Update to Instrument Rating Test

June 2011

Instrument Rating Test Prep 2011

ASA-TP-I-11

With the following changes, ASA's Instrument Rating Test Prep 2011 provides complete preparation for the FAA Instrument Rating, Instrument Flight Instructor (CFII), Instrument Ground Instructor (IGI), and Foreign Pilot Knowledge Exams.

About the Test Changes

The FAA exams are "closed tests" which means the exact database of questions is not available to the public. The question and answer choices in this book provide the largest sampling of representative FAA questions available and they are derived from history and experience with the FAA testing process. You might see similar although not exactly the same questions on your official FAA exam. Answer stems may be rearranged from the A, B, C order you see in this book. Therefore, be careful to fully understand the intent of each question and corresponding answer while studying, rather than memorize the A, B, C answer. You may be asked a question that has unfamiliar wording; studying and understanding the information in this book and the associated reference documents will give you the tools to answer all types of questions with confidence.

We invite your feedback. After you take your official FAA exam, let us know how you did. Were you prepared? Did the ASA products meet your needs and exceed your expectations? We want to continue to improve these products to ensure applicants are prepared, and become safe aviators. Send feedback to: cfi@asa2fly.com

The Computer Testing Supplement did not change this test cycle. The CT-8080-3E remains in effect. The 2012 Test Preps are now available, and they include the changes in this Update. The next FAA test change is expected in October 2011.

Page Number	Question Number	Correct Answer	Explanation
1-24	4969	[C]	*A new question is added to read:* ALL **4969.** The most hazardous aspect of structural icing is that A—it can cause breakage of antennas. B—it can cause blockage of the pitot tube and/or static ports affecting aircraft instruments. C—it can result in aerodynamic degradation including loss of lift. The most hazardous aspect of structural icing is its aerodynamic effects. Ice alters the shape of an airfoil, reducing the maximum coefficient of lift and angle of attack at which the aircraft stalls. (PLT493) — FAA-H-8083-15
1-24	4970	[B]	*A new question is added to read:* ALL **4970.** Preventing ice from causing a hazard for aircraft certificated for flight into known icing conditions is accomplished by 1. Spraying alcohol or glycol solution on the aircraft before takeoff. 2. A deicing system on the aircraft. 3. An anti-icing system on the aircraft. Which statement is true? A—All three statements are true. B—Only statements 2 and 3 are true. C—Only statement 1 is true. Pilots need an operational understanding of how to use the deicing and anti-icing systems before flying appropriately-certified aircraft into known icing conditions. (PLT493) — FAA-H-8083-15 Answers (A) and (C) are incorrect because deicing fluid removes and prevents ice prior to takeoff but is not an effective inflight method to use.

Page Number	Question Number	Correct Answer	Explanation
1-24	4960-1	[B]	*A new question is added to read:* ALL **4960-1.** What should pilots do if icing is detected while also experiencing a rolling condition? A—Lower the flaps to decrease airspeed. B—Set power and angle of attack for a controlled descent. C—Retract flaps and increase power. One hazard of structural icing is the possible uncommanded and uncontrolled roll phenomenon called roll upset, associated with severe in-flight icing. Roll upset may occur as a consequence of, or prior to, a wing stall due to anomalous forces that cause the ailerons to deflect or because the ailerons have lost effectiveness. Deflection of ailerons or loss of aileron effectiveness may be caused by ice accumulating in a sensitive area of the wing aft of areas protected by wing ice prevention systems. If roll upset occurs, pilots should reduce the angle of attack by increasing airspeed or extending wing flaps to first setting, set power for a controlled descent, not retract the flaps (if already extended), and verify operation of any wing ice protection or prevention systems. (PLT493) — AC 91-51A Answer (A) is incorrect because airspeed should be increased, not decreased. Answer (C) is incorrect because flaps should not be retracted if they are already extended.
1-24	4960-2	[C]	*A new question is added to read:* ALL **4960-2.** What autopilot function should you turn off if icing is suspected? A—HDG (heading) mode. B—AUTO Approach (APP) mode. C—Turn autopilot off. If inflight icing is encountered, the pilot should disengage the autopilot and hand-fly the airplane. Using the autopilot during icing conditions may mask important cues relating to control or systems. Additionally, autopilots might self-disconnect and present unusual attitudes or control conditions in some icing encounters. (PLT493) — AC 91-51A
1-25	4964	[A]	*A new question is added to read:* ALL **4964.** If a pilot encounters freezing drizzle, he can assume that A—there is warmer air above. B—the freezing drizzle will accumulate as rime ice. C—since freezing drizzle is supercooled it is not a concern for structural icing. Freezing rain and freezing drizzle occur when the temperature of the surface is below freezing; the rain freezes on contact with the cooler surface. Ice associated with freezing rain or freezing drizzle can accumulate on and beyond the limits of an ice protection system. This kind of ice may not produce the familiar performance degradation; however, it may be hazardous. (PLT493) — FAA-H-8083-15 Answer (B) is incorrect freezing drizzle is likely to accumulate as clear ice. Answer (C) is incorrect because freezing drizzle is a major concern for structural icing.
1-25	4965	[B]	*A new question is added to read:* ALL **4965.** When flying through supercooled water droplets, the first sign of structural ice accumulation would be A—the leading edge of the wings. B—on probes and antennas. C—the windshield. Small and/or narrow objects are the best collectors of droplets and ice up most rapidly. This is why a small protuberance within sight of the pilot can be used as an “ice evidence probe.” It is generally one of the first parts of the airplane on which an appreciable amount of ice forms. (PLT493) — FAA-H-8083-15 Answer (A) is incorrect because the wings are thicker so not as likely to build up with ice. Answer (C) is incorrect because the windshield does not protrude into the airstream, so it is less likely to develop ice first.

Page Number	Question Number	Correct Answer	Explanation
1-25	4966	[B]	*A new question is added to read:* ALL **4966.** What actions should the pilot take in the event of suspected tailplane icing during an approach? A—Leave the autopilot on to assist flying the approach. B—Use partial or no flaps and no autopilot. C—Hand fly the approach until the IAF and then use the autopilot. When the autopilot is used in icing conditions, it can mask changes in performance due to the aerodynamic effects of icing that would otherwise be detected by the pilot if the airplane were being hand flown. Pilots should disengage the autopilot and hand fly the aircraft when operating in icing conditions. If tailplane icing is suspected, the pilot should immediately retract flaps to the previous setting and apply appropriate nose-up elevator pressure. (PLT493) — AC 91-51 Answers (A) and (C) are incorrect because you should not use the autopilot anytime during the approach when operating in icing conditions.
1-25	4967	[B]	*A new question is added to read:* ALL **4967.** Expect clear ice to form on the leading edge of airfoils when A—liquid water and snow combine with ice. B—temperatures are close to freezing, there is a large volume of liquid water precipitation, and the aircraft is at high airspeeds. C—the precipitation is small droplets and the aircraft is at low airspeeds. A glossy, transparent ice formed by the relatively slow freezing of supercooled water is referred to as clear ice. This type of ice is denser, harder, and sometimes more transparent than rime ice. Temperatures close to the freezing point, large amounts of liquid water, high aircraft velocities, and large droplets are conducive to the formation of clear ice. (PLT493) — FAA-H-8083-15 Answer (A) is incorrect because this describes conditions conducive to mixed ice. Answer (C) is incorrect because this describes conditions conducive to rime ice.
1-25	4968	[A]	*A new question is added to read:* ALL **4968.** When flying through stratiform clouds, the best way to alleviate icing is by A—changing altitude to one with above-freezing temperatures or where temperatures are colder than -10°C. B—slowly climbing out of the icing layer. C—always descending to find warm air below. When icing is detected, a pilot should do one of two things: leave the area of precipitation or go to an altitude where the temperature is above freezing or colder than -10°C. This “warmer” altitude may not always be lower and “colder” altitude not always higher. Proper preflight action includes obtaining information on the freezing level and the above-freezing levels in precipitation areas. (PLT493) — FAA-H-8083-15
3-12	4056	[B]	*Answer stems and explanation for incorrect answers are changed to read:* A—may not proceed under IFR until the instrument is corrected by an authorized instrument repairman. B—may take off under IFR and use 100-foot descent as the zero indication. C—may takeoff and proceed under IFR but only in VFR weather conditions. Answers (A) and (C) are incorrect because the VSI may be used by noting any discrepancies and accommodating for them in flight. A VSI is not required for instrument flight. Even if the VSI was completely inaccurate, the flight could still proceed under IFR in IMC under the regulations.

Page Number	Question Number	Correct Answer	Explanation
4-33	4684-2	[B]	*Add a new question to read:* ALL **4684-2.** In what circumstances would a baro-VNAV approach not be authorized? A—When the ground-based NAVAIDs, such as the ILS, are out of service. B—In areas of hazardous terrain or when a remote altimeter setting is required. C—When the lower limit of the published temperature is -20°C and the outside temperature is -15°C. Baro-VNAV must be flown using the local altimeter setting only. Where no local altimeter is available, the LNAV/VNAV line will still be published for use by WAAS receivers with a note that baro-VNAV is not authorized. In addition, reliance on barometric pressure for vertical guidance is not authorized near hazardous terrain. (PLT354) — AIM ¶5-4-5 Answer (A) is incorrect because the RNAV approach does not use the ILS glideslope signal. Answer (C) is incorrect because the minimum and maximum temperature limitation is published on procedures which authorize baro-VNAV operation; these temperatures will vary by procedure.
4-33	4684-3	[B]	*Add a new question to read:* ALL **4684-3.** How does baro-VNAV provide vertical guidance during an RNAV approach? A—GPS-equipped airplanes use the existing ILS glideslope signal for vertical guidance during baro-VNAV approaches. B—By defined vertical angles or altitudes as fixes using the local altimeter setting. C—Using a series of step-down fixes. Baro-VNAV must be flown using the local altimeter setting only. Where no local altimeter is available, the LNAV/VNAV line will still be published for use by WAAS receivers with a note that baro-VNAV is not authorized. (PLT354) — AIM ¶5-4-5 Answer (A) is incorrect because the RNAV approach does not use the ILS glideslope signal. Answer (C) is incorrect because baro-VNAV approaches use a constant descent angle, not step-down fixes.
4-39	4799-1	[A]	*A new question is added to read:* ALL **4799-1.** While on a GPS approach, you receive a RAIM annunciation about the status of RAIM reliability. You should A—execute an immediate missed approach regardless of where you are on the approach path. B—execute an immediate missed approach only if you are past the FAWP. C—continue the approach since you have up to 5 minutes of GPS accuracy to complete the approach after you receive the annunciation. If at any time RAIM is not available, another type of navigation and approach system must be used, another destination selected, or the trip delayed until RAIM is predicted to be available on arrival. (PLT354) — AIM ¶1-1-19
4-39	4799-2	[B]	*A new question is added to read:* ALL **4799-2.** As part of your GPS preflight planning, RAIM prediction should be verified. This means that A—RAIM availability is assured for your entire route of flight including the GPS approach at your destination. B—RAIM is predicted to be available for your entire route of flight including the GPS approach at your destination. C—if RAIM is predicted to be available, you must still have ILS capability to use a GPS approach. During the preflight planning phase, RAIM prediction must be performed. GPS RAIM availability must be confirmed for the intended route of flight (route and time) using current GPS satellite information. In the event of a predicted, continuous loss of RAIM of more than five minutes for any part of the intended flight, the flight should be delayed, canceled, or re-routed to where RAIM requirements can be met. (PLT354) — AIM ¶5-1-15 Answer (A) is incorrect because the RAIM availability may change during the flight. Answer (C) is incorrect because ILS capability is not required to execute a GPS approach.

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4-40	4949-1	[C]	*A new question is added to read:* ALL **4949-1.** On a GPS approach, the GPS/HSI shows an LNAV/VNAV flag. What should you do? A—Descend to the LNAV MDA missed approach point. B—Follow the glideslope to the LNAV/VNAV DA. C—Execute the missed approach. WAAS receivers do not "fail down" to lower levels of service once the approach has been activated. If only the vertical off flag appears, the pilot may elect to use the LNAV minima if the rules under which the flight is operating allow changing the type of approach being flown after commencing the procedure. If the lateral integrity limit is exceeded on an LPV, LNAV/VNAV, or LNAV approach, a missed approach will be necessary since there is no way to reset the lateral alarm limit while the approach is active. With the LNAV/VNAV flag indicating full failure pilots should execute the missed approach. (PLT354) — AIM ¶1-1-20
4-40	4949-2	[C]	*A new question is added to read:* ALL **4949-2.** Changing the default sensitivity on your GPS approach will A—deselect the altitude mode. B—deselect the altitude and heading mode. C—disable the GPS annunciator. Overriding an automatically selected sensitivity during an approach will cancel the approach mode annunciation. The RAIM and CDI sensitivity will not ramp down, and the pilot should not descend to MDA, but fly to the MAWP and execute a missed approach. (PLT354) — AIM ¶1-1-19
4-40	4949-3	[A]	*A new question is added to read:* ALL **4949-3.** In a Technically Advanced Aircraft (TAA), the typical warning message is a A—flashing red indication with a repeating tone. B—yellow indication with a single tone. C—white or green indication with no tone. In a G1000-equipped TAA, the typical warning message is a flashing red indication with a repeating tone. (PLT354) — FAA-H-8083-15 Answer (B) is incorrect because while yellow is often used as an onscreen warning, it often does not include an accompanying tone. Answer (C) is incorrect because white or green is not used to indicate a warning.
5-7	4015-1	[B]	*A new question is added to read:* ALL **4015-1.** An instrument rated pilot is planning a flight under IFR on July 10, this year. Before conducting the flight, the pilot must have A—performed and logged the prescribed tasks and repetitions required for instrument currency no earlier than January 10, this year. B—performed and logged the prescribed tasks and repetitions required for instrument currency no earlier than February 10, this year. C—passed an instrument proficiency check between August 1 last year and July 1 this year. To act as PIC under IFR, a pilot must have logged, in the past 6 calendar months, at least 6 instrument approaches, holding procedures, and intercepting and tracking courses through the use of navigation systems, in the appropriate category of aircraft for the instrument privileges sought. A pilot who does not meet the recent instrument experience requirements during the prescribed time, has 6 months thereafter to meet the experience requirements or pass an instrument proficiency check in the category of aircraft involved. (PLT442) — 14 CFR §61.57 Answer (A) is incorrect because the prescribed tasks and repetitions must have been logged in the past 6 calendar months from the planned flight date. Answer (C) is incorrect because the PIC would have between July and December to complete the prescribed tasks and repetitions before completing the IPC in January.

Page Number	Question Number	Correct Answer	Explanation
5-38	4605-1	[C]	*A new question is added to read:* ALL **4605-1.** A pilot or crew may not perform any activities except those required to safely operate the aircraft during A—the preflight walk-around of the aircraft. B—fueling of the aircraft. C—critical phases of flight. Commonly known as the "sterile cockpit rule," regulations require 121 and 135 flight crewmembers to refrain from nonessential activities during critical phases of flight. Critical phases of flight are all ground operations involving taxi, takeoff, and landing, and all other flight operations below 10,000 feet except cruise flight. Nonessential activities include eating, reading a newspaper, or chatting. While the regulation grew out of accidents in the airline industry, it holds true for the entire aviation community. Pilots can improve flight safety significantly by reducing distractions during critical phases of flight. (PLT440) — FAA-H-8261-1
5-38	4605-2	[B]	*A new question is added to read:* ALL **4605-2.** The "sterile cockpit" rule is good practice not just for airline pilots but for all pilots because A—keeping the cockpit neat and clean keeps you better organized. B—it greatly reduces distractions during critical phases of flight. C—it keeps radio transmissions to a minimum. Commonly known as the "sterile cockpit rule," regulations require 121 and 135 flight crewmembers to refrain from nonessential activities during critical phases of flight. Critical phases of flight are all ground operations involving taxi, takeoff, and landing, and all other flight operations below 10,000 feet except cruise flight. Nonessential activities include eating, reading a newspaper, or chatting. While the regulation grew out of accidents in the airline industry, it holds true for the entire aviation community. Pilots can improve flight safety significantly by reducing distractions during critical phases of flight. (PLT440) — FAA-H-8261-1
6-6	4427-1	[A]	*A new question is added to read:* ALL **4427-1.** When may VFR waypoints be used on an IFR flight plan? A—Never. B—Always. C—When filing a composite flight plan. VFR waypoints shall not be used to plan flights under IFR. VFR waypoints will not be recognized by the IFR system and will be rejected for IFR routing purposes. (PLT161) — AIM ¶1-1-19
6-33	4537-1	[C]	*A new question is added to read:* ALL **4537-1.** Which lines should you cross when exiting the runway? A—Solid lines. B—Striped lines. C—Both solid and striped lines. Holding position markings indicate where an aircraft is supposed to stop. Referred typically to as "hold short lines," they consist of four yellow lines: two solid and two dashed, spaced six inches apart and extending across the width of the taxiway or runway. The solid lines are always on the side where the aircraft is to hold. An aircraft exiting a runway is not clear of the runway until all parts of the aircraft have crossed the applicable holding position marking. (PLT161) — AIM ¶2-3-5

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8-27	4956-1	[B]	*A new question is added to read:* ALL **4956-1.** (Refer to Figure 152.) How do you enter the approach if the aircraft is 27 DME from the AJCIZ intersection heading 300°? A—Begin final approach with a procedure turn. B—Begin final approach without a procedure turn. C—Continue to LNAV minimums after completing the procedure turn. When cleared for the RNAV (GPS) RWY 30 approach from over AJCIZ Intersection, the approach specifies no procedure turn is required when intercepting the localizer within that sector (NoPT). (PLT083) — Instrument Approach Procedures
8-27	4956-2	[A]	*Add a new question to read:* ALL **4956-2.** (Refer to Figure 152.) Why is the required visibility for LNAV/VNAV higher than that for LNAV alone? A—The location of obstacles along the descent path. B—An LNAV/VNAV procedure always has higher visibility minimums. C—The location of the MAP in relation to the MDA for LNAV procedure requires lower visibility minimums. The LNAV/VNAV procedure usually has lower visibility minima than LNAV alone. The reverse is true when obstacle clearance cannot be assured to the missed approach point. In this case, the lower LNAV visibility indicates there are obstacles below the MDA. (PLT354) — AIM ¶5-4-5 Answer (B) is incorrect because an LNAV/VNAV procedure usually has lower visibility minimum due to the benefit of the stabilized approach descent provided by the vertical navigation. Answer (C) is incorrect the location of the missed approach point does not affect the required visibility minima for the LNAV procedure.