

PRACTICE EXAM 16

1. A Sport Pilot is 20 minutes from the destination when the forecast there changes to a 900-foot ceiling and 2 miles visibility. A good alternate lies 15 minutes back along the route with VFR conditions. The best decision is to:

- A. Continue to the destination and attempt to land below the clouds
- B. Descend below the clouds and proceed at low altitude
- C. Divert to the alternate while VFR conditions and fuel margin remain
- D. Climb above the cloud layer to continue toward the destination

2. During preflight, a pilot feels rested and the aircraft is airworthy, but a passenger is pressuring the pilot to depart into marginal weather to make an event. Applying PAVE, the elevated risk is in the category of:

- A. Pilot fitness, which is acceptable
- B. Aircraft condition, which is airworthy
- C. enVironment, which is the only concern
- D. External pressures from the passenger's urgency

3. A pilot on downwind notices an aircraft on a 3-mile straight-in final to the same runway. The most appropriate action is to:

- A. Turn base immediately ahead of the straight-in traffic
- B. Ignore the traffic and continue the normal pattern
- C. Extend the downwind to sequence safely behind the traffic
- D. Climb out of the pattern and squawk 7700

4. A pilot planning a 90-nautical-mile flight at 90 knots groundspeed, burning 6 gallons per hour, has 12 gallons usable. After computing fuel for the flight plus the required day-VFR reserve, the pilot should conclude:

- A. There is no need to compute fuel for such a short flight
- B. The reserve requirement does not apply to day VFR
- C. The flight plus a 30-minute reserve is within the fuel available
- D. The aircraft cannot complete even the one-way leg

5. A Sport Pilot wants to fly a friend and the friend's child on a sightseeing trip in a four-seat light-sport airplane. The pilot may legally:

- A. Carry both passengers since the aircraft has four seats
- B. Carry both if the flight remains in the local area
- C. Carry both if expenses are shared equally
- D. Carry only one of them, due to the single-passenger limit

6. On a hot afternoon at a 5,000-foot-elevation airport with a short runway, a fully loaded light airplane is preparing to depart. The greatest concern is:

- A. Carburetor ice forming during the climb
- B. High density altitude degrading takeoff and climb performance
- C. The magnetic compass leading during the turn
- D. Wake turbulence from the pilot's own aircraft

7. A pilot notices a gradual, unexplained loss of RPM in cruise on a humid day, with no throttle change. The pilot should:

- A. Lean the mixture aggressively to restore power
- B. Apply carburetor heat to clear suspected induction ice
- C. Shut down and restart the engine in flight
- D. Increase the propeller pitch to regain RPM

8. A pilot taking off behind a departing larger aircraft should, to avoid wake turbulence:

- A. Rotate at the same point as the larger aircraft
- B. Climb below the larger aircraft's flight path
- C. Delay until the runway lights change color
- D. Lift off before its rotation point and climb above its path

9. A pilot feels a mild cold coming on the morning of a planned flight. Applying IMSAFE, the pilot should:

- A. Fly anyway, since a minor illness has no effect
- B. Recognize that even a minor illness can impair performance and reconsider
- C. Take an over-the-counter remedy and depart immediately
- D. Fly only if the passenger is also a pilot

10. A pilot inbound to a non-towered airport cannot determine the active runway. The best resource is to:

- A. Squawk 1200 and land on any runway
- B. Contact the nearest control tower for a clearance
- C. Check the wind indicators and segmented circle, then announce on CTAF
- D. File an instrument flight plan to obtain a runway assignment

11. A briefer tells a Sport Pilot "VFR flight not recommended" for the planned route. The pilot should:

- A. Disregard the advisory, since it is not legally binding
- B. Weigh it heavily toward delaying or canceling the flight
- C. Depart immediately to beat the worsening weather
- D. Climb above the weather using instrument procedures

12. A pilot discovers during preflight that the aircraft's annual inspection lapsed two weeks ago. The pilot should:

- A. Fly the aircraft to a mechanic, exceeding the interval by 10 hours
- B. Not fly the aircraft until the annual inspection is completed
- C. Disregard it, since the lapse is only minor
- D. Perform the annual inspection personally before departing

13. A pilot encounters unexpected moderate turbulence at the boundary of a building cumulus cloud. The pilot should:

- A. Slow to or below maneuvering speed and maintain a level attitude
- B. Increase to cruise speed to exit the area quickly
- C. Climb into the cloud to find smoother air
- D. Enter a steep bank to leave the turbulence rapidly

14. A Sport Pilot wishes to fly into a Class C airport but has no airspace endorsement. The pilot should:

- A. Proceed, since a transponder satisfies the requirement
- B. Request a special waiver from the controlling tower
- C. Obtain the required endorsement before operating there
- D. File an instrument flight plan to gain access

15. A pilot loses the attitude and heading indicators in flight while the turn coordinator, airspeed, and altimeter remain normal in clear VFR conditions. The pilot should:

- A. Fly partial panel using the working instruments and the outside horizon
- B. Land immediately, treating the airplane as uncontrollable
- C. Disregard the outside horizon and trust the failed instruments

D. Switch the magnetic compass to the alternate static source

16. A pilot computing a cross-country flight finds the planned arrival is 30 minutes after sunset. As a day-VFR Sport Pilot, the pilot should:

- A. Depart anyway and accept the brief night arrival
- B. Adjust the plan to arrive before sunset, or delay the flight
- C. Obtain a night endorsement during the flight
- D. Increase cruise power to make up the time and arrive at dusk

17. A pilot catches himself thinking "the forecast is probably just being overly cautious" before a marginal-weather flight. This reflects which hazardous attitude, and the antidote is:

- A. Invulnerability/anti-authority; "It could happen to me"
- B. Resignation; "I'm not helpless"
- C. Macho; "Taking chances is foolish"
- D. Impulsivity; "Not so fast"

18. A pilot smells exhaust in the cabin and begins to feel a headache and drowsiness in flight. The pilot should suspect carbon monoxide and:

- A. Increase the cabin heat to mask the symptoms
- B. Continue the flight, since the symptoms are mild
- C. Climb to a higher altitude to dilute the gas
- D. Shut off the heater, open fresh air vents, and land

19. A pilot is loading a light airplane and finds it is within gross weight but the CG falls just aft of the aft limit. The correct action is to:

- A. Shift baggage forward to bring the CG within limits

- B. Add fuel to the aft tanks to balance the load
- C. Depart, since the weight is within limits
- D. Increase power on takeoff to compensate

20. A pilot on final notices the VASI showing "red over red." The pilot should:

- A. Continue the approach, as this indicates on glidepath
- B. Add power and adjust to regain the proper glidepath, as this indicates too low
- C. Reduce power to descend faster toward the runway
- D. Disregard the VASI and land based on the runway numbers

21. A pilot planning a flight near a major sporting event should specifically check for:

- A. The winds and temperatures aloft only
- B. A temporary flight restriction (TFR) published by NOTAM
- C. The airport's historical weather averages
- D. The surface analysis chart's frontal positions only

22. A pilot acting as PIC realizes mid-flight that a previously planned fuel stop is closed. The best decision-making approach is to:

- A. Continue to the original destination regardless of fuel state
- B. Land at the closed airport anyway to refuel
- C. Ignore the closure and hope fuel lasts to the destination
- D. Use the DECIDE process to choose a safe alternate fuel stop

23. A pilot feels strong pressure to complete a flight despite deteriorating weather, in order to return home for work the next day. This "get-there-itis" is best managed by:

- A. Increasing speed to outrun the weather
- B. Relying on the passenger to decide whether to continue
- C. Pressing on, since the destination is the goal
- D. Honoring personal minimums and divert criteria set in advance

24. A pilot reviewing a sectional sees a tower charted at "2049 (1232)" along the route at the planned cruising altitude of 2,000 feet MSL. The pilot should:

- A. Choose a higher cruising altitude to clear the obstacle safely
- B. Maintain 2,000 feet, since the obstacle is below that
- C. Disregard the obstacle, as towers are always lit
- D. Descend below the obstacle to remain clear

25. A pilot encounters an aircraft that remains motionless in the windscreen, neither moving nor changing position but slowly growing larger. The pilot should:

- A. Continue straight, since a stationary target poses no threat
- B. Wait to confirm the other aircraft's intentions before acting
- C. Squawk 7700 and take no evasive action
- D. Maneuver early, recognizing a collision course

26. A pilot planning a flight finds the temperature/dewpoint spread at the destination is very small and falling. The pilot should anticipate:

- A. Clearing skies and improving visibility on arrival
- B. A rapid rise in atmospheric pressure
- C. Strong, gusty surface winds developing
- D. Possible fog or low clouds forming, reducing visibility

27. A pilot is unsure whether a planned medication is safe for flight. The most conservative and correct approach is to:

- A. Fly, since the medication is legally prescribed
- B. Take a double dose to ensure it wears off quickly
- C. Not fly while using any drug that could affect faculties contrary to safety
- D. Fly only if a passenger monitors the pilot's behavior

28. A pilot on a cross-country flight notices fuel is burning faster than planned due to an unexpected headwind. The best decision is to:

- A. Plan a fuel stop while comfortable margin remains
- B. Continue to the destination and hope the wind shifts
- C. Reduce the day-VFR reserve to extend the range
- D. Increase power to reach the destination sooner

29. A pilot wants to demonstrate a light-sport airplane in flight to a prospective buyer. As a Sport Pilot, the pilot:

- A. May not do so, as this is outside Sport Pilot privileges
- B. May do so with a passenger endorsement
- C. May do so whenever the aircraft is for sale
- D. May do so if the buyer shares the operating expenses

30. A pilot approaching mountainous terrain in gusty wind conditions should approach a ridge:

- A. Directly perpendicular at the lowest possible altitude
- B. Straight toward the highest peak with no escape turn
- C. At an angle, preserving the option to turn toward lower terrain

D. On the leeward side to use the downdraft for descent

31. A pilot finds the airplane's airworthiness is in question because an applicable Airworthiness Directive is overdue. The pilot should:

- A. Fly the aircraft, since ADs are only advisory
- B. Comply only if operating the aircraft for hire
- C. Not operate the aircraft until the AD is complied with
- D. Disregard the AD unless the FAA inspects the aircraft

32. A pilot reviewing weather sees several airports along the route shaded red (IFR) on a flight-category chart. As a day-VFR Sport Pilot, the pilot should:

- A. Reassess the flight, treating those areas as no-go for VFR
- B. Proceed as planned, since red indicates good conditions
- C. Climb above the weather using instrument procedures
- D. Disregard the colors, which apply only to night flights

33. A pilot in a steep 60-degree banked turn notices the stall warning activating. The pilot should recognize that:

- A. The stall speed has decreased in the steep turn
- B. The increased load factor has raised the stall speed
- C. The center of gravity has shifted aft during the turn
- D. The propeller has stopped producing thrust

34. A pilot self-assessing before a flight is well-rested, healthy, sober, and unmedicated, but is highly stressed about a family matter. Using IMSAFE, the pilot should:

- A. Recognize that stress can distract and impair judgment, and reconsider flying

- B. Fly anyway, since only physical factors matter
- C. Take a sedative to reduce the stress before departing
- D. Fly only if the flight is conducted at night

35. A pilot on approach encounters a sudden loss of airspeed and sink below the glidepath, suggesting low-level windshear. The immediate action is to:

- A. Apply power and execute a go-around
- B. Reduce power to descend onto the runway
- C. Maintain the approach and accept the sink
- D. Lower the nose to increase the descent rate

36. A pilot planning to share the cost of a flight with a passenger may legally:

- A. Charge the passenger the full cost of the flight
- B. Split the operating expenses on an equal basis
- C. Add a profit margin to the fuel cost
- D. Collect a fee for the pilot's flying services

37. A pilot notices the ammeter reading on the negative (discharge) side in cruise. Recognizing a possible charging-system failure, the pilot should:

- A. Increase engine RPM to force the battery to charge
- B. Switch off the magnetos to conserve power
- C. Turn on all electrical equipment to test the system
- D. Reduce electrical load to preserve battery power for essentials

38. A pilot must decide whether to fly into an area where a microburst has been reported near the airport. The correct decision is to:

- A. Depart immediately to beat the microburst
- B. Increase approach speed to penetrate the shear
- C. Disregard the report, since light aircraft are unaffected
- D. Avoid takeoff or landing until conditions improve

39. A pilot realizes during cruise that the heading indicator has drifted noticeably from the magnetic compass. In straight-and-level flight, the pilot should:

- A. Reset the compass to match the heading indicator
- B. Disregard both instruments and navigate by GPS only
- C. Reset the heading indicator to agree with the compass
- D. Land immediately, treating the airplane as unsafe

40. A pilot weighing several minor factors — slight fatigue, a marginally legal forecast, an unfamiliar airport, and a tight schedule — should recognize that:

- A. Each factor is acceptable, so the flight is clearly safe
- B. Only the weather factor matters in the decision
- C. Several acceptable risks can combine into an unacceptable one
- D. Fatigue is the only factor worth considering

ANSWER KEY WITH EXPLANATIONS

1. C — Divert to the alternate while VFR conditions and fuel margin remain. A 900-foot ceiling and 2-mile visibility are below VFR minimums, so the correct decision is to divert to the VFR alternate while margin remains. Diverting early is the hallmark of good judgment.

2. D — External pressures from the passenger's urgency. With the pilot fit and the aircraft airworthy, the elevated risk is the external pressure from the passenger's urgency to make the event. PAVE flags this as the "E" category.

3. C — Extend the downwind to sequence safely behind the traffic. Recognizing straight-in traffic, the pilot extends the downwind to sequence safely behind it. Turning ahead or ignoring the traffic risks a conflict.

4. C — The flight plus a 30-minute reserve is within the fuel available. The leg takes $90 \div 90 = 1$ hour, burning 6 gallons, plus a 30-minute (3-gallon) reserve = 9 gallons, within the 12 available. Fuel must always be computed with the required reserve.

5. D — Carry only one of them, due to the single-passenger limit. The single-passenger limit is absolute, even in a four-seat aircraft, so the pilot may carry only one of the two. No condition lifts this limit.

6. B — High density altitude degrading takeoff and climb performance. A hot, high-elevation, short-runway, fully loaded departure is the classic high-density-altitude hazard, degrading takeoff and climb. This is the most dangerous combination on takeoff.

7. B — Apply carburetor heat to clear suspected induction ice. A gradual, unexplained RPM loss on a humid day with no throttle change is the classic fixed-pitch symptom of carburetor ice, treated with carburetor heat. Leaning or restarting does not address it.

8. D — Lift off before its rotation point and climb above its path. Departing behind a larger aircraft, the pilot lifts off before its rotation point and climbs above its path to avoid sinking vortices. This mirrors the landing technique of staying above and beyond.

9. B — Recognize that even a minor illness can impair performance and reconsider. IMSAFE's "Illness" element warns that even a minor illness can impair performance, so the pilot should reconsider flying. Medicating and departing could add further impairment.

10. C — Check the wind indicators and segmented circle, then announce on CTAF. At a non-towered field the pilot determines the active runway from the wind indicators and segmented circle, then self-announces on CTAF. There is no tower or IFR assignment at such a field.

11. B — Weigh it heavily toward delaying or canceling the flight. "VFR flight not recommended" is the briefer's judgment that conditions make VFR flight hazardous, weighing heavily toward delay or cancellation for a day-VFR pilot. The decision is the PIC's, but the conservative choice is wisest.

12. B — Not fly the aircraft until the annual inspection is completed. An aircraft with a lapsed annual is unairworthy and may not be operated; unlike the 100-hour, the annual has no overrun allowance and a pilot cannot perform it. The flight must wait for the inspection.

13. A — Slow to or below maneuvering speed and maintain a level attitude. In turbulence the pilot slows to or below V_A and holds a level attitude to protect the airframe. Speeding up, climbing into the cloud, or banking steeply would be unsafe.

14. C — Obtain the required endorsement before operating there. A Sport Pilot needs the appropriate airspace endorsement to operate in Class C; a transponder, waiver, or IFR plan does not substitute. The endorsement must be obtained first.

15. A — Fly partial panel using the working instruments and the outside horizon. Losing the vacuum-driven instruments in clear VFR, the pilot flies partial panel using the turn coordinator, pitot-static instruments, and especially the outside horizon. The airplane remains controllable.

16. B — Adjust the plan to arrive before sunset, or delay the flight. A day-VFR Sport Pilot must arrive before sunset, so the plan should be adjusted or delayed to ensure that. Night flight requires training, an endorsement, and the appropriate medical.

17. A — Invulnerability/anti-authority; "It could happen to me." Dismissing the forecast reflects invulnerability (and anti-authority), countered by "It could happen to me." Recognizing the thought is the protective step.

18. D — Shut off the heater, open fresh air vents, and land. Exhaust smell with headache and drowsiness suggests carbon monoxide; the response is to shut off the heater, open fresh-air vents, and land. Masking symptoms or continuing is dangerous.

19. A — Shift baggage forward to bring the CG within limits. With the airplane within gross weight but the CG aft of limits, shifting baggage forward corrects the balance. An aft CG is hazardous and must not be flown.

20. B — Add power and adjust to regain the proper glidepath, as this indicates too low. "Red over red" on a VASI means too low ("you're dead"), so the pilot adds power to regain the glidepath. Continuing or descending faster would worsen it.

21. B — A temporary flight restriction (TFR) published by NOTAM. Major sporting events often generate TFRs, which appear only in NOTAMs and must be checked. Missing a TFR can have serious legal consequences.

22. D — Use the DECIDE process to choose a safe alternate fuel stop. With the fuel stop closed, the pilot uses the DECIDE process to select a safe alternate fuel stop. Continuing on inadequate fuel or landing at a closed field is unsafe.

23. D — Honoring personal minimums and divert criteria set in advance. Get-there-itis is best managed by honoring personal minimums and divert criteria established calmly on the ground. Increasing speed or deferring to a passenger does not address it.

24. A — Choose a higher cruising altitude to clear the obstacle safely. A tower topping out at 2,049 feet MSL is above the planned 2,000-foot cruise, so the pilot must choose a higher altitude to clear it. Obstacles must always be cross-checked against altitude.

25. D — Maneuver early, recognizing a collision course. A target that stays in the same spot and grows larger is on a collision course, so the pilot maneuvers early. Waiting to confirm removes precious time.

26. D — Possible fog or low clouds forming, reducing visibility. A small, falling temperature/dewpoint spread signals air nearing saturation, so fog or low clouds are likely. This warns of reduced visibility on arrival.

27. C — Not fly while using any drug that could affect faculties contrary to safety. The conservative, correct approach is not to fly while using any drug—prescription or not—that could affect faculties contrary to safety. Legality does not equal safety.

28. A — Plan a fuel stop while comfortable margin remains. With fuel burning faster than planned, the pilot plans a fuel stop while comfortable margin remains. Reducing the reserve or hoping the wind shifts courts fuel exhaustion.

29. A — May not do so, as this is outside Sport Pilot privileges. Demonstrating an aircraft in flight to a prospective buyer is outside Sport Pilot privileges. No endorsement or expense-sharing authorizes it.

30. C — At an angle, preserving the option to turn toward lower terrain. Approaching a ridge at an angle preserves an escape route toward lower terrain if downdrafts prevent a climb. A perpendicular low crossing removes that option.

31. C — Not operate the aircraft until the AD is complied with. An overdue applicable AD makes the aircraft unairworthy; it may not be operated until the AD is complied with. ADs are mandatory, not advisory or commercial-only.

32. A — Reassess the flight, treating those areas as no-go for VFR. Red shading marks IFR conditions, which are no-go for day VFR, so the pilot reassesses or delays. A Sport Pilot cannot legally or safely fly on instruments.

33. B — The increased load factor has raised the stall speed. A 60-degree bank produces 2 G of load factor, which raises the stall speed—hence the stall warning. The critical angle is unchanged, but the airspeed at which it is reached is higher.

34. A — Recognize that stress can distract and impair judgment, and reconsider flying. IMSAFE's "Stress" element warns that psychological pressure can distract and impair judgment, so the pilot should reconsider. A sedative would add impairment.

35. A — Apply power and execute a go-around. A sudden airspeed loss and sink on approach signals low-level windshear, calling for power and an immediate go-around. Reducing power or accepting the sink is dangerous.

36. B — Split the operating expenses on an equal basis. A Sport Pilot may share operating expenses equally with the passenger, with no profit. Charging the full cost or a fee is prohibited.

37. D — Reduce electrical load to preserve battery power for essentials. A discharging ammeter signals a charging-system failure; the pilot reduces electrical load to preserve the battery for essentials like the radio. The engine keeps running on the magnetos.

38. D — Avoid takeoff or landing until conditions improve. A reported microburst near the airport calls for avoiding takeoff or landing until conditions improve, since the shear can exceed any light airplane's capability. Penetrating it is extremely dangerous.

39. C — Reset the heading indicator to agree with the compass. The heading indicator drifts and is reset to the magnetic compass in straight-and-level, unaccelerated flight. Resetting the compass to the heading indicator reverses the correct procedure.

40. C — Several acceptable risks can combine into an unacceptable one. The insidious danger is that several individually acceptable risks can accumulate into an unacceptable whole. Recognizing this combination is central to risk management.