PRACTICE EXAM 18

1. The IMSAFE checklist is used by a pilot to assess what?

A. Personal fitness to fly before departure

B. The aircraft's airworthiness

C. The weather along the route

D. The aircraft's weight and balance

2. What does the "I" in the IMSAFE checklist stand for?

A. Instruments

B. Intention

C. Information

D. Illness

3. What does the "M" in the IMSAFE checklist stand for?

A. Medication

B. Maneuvers

C. Magnetos

D. Mixture

4. Hypoxia is best defined as which of the following?

A. An excess of carbon dioxide in the blood

B. A buildup of nitrogen in the tissues

C. A state of oxygen deficiency in the body

D. An inner-ear balance disturbance

5. Why is hypoxia particularly insidious?

A. It impairs the judgment needed to recognize it, often causing euphoria

B. It produces immediate, severe physical pain

C. It only occurs above 25,000 feet

D. It causes the engine to lose power

6. The remedy for hypoxia is which of the following?

A. Breathe more rapidly to take in air

B. Increase the cabin temperature

C. Ignore it until symptoms pass

D. Use supplemental oxygen and descend

7. Hyperventilation results from which of the following?

A. A deficiency of oxygen at altitude

B. Breathing off too much carbon dioxide, often from stress

C. A buildup of carbon monoxide

D. An inner-ear disturbance

8. The remedy for hyperventilation is which of the following?

A. Use supplemental oxygen immediately

B. Climb to a higher altitude

C. Consciously slow the breathing rate

D. Increase the breathing rate further

9. Why can hypoxia and hyperventilation be confused?

A. Both occur only above 18,000 feet

B. Both are caused by carbon monoxide

C. Both are remedied by oxygen

D. Their symptoms, such as dizziness and tingling, overlap

10. At an altitude where hypoxia is possible, if a pilot is unsure whether dizziness is hypoxia or hyperventilation, the safest first action is what?

A. Slow the breathing rate only

B. Use supplemental oxygen first

C. Continue and monitor the symptoms

D. Increase the cabin heat

11. Spatial disorientation occurs when what happens?

A. The engine loses power in cloud

B. The compass stops functioning

C. The ailerons reverse their effect

D. The pilot loses the ability to determine attitude, especially without a visible horizon

12. A VFR pilot's primary defense against spatial disorientation is what?

A. Maintain visual reference to the horizon and avoid instrument conditions

B. Trust the bodily sensations completely

C. Disable the attitude indicator

D. Increase airspeed to regain control

13. "The leans" is best described as which of the following?

A. A normal sensation requiring no concern

B. A false sensation of banking produced by the vestibular system

C. A failure of the attitude indicator

D. An engine vibration felt through the controls

14. Carbon monoxide poisoning in flight is most often caused by what?

A. A blocked pitot tube

B. A faulty exhaust or cabin heater

C. A discharged battery

D. Low fuel pressure

15. Early symptoms of carbon monoxide poisoning include which of the following?

A. Headache, drowsiness, and impaired judgment

B. Sharp chest pain and rapid pulse only

C. Improved alertness and energy

D. Loss of hearing alone

16. The correct response to suspected carbon monoxide in the cabin is what?

A. Climb to a higher altitude

B. Increase the cabin heat

C. Shut off the heater, ventilate, and land

D. Breathe more slowly

17. What does the "S" in the IMSAFE checklist stand for?

A. Speed

B. Stress

C. Stability

D. Schedule

18. What does the "A" in the IMSAFE checklist stand for?

A. Altitude

B. Attitude

C. Alcohol

D. Airspeed

19. What does the "F" in the IMSAFE checklist stand for?

A. Fatigue

B. Fuel

C. Frequency

D. Flaps

20. What does the "E" in the IMSAFE checklist stand for?

A. Engine

B. Elevation

C. Equipment

D. Emotion

21. Why is fatigue a significant hazard for a pilot?

A. It improves focus by keeping the pilot alert

B. It only affects flights over four hours

C. It has no measurable effect on judgment

D. It subtly erodes performance and judgment

22. A pilot who scuba dived earlier in the day should consider what before flying?

A. Diving has no effect on flying

B. A waiting period is needed to avoid decompression sickness

C. Only flying before diving is a concern

D. Supplemental oxygen removes the need to wait

23. Why does a waiting period after scuba diving matter for flight?

A. The fuel weighs more after diving

B. The compass becomes unreliable

C. Reduced cabin pressure at altitude can trigger decompression sickness

D. Diving lowers the density altitude

24. Dehydration affects a pilot in what way?

A. It subtly degrades performance and judgment over a flight

B. It improves concentration

C. It only matters at high altitude

D. It has no effect on a healthy pilot

25. Why is night vision reduced when relying on the center of the eye?

A. Central vision is less effective in low light, so off-center viewing is better at night

B. The center of the eye sees best in darkness

C. Color perception improves in the dark

D. Peripheral vision fails entirely at night

26. A pilot experiencing tingling and dizziness after a period of anxiety at low altitude, where hypoxia is unlikely, is most likely suffering from what?

A. Hypoxia, corrected by oxygen

B. Carbon monoxide poisoning

C. Hyperventilation, corrected by slowing the breathing

D. Spatial disorientation

27. Why might a pilot continue into worsening conditions while hypoxic without realizing the danger?

A. Hypoxia sharpens the pilot's awareness

B. Hypoxia causes severe pain that distracts the pilot

C. Hypoxia has no effect on decision-making

D. Hypoxia impairs the judgment needed to recognize the impairment

28. A pilot taking a sedating medication should do what?

A. Fly a shorter route to compensate

B. Depart and monitor alertness

C. Increase caffeine intake

D. Delay the flight, as the medication can impair performance

29. An ear block or sinus block during a descent is caused by what?

A. Carbon monoxide in the cabin

B. A vestibular illusion

C. Trapped air unable to equalize with changing cabin pressure

D. A deficiency of oxygen

30. Why does the risk of hypoxia increase with altitude?

A. The temperature rises with height

B. The available oxygen decreases as altitude increases

C. The cabin pressure increases

D. The humidity rises at altitude

31. Stress affects a pilot's performance in what way?

A. It always improves decision-making

B. It has no effect on a trained pilot

C. It can degrade attention and judgment

D. It only matters during night flights

32. A pilot who feels the airplane is climbing after entering cloud, though instruments show level flight, is experiencing what?

A. A correct sensation to act upon

B. Carburetor icing

C. An engine malfunction

D. Spatial disorientation from loss of visual reference

33. Why is the IMSAFE check performed before every flight?

A. To verify the aircraft's fuel quantity

B. To assess the pilot's physical and mental fitness to fly

C. To check the weather forecast

D. To compute the weight and balance

34. Emotional upset before a flight should lead a pilot to do what?

A. Fly to take their mind off the problem

B. Consider delaying the flight until composed

C. Increase the cruise speed to finish sooner

D. Ignore it and proceed normally

35. Why is supplemental oxygen the remedy for hypoxia but not for hyperventilation?

A. Both conditions require oxygen equally

B. Hyperventilation is an oxygen deficiency

C. Hypoxia is an oxygen deficiency, while hyperventilation is excess CO_2 loss corrected by slowing breathing

D. Neither condition responds to oxygen

36. A pilot recognizing illness during the IMSAFE check should do what?

A. Take medication and fly anyway

B. Consider grounding the flight, as illness degrades performance

C. Fly only a local pattern

D. Increase the oxygen flow

37. Why does flying into clouds pose a spatial-disorientation hazard for a VFR pilot?

A. The engine instruments fail in cloud

B. The loss of the horizon allows the balance senses to produce false cues

C. The compass reverses in cloud

D. The controls become heavier

38. A pilot who consumed alcohol must wait at least how long, and be below what blood-alcohol level, to act as a crewmember?

A. At least 8 hours and below 0.04 percent

B. At least 4 hours and below 0.08 percent

C. At least 12 hours and below 0.02 percent

D. At least 24 hours and below 0.10 percent

39. Why is a false sense of well-being a dangerous symptom of hypoxia?

A. It can prevent the pilot from recognizing the deteriorating condition

B. It causes immediate unconsciousness

C. It improves the pilot's reaction time

D. It triggers sharp physical pain

40. A vestibular illusion is produced by what part of the body?

A. The eyes alone

B. The lungs

C. The inner ear's balance system

D. The stomach

41. Why should a pilot use off-center (peripheral) viewing to detect objects at night?

A. The rods responsible for low-light vision are concentrated away from the center

B. The center of the eye is most sensitive in darkness

C. Peripheral vision sees color best

D. Central vision improves at night

42. A pilot who slept only a few hours and feels exhausted should do what?

A. Delay or cancel the flight due to fatigue

B. Depart and rely on adrenaline

C. Drink coffee and proceed

D. Fly a shorter route only

43. Why is carbon monoxide especially dangerous?

A. It has a strong, unmistakable odor

B. It only affects the engine

C. It causes immediate sharp pain

D. It is odorless and impairs judgment before the pilot realizes the danger

44. A pilot feeling pressure and pain in the ears during a rapid descent should do what?

A. Climb immediately and never descend

B. Slow the descent and attempt to equalize pressure

C. Ignore it as normal

D. Increase the descent rate

45. Why does stress belong on the IMSAFE checklist?

A. Stress improves a pilot's focus

B. Stress affects only commercial pilots

C. Stress has no bearing on safety

D. Psychological pressure can impair judgment and attention

46. Hypoxia symptoms such as euphoria and slowed responses are most likely to begin where?

A. Only at sea level

B. Only below 5,000 feet

C. As altitude increases and oxygen decreases, sometimes lower at night

D. Only above 25,000 feet

47. Why is honest self-assessment with IMSAFE important rather than a casual glance?

A. It replaces the need for a weather briefing

B. It satisfies a recordkeeping requirement

C. Genuine fitness problems must be caught before they affect the flight

D. It computes the aircraft's performance

48. A pilot who is emotionally distracted is most at risk of what?

A. Carburetor icing

B. An overspeed condition

C. A magneto failure

D. Reduced attention and impaired decision-making

49. Why does dehydration and fatigue often go unnoticed during a flight?

A. They cause immediate, obvious symptoms

B. They only occur on the ground

C. They affect only the passengers

D. Their onset is gradual, subtly eroding performance

50. The best overall protection against the physiological hazards of flight is what?

A. Flying only at high altitude

B. Honest self-assessment, recognizing symptoms, and taking corrective action

C. Ignoring minor symptoms to avoid distraction

D. Relying solely on the autopilot

Answer Key & Explanations

1. A — IMSAFE — Illness, Medication, Stress, Alcohol, Fatigue, Emotion — assesses the pilot's personal fitness to fly before departure. It addresses the human, not the machine or weather.

2. D — The "I" in IMSAFE stands for Illness, prompting the pilot to ask whether they are sick. Illness degrades performance and judgment.

3. A — The "M" in IMSAFE stands for Medication, prompting the pilot to consider whether any medication could impair them. Sedating medications are a particular concern.

4. C — Hypoxia is a state of oxygen deficiency in the body sufficient to impair brain and organ function. It worsens with altitude as available oxygen decreases.

5. A — Hypoxia is insidious because it impairs the very judgment needed to recognize it, often producing euphoria and a false sense of well-being. The pilot may feel fine while deteriorating.

6. D — The remedy for hypoxia is supplemental oxygen and descent to a lower altitude. Restoring oxygen reverses the impairment.

7. B — Hyperventilation results from breathing off too much carbon dioxide, often triggered by stress or anxiety. It produces dizziness, tingling, and a sense of suffocation.

8. C — The remedy for hyperventilation is to consciously slow the breathing rate, restoring the carbon dioxide balance. Breathing faster would worsen it.

9. D — Hypoxia and hyperventilation can be confused because their symptoms, such as dizziness and tingling, overlap. The remedies differ, so distinguishing them matters.

10. B — At an altitude where hypoxia is possible, the safest first action when unsure is to use supplemental oxygen first, since hypoxia impairs self-assessment. At lower altitudes, hyperventilation becomes the likelier cause.

11. D — Spatial disorientation occurs when the pilot loses the ability to determine the aircraft's attitude, especially without a visible horizon. The balance senses produce false cues.

12. A — A VFR pilot's primary defense against spatial disorientation is to maintain visual reference to the horizon and avoid instrument conditions. The illusions feel convincing and must not be trusted.

13. B — "The leans" is a false sensation of banking produced by the vestibular system. The controls and engine are functioning normally.

14. B — Carbon monoxide poisoning in flight is most often caused by a faulty exhaust or cabin heater. The gas can enter the cabin through the heating system.

15. A — Early carbon monoxide symptoms include headache, drowsiness, and impaired judgment. These can progress to incapacitation if not addressed.

16. C — The correct response to suspected carbon monoxide is to shut off the heater, ventilate the cabin, and land. Prompt action prevents incapacitation.

17. B — The "S" in IMSAFE stands for Stress, prompting the pilot to consider psychological pressure. Stress degrades attention and judgment.

18. C — The "A" in IMSAFE stands for Alcohol, prompting the pilot to verify they are within the legal limits and time. Alcohol impairs performance.

19. A — The "F" in IMSAFE stands for Fatigue, prompting the pilot to assess whether they are adequately rested. Fatigue erodes judgment and reaction time.

20. D — The "E" in IMSAFE stands for Emotion, prompting the pilot to consider whether they are emotionally upset. Strong emotion impairs attention.

21. D — Fatigue subtly erodes performance and judgment, even in a healthy pilot. Its gradual onset makes it easy to underestimate.

22. B — After scuba diving, a waiting period is needed before flying to avoid decompression sickness. Diving introduces nitrogen that must off-gas before exposure to reduced pressure.

23. C — The waiting period matters because reduced cabin pressure at altitude can trigger decompression sickness from dissolved nitrogen. This is why diving and flying must be separated in time.

24. A — Dehydration subtly degrades performance and judgment over the course of a flight, even in a healthy pilot. Its effects are easy to overlook.

25. A — Night vision is reduced when relying on the center of the eye because central vision is less effective in low light, making off-center viewing better at night. The light-sensitive rods lie away from the center.

26. C — Tingling and dizziness after anxiety at low altitude, where hypoxia is unlikely, point to hyperventilation, corrected by slowing the breathing rate. The low altitude makes hypoxia improbable.

27. D — A hypoxic pilot may continue into danger because hypoxia impairs the very judgment needed to recognize the impairment. The euphoria it produces masks the problem.

28. D — A pilot taking a sedating medication should delay the flight, since the medication can impair performance. Flying impaired is both unsafe and prohibited.

29. C — An ear or sinus block during descent is caused by trapped air unable to equalize with the changing cabin pressure. This produces pain until pressure equalizes.

30. B — The risk of hypoxia increases with altitude because the available oxygen decreases as altitude rises. Less oxygen reaches the brain and tissues.

31. C — Stress can degrade attention and judgment, impairing a pilot's performance. This is why it appears on the IMSAFE checklist.

32. D — Feeling a climb that the instruments contradict after entering cloud is spatial disorientation from loss of visual reference. The balance senses produce the false cue.

33. B — The IMSAFE check is performed before every flight to assess the pilot's physical and mental fitness to fly. It addresses the human element of safety.

34. B — Emotional upset should lead a pilot to consider delaying the flight until composed. Strong emotion degrades judgment and attention.

35. C — Supplemental oxygen remedies hypoxia because hypoxia is an oxygen deficiency, while hyperventilation is excess carbon dioxide loss corrected by slowing breathing. The two conditions have different causes and remedies.

36. B — A pilot recognizing illness should consider grounding the flight, since illness degrades performance. Flying sick endangers the flight.

37. B — Flying into clouds poses a disorientation hazard because the loss of the horizon allows the balance senses to produce false attitude cues. The VFR pilot must keep the horizon in sight.

38. A — A crewmember must wait at least 8 hours after consuming alcohol and be below 0.04 percent blood-alcohol, and must not be under the influence. These limits apply independently.

39. A — A false sense of well-being is dangerous because it can prevent the pilot from recognizing the deteriorating hypoxic condition. The pilot feels fine while impaired.

40. C — A vestibular illusion is produced by the inner ear's balance system. Without a visible horizon, these illusions can mislead the pilot.

41. A — Off-center viewing is used at night because the rods responsible for low-light vision are concentrated away from the center of the retina. Looking slightly to the side detects dim objects better.

42. A — A pilot who is exhausted from insufficient sleep should delay or cancel the flight due to fatigue. Caffeine and shorter routes do not reliably overcome it.

43. D — Carbon monoxide is especially dangerous because it is odorless and impairs judgment before the pilot realizes the danger. Its colorless, odorless nature makes it hard to detect.

44. B — A pilot with ear pain during a rapid descent should slow the descent and attempt to equalize pressure. This relieves the trapped-air block.

45. D — Stress belongs on the IMSAFE checklist because psychological pressure can impair judgment and attention. It is a genuine fitness factor.

46. C — Hypoxia symptoms can begin as altitude increases and oxygen decreases, sometimes at lower altitudes at night. Night vision is especially sensitive to mild oxygen deficiency.

47. C — Honest self-assessment with IMSAFE matters because genuine fitness problems must be caught before they affect the flight. A casual glance defeats the purpose.

48. D — An emotionally distracted pilot is most at risk of reduced attention and impaired decision-making. Emotion competes with the focus flying demands.

49. D — Dehydration and fatigue often go unnoticed because their onset is gradual, subtly eroding performance. The slow progression makes them easy to miss.

50. B — The best protection against physiological hazards is honest self-assessment, recognizing symptoms, and taking corrective action. Awareness and prompt response prevent impairment from compromising the flight.