

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. Lawrence G. Hanscom field is located on the:
 - A. 111° radial from GDM
 - B. 54° radial from PUT
 - C. Both A and B
 - D. None of the above

3. 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

4. If instead of southerly heading as in question #3, 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

5. 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

6. 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
7. 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
8. 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 power 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
9. Using the information in question #8 and cruising on V3 from PVD to HFD, what is the ground speed?
- A. 116 knots
 - B. 106 knots
 - C. 110 knots
 - D. 85 knots
10. Using the information in questions #8 and #9, what is the magnetic heading?
- A. 292°
 - B. 329°
 - C. 312°
 - D. 325°

11. Deviation is:
 - A. Magnetic compass error
 - B. Directional gyro error
 - C. Allowance made for variations
 - D. Allowance for A and B

12. 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

13. 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

14. 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

15. Enroute weather can be accessed near Hartford, CT on?
 - A. 122.0
 - B. 122.2
 - C. 122.4
 - D. 122.6

16. Given the following information, what is the approximate average 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. 83 KIAS
17. For the conditions in question #17, how much fuel is used?
- A. 1.0 gal
B. 2.5 gal
C. 3.5 gal
D. 5.0 gal
18. 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
19. 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

20. When should pilot monitor the 121.5 MHz or 243 Mhz frequencies?
- A. Until 2021 when the Cospas-Sarat system has announced that it will discontinue the monitoring and reception of the 121.5 MHz frequencies
 - B. Until the 406 Mhz frequency is activated
 - C. While enroute
 - D. When instructed by ATC
21. 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
22. The magnetic heading for runway 02 at Keene, NH (KEEN) is:
- A. 020
 - B. 022
 - C. 018
 - D. 019
23. 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
24. 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

25. 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
26. 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
27. 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
28. When a VFR flight plan is filled 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
29. VFR position reports:
- A. Are required
 - B. Are a good practice
 - C. Should be transmitted every hour to ATC
 - D. Are required in warning areas
30. Hyperventilation:
- A. Is caused by hypoxia
 - B. Is caused by inadvertent door open flight
 - C. Can occur due to stress
 - D. Cannot occur at the same time as hypoxia

31. 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
32. 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
33. 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
34. A TAF provides weather information:
- A. For a 5 statute mile radius from the reference terminal
 - B. In conjunction with the published TFRs
 - C. For a 5 nautical mile radius from the reference terminal
 - D. None of the above
35. 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
36. 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) _____

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