



Update to Inspection Authorization Test

Inspection Authorization Test Prep

July 2010

ASA-IA-5

With the following changes, ASA's *Inspection Authorization Test Prep, Fifth Edition* provides complete preparation for the FAA Inspection Authorization Knowledge Exam. The FAA may rearrange the answer stems on your test to appear in a different order than you see in the ASA Test Prep. For this reason, be careful to fully understand the intent of each question and corresponding answer while studying, rather than memorize the A, B, C associated with the correct response.

Page Number	Question Number	Correct Answer	Explanation
1-5	—	—	<p><i>Insert new item #8 into the list of test-taking steps:</i></p> <p>8. You will be given 10 minutes to review any questions you missed (without the answer choices or your selected answer). This is helpful for determining where future study and learning can be focused.</p>
3-3	—	—	<p><i>Add a new "Note" to the Introduction text, to read:</i></p> <p>Note: On October 16, 2009, the FAA released major amendments to a number of regulations — 14 CFR Parts 1, 21, 43 and 45 were affected by these revisions. Although the <i>effective</i> date for these in the Federal Register (FR) was April 14, 2010, only a portion of the changes became effective on that date. The remaining amendments have compliance dates of 18 months after the FR publication date. Currently it is not known when the FAA will update the IA test database and computer testing supplement accordingly with this amendment; therefore the proactive IA applicant will be prepared to answer questions that deal with the regulations as they currently exist as well as those affected by the new amendments. For further information, see the "Reader Resources" page on the ASA website (details are contained in a downloadable PDF of this October 2009 FR).</p>
3-8	28a	[B]	<p><i>Insert a new question to read:</i></p> <p>28a. Aircraft certified under 14 CFR Part 23 must have "Airworthiness Limitations" documentation, including:</p> <p>A—Special inspection techniques. B—Structural inspection intervals. C—Special tool catalog.</p> <p>This statement is found in the G23.4 "Airworthiness Limitations" section of Appendix G to 14 CFR Part 23: "This section must set forth each mandatory replacement time, structural inspection interval, and related structural inspection procedure required for type certification."</p> <p>28a [B] (017) Part 23, App. G23.4</p>
3-8	28b	[B]	<p><i>Insert a new question to read:</i></p> <p>28b. Aircraft certified under 14 CFR Part 23 must have "Airworthiness Limitations" documentation, including:</p> <p>A—Service information. B—Structural inspection intervals. C—Maintenance Manual.</p> <p>This statement is found in the G23.4 "Airworthiness Limitations" section of Appendix G to 14 CFR Part 23: "This section must set forth each mandatory replacement time, structural inspection interval, and related structural inspection procedure required for type certification."</p> <p>28b [B] (017) Part 23, App. G23.4</p>

Page Number	Question Number	Correct Answer	Explanation
3-9	30a	[A]	<p><i>Insert a new question to read:</i></p> <p>30a. 14 CFR Part 27 prescribes airworthiness standards for which of the following?</p> <p>A—Small rotorcraft. B—Large rotorcraft. C—Both A and B.</p> <p>14 CFR Part 27 prescribes airworthiness standards for rotorcraft with a maximum weight of 7,000 pounds or less and nine or less passengers.</p> <p>30a [A] (017) §27.1(a)</p>
3-10	37	[B]	<p><i>Insert new text at end of current explanation; answer is changed to [B]:</i></p> <p>Many helicopter TCDS refer to the manufacturer maintenance manuals as required information.</p> <p>37 [B]</p>
3-15	64a	[C]	<p><i>Insert a new question to read:</i></p> <p>64a. Which of the following would be considered a propeller major repair?</p> <p>A—Straightening of steel blades. B—Repair of a propeller governor. C—Both A and B.</p> <p>14 CFR Part 43, Appendix A provides specific examples of major repairs and alterations to airframes, powerplants, propellers and appliances. Straightening of blades and repair of governors are both listed in the propeller section under major repairs.</p> <p>64a [C] (021) Part 43 App. A (b)(3)</p>
3-15	64b	[C]	<p><i>Insert new question to read:</i></p> <p>64b. Which of the following would be considered a propeller major repair?</p> <p>A—Straightening of aluminum blades. B—Repair of a propeller governor. C—Both A and B.</p> <p>14 CFR Part 43, Appendix A provides specific examples of major repairs and alterations to airframes, powerplants, propellers and appliances. Straightening of blades and repair of governors are both listed in the propeller section under major repairs.</p> <p>64b [C] (021) Part 43 App. A (b)(3)</p>
3-22	91b	[B]	<p><i>Insert new question to read:</i></p> <p>91b. An amateur-built aircraft recently registered in the U.S. has a maximum speed of 180 mph. What size nationality and registration markings are required?</p> <p>A—2-inch. B—3-inch. C—12-inch.</p> <p>The required identification markings for U.S.-registered civil aircraft are found in 14 CFR Part 45, Subpart C; 3-inch marking is acceptable when the aircraft maximum cruising speed does not exceed 180 knots CAS.</p> <p>91b [B] (017) §45.29(b)(1)(iii)</p>

Page Number	Question Number	Correct Answer	Explanation
3-31	132a	[C]	<p><i>Insert a new question to read:</i></p> <p>132a. The holder of an inspection authorization may supervise a progressive inspection on a turbine-powered rotorcraft weighing</p> <p>A— 12,500 lbs or less. B—over 12,500 lbs. C—both A and B.</p> <p>The owner or operator of a turbine-powered rotorcraft may elect to use the inspection provisions of §91.409(d), a progressive inspection. No weight limitation is specified.</p> <p>132a [C] (031) §91.409(d)</p>
3-31	134a	[A]	<p><i>Insert a new question to read:</i></p> <p>134a. An Approved Aircraft Inspection Program could apply to which of the following?</p> <ol style="list-style-type: none"> 1. Large 30-passenger turbine powered helicopter. 2. A 12-passenger commuter category multi-engine turboprop aircraft. <p>A—Both 1 and 2. B—Only 1. C—Only 2.</p> <p>The owner or operator of a turbine-powered rotorcraft may elect to use the inspection provisions of §91.409(d), a progressive inspection. No weight limitation is specified. Section 91.409(e) lists numerous different types of aircraft and specifies that they must be inspected in accordance with one of the types of inspection programs stated in §91.409(f).</p> <p>A 12-seat multi-engine turbine aircraft operating under 14 CFR Part 135 (Commuter and On-Demand Operations) could be maintained under an approved inspection program by the operator (§135.411(a)).</p> <p>134a [A] (031) 14 CFR Parts 91 & 135; §125.1(b)</p>
4-9	163a	[C]	<p><i>Insert a new question to read:</i></p> <p>163a. Use AD 93-24-03 to answer this question.</p> <p>Known Information: Beech Bonanza model E33, serial number CD1224, current aircraft total time 3,676 hours.</p> <p>The last recorded entry for this AD was at aircraft total time of 3,176 hours. At that time, the forward rudder spar was inspected in accordance with Beech Service Bulletin No. 2333, Revision 1. No cracks were found at that time. During the current inspection at 3,676 hours, cracks were found in the area of the upper hinge. What action should be taken concerning compliance with this AD?</p> <p>A—Reinspect the rudder forward spar for cracks in accordance with the instructions in Beech Service Bulletin No. 2333, Revision 1, at intervals not to exceed 500 hours time in service. B—Since cracks were found only in the upper hinge area, no further action is required by this AD. C—Stop-drill the cracks and install an SMP upper-hinge reinforcement bracket in accordance with STC SA4899NM.</p> <p>For a crack in the upper hinge, the AD states that the corrective action is to stop-drill and install the reinforcement bracket per the referenced STC.</p> <p>163a [C] (020) AD 93-24-03 (c)(3)</p>

Page Number	Question Number	Correct Answer	Explanation
5-4	171a	[C]	<p><i>Insert a new question to read:</i></p> <p>171a. The Airworthiness Approval Tag (8130-3) may be used for which of the following?</p> <p>A—Identification of parts. B—Domestic Airworthiness Approvals. C—Both A and B.</p> <p>The 8130-3 form and its related guidance material continues to evolve. This form is the preferred method for documenting the approval of products, parts and appliances considered approved by the FAA. Chapter 2 of the Order lists “Domestic Airworthiness Approvals”; in Chapter 3, blocks 6 through 13 of the form are explained, which allow the entry of sufficient data to specifically identify the parts being approved.</p> <p>171a [C] (030) Order 8130.21G</p>
6-18	223f	[B]	<p><i>Insert a new question to read:</i></p> <p>223f. What kind of defect is detected when using longitudinal magnetization?</p> <p>A—Longitudinal. B—Transverse. C—Lateral.</p> <p>Longitudinal magnetization occurs when the part is subjected to circular current. This circular current causes the magnetic lines of force to flow through the length of the part in a longitudinal path. A “transverse” crack, oriented 90 degrees to the magnetic flow, will appear because the crack disrupts the magnetic flow through the part and attracts the magnetic inspection particles.</p> <p>223f [B] (024) AC 43.13-1B Ch. 5</p>
6-18	223g	[A]	<p><i>Insert a new question to read:</i></p> <p>223g. What kind of defect is detected when using circular magnetization?</p> <p>A—Longitudinal. B—Transverse. C—Lateral.</p> <p>Circular magnetization occurs when the part is subjected to longitudinal current. This longitudinal current causes the magnetic lines of force to flow around the part in a circular path. A “longitudinal” crack, oriented 90 degrees to the magnetic flow, will appear because the crack disrupts the magnetic flow through the part and attracts the magnetic inspection particles.</p> <p>223g [A] (024) AC 43.13-1B Ch. 5</p>
6-18	223h	[A]	<p><i>Insert a new question to read:</i></p> <p>223h. Which type of crack can be detected by magnetic particle inspection using either circular or longitudinal magnetization?</p> <p>A—45 degrees. B—Longitudinal. C—Transverse.</p> <p>Longitudinal magnetization produces a magnetic field that extends lengthwise in the material. It is used to detect faults that extend across the part, perpendicular to the lines of magnetic flux. Circular magnetization produces a magnetic field that extends across the material. It can detect faults that are oriented along the length of the part. Either type of magnetization can detect a fault that runs at 45 degrees to the length of the part.</p> <p>223h [A] (024) AMT-G Ch. 7</p>

Page Number	Question Number	Correct Answer	Explanation
6-18	223i	[A]	<p><i>Insert a new question to read:</i></p> <p>223i. The term “resin rich” refers to a composite material that is</p> <p>A—filled with resin but lacks sufficient reinforcing fiber. B—filled with reinforcing fiber but lacks sufficient resin to thoroughly wet the fiber. C—cured without using external heating.</p> <p>A localized area in a composite layup that is filled with resin but lacks sufficient reinforcing fiber is called a “resin rich” area. A resin rich laminate is usually more brittle than a layup with the proper amount of resin. It will also weigh more.</p> <p>223i [A] (032) DAT</p>
6-18	223j	[C]	<p><i>Insert a new question to read:</i></p> <p>223j. For detection of which of the following could a coin or ring tap test be used in a composite structure?</p> <p>A—Voids and occlusions. B—Delaminations and occlusions. C—Delamination, debonding, and voids.</p> <p>Tap testing is widely used for a quick evaluation of any accessible aircraft surface to detect the presence of delamination or debonding. A void is an empty area in the composite laminate, and this term is interchangeable with delamination.</p> <p>223j [C] (024) AC 43.13-1B p. 5-105</p>
6-18	223k	[A]	<p><i>Insert a new question to read:</i></p> <p>223k. Which NDT method should not be used to detect cracks in advanced composite structures?</p> <p>A—Dye penetrant. B—Ultrasonic. C—Both A and B.</p> <p>Penetrant inspection is used on nonporous metal and nonmetal components in order to find material discontinuities that are open to the surface. Composite materials are constructed in layers, so only cracks in the surface ply could be detected by dye penetrant. Ultrasonics and tap tests are used on composite structures.</p> <p>223k [A] (024) AC 43.13-1B p. 5-94</p>
6-18	223l	[A]	<p><i>Insert a new question to read:</i></p> <p>223l. When working with composites, the warp direction is designated at zero degrees. In what direction would the tracer run?</p> <p>A—0 degrees. B—45 degrees. C—90 degrees.</p> <p>Warp tracers are threads of a different color from the warp threads that are woven into a material in order to identify the direction of the warp threads.</p> <p>223l (A) (024) DAT</p>
6-20	227b	[C]	<p><i>Insert a new question to read:</i></p> <p>227b. Ferrous alloys having a strength of 220,000 PSI should have corrosion removed with which of the following materials?</p> <p>A—Garnet. B—Acid-based stripper. C—Silicon carbide.</p> <p>Table 6-1 on Page 6-22 of AC 43.13-1B lists the abrasives that may be used to remove corrosion from ferrous alloys. Silicon carbide is allowed.</p> <p>227b [C] (026) AC 43.13-1B</p>

Page Number	Question Number	Correct Answer	Explanation
6-28	260a	[B]	<p><i>Insert a new question to read:</i></p> <p>260a. What is the maximum amount of time a circuit can be in operation and still be an intermittent duty circuit?</p> <p>A—Three minutes. B—Two minutes. C—One minute.</p> <p>Referring to Figures 11-2 and 11-3 in AC 43.13-1B, there is a significant difference in the current-carrying capacity of the same diameter wire, depending on whether or not the current flow is intermittent or continuous. However, there is no definition given for understanding what length of time can be used to determine this. This information is located in paragraph 11-68.d., where it states "...or intermittent operation (maximum two minutes)."</p> <p>260a [B] (003) AC 43.13-1B</p>
6-35	286	—	<p><i>Replace #286 answer stems with the following:</i></p> <p>A—Enough vacuum required to operate the maximum number of instruments and positive pressure. B—Maximum negative pressure to run total instruments, plus pressure drop in plumbing. C—Enough vacuum required to operate the minimum number of instruments and positive pressure.</p>
6-35	287	—	<p><i>Replace #287 answer stems with the following:</i></p> <p>A—Enough vacuum required to operate the maximum number of instruments and sufficient negative pressure. B—Maximum negative pressure to run total instruments plus pressure drop in plumbing. C—System minimum pressure differential at required airflow rate per minute.</p>
7-10	338b	[B]	<p><i>Insert a new question to read:</i></p> <p>338b. The Piper PA-28-235 is certified under CAR Part 3. However, a limited number of systems are also required under which of the following?</p> <p>A—14 CFR Part 25. B—14 CFR Part 23. C—14 CFR Part 21.</p> <p>14 CFR Part 23, according to Page 34 of TCDS 2A13, "Data Pertinent to all models, Certification Basis" for the PA-28-235.</p> <p>338b [B] (013) TCDS 2A13 p. 34</p>
7-18	375m	[C]	<p><i>Insert a new question to read:</i></p> <p>375m. According to TCDS P-920, the prefix "L" for blade model LC7666D means:</p> <p>A—Large pitch change knob. B—L.H. tractor. C—L.H. pusher.</p> <p>Refer to Note 2 of the TCDS, which states "L prefix denotes L.H. pusher."</p> <p>375m [C] (020) TCDS P-920, p. 5</p>

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7-18	375n	[B]	<p><i>Insert a new question to read:</i></p> <p>375n. How much unusable fuel and what is the location of the unusable fuel for serial number 21062775?</p> <p>A—60 lbs at station +46. B—6 lbs at station +23. C—9 lbs at station +46.</p> <p>Comparison of the given S/N to the S/N range of the various Cessna 210 models in TCDS 3A21 indicates that this S/N is for a Model 210M (on Page 17 of the TCDS). For fuel capacity, the TCDS refers to Note 1 (Page 25), where it states that the 210 Model M has unusable fuel of 6 lbs at (+23).</p> <p>375n [B] (020) TCDS 3A21</p>



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