PRACTICE EXAM 9 SIMULATION

1. An IFR clearance is delivered in a standard sequence captured by the mnemonic:

A. PAVE

B. IMSAFE

C. CRAFT

D. DECIDE

2. In the CRAFT format, the "C" stands for the:

A. Cruising altitude

B. Clearance limit

C. Course to fly

D. Communication frequency

3. In the CRAFT format, the "R" represents the:

A. Radial to track

B. Route of flight

C. Runway assignment

D. Reporting point

4. The "A" in CRAFT refers to the:

A. Altitude assignment, including any expected altitude and time

B. Approach to be flown

C. Airspeed restriction

D. Alternate airport

5. The "F" in CRAFT refers to the:

A. Final approach fix

B. Filed flight plan

C. Departure (control) frequency

D. Fuel requirement

6. The "T" in CRAFT refers to the:

A. Time of departure

B. Transponder (squawk) code

C. True airspeed

D. Track over the ground

7. When the cleared route matches the filed flight plan, ATC may issue the route simply as:

A. "Cleared as filed"

B. "Cleared direct"

C. "Resume own navigation"

D. "Proceed on course"

8. Even when issued "cleared as filed," the pilot must still copy the:

A. Entire route again

B. Aircraft type

C. Altitude, departure frequency, and transponder code

D. Fuel endurance

9. A clearance void time at a non-towered airport is the time by which the aircraft must:

A. Reach the first fix

B. Depart, or the clearance is canceled

C. Contact the destination tower

D. Begin the approach

10. If the aircraft has not departed by the clearance void time, the pilot must:

A. Depart within 30 minutes anyway

B. Not depart on that clearance and advise ATC of intentions

C. Squawk 7600 and depart

D. Refile a VFR flight plan and depart

11. An Obstacle Departure Procedure (ODP) is designed primarily to provide:

A. Traffic sequencing

B. Noise abatement

C. A simplified clearance

D. Obstacle clearance on departure

12. A Standard Instrument Departure (SID) is designed primarily to:

A. Provide obstacle clearance only

B. Replace the enroute structure

C. Simplify clearance delivery and reduce communication and workload

D. Define the missed approach

13. An ODP may be flown:

A. Only when assigned by ATC

B. Only in VFR conditions

C. Only above 18,000 feet

D. At the pilot's discretion, without a specific ATC clearance

14. A SID is issued to the pilot:

A. As part of the ATC clearance

B. Only by NOTAM

C. Automatically by the GPS

D. Only after departure

15. ODPs are published:

A. Only graphically

B. Only in the AIM

C. Only on enroute charts

D. Either textually or graphically

16. SIDs are always published:

A. Textually only

B. Graphically as charts

C. In the Chart Supplement

D. As NOTAMs

17. A pilot who does not wish to be assigned a Standard Instrument Departure should indicate which remark in the flight plan?

A. "No SIDs"

B. "VFR only"

C. "Radar vectors"

D. "Direct routing"

18. The standard climb gradient that an ODP assumes for obstacle clearance, unless a higher gradient is published, is:

A. 200 feet per nautical mile

B. 152 feet per nautical mile

C. 300 feet per nautical mile

D. 500 feet per nautical mile

19. A climb gradient is expressed in feet per nautical mile, while a climb rate is expressed in:

A. Knots

B. Degrees per second

C. Feet per minute

D. Nautical miles per hour

20. To convert a required climb gradient to a climb rate, the pilot uses the formula rate equals gradient times groundspeed divided by:

A. 100

B. 60

C. 10

D. 6

21. An ODP assumes the aircraft crosses the departure end of the runway at least how many feet above the runway?

A. 50 feet

B. 100 feet

C. 35 feet

D. 200 feet

22. Before turning, an ODP generally assumes the aircraft climbs to at least how many feet above the airport elevation?

A. 400 feet

B. 200 feet

C. 1,000 feet

D. 1,500 feet

23. A pilot copying a fast clearance uses standardized shorthand. An upward arrow in clearance shorthand commonly means:

A. Cleared to

B. Direct

C. Climb/maintain

D. Cross

24. A pilot departing IFR in low visibility from an airport with surrounding obstacles, where an ODP is published, should:

A. Disregard the ODP if not assigned

B. Review and consider flying the ODP for obstacle protection

C. Wait for visual conditions

D. Climb at any rate without reference to the procedure

25. A required climb gradient that the aircraft cannot meet at the planned weight and density altitude makes the departure:

A. Legal but uncomfortable

B. Acceptable with ATC approval

C. Permissible above the freezing level

D. Unsafe

26. A SID, in addition to streamlining ATC traffic flow, also provides:

A. Obstacle clearance

B. Weather avoidance

C. Fuel planning data

D. Holding instructions

27. A pilot reads back which elements of a clearance to confirm accurate receipt?

A. Only the transponder code

B. Only the route

C. Nothing, as ATC confirms

D. A clearance containing an altitude, heading, hold, or route change

28. Departure control frequency, copied as the "F" in CRAFT, is used:

A. Before engine start

B. On the ground only

C. During taxi

D. After takeoff, when handed off from the tower or ground

29. A pilot at a non-towered airport receives a clearance with a void time and a time to advise ATC of intentions if not airborne. This second time is used to:

A. Begin the approach

B. Tell ATC the aircraft did not depart so the clearance can be handled

C. Reset the transponder

D. File a new flight plan automatically

30. A diverse departure assumes the aircraft can climb at the standard gradient and turn only after reaching:

A. The first fix

B. Cruise altitude

C. 1,000 feet AGL

D. 400 feet above the airport elevation

31. A pilot flying a SID must comply with the SID's:

A. Published routing and altitude/speed restrictions

B. Obstacle clearance below 35 feet only

C. Instructions only until radar contact

D. Holding pattern entries

32. Clearance shorthand uses "D→" to commonly denote:

A. Descend

B. Depart

C. Decision altitude

D. Direct

33. An ODP differs from a diverse departure in that an ODP is published when:

A. The airport has a control tower

B. The airport is in Class B airspace

C. Specific obstacles require a defined routing or higher climb gradient

D. The runway exceeds 8,000 feet

34. A pilot must verify the aircraft can meet a published climb gradient considering:

A. The wind direction only

B. The number of passengers only

C. The transponder code

D. The actual weight and density altitude

35. A clearance issued as "cleared as filed" abbreviates which CRAFT element?

A. The clearance limit

B. The altitude

C. The transponder code

D. The route

36. Which statement about SIDs and ODPs is correct?

A. Both are flown only in VFR conditions

B. Both replace the enroute airway structure

C. Both ultimately keep the aircraft clear of terrain

D. Both are issued only by NOTAM

37. A pilot computing a climb rate for a 250 ft/NM gradient at a groundspeed of 180 knots would need a climb rate of:

A. 500 feet per minute

B. 250 feet per minute

C. 750 feet per minute

D. 120 feet per minute

38. When a clearance includes "expect 9,000 in 10 minutes," the "expected altitude" is copied as part of which CRAFT element?

A. The route

B. The frequency

C. The altitude

D. The transponder

39. A pilot unable to accept a SID due to lack of charts should:

A. Fly it from memory

B. Accept it and improvise

C. Squawk 7600

D. Indicate "No SIDs" in the flight plan remarks

40. The primary purpose of standardized clearance shorthand is to allow the pilot to:

A. Fly without a flight plan

B. Accurately record a rapidly delivered clearance

C. Avoid reading back the clearance

D. Bypass ATC communication

41. A pilot reviewing a textual ODP would find it published in the:

A. Front of the terminal procedures booklet

B. Enroute high altitude chart

C. Chart Supplement only

D. Aircraft flight manual

42. An ODP requiring a climb gradient steeper than 200 ft/NM would publish:

A. The specific higher required gradient

B. A note to disregard obstacles

C. A maximum descent rate

D. A holding pattern

43. A SID's main benefit to the ATC system is:

A. Eliminating the need for transponders

B. Removing altitude restrictions

C. Reducing communication and organizing traffic flow

D. Allowing flight without a clearance

44. A pilot copying a clearance records the squawk code in which CRAFT position?

A. First

B. Second

C. Third

D. Last

45. A pilot must depart by the clearance void time because departing afterward would mean operating on:

A. A VFR clearance

B. An expired clearance

C. A SID without authorization

D. A radar vector

46. A climb gradient of 200 ft/NM at a groundspeed of 90 knots requires a climb rate of:

A. 200 feet per minute

B. 90 feet per minute

C. 300 feet per minute

D. 450 feet per minute

47. When a SID is assigned and the pilot accepts it, the SID becomes:

A. Optional after takeoff

B. Canceled upon radar contact

C. Advisory only

D. A mandatory part of the clearance to be flown as charted

48. A pilot flying an ODP at a high-elevation airport on a hot day must pay particular attention to:

A. Whether the aircraft can meet the climb gradient at the high density altitude

B. The transponder code

C. The destination weather only

D. The fuel color

49. The CRAFT element copied as the route may include:

A. Only the destination

B. The departure procedure, airways, or "cleared as filed"

C. The transponder code

D. The fuel endurance

50. A pilot who reaches the departure end of the runway and begins a turn before the ODP-assumed altitude risks:

A. Inadequate obstacle clearance

B. Excessive fuel burn

C. A transponder fault

D. Loss of radar contact

51. A clearance void time primarily protects against:

A. Excessive fuel consumption

B. Radio congestion

C. Incorrect transponder codes

D. Two aircraft operating IFR in the same airspace without separation

52. An ODP is best described as a procedure that:

A. Is always assigned by ATC

B. Provides terrain clearance and may be flown at pilot discretion

C. Replaces the SID at towered airports

D. Is only for arrivals

53. A pilot copying "C" then "D→ XYZ" in shorthand has recorded:

A. Cross XYZ at an altitude

B. Climb to XYZ

C. Cleared to, direct XYZ

D. Cancel direct routing

54. A SID published with a required climb gradient must be flown only if the aircraft:

A. Is turbine powered

B. Can meet the required gradient at its weight and density altitude

C. Has a current database

D. Is above 10,000 feet

55. The difference between a climb gradient and a climb rate is that the gradient is referenced to:

A. Distance (feet per nautical mile)

B. Time (feet per minute)

C. Airspeed

D. Bank angle

56. A pilot at a towered airport receiving a SID as part of the clearance must:

A. Decline it automatically

B. Fly it only if convenient

C. Refile a flight plan

D. Comply with it or advise inability before departure

57. A textual ODP that reads "climb heading 090 to 2,000 before proceeding on course" is providing:

A. A holding instruction

B. A specific obstacle-clearance routing

C. A missed approach

D. An arrival transition

58. A pilot copying a clearance hears the elements in CRAFT order. The frequency element is copied:

A. First

B. Second

C. Fourth

D. Last

59. A pilot determines that at the planned density altitude the aircraft can climb at 400 ft/min at a groundspeed that yields only 150 ft/NM, while the ODP requires 200 ft/NM. The pilot should:

A. Depart and accept the deficit

B. Ignore the ODP entirely

C. Reduce weight, wait for cooler conditions, or otherwise meet the gradient before departing

D. Climb at a steeper bank

60. The fundamental safety purpose served by both ODPs and SIDs is to:

A. Ensure the aircraft departs and climbs clear of terrain and obstacles

B. Reduce fuel consumption

C. Eliminate the need for an instrument rating

D. Replace the need for weather briefings

Answer Key

1. C — IFR clearances are delivered in the CRAFT sequence: Clearance limit, Route, Altitude, Frequency, Transponder. PAVE, IMSAFE, and DECIDE are risk-management and decision frameworks, not clearance formats.

2. B — The "C" in CRAFT is the clearance limit, the point to which the aircraft is cleared (usually the destination). It is the first element copied.

3. B — The "R" is the route of flight, including any departure procedure and airways. It may be abbreviated as "cleared as filed."

4. A — The "A" is the altitude assignment, including any expected altitude and the time to expect it. The expected-altitude information becomes critical in a lost-comm scenario.

5. C — The "F" is the departure (control) frequency to use after takeoff. It is the frequency for the handoff from tower or ground.

6. B — The "T" is the transponder (squawk) code, the final CRAFT element. It identifies the aircraft to ATC radar.

7. A — When the cleared route matches the filed flight plan, ATC issues it as "cleared as filed." This abbreviates the route element.

8. C — Even with "cleared as filed," the pilot must still copy the altitude, departure frequency, and transponder code. Only the route is abbreviated.

9. B — A clearance void time is the time by which the aircraft must depart, or the clearance is canceled. It applies at non-towered airports.

10. B — If not departed by the void time, the pilot must not depart on that clearance and must advise ATC of intentions. Departing on an expired clearance is not permitted.

11. D — An ODP is designed primarily to provide obstacle clearance on departure. A SID, by contrast, is primarily for ATC traffic flow.

12. C — A SID is designed primarily to simplify clearance delivery and reduce communication and workload in busy terminal areas. It also provides obstacle clearance.

13. D — An ODP may be flown at the pilot's discretion without a specific ATC clearance, to ensure obstacle protection. A SID, by contrast, must be assigned.

14. A — A SID is issued to the pilot as part of the ATC clearance and must be accepted or refused before departure. It is not automatic or NOTAM-only.

15. D — ODPs are published either textually (in the front of the terminal procedures booklet) or graphically. SIDs, by contrast, are always graphic.

16. B — SIDs are always published graphically as charts. ODPs may be textual or graphic.

17. A — A pilot who does not wish to be assigned a SID indicates "No SIDs" in the flight plan remarks. This tells ATC not to issue a SID.

18. A — The standard ODP climb gradient providing obstacle clearance is 200 feet per nautical mile unless a higher gradient is published. The pilot must verify the aircraft can meet it.

19. C — A climb gradient is in feet per nautical mile; a climb rate is in feet per minute. The two are converted using groundspeed.

20. B — Climb rate equals gradient times groundspeed divided by 60. This converts feet per nautical mile to feet per minute at a given groundspeed.

21. C — An ODP assumes the aircraft crosses the departure end of the runway at least 35 feet above the runway. This is part of the standard obstacle-clearance assumption.

22. A — An ODP generally assumes the aircraft climbs to at least 400 feet above the airport elevation before turning. This protects the initial climb area.

23. C — An upward arrow in clearance shorthand commonly means climb/maintain. Standardized symbols allow rapid, accurate copying.

24. B — Departing in low visibility from an airport with obstacles where an ODP is published, the pilot should review and consider flying the ODP for obstacle protection. The procedure's routing and gradient guarantee terrain clearance.

25. D — A required climb gradient the aircraft cannot meet at the planned weight and density altitude makes the departure unsafe. The pilot must ensure the aircraft can achieve the gradient.

26. A — A SID also provides obstacle clearance in addition to streamlining traffic flow. Both ODPs and SIDs keep the aircraft clear of terrain.

27. D — A clearance containing an altitude, heading, hold, or route change must be read back to confirm accurate receipt. Routine information does not require readback.

28. D — The departure control frequency is used after takeoff, when handed off from tower or ground. It is copied as the "F" in CRAFT for use once airborne.

29. B — The second time tells ATC the aircraft did not depart, so the clearance and the airspace can be handled appropriately. It prevents ATC from holding airspace for a flight that never launched.

30. D — A diverse departure assumes the aircraft climbs at the standard gradient and turns only after reaching 400 feet above the airport elevation. This protects the initial climb.

31. A — A pilot flying a SID must comply with its published routing and altitude/speed restrictions. The SID remains in effect unless amended, not canceled by radar contact.

32. D — "D→" in clearance shorthand commonly denotes direct. Standard shorthand symbols speed accurate copying.

33. C — An ODP is published when specific obstacles require a defined routing or a higher-than-standard climb gradient. A diverse departure, by contrast, applies where no specific obstacle routing is needed.

34. D — The pilot must verify the aircraft can meet a published climb gradient considering the actual weight and density altitude. High density altitude is often the limiting factor.

35. D — "Cleared as filed" abbreviates the route element. The altitude, frequency, and transponder are still issued.

36. C — Both SIDs and ODPs ultimately keep the aircraft clear of terrain, though their primary purposes differ. They are not VFR-only, do not replace the airways, and are not NOTAM-only.

37. C — Climb rate equals gradient times groundspeed divided by 60, so 250 × 180 ÷ 60 = 750 feet per minute. At 180 knots, a 250 ft/NM gradient requires a 750 ft/min climb rate.

38. C — An expected altitude such as "expect 9,000 in 10 minutes" is copied as part of the altitude (A) element of CRAFT. It supports lost-comm planning.

39. D — A pilot unable to accept a SID due to lack of charts should indicate "No SIDs" in the flight plan remarks. Flying it from memory or improvising would be unsafe.

40. B — Standardized clearance shorthand allows the pilot to accurately record a rapidly delivered clearance. It does not replace the flight plan or the required readback.

41. A — A textual ODP is published in the front of the terminal procedures booklet. Graphic ODPs and SIDs appear as charts.

42. A — An ODP requiring a gradient steeper than 200 ft/NM publishes the specific higher required gradient. The pilot must confirm the aircraft can meet it.

43. C — A SID's main benefit to the ATC system is reducing communication and organizing traffic flow. It streamlines clearance delivery in busy terminal areas.

44. D — The transponder (squawk) code is copied last, as the "T" in CRAFT. The sequence is Clearance limit, Route, Altitude, Frequency, Transponder.

45. B — Departing after the void time would mean operating on an expired clearance, which is not permitted. The void time bounds when the clearance is valid.

46. C — Climb rate equals 200 × 90 ÷ 60 = 300 feet per minute. At 90 knots, a 200 ft/NM gradient requires a 300 ft/min climb rate.

47. D — Once accepted, a SID becomes a mandatory part of the clearance to be flown as charted. It is not optional or canceled by radar contact.

48. A — At a high-elevation airport on a hot day, the pilot must pay particular attention to whether the aircraft can meet the climb gradient at the high density altitude. Density altitude degrades climb performance.

49. B — The route element of CRAFT may include the departure procedure, airways, or "cleared as filed." It defines the path of flight.

50. A — Turning before the ODP-assumed altitude (400 feet above airport elevation) risks inadequate obstacle clearance. The procedure protects the initial straight climb.

51. D — A clearance void time protects against two aircraft operating IFR in the same airspace without separation. It ensures ATC can manage the airspace if the aircraft does not depart on time.

52. B — An ODP provides terrain clearance and may be flown at pilot discretion, without a specific ATC clearance. A SID, by contrast, is always assigned.

53. C — "C" then "D→ XYZ" in shorthand records "cleared to, direct XYZ." The symbols compress the clearance for rapid copying.

54. B — A SID with a required climb gradient must be flown only if the aircraft can meet that gradient at its weight and density altitude. Performance must support the procedure.

55. A — A climb gradient is referenced to distance (feet per nautical mile), while a climb rate is referenced to time (feet per minute). Groundspeed converts between them.

56. D — A pilot receiving a SID as part of the clearance must comply with it or advise inability before departure. Accepting it makes it mandatory.

57. B — A textual ODP reading "climb heading 090 to 2,000 before proceeding on course" provides a specific obstacle-clearance routing. It defines the path that keeps the aircraft clear of terrain.

58. C — The frequency element is copied fourth in the CRAFT sequence (Clearance limit, Route, Altitude, Frequency, Transponder). It precedes the transponder code.

59. C — If the aircraft cannot meet the required 200 ft/NM gradient at the planned density altitude, the pilot should reduce weight, wait for cooler conditions, or otherwise meet the gradient before departing. Accepting the deficit or ignoring the ODP would be unsafe.

60. A — The fundamental safety purpose of both ODPs and SIDs is to ensure the aircraft departs and climbs clear of terrain and obstacles. This terrain protection is their shared role.