**Answer Key With Explanations**

1. **D.** A BFR has been completed in 24 calendar months, a complex is not required for this aircraft, and this is not a for hire operation, therefore a 100 hour is not required.
2. **A.** The trip was started on 3/10/13 and ended on 3/11/13. 90 days prior to 3/11/13 was 12/11/12. 3 single engine night landings can be found in the logbook, and you need them since you land after 7pm.
3. **D.** The GCO is NOTAMed unreliable and mentions the phone number to use. A is flight watch and the CTAF will not open your flight plan
4. **B.** Per FAR 91.159, VFR cruising altitudes are only required > 3000 feet above the surface. Therefore 3,500 MSL is a legal cruising altitude for this leg
5. **C.** See attached performance. Your ramp weight is 3,075 lbs therefore 3000 lb climb chart is the correct one. At 9C the 0C ROC at 1,490 FPM is correct. Also since daylight savings time begins on 3/10/13, B is incorrect as you are now on Eastern Daylight Time (UTC-4)
6. **B.** See attached weight and balance. Aircraft pilot dad mom and 105 lbs of bags plus 210 lbs of gas is 3,075 lbs. Subtract the 1.7 gallons for start taxi and takeoff
7. **B.** See attached performance. 3000 lb takeoff chart 1000 ft pressure altitude chart 5.75 kts headwind. A is 3000 lbs without wind and C/D are 3,600 lbs.
8. **C.** A is correct if you use 120 as a TAS, B is descent groundspeed, and D is TAS
9. **C.** The AFD provides this information on runway information. > = .3%
10. **A.** See attached performance. Since we cruise at 3,500 and have a nice tailwind, burn plus 1.7 for start is 5.48 gallons
11. **B.** See attached weight and balance. Since the max ramp weight is 3,600lbs and the zero fuel weight is 3,265lbs (this test is much much easier if you use ZFW) you can only take 55.8 gallons. You cannot top off the aircraft (A) and C is additional gas, not total gas
12. **A.** 4500-808 feet, and using the note about closest temperature (20C), SL pressure, and 3600 lb chart is 995FPM. Answer is 3.71 or 3:43 minutes
13. **B.** A is your magnetic course B is your true heading and D is magnetic heading with 6E variation
14. **A.** See attached performance. Being as you start your descent early over the PDK VOR you spend a little less time than normal.
15. **B.** Distance from VOR to airport is 12.5 NM and (4500-808)/12.5 gives you 292.72 FT/NM. With a 161.9 kt groundspeed, that translates to 789.86 FPM.
16. **D.** A is incorrect because the wind-shift occurred at 1619Z. SCT is not a ceiling and the sea level pressure is not measured in mercury.
17. **A.** On runway 14, there is .56 kts of tailwind. For 9C that’s an increase of 16.7 feet. B is the calm wind ground roll, C is for sea level and D is the correct landing distance.
18. **A.** The PIREP was given at 1617Z, not between 16,000 and 17,000
19. **D.** A is incorrect because the runway slopes up, B is for runway 32, and C is to the northeast, not on final.
20. **B.** See performance. A is the leg burn, C is without STTO fuel as is D.
21. **C.** See performance. You burn 7.18 gallons, since you took off at MTOW (3600 lbs) 3600-43.08=3556.9 lbs
22. **A.** See performance. Remember to use day 2 weather (calm winds in climbs). B is correct using day 1 weather other two are made up.
23. **D.** How much runway is left in front of you. When the wheels leave the ground implies ground roll, which is 942 feet (A) so 2,801 feet (RW 9) – 942 is 1859 feet D.
24. **B.** See performance using day 2 weather you get a distance of 7.41 miles in climb minus the 12.5 before the VOR and that is 5.09 miles in cruise. Other answers are using other climb rates or weather
25. **C.** Standard VFR weather minimums question, 91.155
26. **C.** AFD mentions that a parachute jumping area must be open for at least a year, open year round (at least on weekends) and log more than 4000 jumps a year
27. **A.** The questions give you all the info you need. 26.9 miles after the VOR, gives you 14.8 miles to the airport. Using just cruise, approximately 040 degree course gives you a groundspeed of 139.7 kts. That info gives you 6.36 minutes
28. **D.** We have S4 per the AFD, and that in the AFD says Major Major
29. **A.** See attached performance. All information is there (26.9 miles after VOR) helps to get 11.5 minutes to diversion, that plus 6.36 minutes and the info before the VOR gets the answer. Gave large tolerances since they’re prolly stressing about the diversion and time management.
30. **D.** AIM 7-1-12
31. **D.** With the departure of the brother girlfriend and bag you are back to leg 1 ZFW 2865 lbs. Fuel is now down to 41.09 gallons which makes 3111.56 lbs.
32. **A.** Easy question because only one answer has the correct liftoff speed (49KIAS). Calculation not required
33. **C.** Now that the weight is gone you’re back to using the 3000lb charts with the KFTY METAR and 19C temperature, you now get a ROC of 1340 FPM
34. **A.** See performance. 5,500 feet cruise and day 2 weather. No surprises.
35. **B.** Rewarding those still hanging with the test with some easy performance questions.
36. **B.** See performance attached I got 93.98 minutes total for 1.6 in the logbook
37. **C.** See performance. A is if the aircraft didn’t divert, B is if you missed STTO fuel
38. **C.** You cruised at 5,500 feet and if you look at the sectional on leg 3, that puts you into class B airspace. The ELT was inspected more than 12 calendar months ago both you did wrong.
39. **A.** Part 43 Appendix A says yes
40. **D.** Covington was NOTAMed closed, rest of statements aren’t true