

Hanscom Flight Training Center

Pre-Solo Written Test for Solo Cross Country in PA28 Warrior

1. Usable fuel capacity at the bottom of the filler neck indicator is:
 - (A) 48 gal
 - (B) 50 gal
 - (C) 17 gal
 - (D) 75 gal

2. The Lawrence VOR is a:
 - (A) TVOR; designed to be used within 25 nm. and below 12,000 ft. AGL
 - (B) LVOR; reliable up to 40 nm. at altitude between 1,000 ft. and 18,000 ft. AGL
 - (C) HVOR; offering reception up to 40 nm. up to 14,500 ft. AGL
 - (D) none of the above

3. Lawrence G. Hanscom field is located on the:
 - (A) 111° radial from GDM
 - (B) 223° radial from LWM
 - (C) 54° radial from PUT
 - (D) all of the above

4. If flying direct from KBED to KEWB with PUT tuned and identified, and have 93° selected, over KOWD, the VOR Indicator would display:
 - (A) full right deflection with a FROM indication
 - (B) full left deflection with a TO indication
 - (C) full right deflection with a TO indication
 - (D) none of the above

5. If instead of southerly heading as in question #4, the aircraft were heading in a northerly direction, the VOR Indicator would display:
 - (A) full right deflection with a FROM indication
 - (B) full left deflection with a TO indication
 - (C) full right deflection with a TO indication
 - (D) none of the above

6. The red flag on the Sanford Seacoast Regional Airport shows that the airport is a:
 - (A) VFR waypoint
 - (B) public gathering facility
 - (C) location over which transit is not recommended
 - (D) both B and C

7. Green State Airport (KPVD) is within class C airspace:
 - (A) a clearance is required to transit overhead at 3,000 ft.
 - (B) communication must be established prior to transiting east to west
 - (C) student pilots may not transit unless a logbook endorsement has been received
 - (D) all of the above

8. If cruising on V-3 from KPVD to KHFD which altitude may not be used:
 - (A) 2,500 MSL
 - (B) 3,000 MSL
 - (C) 3,500 MSL
 - (D) 4,500 MSL

9. Given the following information, the TAS and GPH are:
aircraft: Aero Club Warrior
altitude: 4,500 ft. MSL
altimeter: 29.92
power setting: 75%
leaning: set for best economy cruise per Lycoming
OAT: 30° F
winds aloft forecast: 350° at 30 knots
 - (A) 107 knots, 11 GPH
 - (B) 123 knots, 9.5 GPH
 - (C) 117 knots, 10 GPH
 - (D) 111 knots, 10 GPH

10. Using the information in question #9, what is the ground speed?:
 - (A) 116 knots
 - (B) 106 knots
 - (C) 89 knots
 - (D) 85 knots

11. Using the information in question #9, what is the magnetic heading?:
 - (A) 292°
 - (B) 329°
 - (C) 312°
 - (D) 325°

12. Deviation is:
 - (A) magnetic compass error
 - (B) directional gyro error
 - (C) allowance made for variations
 - (D) allowance for A and B

13. Referring to the Boston VORTAC, a pilot may communicate with Bridgeport Radio on:
(A) 122.1, listening on 112.7
(B) 122.2
(C) 122.4
(D) all of the above
14. Entry to the pattern for runway 02 at Keene, NH (KEEN):
(A) must be via the 45° entry to the left downwind
(B) may at the pilot's discretion be made via the crosswind, downwind, or base
(C) may be via the straight into final if no other aircraft are in the pattern
(D) must be via the 45° entry to the right downwind
15. If TAS is 107 knots, in cruise at 4,500 ft. MSL, how long will it take to fly 170 nm.?:
(A) 95 minutes
(B) 105 minutes
(C) 110 minutes
(D) not enough information is provided to answer this question
16. Enroute weather (Enroute Flight Advisories Service, i.e. Flight Watch) can be contacted near Hartford, CT on:
(A) 122.0
(B) 122.2
(C) 122.4
(D) 122.6
17. Also near Hartford, CT, hazardous in flight weather (HIWAS) is available on:
(A) 114.9 (Hartford VOR)
(B) 244.0 (Loomis Beason)
(C) 122.4
(D) 122.6
18. Given the following information, what is the approximate average true airspeed in a climb from an airport to 7,500 ft. MSL?:
airport elevation: 1,500 ft. above sea level
airport temperature: 18° C
cruise OAT: 0° C
altimeter setting: 29.92
3,000 ft. winds aloft: 340 / 20
6,000 ft. winds aloft: 020 / 30
true course: 360
indicated airspeed: 79 KIAS
flaps: up
power setting: full throttle

- (A) 79 KIAS
- (B) 87 KIAS
- (C) 90 KIAS
- (D) 85 KIAS

19. For the conditions in question #18, how much fuel is used?:

- (A) 1.0 gal
- (B) 2.5 gal
- (C) 3.5 gal
- (D) 5.0 gal

20. The automated surface observation system (ASOS) in use at KBED _____ :

- (A) is designed to be receivable up to 25 nm. from KBED
- (B) broadcasts on the ATIS frequency (124.6) when the tower is not in operation
- (C) may be accessed by telephone (781-274-9733)
- (D) all of the above

21. While on a cross country flight, if an unscheduled stop is made:

- (A) the pilot may continue after closing the flight plan, rechecking weather and refilling with FSS
- (B) the pilot may continue after review of airport procedures in the Chart Supplement
- (C) the flight may not continue until the responsible flight instructor or a designee arrives at the airport and reviews the flight planning for the remaining segment and dispatched the flight
- (D) the student pilot may not proceed further until such time their instructor has been contacted and authorizes the departure

22. When should pilots monitor the 121.5 MHz or 243 MHz frequencies?:

- (A) until 2021 when the Cospas-Sarsat system has announced that it will discontinue the monitoring and reception of the 121.5 MHz and 243 MHz frequencies
- (B) until the 406 MHz frequency is activated
- (C) while enroute
- (D) when instructed by ATC

23. If having worked from 0800 until 2100 on the previous day, the crew rest period is:

- (A) 8 hours
- (B) 12 hours
- (C) 16 hours
- (D) 24 hours

24. The magnetic heading for runway 02 at Keene, NH (KEEN) is:
- (A) 020
 - (B) 022
 - (C) 018
 - (D) 019
25. To intercept EEN V-93 CON departing runway 02 at Keene:
- (A) select the 65° radial from the Keene VORTAC and fly heading 90° until the CDI enters with a FROM indication
 - (B) select the 66° radial to CON and fly a magnetic heading 90° until the CDI enters with a TO indication
 - (C) select the 246° radial from CON and fly a magnetic heading of 90° until the CDI enters with a TO indication
 - (D) either A or B
26. The VOR range of frequencies is:
- (A) 121.00 MHz to 136.95 MHz
 - (B) 108.00 MHz to 117.95 MHz
 - (C) 108.00 MHz to 136.95 MHz
 - (D) none of the above
27. If confronted with forced landing, trim should be set at _____. When field can easily be reached, slow to _____.
- (A) 79 KIAS, 63 KIAS
 - (B) 73 KIAS, 63 KIAS
 - (C) 73 MPH, 63 MPH
 - (D) none of the above
28. To find a bearing to a selected VOR, you should:
- (A) center the CDI with a FROM indication
 - (B) press and hold the Mode Switch for two seconds
 - (C) center the CDI with a TO indication
 - (D) either B or C
29. If intercepted... :
- (A) maintain a listening watch on Guard 121.5
 - (B) contact ATC
 - (C) follow the intercept's visual signals
 - (D) all of the above

30. When a stopover flight is planned, a separate flight plan should be filed for each leg when the stop is expected to be more than ... :
- (A) 2 hours
 - (B) 30 minutes
 - (C) 1 hour
 - (D) no such action is recommended
31. When a VFR flight plan with FSS, it will generally be held after the proposed departure time by the FSS ... :
- (A) for 2 hours
 - (B) for 30 minutes
 - (C) for 1 hour
 - (D) until the actual departure time is received
32. VFR position reports ... :
- (A) are required
 - (B) are a good practice
 - (C) are transmitted every hour to ATC
 - (D) are required in prohibited areas
33. Hyperventilation ... :
- (A) is caused by hypoxia
 - (B) is caused by inadvertent door open in flight
 - (C) can occur due to stress
 - (D) cannot occur at the same time as hypoxia
34. Engaging the starter is limited to _____, with _____ rest between re-engaging the starter.
- (A) 15 seconds, 2 minutes
 - (B) 20 seconds, 4 minutes
 - (C) 30 seconds, 2 minutes
 - (D) 30 seconds, 1 minute
35. Glide performance from PA 3,000 ft. to PA 500 ft. is:
- (A) 4.9 nm
 - (B) 6.8 sm
 - (C) 6.0 sm
 - (D) both A and C

36. For a cold start, if the engine doesn't start within _____, disengage the starter, re-prime the engine and repeat the start procedure.
- (A) 8 to 15 seconds
 - (B) 1 minute
 - (C) 15 to 30 seconds
 - (D) 5 to 10 seconds
37. A TAF provides weather information... :
- (A) for a 5 statute mile radius from the referenced terminal
 - (B) in conjunction with the published TFRs
 - (C) for a 5 nautical mile radius from the referenced terminal
 - (D) none of the above
38. When flying into Westover ... :
- (A) tower must be informed that the destination is the civilian side
 - (B) the pilot must taxi, shut down, and report to the FBO
 - (C) a sign-in process is necessary
 - (D) all of the above
39. Area forecasts specify altitudes for cloud height ... :
- (A) provide an 18 hour synopsis of weather patterns
 - (B) provide a 12 hour forecast of VFR cloud cover and visibility
 - (C) provide a 6 hour categorical outlook
 - (D) all of the above

Annual Reviews

Date _____ (CFI) _____

Date _____ (CFI) _____

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