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Flight Instructor Airplane

FAA written exam study guide



Sample only Not the full guide, and not for sale.

The full version can be ordered from the PilotTestQA store.

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Cockpit photograph by Rhys Abel

How to use this guide

The Flight Instructor Airplane (FIA) test is required before you can obtain a flight instructor certificate with an airplane rating. The rating allows you to teach in an airplane.

The full FIA test contains 100 questions from a databank of more than 900 questions. You are allowed 2 hours 30 minutes for the exam and a score of 70% or better is required to pass. With this study guide, a score of 90% or better while completing the exam within 30-45 minutes is easily achievable.

This study guide is divided into four parts.

PART 1

Part 1 has the questions with only the correct answer shown. It is highly recommended you spend the most time on this section. The trick to passing any FAA written exam is rote memorization of the questions and answers. You will learn the fundamentals and principles of all the material later during ground school and self-study lessons. For now, your main focus is to score as high as possible on the FIA exam. The best way to prepare for the written exam is by reading the question and then the correct answer, then moving on to the next question and answer, repeating this process until you've read all of the questions and their correct answers. The idea in doing this is to allow your brain/eyes to associate the correct answer to each question. After you've read through this section several times, you will begin to identify certain key words in both the question and answer which starts making the answers easier to identify.

PART 2

Part 2 has the questions with all three possible answer choices shown. It is recommended you only study this section after you have studied Part 1 enough times to build your memory for identifying the correct answer. You can use this section to give yourself random quizzes to see how well the correct answer "stands out" from the wrong answers.

PART 3

Part 3 has the questions with all three possible answer choices shown and the correct answer is highlighted. You can use this section by having a second person read random questions to you along with the answer choices and they will easily be able to see whether or not you were correct.

PART 4

Part 4 has the images/graphics that accompany the test questions. Some of these graphics may appear to be of low quality, however they are the exact images (resolution and quality) that will be provided to you on the exam.

Contents

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Part 1 Questions with only the correct answer

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Aircraft Systems
Flight Instruction
Fundamentals of Instructing
FARs
Airports and Airspace
Navigation
Weather
Weight and Balance / Performance
Aeromedical Factors

Part 2 Questions with all three answer choices

Aerodynamics and Aircraft
Aircraft Systems
Flight Instruction
Fundamentals of Instructing
FARs
Airports and Airspace
Navigation
Weather
Weight and Balance / Performance
Aeromedical Factors

Part 3

All three choices, correct answer highlighted

Aerodynamics and Aircraft
Aircraft Systems
Flight Instruction
Fundamentals of Instructing
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Airports and Airspace
Navigation
Weather
Weight and Balance / Performance
Aeromedical Factors

Part 4

Figures and diagrams >

This is a sample. It does not include all of the questions and answers in the full version of this study guide.

Order the full guide

Part 1

Read the question, then the correct answer, and move on. Repeat until the answer comes with the question.

Aerodynamics and Aircraft

01

What is V(2) speed?

CORRECT ANSWER

B Takeoff safety speed.

02

(Refer to Figure 17.) The airspeed indicated by point D is

CORRECT ANSWER

C maximum structural cruising speed.

Aircraft Systems

03

Aircraft maintenance records must include the current status of

CORRECT ANSWER

C life-limited parts of each airframe, engine, propeller, rotor, and appliance.

04

When operating an aircraft with a constant-speed propeller, which procedure places the least stress on cylinder components?

CORRECT ANSWER

B When power settings are being decreased, reduce manifold pressure before RPM.

Flight Instruction

05

What restriction is imposed regarding flight instruction of other pilots in air transportation service by an airline transport pilot?

CORRECT ANSWER

C 36 hours in any 7-day period.

06

(Refer to Figure 48.) In flying the rectangular course, when would the aircraft be turned less than 90°?

CORRECT ANSWER

A Corners 1 and 4.

Fundamentals of Instructing

07

Which statement is true about instructors' critiques?

CORRECT ANSWER

C Before students willingly accept their instructor's critique, they must first accept the instructor.

08

A written test is said to be comprehensive when it

CORRECT ANSWER

B samples liberally whatever is being measured.

FARs

09

Which is the correct symbol for the minimum steady flight speed at which an airplane is controllable?

CORRECT ANSWER

A Vs.

10

If the certification category of an airplane is listed as 'utility,' it means the airplane is intended for which maneuvers?

CORRECT ANSWER

B All nonaerobatic maneuvers plus limited aerobatics including spins.

Airports and Airspace

11

A 'stopway' can be defined as an area

CORRECT ANSWER

A designated for use in decelerating the airplane during an aborted takeoff.

12

(Refer to Figure 45.) What are the visibility and cloud clearance requirements in an airplane at night when conducting takeoffs and landings at McCampbell Airport (area 1)?

CORRECT ANSWER

C 3 SM visibility, 500 feet below, 2,000 feet horizontally from clouds.

Navigation

13

When converting from magnetic course to true course, a pilot should

CORRECT ANSWER

A add easterly variation regardless of heading.

14

(Refer to Figure 40.) The line from point A to point B of the wind triangle represents

CORRECT ANSWER

A true heading and true airspeed.

Weather

15

In what part of the atmosphere does most weather occur?

CORRECT ANSWER

B Troposphere.

16

(Refer to Figure 3.) Which station is reporting the wind as calm?

CORRECT ANSWER

A KDAL.

Weight and Balance / Performance

17

To maintain level flight in an airplane which is loaded with the CG at the forward limit, an additional download must be imposed on the horizontal stabilizer. This in turn produces

CORRECT ANSWER

A an additional load which the wing must support.

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(Refer to Figure 25.) What would be the indicated stall speed during a 40° banked turn with the gear down and flaps 45° down?

CORRECT ANSWER

C 83 KIAS.

Aeromedical Factors

19

What suggestion could you make to students who are experiencing motion sickness?

CORRECT ANSWER

C Tell the students to avoid unnecessary head movement and to keep their eyes on a point outside the aircraft.

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How can smoking affect a pilot?

CORRECT ANSWER

B Reduces the oxygen-carrying capability of the blood.

Part 2

All three choices. The correct one is not marked. Use this after Part 1.

Aerodynamics and Aircraft

01

What is V(2) speed?

A Minimum takeoff speed.
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B never-exceed speed.
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Aircraft Systems

03

Aircraft maintenance records must include the current status of

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C life-limited parts of each airframe, engine, propeller, rotor, and appliance.

04

When operating an aircraft with a constant-speed propeller, which procedure places the least stress on cylinder components?

A When power settings are being increased, increase manifold pressure before RPM.
B When power settings are being decreased, reduce manifold pressure before RPM.
C Whether power settings are being increased or decreased, RPM is adjusted before manifold pressure.

Flight Instruction

05

What restriction is imposed regarding flight instruction of other pilots in air transportation service by an airline transport pilot?

A 30 hours in any 7-day period.
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B Corners 1 and 2.
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Which statement is true about instructors' critiques?

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B a lesser load that must be supported by the wing.

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B 90 KIAS.

C 83 KIAS.

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What suggestion could you make to students who are experiencing motion sickness?

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B Have the students lower their head, shut their eyes, and take deep breaths.

C Tell the students to avoid unnecessary head movement and to keep their eyes on a point outside the aircraft.

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How can smoking affect a pilot?

A Can decrease night vision by up to 50 percent.

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Figure 3. Aviation Routine Weather Reports (METAR)



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Figure 17. Velocity/Load Factor Chart

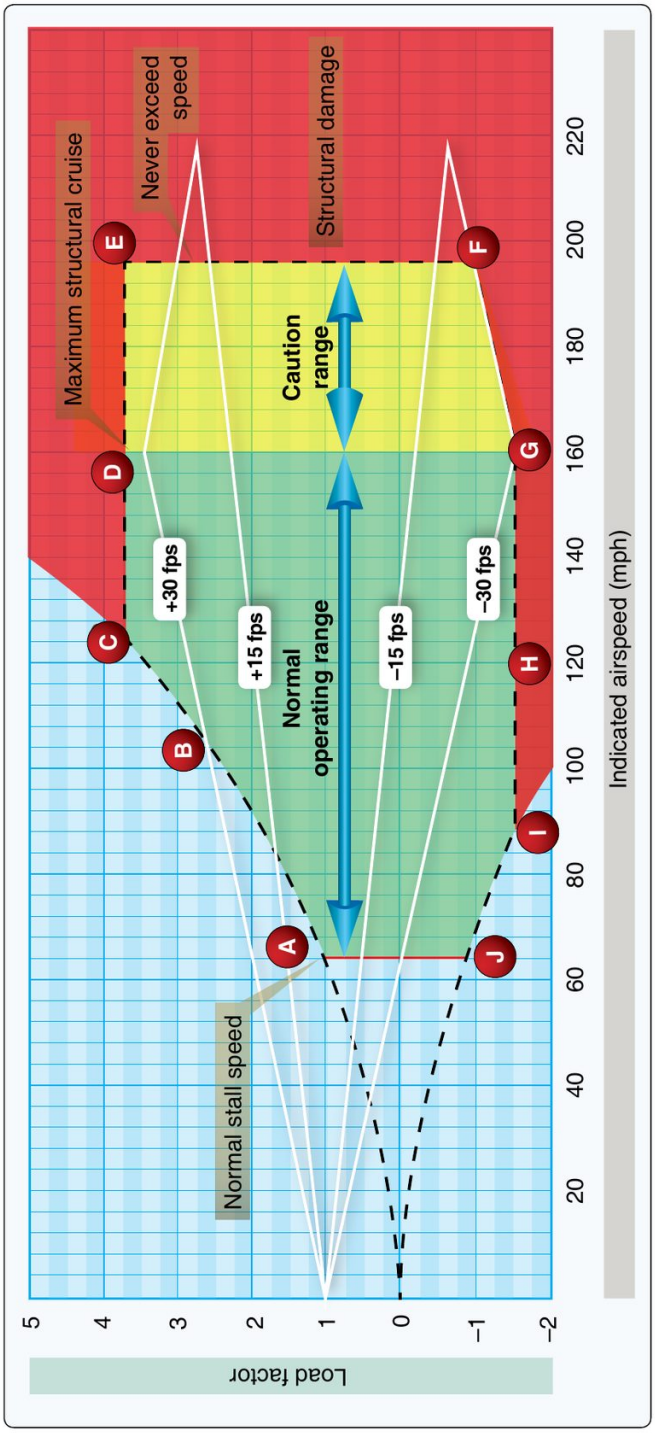


Figure 17. Velocity/Load Factor Chart.

Figure 25. Airspeed Calibration Stalls/Speeds Chart

Airspeed calibration—Normal system

Flaps 0°		Flaps 15°		Flaps 45°	
KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
80	84	70	79	70	76
100	102	80	86	80	84
120	122	90	94	90	93
140	141	100	103	100	102
160	161	110	112	110	111
180	181	120	121	120	120
200	201	130	131	130	129
220	221	140	141	140	138
240	242	150	151		

KIAS—indicated airspeed in knots
KCAS—calibrated airspeed in knots

Stall speeds—KCAS

4,600 lb gross weight

Configuration	Angle of bank			
	0°	20°	40°	60°
Gear and flaps up	84	87	97	119
Gear down and flaps 15°	80	83	92	113
Gear down and flaps 45°	76	79	87	108

Figure 25. Airspeed Calibration Stalls/Speeds Chart.

Figure 40. Wind Triangle

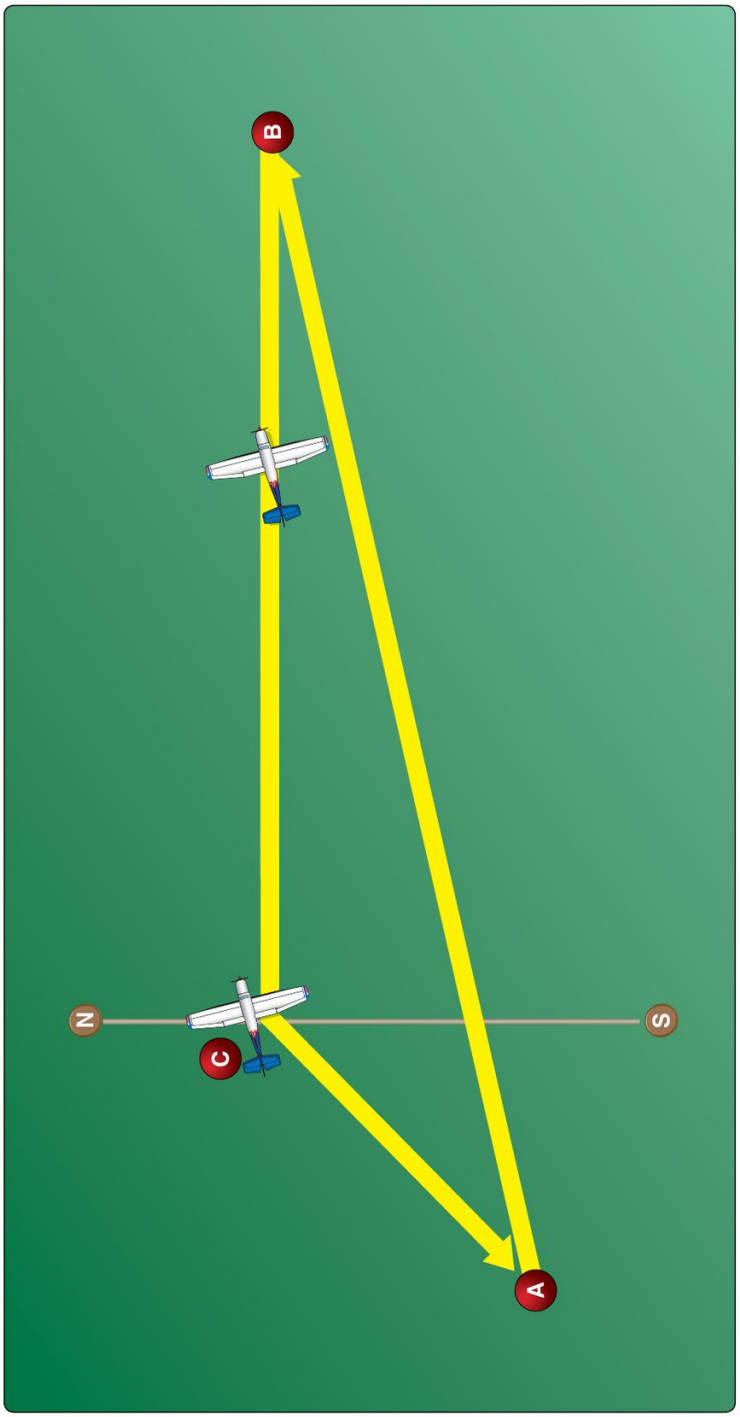


Figure 40. Wind Triangle.

Figure 45. Sectional Chart Excerpt

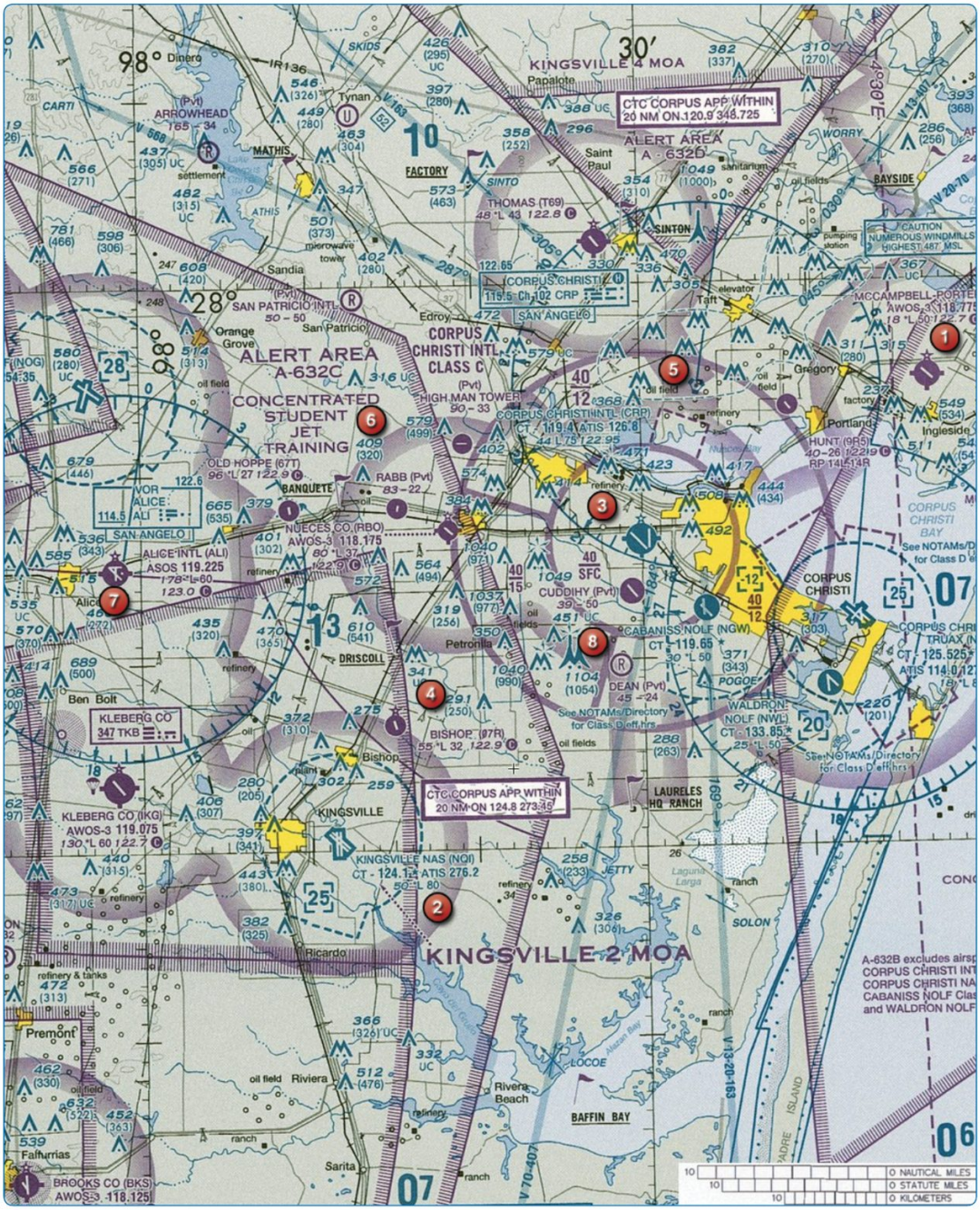


Figure 45. Sectional Chart Excerpt.
Note: *Chart is not to scale and should not be used for navigation. Use associated scale.*

Figure 48. Rectangular Course

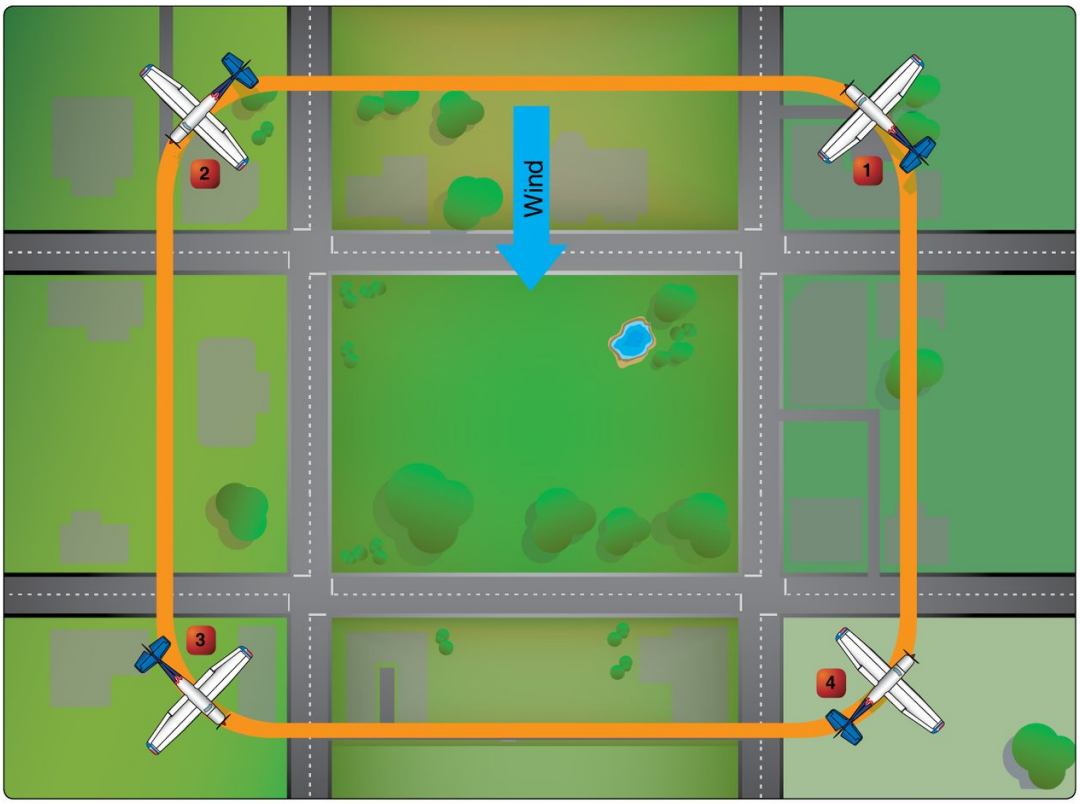


Figure 48. Rectangular Course.