lift become drag?
- a) 30 degrees
  - b) 45 degrees
  - c) 70 degrees
  - d) 90 degrees

Good luck. Sincerely, -SA.