PRACTICE EXAM 11 SIMULATION

1. A precision approach is distinguished from a non-precision approach by providing:

A. Both lateral and vertical guidance meeting precision standards

B. Lateral guidance only

C. Distance information only

D. A holding pattern at the fix

2. On an ILS, the component that aligns the aircraft with the runway centerline is the:

A. Glide slope

B. Outer marker

C. Middle marker

D. Localizer

3. On an ILS, the component that defines the descent path to the touchdown zone is the:

A. Localizer

B. Marker beacon

C. Approach lighting system

D. Glide slope

4. The localizer is intercepted and tracked to provide guidance that is:

A. Lateral, along the runway centerline

B. Vertical, to the touchdown zone

C. Distance to the threshold

D. Missed approach routing

5. The glide slope is normally set at an angle of approximately:

A. 1.5 degrees

B. 6 degrees

C. 3 degrees

D. 9 degrees

6. The pilot should intercept the glide slope from below at the published intercept altitude to avoid:

A. Excessive localizer sensitivity

B. Capturing a false glide slope at a higher angle

C. Reverse sensing

D. A premature missed approach

7. A false glide slope typically exists at angles such as:

A. 1 and 2 degrees

B. Exactly 3 degrees

C. Around 9 and 12 degrees

D. Below the horizon

8. At the Decision Altitude on a precision approach, if the runway environment is not in sight, the pilot must:

A. Execute the missed approach immediately

B. Level off and continue to the MAP

C. Descend 100 more feet to look

D. Circle until the runway appears

9. On a precision approach, the pilot descends along the glidepath to a:

A. Decision Altitude (DA)

B. Minimum Descent Altitude (MDA)

C. Circling altitude

D. Maximum Authorized Altitude

10. A WAAS-enabled approach providing lateral and vertical guidance to minimums comparable to a CAT I ILS, with no ground equipment at the airport, is the:

A. LNAV approach

B. VOR/DME approach

C. LPV approach

D. Localizer back course

11. LNAV/VNAV is flown like a precision approach because it provides:

A. Lateral guidance only to an MDA

B. Lateral guidance with a vertical path to a decision altitude

C. Advisory vertical guidance only

D. No vertical guidance

12. Aircraft approach categories are defined by the aircraft's:

A. Maximum gross weight

B. Service ceiling

C. Wingspan

D. Reference landing speed (V_REF, or 1.3 × V_SO at max landing weight)

13. Category A aircraft have a reference landing speed of:

A. 141 to 165 knots

B. 121 to 140 knots

C. 91 to 120 knots

D. Less than 91 knots

14. Category B aircraft have a reference landing speed of:

A. 91 to 120 knots

B. Less than 91 knots

C. 121 to 140 knots

D. 166 knots or more

15. A pilot flying an approach faster than the upper limit of the aircraft's category must:

A. Use the lower category's minimums

B. Disregard the category entirely

C. Reduce visibility requirements

D. Use the next higher category's minimums

16. The localizer transmits from an antenna located:

A. At the approach end of the runway

B. At the far (departure) end of the runway

C. In the control tower

D. At the middle marker

17. The glide slope antenna is located:

A. At the departure end of the runway

B. At the outer marker

C. Near the approach end of the runway

D. At the missed approach holding fix

18. Compared with a VOR course, the localizer course is:

A. Wider and less sensitive

B. Much narrower and more sensitive

C. Identical in sensitivity

D. Referenced to true north

19. A typical CAT I ILS provides minimums of approximately:

A. A 50-foot decision height

B. A 200-foot decision height and 1/2 mile or RVR 2400

C. Zero-zero

D. A 600-foot ceiling and 2 miles

20. CAT II and CAT III ILS approaches provide:

A. Higher minimums than CAT I

B. The same minimums as CAT I

C. No vertical guidance

D. Lower minimums than CAT I, requiring additional equipment and certification

21. General aviation operations are almost always conducted to which ILS category minimums?

A. CAT I

B. CAT II

C. CAT III

D. CAT IIIc

22. When the glide slope fails or is unavailable on an ILS, the pilot may fly the:

A. Localizer (LOC) approach to an MDA

B. Circling approach only

C. Back course with vertical guidance

D. Visual approach exclusively

23. The outer marker on a traditional ILS is identified by which light and audio?

A. White light, rapid dots

B. Amber light, alternating dots and dashes

C. Blue light, continuous low-tone dashes

D. Green light, steady tone

24. The middle marker on a traditional CAT I ILS is located approximately near the:

A. Final approach fix

B. Decision height point, about 3,500 feet from the threshold

C. Initial approach fix

D. Missed approach holding fix

25. Modern ILS installations increasingly replace marker beacons with:

A. A second glide slope

B. DME, GPS fixes, or radar

C. A second localizer

D. Marker lights only

26. A pilot flying an LPV approach descends to a decision altitude, where the decision to land or go missed is:

A. Made at the MAP only

B. Deferred until the runway is reached

C. Made by ATC

D. Made at the DA

27. A slight momentary descent below the DA during a go-around on a precision approach is:

A. A violation requiring a report

B. Cause for an immediate climb only

C. Prohibited under all circumstances

D. Expected and accounted for

28. A pilot on an ILS observes both the localizer and glide slope needles centered. This indicates the aircraft is:

A. Below the glidepath and right of course

B. On both the lateral course and the vertical path

C. Above the glidepath and left of course

D. Past the missed approach point

29. The localizer transmits in which frequency band?

A. UHF

B. VHF

C. Low/medium frequency

D. HF

30. The glide slope transmits in which frequency band, paired automatically when the localizer is tuned?

A. VHF

B. Low/medium frequency

C. UHF

D. HF

31. Localizer sensitivity, as the aircraft nears the runway, tends to:

A. Decrease steadily

B. Increase

C. Remain constant

D. Reverse

32. Full-scale deflection of the localizer represents approximately how many degrees either side of course?

A. 2.5 degrees

B. 10 degrees

C. 5 degrees

D. 20 degrees

33. A pilot flying a coupled ILS approach with the autopilot in approach mode must:

A. Disengage all instruments

B. Rely solely on the moving map

C. Ignore the raw localizer and glide slope

D. Monitor that the correct modes are engaged and the aircraft is tracking properly

34. The inner marker is associated with which operations?

A. CAT I only

B. CAT II and CAT III

C. Circling approaches

D. Visual approaches

35. APV (Approach with Vertical guidance) procedures such as LPV are flown:

A. Down a glidepath to a decision altitude, like a precision approach

B. To an MDA with no vertical guidance

C. As circling approaches only

D. Without any lateral guidance

36. A Category C aircraft has a reference landing speed of:

A. 121 to 140 knots

B. Less than 91 knots

C. 91 to 120 knots

D. 166 knots or more

37. A pilot must use the approach minimums and circling radius for the category matching the:

A. Aircraft's maximum gross weight

B. Actual approach speed flown

C. Aircraft's empty weight

D. Cruising true airspeed

38. A localizer back course approach without automatic correction is subject to:

A. Reverse sensing on the CDI

B. A steeper glide slope

C. Loss of DME

D. Wider course width than a VOR

39. The glide slope and the altimeter should agree at the:

A. Missed approach point

B. Initial approach fix

C. Published final approach fix altitude

D. Circling minimum

40. A pilot intercepting the glide slope from above risks:

A. Reverse sensing on the localizer

B. Loss of DME

C. Excessive localizer width

D. Capturing a false, steeper glidepath toward terrain

41. A precision approach gives the pilot a glidepath down to a decision altitude, where the pilot must:

A. Decide instantly to land or go missed

B. Level off and continue to the MAP

C. Circle to the landing runway

D. Hold until visual

42. The localizer is approximately how many times more sensitive than a VOR?

A. Two times

B. One-half

C. Four times

D. Ten times

43. A pilot flying an ILS is vectored to intercept the localizer at the published altitude, then intercepts the glide slope:

A. From above at any altitude

B. At the missed approach point

C. After passing the runway threshold

D. From below at the glide slope intercept altitude

44. The approach lighting system on an ILS provides:

A. Vertical guidance

B. Distance information

C. Visual cues during the transition to landing

D. Lateral course guidance

45. A Category D aircraft has a reference landing speed of:

A. Less than 91 knots

B. 91 to 120 knots

C. 141 to 165 knots

D. 166 knots or more

46. A pilot flying a precision approach who reaches the DA with the runway environment in sight and meeting the legal requirements may:

A. Continue and land

B. Only execute a missed approach

C. Descend below DA without restriction regardless

D. Circle indefinitely

47. The marker beacon producing a white light and rapid dots is the:

A. Outer marker

B. Middle marker

C. Back-course marker

D. Inner marker

48. A pilot tuning the localizer frequency on an ILS automatically receives the:

A. DME groundspeed only

B. Paired glide slope

C. ADF bearing

D. Marker beacon audio only

49. LNAV/VNAV provides a vertical path that may be derived from:

A. The localizer only

B. The ADF

C. A marker beacon

D. Barometric or WAAS sources

50. A pilot flying a precision approach must transition from the precision (DA, continuous descent) procedure to a non-precision (MDA, step-down) procedure if the:

A. Localizer becomes more sensitive

B. Approach lights are visible

C. Glide slope fails, reverting to a localizer-only approach

D. Outer marker is replaced by DME

51. A pilot recognizes that the ILS glide slope and localizer needles deflecting away from center indicate the aircraft is:

A. On both the course and the glidepath

B. Past the missed approach point

C. Off the course and/or the glidepath

D. Established on the localizer back course

52. A precision approach's decision altitude is reached, and a momentary descent occurs during the go-around. This is acceptable because the DA:

A. Accounts for the expected slight altitude loss during the missed approach

B. Is only advisory

C. Has no minimum value

D. Is the same as the MDA

53. The ILS category that supports the lowest minimums, down to near zero, requiring specialized aircraft, crew, and ground equipment, is:

A. CAT I

B. CAT II

C. APV

D. CAT III

54. A pilot flying an LPV to a 200-foot DA is using an approach that, unlike an ILS, requires:

A. A ground-based localizer

B. A glide slope antenna

C. Marker beacons

D. No ground-based equipment at the airport

55. A Category E aircraft has a reference landing speed of:

A. 141 to 165 knots

B. 166 knots or more

C. 121 to 140 knots

D. Less than 91 knots

56. The pilot must brief the missed approach before beginning a precision approach so that it can be:

A. Filed with ATC

B. Executed immediately and from memory at the DA if needed

C. Disregarded once on the glidepath

D. Replaced with a circling maneuver

57. The localizer course width is set so that full-scale deflection occurs at about 2.5 degrees, making it:

A. Less precise than a VOR

B. Identical to an NDB

C. Roughly four times as sensitive as a VOR

D. Referenced to true north

58. A pilot flying an ILS notices the glide slope flag appears and the glide slope is unusable. The pilot should:

A. Continue descending on the glidepath anyway

B. Disregard the localizer as well

C. Revert to the localizer-only minimums (MDA)

D. Descend below the DA to acquire the runway

59. A precision approach provides vertical guidance that allows a:

A. Continuous, stabilized descent to the decision altitude

B. Stepped descent to an MDA

C. Level segment to the MAP

D. Circling maneuver only

60. The fundamental advantage of a precision (or APV) approach over a non-precision approach is that it provides:

A. A wider course

B. A holding pattern

C. Vertical guidance for a stabilized descent to lower minimums

D. Freedom from any minimums

Answer Key

1. A — A precision approach provides both lateral and vertical guidance meeting precision standards. A non-precision approach, by contrast, provides lateral guidance only.

2. D — The localizer aligns the aircraft with the runway centerline, providing lateral guidance. The glide slope, separately, provides the vertical component.

3. D — The glide slope defines the descent path to the touchdown zone. The localizer supplies the lateral course.

4. A — The localizer provides lateral guidance along the runway centerline. Vertical guidance comes from the glide slope.

5. C — The glide slope is normally set at about 3 degrees. False glide slopes exist at higher angles such as 9 and 12 degrees.

6. B — The glide slope is intercepted from below at the published altitude to avoid capturing a false glide slope at a higher angle. A false capture would put the aircraft on a dangerously steep path.

7. C — False glide slope lobes exist at higher angles such as around 9 and 12 degrees. Intercepting from below at the published altitude avoids them.

8. A — At the DA without the runway environment in sight, the pilot must execute the missed approach immediately. There is no level-off and continuation as on a non-precision approach.

9. A — On a precision approach, the pilot descends along the glidepath to a Decision Altitude. At the DA the pilot decides to land or go missed.

10. C — An LPV approach provides lateral and vertical guidance to minimums comparable to a CAT I ILS, with no ground equipment at the airport. It is the most capable WAAS line of minimums.

11. B — LNAV/VNAV provides lateral guidance with a vertical path to a decision altitude, so it is flown like a precision approach. The lateral-only LNAV line, by contrast, is non-precision.

12. D — Aircraft approach categories are defined by reference landing speed (V_REF, or 1.3 × V_SO at maximum landing weight). Higher speeds place the aircraft in a higher category with higher minimums.

13. D — Category A is less than 91 knots. Most light single-engine aircraft fall in this category.

14. A — Category B is 91 to 120 knots. Light twins and faster singles typically fall here.

15. D — Flying faster than the category's upper limit requires using the next higher category's minimums. The minimums must match the actual approach speed.

16. B — The localizer antenna is located at the far (departure) end of the runway, projecting its course back along the approach. The glide slope antenna is near the approach end.

17. C — The glide slope antenna is located near the approach end of the runway. The localizer antenna, by contrast, is at the far departure end.

18. B — The localizer course is much narrower and more sensitive than a VOR course, roughly four times as sensitive. This sensitivity increases near the runway.

19. B — A typical CAT I ILS provides about a 200-foot decision height with 1/2 mile or RVR 2400 visibility. Lower categories require additional equipment.

20. D — CAT II and CAT III provide lower minimums than CAT I, requiring additional aircraft, crew, and ground equipment. CAT III can reach near-zero minimums.

21. A — General aviation operations are almost always conducted to CAT I minimums. CAT II and III require specialized equipment and certification.

22. A — With the glide slope unavailable, the pilot may fly the localizer (LOC) approach to an MDA. This is a non-precision approach with higher minimums than the ILS.

23. C — The outer marker uses a blue light with continuous low-tone dashes. It marks roughly the glide slope intercept near the final approach fix.

24. B — The middle marker is located near the decision height point on a CAT I ILS, about 3,500 feet from the threshold. The outer marker, by contrast, is near the FAF.

25. B — Modern ILS installations increasingly replace marker beacons with DME, GPS fixes, or radar. These provide position information without dedicated marker antennas.

26. D — On an LPV approach, the decision to land or go missed is made at the DA. The pilot decides instantly upon reaching the decision altitude.

27. D — A slight momentary descent below the DA during a go-around is expected and accounted for in the procedure design. Unlike the MDA, the DA anticipates this brief altitude loss.

28. B — Both needles centered indicate the aircraft is on both the lateral course and the vertical path. This is the on-path condition for a precision approach.

29. B — The localizer transmits in the VHF band. The glide slope, separately, transmits in UHF.

30. C — The glide slope transmits in the UHF band and is paired automatically when the localizer is tuned. The localizer itself is VHF.

31. B — Localizer sensitivity increases as the aircraft nears the runway because the beam narrows toward the antenna. Small deviations produce large CDI movement near touchdown.

32. A — Full-scale localizer deflection represents about 2.5 degrees either side of course. A VOR, by contrast, is about 10 degrees full scale.

33. D — On a coupled approach, the pilot must monitor that the correct modes are engaged and the aircraft is tracking properly. Mode awareness and cross-checking raw data remain essential.

34. B — The inner marker is associated with CAT II and CAT III operations, located near the threshold. CAT I typically uses the outer and middle markers.

35. A — APV procedures such as LPV are flown down a glidepath to a decision altitude, like a precision approach. They provide vertical guidance without meeting the strict ICAO precision definition.

36. A — Category C is 121 to 140 knots. Turboprops and light jets typically fall here.

37. B — The pilot uses the minimums and circling radius for the category matching the actual approach speed flown. Flying faster moves the aircraft to a higher category.

38. A — A localizer back course without automatic correction is subject to reverse sensing on the CDI. The needle moves opposite the expected direction.

39. C — The glide slope and the altimeter should agree at the published final approach fix altitude. This cross-check confirms the aircraft is on the true glidepath, not a false one.

40. D — Intercepting the glide slope from above risks capturing a false, steeper glidepath toward terrain. Intercepting from below at the published altitude avoids the false lobes.

41. A — A precision approach gives a glidepath down to a decision altitude, where the pilot must decide instantly to land or go missed. There is no level-off and continuation as on a non-precision approach.

42. C — The localizer is approximately four times more sensitive than a VOR (about 2.5 degrees versus 10 degrees full scale). This greater sensitivity demands smoother corrections.

43. D — On an ILS the aircraft intercepts the localizer at the published altitude, then intercepts the glide slope from below at the glide slope intercept altitude. Intercepting from below avoids a false glide slope.

44. C — The approach lighting system provides visual cues during the transition to landing. It does not provide lateral or vertical electronic guidance.

45. C — Category D is 141 to 165 knots. Jets typically fall in this category.

46. A — Reaching the DA with the runway environment in sight and meeting the legal requirements, the pilot may continue and land. If the requirements are not met, the missed approach is flown.

47. D — The inner marker produces a white light with rapid dots. The outer marker is blue with low-tone dashes and the middle marker amber with alternating dots and dashes.

48. B — Tuning the localizer frequency automatically pairs the glide slope on an ILS. The two are tuned together as a single frequency selection.

49. D — LNAV/VNAV provides a vertical path that may be derived from barometric or WAAS sources. This vertical guidance distinguishes it from the lateral-only LNAV line.

50. C — If the glide slope fails, the pilot must transition from the precision (DA, continuous descent) procedure to a non-precision (MDA, step-down) localizer-only approach. The loss of vertical guidance changes the procedure.

51. C — Needles deflecting away from center indicate the aircraft is off the course and/or the glidepath. Centered needles, by contrast, indicate on-path.

52. A — The DA accounts for the expected slight altitude loss during the missed approach, so a momentary descent below it during the go-around is acceptable. This distinguishes the DA from the MDA, which may never be descended below.

53. D — CAT III supports the lowest minimums, down to near zero, requiring specialized aircraft, crew, and ground equipment. CAT I, by contrast, is the standard general-aviation category.

54. D — An LPV to a 200-foot DA, unlike an ILS, requires no ground-based equipment at the airport. WAAS provides the lateral and vertical guidance.

55. B — Category E is 166 knots or more. High-performance and military aircraft fall here.

56. B — The missed approach is briefed before beginning a precision approach so it can be executed immediately and from memory at the DA if needed. Briefing in advance ensures a prompt, correct go-around.

57. C — The localizer's roughly 2.5-degree full-scale width makes it about four times as sensitive as a VOR. This greater precision is essential for aligning with the runway.

58. C — If the glide slope becomes unusable (flag appears), the pilot reverts to the localizer-only minimums (MDA). Continuing on the failed glidepath or disregarding the localizer would be unsafe.

59. A — A precision approach provides vertical guidance allowing a continuous, stabilized descent to the decision altitude. A non-precision approach, by contrast, uses a stepped descent to an MDA.

60. C — The fundamental advantage of a precision or APV approach is vertical guidance for a stabilized descent to lower minimums. This continuous glidepath is safer and reaches lower minimums than a non-precision approach.