Gleim Airline Transport Pilot FAA Knowledge Test Prep

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Updates
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NOTE: Sections with changes are indicated by a vertical bar in the left margin. Text that should be deleted is displayed with a line through it. New text is shown with blue underlined font.

If you are tested on any content not represented in our materials or this update, please share this information with Gleim so we can continue to provide the most complete test preparation experience possible. You can submit feedback at www.GleimAviation.com/questions. Thank you in advance for your help!

Study Unit 4 – Federal Aviation Regulations: Part 135

Page 170, Subunit 4.9, Question 136: This update corrects a reference to 14 CFR and improves the description of the type of airplane in the correct answer explanation.

136. (Refer to Figure 1 on page 171.) What is the maximum landing distance that may be used by a reciprocating-engine-powered, large transport category airplane to land on Rwy 6 with zero wind conditions?

A. 5,460 feet.

B. 6,210 feet.

C. 6,370 feet.

Answer (C) is correct. *(14 CFR 135.377)*

DISCUSSION: 14 CFR 135.~~387~~377 requires a reciprocating-engine-powered transport category airplane be able to land in 70% of the effective length of the runway at an alternate airport while taking into account the wind restrictions in 14 CFR 135.375. The effective length of Rwy 6 on Fig. 1 is 9,100 ft. (10,350 – 1,250). The effective runway length begins at the point where the obstruction clearance plane intersects the centerline of the runway. Thus, the maximum landing distance is 6,370 ft. (9,100 × 70%).

Answer (A) is incorrect. This is 60%, not 70%, of the effective runway length. Answer (B) is incorrect. This is 60%, not 70%, of the actual, not the effective, runway length.

Study Unit 5 – Aerodynamics and Airplanes

Page 225, Subunit 5.9, Question 103: This update corrects the unit of measurement used in the question.

103. What is the maximum load that can be placed on a pallet without exceeding the floor weight limit of 260 pounds/sq. ~~inch~~foot?

Pallet dimensions: 95.2 inches × 140.1 inches
Pallet weight: 350 pounds
Tie-down devices: 120 pounds

A. 23,606 pounds.

B. 24,076 pounds.

C. 24,546 pounds.

Answer (A) is correct. *(FAA-H-8083-1B Chap 9)*

DISCUSSION: The maximum pallet weight when the floor limit is given is found by first determining the area of the pallet in the unit of measurement given in the floor limit. The area of the pallet is then multiplied by the floor limit to determine the total weight allowed, including the freight, pallet, and tie-down devices. To determine the maximum load that can be placed on the pallet, the weight of the pallet and tie-down devices must be subtracted from the total weight.

Pallet area: 95.2 × 140.1 = 13,337.5 sq. in.
Convert pallet area from sq. in. to sq. ft.:
13,337.5 ÷ 144 = 92.6 sq. ft. (144 sq. in. = 1 sq. ft.)
Maximum pallet weight: 92.6 × 260 = 24,076 lb.
Pallet load: 24,076 – 350 – 120 = 23,606 lb.

Answer (B) is incorrect. The weight of the pallet and tie-down devices must be subtracted to determine the load allowed on the pallet. Answer (C) is incorrect. The weight of the pallet and tie-down devices is included in the maximum allowable weight of the pallet.

Study Unit 13 – Cessna Caravan Operating/Performance Data

Page 695, Subunit 13.2, Item 3.: This update adds a reference to a figure.

3. EXAMPLE: Given the following conditions, determine the approximate short-field total landing distance over a 50-ft. obstacle for an airport with a pressure altitude of 4,000 ft.

OAT	20°C
Landing weight	8,500 pounds
Headwind	11 knots
Flaps	UP

Reverse thrust applied after touchdown

Using the performance chart in Figure 402 on page 703, a weight of 8,500 lb. in zero wind conditions at 20°C results in a distance of 1,970 ft. In Figure 401 on page 703, Note 2 allows a decrease of 10% or 197 ft.; Note 5 allows an additional decrease of 10% or 108 ft.; Note 3 requires an increase of 40% or 666 ft. After accounting for these calculations, the answer is 2,331 ft.

Study Unit 14 – Bombardier CRJ and Q400 Operating/Performance Data

Page 755, Subunit 14.3, Question 21: This update corrects the temperature in the answer explanation.

21. (Refer to Figure 478 on page 754.) With a reported temperature of 5°C, and a weight of 57,000 pounds, an altitude of 6,355 feet, and a V1/VR ratio of 1.0, the accelerate-stop distance is

A. 4,100 feet.

B. 4,900 feet.

C. 5,900 feet.

Answer (C) is correct. (POH/AFM)

DISCUSSION: Draw a straight line from the outside air temperature section from ~~0~~5°C left to 6,355 ft. in the altitude graph area. From there, draw a straight line to the REFERENCE LINE in the center of the chart. Then, draw a straight line left along the 57,000-lb. weight line from the scale on the right of the chart. Draw this line straight up and beyond the top-most diagonal line. Go back to the center REFERENCE LINE and draw a line diagonally from that point, following the contour of the other diagonal lines on the chart until you intersect the 57,000-lb. weight line you drew before this step. From there, draw a straight line up to the Accelerate-Stop Distance Required scale. This line should intersect at or very close to 5,900 ft. In this example, the correction for V1/VR is not used. Make sure your lines are straight and, where curved, follow the contours of the lines.

Answer (A) is incorrect. Using the incorrect line in the altitude graph would result in 4,100 ft. Answer (B) is incorrect. The amount of 4,900 ft. would be found if -5°C were used.

Study Unit 16 – Weather Reports and Forecasts

Page 808, Subunit 16.6, Item 10.: This update edits the chart number.

10. Maximum turbulence potential charts (GTG-~~2~~3) graphics are computer generated, four-dimensional forecasts of information related to the likelihood of encountering Clear Air Turbulence (CAT) associated with upper-level fronts and jet streams.