

FLIGHT. PLANNING PROBLEM 17TiltMafia
20170514

INSTRUCTIONS: Read the following problem thoroughly. Complete a multi-engine flight log, including the fuel plan section, as well as a DD-175 military flight plan. When finished, compare your log and DD-175 with the attached flight plan and log. Then answer the questions at the end of the problem and check your answers with the attached answer sheet.

Aircraft/BUNO/Side T-44/160842/0442
Unit/Home Station: CTW-4/NAS Corpus Christi
Date/ETD: 1 May 20__ / 1345 Local

Point of Departure: Phoenix Sky Harbor, Arizona, 35°C at Airport
Destination: El Paso International, El Paso, Texas
Alternate (required): Roswell industrial Air Center, Roswell, NM

Cruising 17,000 OAT +20
Altitude: TAS: Use cruise climb speeds to level off
 (Note — climb schedule shown below)
 225 KTAS Props 1900.

Winds (True): 250/40 to destination
 180/35 from destination to alternate

Distance to MOBIE 27NM from takeoff.

Variation: Use 11° E for the Variation for the entire flight.

Route:
To Destination: Take off RWY 26R. MOBIE-TWO DEPARTURE to MOBIE
 Direct to Stanfield
 V-94 to San Simon
 V-198 to HANCH, Direct VALTR, (IAF) ILS RWY 22 Approach
To Alternate: Direct WHOLE V-280 to Chisum VORTAC, Direct TOPAN (IAF)

Approach Intend to Use:
At Destination: ILS RWY 22
At Alternate: ILS RWY 21

Fuel:
Fuel Aboard: 2496 lbs.
Taxi and Run-up: 60 lbs.
Climb Schedule: 130 lbs./12 min./34 NM
Expected Consumption: 500 lbs./hr.
Approach Fuel: 125 lbs.
Max. Endurance 375 lbs./hr. Consumption at 10,000'

Additional Information
Hours Fuel Aboard: 5+30
Radio Call: Navy 1G842
Equipment Aboard: TACAN, Dual VOR, LF-ADF, GPS Dual ILS, RNAV,
 Transponder w/Mode C, VHF and VHF/UHF Tranceivers.

FLIGHT PLANNING PROBLEM 17 QUESTIONS

Suppose in actual flight you passed over Stanfield at 0947 and arrived over SAN SIMON VORTAC at 1031. Your actual MH averaged 083 and your TAS was 180 kts. What is the actual magnetic wind?

- A. 202 AT 33
- B. 342 AT 33
- C. 352 AT 28
- D. 222 AT 28

2. On this same leg, the fuel remaining at Stanfield was 2330 pounds and 2034 lbs. remaining at San Simon. What is the actual rate of consumption?

- A. 296 lbs./hr.
- B. 368 lbs./hr.
- C. 402 lbs./hr.
- D. 444 lbs./hr.

Using the wind found in Question 1, how many minutes after passing COLUMBUS VORTAC should you start using EL PASO VORTAC for navigational guidance? (Assume DME inoperative.)

- A. 5
- B. 7
- C. 9
- D. 11

4. In order to make a TAS of 180 kts, what CAS must be flown if the pressure altitude is 10,500' and the (true) outside air temperature is -5 C?

- A. 160
- B. 154
- C. 170
- D. 190

PUBLICATION QUESTIONS

5. If you had minor difficulties outbound from Stanfield, could you request and execute an approved instrument approach procedure to Coolidge Municipal? Coolidge is located on the TFD R-073 @ 24 DME.

- A. Yes
- B. No

6. TOTEC is 14 NM east of Stanfield VORTAC. How can you identify TOTEC.?

- A. TFD R-093 at 14 DME
- B. PXR R-143 at 40 DME
- C. TUS R-308 at 57 DME
- D. A, B and C are all correct.

7. To change your flight plan 40 NM east of San Simon, who would you contact and on what frequency?

- A. Albuquerque Center on 327.15
- B. Tucson Center on 134.45 or 327.15
- C. Prescott FSS: on 255.4 or 122.6.
- D. Albuquerque FSS: You could transmit on 122.1 and receive on 110.8.

8. Between Stanfield and San Simon, the low UHF frequencies given in FLIP for Albuquerque Center are:
- A. 134.45
 - B. 327.15 only
 - C. 273.6, 327.15, and 398.9
 - D. 273.6 and 281.5
9. What types of METRO services are available at Davis-Monthan AFB?
- A. APMSV only
 - B. Weather Radar only
 - C. Full time PMSV and Weather Radar
 - D. Davis-Monthan AFB does not have PMSV.
10. What publication contains the localizer frequency for the ILS approach at Davis-Monthan AFB?
- A. FLIP AP/1
 - B. FLIP GP
 - C. FLIP Terminal (Approach Procedures)
 - D. FIH
11. Do all runways at El Paso International have high intensity runway lights?
- A. No
 - B. Yes
12. The runway weight-bearing capacity for a single wheel type aircraft at El Paso International (For RWY 4) is:
- A. 175,000
 - B. 100,000
 - C. 85,000
 - D. 11,012
13. Is VHF/DF guidance available at El Paso Intl and/or Paso Elmira (NY) Corning Regional?
- A. Yes El Paso, No Elmira
 - B. No El Paso, Yes Elmira
 - C. No
 - D. Yes
14. Which of the following type fuels are available at El Paso International?
- A. A, A+, (Contract) and A+, B+100LL, (Non-Contract)
 - B. JP-5
 - C. C+
 - D. 89 Octane
15. Who can broadcast over the El Paso VORTAC?
- A. El Paso Approach Control.
 - B. Albuquerque Radio.
 - C. No one - The El Paso VORTAC is without voice capability.
16. El Paso Approach Control provides the following RADAR services (IAW - IIFR Supplement).
- A. RADAR vectors denoted by the (R), ASR denoted by RADAR after the 1LS/RADAR heading.
 - B. RADAR Vectors and ASR approaches as denoted by the (R).

17. In a Category B aircraft, to what MSL altitude may you descend (if still on instruments) on an ASR straight-in approach to RWY 22 at El Paso International?
- A. 4380
 - B. 4240
 - C. 4460
 - D. 4320
18. What frequencies are available for El Paso Tower?
- A. 118.3 only
 - B. 118.3 and 239.275 only
 - C. 118.3, 121.5, 239.275 and 243.0
 - D. 115.2 only 121.5
19. From Roswell airport, if you desired to obtain weather information from the USAF Weather Briefing Facility at Ft Leavenworth, what DSN telephone number should you call?
- A. 331-2651/52
 - B. 781-4775
 - C. 1-800-WEATHER
 - D. 866-6305
20. Suppose the destination weather is forecast to be above minimums but less than 3000/3. What is the minimum weather that could be forecast for the Roswell International Air Center and still use it for an alternate airport.
- A. 200-1/2
 - B. 300-1
 - C. 300-3/4
 - D. 400-1
21. Is a back course LOC approach available at El Paso International?
- A. Yes
 - B. No
22. The type of approach which will authorize the lowest minimums for a fully equipped aircraft at El Paso International is the:
- A. ILS RWY 22
 - B. LOC/DME RWY 4
 - C. ILS RWY 22 Circling
 - D. NDB RWY 22
23. With an ATC clearance limit at VALTR and the ILS RWY 22 the expected approach (El Paso), you experience two-way communications failure. You arrive at VALTR prior to your ETA, and hold. Your inbound and outbound courses in that order would be:
- A. 243-063
 - B. 261-081
 - C. 222-042
 - D. 081-261
24. The MSL elevation of the highest obstruction within 9 NM of the El Paso VORTAC (VOR RWY 26L) is:
- A. 4025
 - B. 41501
 - C. 6500
 - D. 7192

25. The highest obstruction on the VOR RWY 26L instrument approach procedure chart (approach plate) is:
- A. 7900
 - B. 6927
 - C. 7192
 - D. 8300
26. The El Paso Intl airport beacon is located:
- A. On top of the Control Tower
 - B. Next to the Terminal Building
 - C. Approach end of RWY 26L
 - D. Between RWY 22 and RWY 8L
- Both the airport sketch & the airport diagram show the position of, the airport beacon,**
27. RWY 22 at El Paso has what type of instrument approach lighting system?
- A. Short Simplified Approach Lighting System (SSALR)
 - B. Omnidirectional Approach Lighting System (ODALS)
 - C. Medium Intensity Approach Lighting System (MALSR)
 - D. Visual Approach Slope Indicator (VASI)
28. The highest obstruction on the VOR RWY 26L instrument approach procedure chart (approach plate) is:
- A. 8200, 7000
 - B. 8400, 7200
 - C. 7000, 7800
 - D. 7192, 4141
29. If you miss the approach on the VOR RWY 26L where would you hold expect to hold:
- A. East of the ELP VORTAC on the R-081, left turns
 - B. East of the ELP VORTAC on the R-081, right turns
 - C. East of the ELP R-081 @ the 9 DME, left turns
 - D. East of the ELP R-081 @ the 9 DME, right turns
30. The NOTAM code group QNBAW signifies:
- A NDB Awaiting Maintenance
 - B. NDB Unavailable
 - C. NDB Completely Withdrawn
 - D. NDB Available Weekends
31. The low altitude preferred route from Houston Intercontinental to Dallas-Fort Worth International is:
- A. Available in AP/1
 - B. Available from DINS website
 - C. Available from FAA website
 - D. Available at Base Operations
32. When executing a VOR 26L approach to El Paso International at 120 knots IAS if the surface wind is reported as "240 DEGREES, 20 KNOTS," the approximate time from the FAF to the missed approach point should be:
- A . 1:59
 - B . 2:19
 - C . 2:38
 - D . 2:05

33. While executing the VOR 26L approach at El Paso International, you receive clearance to circle to land on RWY 22. While on right base leg for RWY 22, you lose sight of the airport environment. The best course of action is:
- A. Continue to RWY 22 going below the MDA to regain sight of the airport
 - B. Execute a climbing right turn to 6500 direct ELP VORTAC and hold
 - C. Make a climbing right turn toward runway 22 then execute the published miss approach
 - D. Execute a climbing left turn to 6900 direct ELP VORTAC and hold
34. The Final Approach Fix for the ILS 22 at El Paso International with all equipment functioning normally is:
- A. The VALTR LOM
 - B. 5.7 DME off of the localizer
 - C. When the glideslope is intercepted at 5100 feet
 - D. When the glideslope is intercepted and passing 5175 feet
35. The Missed Approach Point for the localizer straight in to RWY 22 is:
- A. 3.4 DME off of the localizer
 - B. 3.4 NM from the Final Approach Fix
 - C. 2.2 DME off of channel 52
 - D. Both B and C are correct
36. While executing the ILS RWY 22 at El Paso International, the DME identifier is:
- A. ELP
 - B. EL
 - C. I-ELP
 - D. EWM
37. You are told the RCR code is 08. How will this affect your landing roll?
- A. Increase it from 46% to 99%
 - B. Increase it from 16% to 45%
 - C. Increase it 100% or more
 - D. Not affect the landing roll
38. Assuming El Paso International is closed, would you be required to obtain a PPR for Biggs AAF?
- A. Yes
 - B. No
39. You need to re-file your flight plan in flight, nearing El Paso, you try to raise Albuquerque FSS without success. What is the best course of action?
- A. Contact Deming FSS
 - B. Contact El Paso Tower
 - C. Contact Albuquerque Center
 - D. Contact El Paso Approach
40. On the VOR 26L approach to El Paso in a T-44 (Category B) at the circling minimums, the aircraft will be:
- A. 4480 feet above the airport
 - B. 518 feet above the airport elevation
 - C. 75 feet above the touchdown zone
 - D. 458 feet above the airport elevation.

41. At NOCIG Intersection on the VOR approach at El Paso International, the aircraft's altitude:
- A. No lower than 6400' AGL
 - B. No lower than 6400' MSL
 - C. Must be 6400' MSL
 - D. Must be 6400' AGL
42. The Navaid changeover point between Stanfield and San Simon is:
- A. 82 miles from Stanfield
 - B. Halfway between Stanfield and San Simon
 - C. 82 miles from San Simon
 - D. 57 miles from Stanfield
43. The approach control serving Biggs AAF is:
- A. Biggs Approach
 - B. Newman Approach
 - C. El Paso Approach
 - D. VALTR Approach
44. What is the location of the nearest PMSV to Biggs AAF?
- A. Biggs Metro
 - B. NAS Corpus Christi Metro
 - C. Holloman Metro
 - D. Davis Monthan Metro
45. Assuming El Paso is your clearance limit and that your last assigned altitude was 5000 feet, you experience a two-way loss of communications prior to reaching Stanfield. At TOTEC you should:
- A. Climb to 5500 after passing TOTEC
 - B. Maintain 5000
 - C. Climb so as to cross TOTEC at or above 5500 and continue climb to 8000
 - D. Maintain 5000 to TOTEC then climb to 8000
46. Assuming you are cleared for VFR on top between Columbus and El Paso with the tops of the clouds at 6000 feet MSL, what is the lowest altitude you could fly?
- A. 6000 MSL
 - B. 7500 MSL
 - C. 8500 MSL
 - D. 9500 MSL
47. If you lose two-way communications between Phoenix and Stanfield, what is the lowest IFR altitude you can descend to?
- A. 8000
 - B. 5000
 - C. 4300
 - D. 2500
48. Is Biggs AAF in class D airspace?
- A. Yes
 - B. No
 - C. It has its own class C airspace

49. While shooting the LOC/DME RWY 4 at El Paso International, would you receive any glideslope indications?

- A. No
- B. Yes, and can be used for the approach
- C. Yes, but are unreliable and should be disregarded

50. What would be the middle marker identifier for the ILS RWY 22 at El Paso International?

- A. EL
- B. Alternating dots and dashes
- C. LP
- D. I-ELP

ETAS (Effective TAS) COMPUTATIONS USED FOR THE FLIGHT LOG, problem 17

The purpose for ETAS is to account for the effect of crosswind on groundspeed for the CR-2 computer.

Ground Speed (GS) determined from Effective True Airspeed (ETAS) when Crab Angle is 10° or greater. Notice that a 11° crab angle gives a ETAS of. 177 knots for a TAS of 180 knots. The net effect is to slow the aircraft by 3 knots.

This problem does not require any (ETAS) computations due to the increase in True Airspeed. If you have any questions on how to determine the ETAS please talk to an instructor prior to your final exam

Flight Planning Practice Problem 17

Answer Key

1. B - If using the CR-2, make sure to use effective true airspeed.
2. C - $2330 - 2034 = 296$ burned in 44 min. = 403 lbs./hr.
3. D - 33 NM at 181 knot GS = 11 min. (Use effective TAS on CR-2)
4. B - E-6B reads true temperature. CR-2 use heat rise of 4° .
5. B - Green Airport Symbol LA E ELA no DOD Instrument Approach. Also Coolidge not listed in the ES (IFR Supplement).
6. D - All 3 arrows have hollow arrowheads so DME can be used.
7. D -
8. C - Notice ES differs from postage stamp on LA chart use non-bold frequencies for low altitude.
9. C - See page. C-10 in FIH for PMSV at Davis-Monthan AFB.
10. C - Terminal FLIP holds these frequencies. The other pubs do not.
11. A - See airport sketch for any of the approaches at El Paso. RWY 8L-26R has MIRL (Sometimes "No is A)
12. B - IFR Supplement shows S100 for runway 4. Check legend for translation.
13. B - IFR Supplement, NAVAID subheading. VHF DF would be shown if available.
14. A - IFR Supplement, SERVICE subheading.
15. C - Underlined VOR frequency on LAG ELA means no voice capability.
16. A - (R) means RADAR vectors. El Paso ILS/RADAR subheading lists LOC, ILS & RADAR approaches.
17. D - See ASR minimums in front of Terminal FLIP.
18. C - GUARD frequencies shown with an (E) in the IFR Supplement (See page A-3 of the IFR Supplement).
19. A -
20. D - ILS RWY 21 landing minimums are $200 - 1/2$ plus $2004/2$ for alternate planning is equals to 400-1.
21. B - Must state BC in margin information & back course in the planview of the approach plate to be available.
22. A - Check the index for available approaches at El Paso. ILS RWY 22 is the only precision approach.
23. C - With no published arrival holding pattern hold at the IAF on the final approach course with right turns (procedure turn side).
24. B - Check elevations within 9 NM (to scale circle) on the VOR RWY 26L approach plate.
25. C - Highest altitude is usually bold and approximately 1000' below 8400' MSA.
26. A - See airport diagram in Terminal FLIP.
27. C - A, symbol for MALSR. See FIR Section B.
28. B - Check MSA circle on the instrument approach procedure chart (approach plate).
29. C - There are two published missed approach patterns. Required to use TACAN pattern if TACAN equipped.
30. C - See Fill NOTAM section.
31. C -
32. B - Wind gives 20 kt. Headwind. Calculate groundspeed and interpolate.
33. C - No descent below MDA unless field in sight, so first a climbing right turn to stay within the circling protected zone then execute missed approach instructions for VOR 26L.
34. C - See legend for "lightning arrow" at front of FLIP Terminal.
35. D - Below airport sketch and profile view - FAF to MAP is 3.4 NM. LOC MAP = I-ELP 2.2 DME .
36. C - Note I-ELP on descent profile in the FLIP Terminal Instrument Approach Procedure.
37. A - Page B-27 in FM
38. A - See PPR note in REMARKS section in IFR Supplement.
39. C - You could contact Center with request, workload permitting they will be able to help you.
40. B - FLIP Terminal for Cat. B aircraft. Circling minimums use Height Above Airport.
41. B - FLIP Terminal, VOR RWY 26L, profile view at NOCIG, 6000 is underlined.
42. A - Changeover point on V94.
43. C - Check IFR Supplement, Biggs AAF communications.
44. C - See page C-25 in the FIR Holloman AFB has full time PMSV with weather radar.
45. C - MRA for TOTEC - must cross at 5500'. Then MEA for route is 8000'.
46. D - VFR-on-top is an IFR clearance, so you must comply with the MEA of 9000'. VFR semicircular rules for easterly course is odd plus 500'.
47. B - MEA for mute is 5000'
48. A - Bigg's AAF is in Class D airspace. Note that the airfield is also within the boundaries of El Paso Class C
49. C - See note on bottom of the profile view on the LOC/DME RWY 4 approach.
50. B - MM is identified by alternating dots and dashes.

MULTI-ENGINE FLIGHT LOG

PILOT'S NAME: ①

AIRFIELD / ELEVATION / FREQUENCY ② *** NOTE: MAG WINDS = True Winds ← Variation (+W, -E)

DEP	CLINC	GND	TWR	DEP
DES	APP		TWR	GND
ALT	APP		TWR	GND
CRUISE ALTITUDE		MAG WINDS:	DESTINATION	TAS
17,000		CALM	239 / 40	225
①		CLIMB TIME / FUEL / DISTANCE		
⑥		T/O FUEL	- START / TAXI	FUEL FLOW PPH
FUEL PLAN		2,436	2,496	500
1. CLIMB / ROUTE TO DEST IAF	730	RESERVE FUEL 10% of #4 or 20 minutes MAX ENDURANCE FUEL at 10,000 FEET MSL		
2. ROUTE TO ALT IAF (if Required)	276	CHECKLIST FUEL PACKET FLASHLIGHT WALLET CREDIT CARDS PUBLICATIONS AP / 1 WX BRIEF CR-2 NOTAMS FDC NOTAMS		
3. APPROACH	125	D. ESTIMATES A. CROSS CHECK CHECK IN AP / 1		
4. TOTAL (1+2+3)	1,131	1. FLIGHT HAZARDS 2. ROUTE & AREA RESTRICTIONS 3. SUPPLEMENTARY AIRPORT REMARKS		
5. RESERVE (See Note at Flight)	125			
6. TOTAL REQUIRED (4+5)	1,256			
7. REMAINING FUEL T/O - 6	1,180			
8. REQUIRED TO ALT (2+3+5)	526			
AIRFIELD INFO	DESTINATION	ALTERNATE	DELAY / EMERGENCY	
RUNWAY				
LIGHTS				
FUEL / OXYGEN				
APPROACH HINS				
REMARKS				
NOTES				

ACTUAL TIME OFF / ON

T/O FUEL

2,436

ROUTE TO ③	VOR TACAN	CRS	DIST	GS	ETE ⑤	LEG	ERR	ACTUAL TIME OFF / ON		NOTES
								FUEL	ATA	
Climb			27		12	130	2,306			
Dir TFD		108	7/17	252	4	33	2,273			
V94 SSO		093	139	258	32	267	2,006			
V-198 CUS		094 095	90	257	21	175	1,831			
V-198 HANC		078	44	262	10	83	1,748			
Dir VALTR		070	21	263	5	42	1,706			
			348		84	730				
Dir WHOLE		060	24	236	6	50	1,656			
V280 PIO		027	45	253	11	92	1,564			
V280 CME		023 024	59	254	14	117	1,447			
Dir TOPAN		067	9	233	2	17	1,430			
			137		33	276				