PRE-SOLO WRITTEN KNOWLEDGE TEST

Single-Engine Airplane | Student Version 1.0 | October 2026

Student: _____ Date: _____

Instructor: _____ Aircraft make/model: _____

Home airport (identifier): _____ Aircraft registration (if known): _____

Instructions: Answer in your own words. Use current FAA regulations, the current chart and Chart Supplement, and the aircraft POH/AFM as applicable. Cite sources where appropriate. Your instructor will review and correct all incorrect answers before authorizing solo flight. This examination does not itself grant solo privileges.

1 | Student Pilot Solo Regulations

1. What three subjects must your pre-solo aeronautical knowledge test address? (14 CFR 61.87(b))

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2. Identify at least eight maneuvers or procedures for which a single-engine airplane student must receive and log pre-solo flight training. Include takeoffs/landings, traffic patterns, stalls and emergency operations. (61.87(d))

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3. What certificates, identification, and medical qualification (or permissible alternative) must you have for this particular solo? What logbook endorsement is required, and how long is it valid? (61.3, 61.23, 61.87(n), 61.89(d))

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4. Can two student pilots fly together and both log solo flight? Can you carry a passenger? Explain. (61.87(a), 61.89(a))

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5. Is solo night flight automatically prohibited? What additional conditions apply, and what limitations has your instructor established for YOU? (61.87(o), 61.89)

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6. List at least six student pilot solo limitations, including visibility, visual reference to the surface, and instructor-imposed restrictions. (61.89)

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7. May you fly 30 NM from your departure airport or land at another airport on your initial solo endorsement alone? Explain the general rule and the special endorsements permitted by 61.93.

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8. Where are you currently authorized by your instructor to operate solo? List approved airport(s), practice area boundaries, maximum wind, weather minima, and other limitations from your logbook or instructor.

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2 | Operating Regulations and Preflight Decisions

9. Who is the pilot in command on your solo flight, and what responsibility does that person have? (91.3)

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10. What information must you review before departure? Address weather, NOTAMs, fuel, runway lengths, performance, and alternatives as applicable. (91.103)

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11. What aircraft documents must be aboard, and what inspection or maintenance status items must be verified before departure? (91.203, 91.409, 91.417, 91.7)

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12. Explain the alcohol and impairing-drug restrictions. What should you do if you are sick, fatigued, stressed, or taking medication? (91.17; IMSAFE)

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13. When must the pilot use seat belts and shoulder harnesses? (91.105)

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14. What are the minimum safe altitudes over congested areas, other areas, and open water/sparsely populated areas? Explain the general emergency-landing rule and exceptions. (91.119)

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15. What are the day-VFR fuel reserve requirements for an airplane? How does your personal or instructor minimum compare? (91.151)

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16. If a light, radio, instrument, or other item is inoperative during preflight, may you simply placard it yourself and fly? Explain your decision process and who you would consult. (91.205, 91.213)

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3 | Airspace, Airports, and Weather

Using a CURRENT sectional/TAC and Chart Supplement, identify your HOME AIRPORT and the THREE NEAREST PUBLIC-USE AIRPORTS by straight-line distance. Exclude private-use airports. If equal-distance candidates or operational considerations exist, confirm the selection with your instructor.

Airport	ID	Distance (NM)	Airspace / surface area	Tower / CTAF

Home airport				
Nearest public-use #1				
Nearest public-use #2				
Nearest public-use #3				

17. For each airport above, describe the airspace class, applicable surface-area dimensions or boundaries, charted airspace floors and ceilings where relevant, and the entry/communication rules.

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18. What are the day-VFR visibility and cloud-clearance requirements in the airspace you will use? Differentiate Class G below 1,200 feet AGL from controlled airspace when applicable. (91.155)

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19. State your instructor-approved personal solo weather minimums: visibility, ceiling, steady/gust winds, crosswind, turbulence, and any other restrictions. What if actual weather is legal but outside those limits?

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20. What are the traffic-pattern direction, standard pattern altitude, runway information, and noise-abatement procedures at your home airport? Identify the current data sources.

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21. Does nearby Class B, C, or D airspace affect your planned solo? Explain the precise ATC communications/clearance requirements and any special student-pilot endorsements required for Class B, if applicable. (91.129-131; 61.95)

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22. Describe arrival and radio procedures at your home airport. If it is towered, when may you enter Class D and what does a radio reply containing only your call sign mean? If nontowered, how do you join and communicate in the pattern? (91.126-130)

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23. You call ATC and receive instructions you do not understand or cannot safely comply with. What do you say and do?

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24. Your planned runway closes, or no one responds on the expected radio frequency. Explain the safe alternatives and when you would divert, hold, or use lost-communications procedures.

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25. How do you obtain and interpret current METARs, TAFs (where available), winds, and relevant NOTAMs? Describe one weather change that would cause you to cancel or terminate the flight.

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4 | Aircraft Operations and Performance

26. State the aircraft make/model, approved fuel grade, usable fuel capacity, normal operating fuel quantity for solo, and fuel-burn estimate. Identify the POH/AFM or aircraft-specific source.

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27. Calculate your takeoff and landing performance for a representative solo weight and current forecast conditions. How will density altitude and a tailwind affect the results?

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28. For YOUR make/model, give the applicable speeds in KIAS: VS0, VS1, VR (if published), VX, VY, VA at relevant weight, best glide, VFE, VNO, VNE, and any published normal approach speed. Explain which are instrument markings and which are not. Do not invent a speed absent from the POH/AFM.

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29. What are the aircraft's demonstrated crosswind component, actual operating limitations, and your instructor-authorized solo wind/crosswind limits? How will you calculate a crosswind component?

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30. What are your immediate actions after an engine failure (a) during takeoff roll, (b) immediately after liftoff, and (c) in the practice area? Prioritize aircraft control and follow your specific checklist.

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31. Describe your go-around procedure. Give at least three situations in which you should initiate one rather than try to salvage the landing.

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32. You are on final, high and fast, and another aircraft is still occupying the runway. Explain your decision and actions.

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33. Describe what to do if you become disoriented or lost, have a suspected radio failure, or encounter weather worse than forecast. When should you request assistance or declare an emergency?

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5 | Pre-Solo Instructor Oral Review

Review and demonstrate understanding of: preflight/runup and abort points; taxi and runway incursion prevention; normal/crosswind takeoffs and landings; pattern entry and spacing; safe go-around; stalls and slow flight at appropriate training altitudes; wake turbulence; engine failures in takeoff, pattern, and practice area; checklist usage; radio failures and diversion; and the exact scope of the student's solo authorization.

Questions corrected / topics reviewed: _____

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Instructor-determined restrictions / next steps: _____

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Instructor signature: _____ Review date: _____

Instructor note: Successful completion and review of this knowledge test alone does not replace the flight training, demonstrated proficiency, applicable endorsements, or medical/certificate requirements of Part 61.