SESSION 18: PREFLIGHT PREPARATION — MIXED SCENARIO: FULL ORAL PREFLIGHT SIMULATION

1. The DPE first asks whether you're legal to act as PIC under IFR today. Which establishes your instrument currency?

A. A flight review completed within 24 calendar months

B. A current third-class medical alone

C. Six approaches, holding, and intercepting/tracking within the preceding 6 calendar months

D. Logging 6 hours of cross-country time this month

2. You hold a current BasicMed qualification and no FAA medical. The DPE asks if you can fly this IFR flight at 11,000 ft in a 2,900-lb single. The answer is:

A. No; BasicMed prohibits IFR flight

B. Yes; the operation is within all BasicMed limits

C. No; BasicMed caps altitude at 10,000 ft

D. No; IFR requires a third-class medical

3. The KBBB TAF within your ±1-hour ETA window shows `BKN015 3SM BR`. Regarding an alternate:

A. An alternate is required; the ceiling is below 2,000 and visibility is at the 3-mile threshold with restriction

B. No alternate is needed; 3 miles meets the requirement

C. An alternate is needed only if the visibility drops below 1 mile

D. The TAF is irrelevant to the alternate determination

4. You select KCCC as the alternate. Its only approach is an ILS, and the forecast at your alternate ETA is a 700-ft ceiling and 3 miles. KCCC is:

A. Usable; the forecast meets the 600-2 precision-approach alternate minimums

B. Not usable; the ceiling must be at least 800 ft

C. Not usable; visibility must exceed 5 miles

D. Usable only with a non-precision approach

5. The DPE points out that KDDD's RNAV approach is annotated "A NA." This means KDDD:

A. May be used as an alternate only at night

B. Has no published approach minimums

C. Is closed to all IFR traffic

D. May not be used to qualify as your alternate via that approach

6. Your route crosses remote high terrain on a direct GPS segment. To pick a safe cruise altitude there, you reference:

A. The MEA of the nearest Victor airway

B. The OROCA for each quadrant the route crosses

C. The MOCA at the departure VOR

D. The MCA at the destination

7. A fix on your airway route is marked with an MCA. The DPE asks why. Your answer:

A. It marks an ARTCC sector boundary

B. It indicates the maximum authorized altitude

C. It designates a mandatory reporting point

D. Rising terrain ahead requires you to begin climbing to cross the fix at or above that altitude

8. With an alternate required, your §91.167 fuel must cover the destination, then the alternate, plus:

A. 30 minutes at normal cruise

B. 1 hour at maximum range

C. 45 minutes at normal cruise

D. 30 minutes at approach speed

9. You compute 38 gal to KBBB, 16 gal to KCCC, and your burn is 12 gph. The minimum legal fuel is:

A. 54 gallons

B. 63 gallons

C. 60 gallons

D. 67 gallons

10. KAAA is non-towered with no clearance delivery. You obtain your IFR clearance by:

A. Squawking 7600 to request it automatically

B. Departing VFR and always picking it up airborne

C. Filing a second flight plan after takeoff

D. Phoning the controlling facility (or via RCO/GCO) before departure

11. You receive "released for departure, clearance void if not off by 1430, time now 1418." You must be airborne:

A. Within 30 minutes of the release

B. By your destination ETA

C. By 1430, or the clearance is void

D. Before contacting the tower

12. Reviewing NOTAMs, you find an FDC NOTAM raising the minimums on KBBB's approach. You must:

A. Disregard it because FDC NOTAMs are advisory

B. Apply it only if the weather is below the original minimums

C. Apply the amended higher minimums when flying that approach

D. Use the charted minimums regardless

13. KAAA sits at 5,800 ft and the afternoon is hot. The DPE asks about your departure. Your primary concern is:

A. High density altitude degrading takeoff and climb performance, possibly below a required gradient

B. The CG shifting aft as fuel burns

C. A lower-than-normal stall speed

D. Reduced fuel consumption in the climb

14. The departure has a published ODP requiring 350 ft/NM to 8,000 ft. At a 90-knot climb groundspeed, the required climb rate is:

A. 350 feet per minute

B. 700 feet per minute

C. 450 feet per minute

D. 525 feet per minute

15. Your loaded weight is within max gross, but the CG falls 0.5 inch aft of the rearward limit. The aircraft is:

A. Legal because weight is within limits

B. Not legal; both weight AND CG must be within limits

C. Legal for VFR only

D. Legal if the excess is under 1 inch

16. The KBBB METAR shows `OVC008 2SM BR 04/03 A2991`. The small temperature/dew point spread tells you:

A. Stable, dry conditions are present

B. An icing layer exists at the surface

C. Conditions are near saturation, consistent with the low ceiling and mist

D. The report is erroneous

17. An AIRMET Zulu covers your route from 6,000 to 12,000 ft with a freezing level near 7,000 ft. In a non-FIKI aircraft, the implication is:

A. Icing is no concern below -10°C

B. The AIRMET applies only above 12,000 ft

C. You may legally penetrate the icing if you exit within 5 minutes

D. Cruising in cloud within that band risks known icing your aircraft is not certified to handle

18. Given the AIRMET Zulu, the freezing level near 7,000 ft, and the deteriorating destination, the soundest decision is to:

A. Depart at the planned altitude and monitor for ice

B. Reevaluate altitude/route to stay clear of the icing band, or delay/cancel if it can't be avoided

C. File higher to climb above the freezing level through the icing

D. Disregard the AIRMET since it is advisory

19. The DPE asks how the destination low ceiling "makes sense." The Surface Analysis Chart most usefully shows:

A. The required fuel reserve

B. The active runway at KBBB

C. An approaching warm front upwind of KBBB explaining the low ceilings

D. The transponder code assignment

20. Your transponder code for the IFR flight is:

A. Assigned by ATC as part of the clearance

B. Always 1200 until airborne

C. Selected by you from a published list

D. Set to 7700 throughout the IFR flight

21. You verify the clearance received differs slightly from your filed route. You should:

A. Fly the filed route and ignore the amendment

B. Depart and resolve it airborne

C. Read back, confirm, and comply with the amended clearance as issued

D. Refuse and re-file

22. With the destination near minimums, an icing AIRMET on the route, and a non-FIKI aircraft, the DPE asks for your go/no-go reasoning. The strongest response:

A. Proceeds because the flight is technically legal

B. Defers entirely to whether the medical is current

C. Weights the schedule pressure as a deciding factor

D. Integrates the icing exposure, near-minimums destination, fuel/alternate margins, and personal minimums into a conservative decision

23. The DPE asks what your continue/divert plan is once airborne. The best answer:

A. Reassess at each decision point using the same framework, diverting when the data first warrants it

B. Commit to the destination and only divert after two missed approaches

C. Decide once at departure and not revisit it

D. Divert only when fuel becomes the limiting factor

24. Your minimum-altitude reference while navigating the airway 40 NM from the reference VOR, where the chart shows MEA 9,000 and MOCA 6,500, is:

A. 9,000, the MEA, because signal reception beyond 22 NM is assured only at the MEA

B. 6,500, the MOCA

C. The midpoint, 7,750

D. 5,500, below both

25. Summarizing, the DPE asks the single principle that ties your preflight decisions together. The best answer:

A. The legal minimums are the only relevant standard

B. Each phase — qualification, weather, route, alternate, fuel, performance — must be satisfied and integrated into a conservative, current-and-proficient go decision

C. Fuel is the only factor that matters once legal

D. The destination forecast alone determines the go decision

ANSWER KEY & EXPLANATIONS — SESSION 18

1. C. 66 HIT in 6 months — Instrument currency is established by six approaches, holding, and intercepting/tracking within the preceding 6 calendar months.

2. B. Within BasicMed limits — IFR at 11,000 ft in a 2,900-lb single is within all BasicMed limits (IFR allowed, ≤18,000 ft, ≤6,000 lb).

3. A. Alternate required — A 1,500-ft ceiling (below 2,000) with 3SM in mist falls below the 2,000/3 threshold, requiring an alternate.

4. A. Meets 600-2 — KCCC's ILS gives 600-2 precision alternate minimums; a 700-ft ceiling and 3 miles meets that requirement.

5. D. Can't qualify as alternate — "A NA" means KDDD may not be used to qualify as your alternate via that approach.

6. B. OROCA — Over remote terrain on a direct GPS segment, the OROCA for each quadrant provides the safe altitude reference.

7. D. Climb for terrain — An MCA exists because rising terrain ahead requires you to begin climbing to cross the fix at or above that altitude.

8. C. +45 min cruise — With an alternate required, the reserve is 45 minutes at normal cruise after destination and alternate fuel.

9. B. 63 gallons — 38 + 16 + 9 (45 min at 12 gph = 0.75 × 12) = 63 gallons.

10. D. Phone the facility — At non-towered KAAA without clearance delivery, obtain the clearance by phoning the controlling facility (or RCO/GCO).

11. C. By 1430 — "Void if not off by 1430" means you must be airborne by 1430 or the clearance is void.

12. C. Apply higher minimums — An FDC NOTAM raising the approach minimums must be applied when flying that approach.

13. A. Density altitude — At 5,800 ft on a hot day, the primary concern is high density altitude degrading takeoff and climb performance, possibly below a required gradient.

14. D. 525 fpm — 350 ft/NM × 90 kt ÷ 60 = 525 feet per minute.

15. B. Not legal — With the CG aft of the rearward limit, the aircraft is not legal; both weight and CG must be within limits.

16. C. Near saturation — A small temperature/dew point spread indicates near-saturation, consistent with the low ceiling and mist.

17. D. Known icing risk — Cruising in cloud within the AIRMET Zulu band above the freezing level risks known icing the non-FIKI aircraft is not certified to handle.

18. B. Avoid the band/delay — The sound decision is to reevaluate altitude/route to stay clear of the icing band, or delay/cancel if it cannot be avoided.

19. C. Approaching warm front — The Surface Analysis Chart most usefully shows an approaching warm front upwind of KBBB explaining the low ceilings.

20. A. ATC-assigned — The IFR transponder code is assigned by ATC as part of the clearance.

21. C. Read back/comply — If the clearance differs from the filed route, read back, confirm, and comply with the amended clearance as issued.

22. D. Integrated conservative decision — The strongest go/no-go reasoning integrates the icing exposure, near-minimums destination, fuel/alternate margins, and personal minimums into a conservative decision.

23. A. Reassess each point — The continue/divert plan reassesses at each decision point using the same framework, diverting when the data first warrants it.

24. A. 9,000 MEA — At 40 NM (beyond 22 NM), signal reception is assured only at the MEA, so fly 9,000.

25. B. Integrated go decision — The unifying principle is that each phase must be satisfied and integrated into a conservative, current-and-proficient go decision.