Study Unit 1 – Airplane Instruments

Page 30, Subunit 1.2, Question 18: This question was removed in error in our April 2017 update and now has been added back to our database.

18. If, while in level flight, it becomes necessary to use an alternate source of static pressure vented inside the airplane, which of the following should the pilot expect?

A. The vertical speed to show a climb.
B. The vertical speed to momentarily show a descent.
C. The altimeter to read higher than normal.

Answer (C) is correct. *(IFH Chap 5)*

**DISCUSSION:** Most aircraft equipped with a pitot-static system are provided with an alternate source of static pressure for emergency use. This source is usually vented inside the cabin. The pressure within an unpressurized cockpit is slightly lower than the pressure outside the airplane because of the Venturi effect of the air moving past the outside of the cockpit. When the alternate static source is used, the altimeter and airspeed indicator will read higher than actual, and the vertical speed indicator will momentarily show a climb.

Answer (A) is incorrect. The VSI will show only a momentary, not a steady-state, climb. Answer (B) is incorrect. The VSI indication will be a momentary climb, not a descent.

Study Unit 4 – Federal Aviation Regulations

Page 108, Subunit 4.2, Question 25: “A pilot has an IFR flight plan for July 10 . . .” was removed. Subsequent questions have been renumbered accordingly.

Study Unit 6 – Holding and Instrument Approaches

Page 294, Subunit 6.13, Question 176: This edit clarifies the answer explanation.

176. Which of the following is true concerning GPS approaches?

A. Handheld GPS receivers are approved in emergency situations.
B. Terminal mode occurs within 20 NM of the destination airport.
C. In approach mode, the sensitivity on the CDI changes from 1 NM to 0.3 NM.

Answer (C) is correct. *(AAH Chap 3)*

**DISCUSSION:** Approach mode increases the sensitivity on the CDI within 2 NM of the airport final approach waypoint from 1 NM to 0.3 NM.

Answer (A) is incorrect. Handheld receivers are not approved for GPS approaches. They may be referenced in both normal and emergency situations as an aid to situational awareness. Answer (B) is incorrect. Terminal mode occurs within 30 NM of the destination airport, not 20 NM.
Study Unit 8 – Aviation Weather

Page 309, Subunit 8.7, item 5.b.: This information was deleted because this information will not be presented this way on the exam.

b. The only way to ensure the wing is free of critical ice is to perform a tactile inspection. This type of inspection is valuable for detecting critical ice. By physically touching the surface, any fine contaminants not easily visible can be detected.

Page 329, Subunit 8.7, Question 84: “When conditions favoring the formation of ice are present, pilots . . .” was removed because this information will not be presented this way on the exam. Subsequent questions have been renumbered accordingly.

Page 331, Subunit 8.7, Question 92: This edit clarifies the question choice.

92. Should you experience uncommanded roll due to icing forward of the ailerons, the most appropriate response is to

A. begin a climb.
B. retract the flaps in increments and employ available ice removal equipment.
C. reduce the angle of attack by reducing the aircraft pitch, and if in a turn, roll wings level.

Answer (C) is correct. (AC 91-74B)

DISCUSSION: If you encounter uncommanded roll due to ice accumulations forward of the ailerons, pilots can remedy roll up sets using the following guidelines:

1. Reduce the angle of attack by reducing the aircraft pitch. If in a turn, the pilot should roll the wings level.
2. Set the appropriate power and monitor the airspeed and angle of attack.
3. If flaps are extended, do not retract them unless it can be determined that the upper surface of the airfoil is clear of ice. Retracting the flaps will increase the angle of attack at a given airspeed.
4. Verify wing protection is functioning normally and systematically through visual observation of each wing.

Answer (A) is incorrect. In the case of uncommanded roll, you should reduce the angle of attack by reducing the aircraft pitch, not increasing it to begin a climb. Answer (B) is incorrect. While you should employ any ice protection equipment available, you should not retract the flaps, regardless of their level of extension, during uncommanded roll as this will actually increase the angle of attack. However, if you can verify that the upper surface of the wing is clear of ice, you may retract the flaps if necessary. Bear in mind this is the exception to the rule.

Page 333, Subunit 8.7, Question 105: “How can you be sure the wing is free of . . .” was removed because this information will not be presented this way on the exam. Subsequent questions have been renumbered accordingly.

Study Unit 9 – Aviation Weather Services

Page 350, Subunit 9.11, item 1.: These edits correct the material.

1. The U.S. High-Level Significant Weather Prognostic Chart encompasses airspace from above 24,000 25,000 ft. to 60,000 63,000 ft. pressure altitude (FL 240 250 to FL 600 630).
Page 351, Subunit 9.11, items 5.b. and 6.: These edits correct the material.

b. CB bases below 24,000 ft. (FL 240), the lowest altitude limit of the chart, are shown as XXX.

1) CB tops are expressed in hundreds of feet MSL.
2) The term “below 24,000 ft.” (FL 240) is used because phenomena that extend beyond the lower limit of the High-Level Significant Weather Prognostic Chart are found on the Low Level Significant Weather Prognostic Chart, the upper limit of which is 24,000 ft. pressure altitude (FL 240).

6. EXAMPLES:

Page 362, Subunit 9.8, Question 35: These edits were made to improve the question.

35. (Refer to Figure 18 on page 363.) The chart symbols shown in the Gulf of Mexico at 12Z and extending into AL, GA, SC, and northern FL indicate a

A. hurricane.
B. tropical storm.
C. tornado originating in the Gulf of Mexico.

Answer (A B) is correct. (AWS Sect 8)

DISCUSSION: The SFC PROG chart at 1200Z is on the lower right panel. The symbol shown in the Gulf of Mexico and extending into AL, GA, SC, and northern FL indicates a hurricane tropical storm and associated precipitation.

Answer (B A) is incorrect. The symbol in the Gulf of Mexico indicates a hurricane tropical storm. A tropical storm hurricane symbol would have the center circle whitened completely darkened, not open. Answer (C) is incorrect. The symbol in the Gulf of Mexico indicates a hurricane tropical storm, not a tornado. Additionally, tornadoes are not forecast on a prog chart.

Page 364, Subunit 9.9, Question 42: “(Refer to Figure 9 on page 365.) The Severe Weather Outlook Chart, which is used primarily . . .” was removed because it was outdated.
Study Unit 11 – IFR Flights

Page 445, Subunit 11.3, Question 38: These edits clarify the answer explanations.

38. (Refer to Figure 188 on page 446.) When conducting a missed approach from the LOC/DME RWY 21 approach at PDX, what is the Minimum Safe Altitude (MSA) while maneuvering between the runway and BTG VORTAC?

A. 4,200 feet MSL.
B. 3,500 feet MSL.
C. 6,200 feet MSL.

Answer (A B) is correct. (ACL AIM Para 5-4-5)

DISCUSSION: According to the missed approach instructions, the pilot should perform a climbing right turn to 4,200 ft. on route to the BTG VORTAC. The missed approach would place the aircraft in the MSA sector indicating 3,500 feet. This MSA sector is from the 120° radial clockwise through the 300° radial of the BTG VORTAC. MSAs are published for emergency use on IAP charts. They provide 1,000 feet of clearance over all obstacles but do not necessarily ensure acceptable navigation signal coverage. MSAs are depicted in feet above mean sea level. A single sector altitude is normally established; however, when necessary to obtain relief from obstacles, an MSA with up to four sectors may be established.

Answer (B A) is incorrect. While the published MSA for a course between the runway and the VORTAC is 3,500 ft., you should always use the highest altitude applicable to a given flight segment; in this case, the missed approach instructions of 4,200 ft. The missed approach altitude is 4,200 feet, not the MSA while maneuvering between the runway and BTG VORTAC while on the missed approach.

Answer (C) is incorrect. An MSA of 6,200 feet would apply to flight between the 120° radial clockwise through the 300° radial of the BTG VORTAC, an area to the northeast of the course described. An MSA of 6,200 feet would apply to flight between the 300° radial clockwise through the 120° radial of the BTG VORTAC, which is not the area maneuvering between the runway and BTG VORTAC while on the missed approach.