

Date revised: November 29, 2016

The following sample exam for Flight Instructor Airplane (FIA) is suitable study material for all the Flight Instructor rating tests including helicopters, gliders and gyroplanes, etc. Although these questions are airplane based they represent the same type of questions that can be found on all Flight Instructor tests. The applicant must realize that these questions are to be used as a study guide, and are not necessarily actual test questions. The full FIA test contains 100 questions. The Application Identification, Information Verification and Authorization Requirements Matrix lists all FAA exams. It is available at:

[http://www.faa.gov/training\\_testing/testing/media/testing\\_matrix.pdf](http://www.faa.gov/training_testing/testing/media/testing_matrix.pdf)

The FAA testing system is supported by a series of supplement publications. These publications include the graphics, legends, and maps that are needed to successfully respond to certain test questions. FAA-CT-8080-5, Computer Testing Supplement for Flight and Ground Instructors is available at:

[http://www.faa.gov/training\\_testing/testing/test\\_questions/media/FAA-CT-8080-5G.pdf](http://www.faa.gov/training_testing/testing/test_questions/media/FAA-CT-8080-5G.pdf)

The Learning Statement Reference Guide for Airman Knowledge Testing contains listings of learning statements with their associated codes. Matching the learning statement codes with the codes listed on your Airman Knowledge Test Report assists in the evaluation of knowledge areas missed on your exam. It is available at: [http://www.faa.gov/training\\_testing/testing/media/LearningStatementReferenceGuide.pdf](http://www.faa.gov/training_testing/testing/media/LearningStatementReferenceGuide.pdf)

**Sample FIA Exam:**

1 . PLT018

(Refer to FAA-CT-8080-5G, Figure 18.) What is the stall speed of an airplane under a load factor of 2 if the unaccelerated stall speed is 100 knots?

- A) 115 knots.
- B) 129 knots.
- C) 140 knots.

2 . PLT095

Aileron deflection moves the airplane about its

- A) lateral axis.
- B) longitudinal axis.
- C) vertical axis.

3 . PLT095

Action of the elevators moves the plane on its

- A) lateral axis.
- B) longitudinal axis.
- C) vertical axis.

4 . PLT238

(Refer to FAA-CT-8080-5G, Figure 21.) Of aircraft 1, 2 , or 3, which has the lowest aspect ratio?

- A) 1.
- B) 2.
- C) 3.

5 . PLT237

Maximum gliding distance of an aircraft is obtained when

- A) parasite drag is the least.
- B) induced drag and parasite drag are equal.
- C) induced drag equals the coefficient of lift.

6 . PLT238

Aspect ratio of a wing is defined as the ratio of the

- A) wingspan to the wing root.
- B) wingspan to the mean chord.
- C) square of the chord to the wingspan.

7 . PLT168

The angle of attack of a wing directly controls the

- A) angle of incidence of the wing.
- B) amount of airflow above and below the wing.
- C) distribution of positive and negative pressure acting on the wing.

8 . PLT125

During flight, advancing thrust will

- A) increase airspeed.
- B) cause the aircraft to climb.
- C) cause the aircraft to increase airspeed and climb.

9 . PLT074

(Refer to FAA-CT-8080-5G, Figure 17.) The airspeed indicated by point A is

- A) maneuvering speed.
- B) normal stall speed.
- C) maximum structural cruising speed.

10 . PLT127

What can a pilot expect when landing at an airport located in the mountains?

- A) Higher true airspeed and longer landing distance.
- B) Higher indicated airspeed and shorter landing distance.
- C) Lower true airspeed and longer landing distance.

11 . PLT132

In a twin-engine airplane, the single-engine service ceiling is the maximum density altitude at which VYSE will produce

- A) 50 feet per minute rate of climb.
- B) 100 feet per minute rate of climb.
- C) 500 feet per minute rate of climb.

12 . PLT134

How does increased weight affect the takeoff distance of an airplane?

- A) The airplane will accelerate more slowly with the same power output, but the same airspeed is required to generate necessary lift for takeoff.
- B) The airplane will accelerate more slowly with the same power output, and a higher airspeed is required to generate necessary lift for takeoff.
- C) Every airplane has the same acceleration factor with the same power output, but a higher airspeed is needed to overcome the increased ground effect.

13 . PLT013

(Refer to FAA-CT-8080-5G, Figure 30.) What is the crosswind component for a landing on Runway 18 if the tower reports the wind as 220° at 25 knots?

- A) 16 knots.
- B) 19 knots.
- C) 22 knots.

14 . PLT127

What effect does high density altitude have on aircraft performance?

- A) It increases engine performance.
- B) It reduces climb performance.
- C) It increases takeoff performance.

15 . PLT006

(Refer to FAA-CT-8080-5G, Figure 29.) What is the approximate glide distance?

Height above terrain = 5,500 ft

Tailwind = 10 kts

- A) 11 miles.
- B) 12 miles.
- C) 13 miles.

16 . PLT497

When making routine transponder code changes, pilots should avoid inadvertent selection of which codes?

- A) 0700, 1700, 7000.
- B) 1200, 1500, 7000.
- C) 7500, 7600, 7700.

17 . PLT023

What is true altitude?

- A) The vertical distance of the aircraft above sea level.
- B) The vertical distance of the aircraft above the surface.
- C) The height above the standard datum plane.

18 . PLT023

Under what condition is indicated altitude the same as true altitude?

- A) If the altimeter has no mechanical error.
- B) When at sea level under standard conditions.
- C) When at 18,000 feet MSL with the altimeter set at 29.92.

19 . PLT023

What is pressure altitude?

- A) The indicated altitude corrected for position and installation error.
- B) The altitude indicated when the barometric pressure scale is set to 29.92.
- C) The indicated altitude corrected for nonstandard temperature and pressure.

20 . PLT253

To properly purge water from the fuel system of an aircraft equipped with fuel tank sumps and a fuel strainer quick drain, it is necessary to drain fuel from the

- A) fuel strainer drain.
- B) lowest point in the fuel system.
- C) fuel strainer drain and the fuel tank sumps.

21 . PLT253

During preflight, the fuel vent system should always be checked

- A) to ensure the vent is closed.
- B) to ensure the vent is open.
- C) to ensure the vent system pressure is in the green range.

22 . PLT141

A series of continuous red lights in the runway centerline lighting indicates

- A) 1,000 feet of runway remaining.
- B) 3,000 feet of runway remaining
- C) the beginning of the runway overrun area.

23 . PLT147

The visual glidepath of a 2-bar VASI provides safe obstruction clearance within plus or minus 10° of the extended runway centerline and to a distance of how many miles from the runway threshold?

- A) 4 NM.
- B) 6 NM.
- C) 10 NM.

24 . PLT145

An airport has pilot controlled lighting but runways without approach lights. How many times should you key your microphone to turn on the MIRL at medium intensity?

- A) 5 clicks.
- B) 3 clicks.
- C) None, the MIRL is left on all night.

25 . PLT141

A military airfield can be identified by

- A) a white and red rotating beacon.
- B) white flashing sequence lights (strobes).
- C) a green and dual-peaked white rotating beacon.

26 . PLT141

What is the purpose for the runway hold position markings on the taxiway?

- A) Identifies area where aircraft are prohibited.
- B) Holds aircraft short of the runway.
- C) Allows an aircraft permission onto the runway.

27 . PLT141

The 'No Entry' sign identifies

- A) paved area where aircraft entry is prohibited.
- B) an area that does not continue beyond intersection.
- C) the exit boundary for the runway protected area.

28 . PLT141

The 'ILS critical area boundary sign' identifies

- A) the exit boundary for the runway protected area.
- B) the edge of the ILS critical area.
- C) the area where an aircraft is prohibited from entering.

29 . PLT147

A slightly below glidepath indication on a 2-bar VASI glidepath is indicated by

- A) two red lights over two white lights.
- B) two white lights over two red lights.
- C) two red lights over two more red lights.

30 . PLT373

When density altitude is beyond capability as indicated on the performance chart,

- A) interpolate the data and attempt takeoff.
- B) extrapolate the data and attempt takeoff.
- C) do not attempt takeoff until conditions permit calculations to provide the data to determine a safe takeoff and climb out.

31 . PLT393

Flight through a restricted area should not be accomplished unless the pilot has

- A) filed an IFR flight plan.
- B) received prior authorization from the controlling agency.
- C) received prior permission from the commanding officer of the nearest military base.

32 . PLT064

(Refer to FAA-CT-8080-5G, Figure 45.) The controlled airspace located at the Corpus Christi VORTAC (area 5) begins at

- A) the surface.
- B) 700 feet AGL.
- C) 1,200 feet MSL.

33 . PLT064

(Refer to FAA-CT-8080-5G, Figure 46.) What is the ceiling of the Class C airspace surrounding San Jose International Airport (area 2)?

- A) 2,500 feet AGL.
- B) 4,000 feet MSL.
- C) 6,000 feet MSL.

34 . PLT064

(Refer to FAA-CT-8080-5G, Figure 46.) What is the height of the Class D airspace over Livermore Airport (area 5)?

- A) 2,900 feet MSL.
- B) 3,000 feet AGL.
- C) Base of the overlying Class B airspace.

35 . PLT376

Public figures are protected by

- A) special use airspace.
- B) prohibited areas.
- C) temporary flight restriction.

36 . PLT064

(Refer to FAA-CT-8080-5G, Figure 44.) An aircraft takes off from Hicks Airport (area 1) and flies northeast towards Northwest Airport (area 2). What maximum altitude could be flown to remain under the class B airspace?

- A) 4,000 feet MSL.
- B) 2,500 feet MSL.
- C) 3,200 feet MSL.

37 . PLT194

The most effective technique to use for detecting other aircraft at night is to

- A) turn the head and sweep the eyes rapidly over the entire visible region.
- B) avoid staring directly at the point where another aircraft is suspected to be flying.
- C) avoid scanning the region below the horizon so as to avoid the effect of ground lights on the eyes.

38 . PLT219

What will cause the nose of an aircraft to move in the direction of the turn before the bank starts in a turn entry?

- A) Rudder being applied too late.
- B) Rudder being applied too soon.
- C) Failure to apply back elevator pressure.

39 . PLT486

When explaining the techniques used for making short- and soft-field takeoffs, it would be correct to state that

- A) during soft-field takeoffs, lift-off should be made as soon as possible.
- B) during soft-field takeoffs, lift-off should be made only when best angle-of-climb speed is attained.
- C) during short-field takeoffs, lift-off should be attempted only after best rate-of-climb speed is attained.

40 . PLT119

Pilots are encouraged to turn on their landing lights when operating below 10,000 feet, day or night, and when operating within

- A) Class B airspace.
- B) 10 miles of any airport.
- C) 5 miles of a controlled airport.

41 . PLT170

What normally results from excessive airspeed on final approach?

- A) Bouncing.
- B) Floating.
- C) Ballooning.

42 . PLT170

A go-around from a poor landing approach should

- A) not be attempted unless circumstances make it absolutely necessary.
- B) generally be preferable to last minute attempts to prevent a bad landing.
- C) not be attempted after the landing flare has been initiated regardless of airspeed.

43 . PLT195

Most midair collision accidents occur during

- A) hazy days within the traffic pattern environment.
- B) clear days in the vicinity of navigational aids.
- C) night conditions during simulated instrument flight.

44 . PLT112

To properly compensate for a crosswind during straight-and-level cruising flight, the pilot should

- A) hold rudder pressure toward the wind.
- B) establish a proper heading into the wind by coordinated use of the controls.
- C) hold aileron pressure toward the wind and hold opposite rudder pressure to prevent a turn.

45 . PLT104

The lighter workloads associated with glass (digital) flight instrumentation

- A) are instrumental in decreasing flightcrew fatigue.
- B) have proven to increase safety in operations.
- C) may lead to complacency by the flightcrew.

46 . PLT104

When a pilot believes advanced avionics enable operations closer to personal or environmental limits,

- A) greater utilization of the aircraft is achieved.
- B) risk is increased.
- C) risk is decreased.

47 . PLT104

Human behavior

- A) rarely results in accidents unless deliberate actions are performed.
- B) causes three out of four accidents.
- C) is well understood, so behavioral induced accidents are exceedingly rare occurrences.

48 . PLT333

One aid in increasing night vision effectiveness would be to

- A) look directly at objects.
- B) force the eyes to view off center.
- C) increase intensity of interior lighting.

49 . PLT438

Although not required, supplemental oxygen is recommended for use when flying at night above

- A) 5,000 feet.
- B) 10,000 feet.
- C) 12,500 feet.

50 . PLT096

What physical change would most likely occur to occupants of an unpressurized aircraft flying above 15,000 feet without supplemental oxygen?

- A) Gases trapped in the body contract and prevent nitrogen from escaping the bloodstream.
- B) The pressure in the middle ear becomes less than the atmospheric pressure in the cabin.
- C) A blue coloration of the lips and fingernails develop along with tunnel vision.

51 . PLT330

Anemic hypoxia has the same symptoms as hypoxic hypoxia, but it is most often a result of

- A) poor blood circulation.
- B) a leaking exhaust manifold.
- C) use of alcohol or drugs before flight.

52 . PLT103

Hazardous attitudes occur to every pilot to some degree at some time. What are some of these hazardous

- A) Poor risk management and lack of stress management.
- B) Antiauthority, impulsivity, macho, resignation, and invulnerability.
- C) Poor situational awareness, snap judgments, and lack of a decision making process.

53 . PLT022

In the aeronautical decision making (ADM) process, what is the first step in neutralizing a hazardous attitude?

- A) Making a rational judgment.
- B) Recognizing hazardous thoughts.
- C) Recognizing the invulnerability of the situation.

54 . PLT280

An illusion, that the aircraft is at a higher altitude than it actually is, is produced by

- A) atmospheric haze.
- B) upsloping terrain.
- C) downsloping terrain.

55 . PLT334

A rapid acceleration can create the illusion of being in a

- A) left turn.
- B) noseup attitude.
- C) nosedown attitude.

56 . Question position intentionally left blank.

57 . Question position intentionally left blank.

58 . PLT186

Which instruments are considered primary and supporting for bank, respectively, when establishing a level standard-rate turn?

- A) Turn coordinator and attitude indicator.
- B) Attitude indicator and turn coordinator.
- C) Turn coordinator and heading indicator.

59 . PLT185

What is the first fundamental skill in attitude instrument flying?

- A) Aircraft control.
- B) Instrument cross-check.
- C) Instrument interpretation.

60 . PLT185

What is the correct sequence in which to use the three skills used in instrument flying?

- A) Aircraft control, cross-check, and instrument interpretation.
- B) Instrument interpretation, cross-check, and aircraft control.
- C) Cross-check, instrument interpretation, and aircraft control.

61 . Question position intentionally left blank.

62 . PLT015

If fuel consumption is 15.3 gallons per hour and groundspeed is 167 knots, how much fuel is required for an aircraft to travel 620 NM?

- A) 63 gallons.
- B) 60 gallons.
- C) 57 gallons.

63 . PLT012

How far will an aircraft travel in 3-1/2 minutes if its groundspeed is 65 knots?

- A) 3.3 NM.
- B) 3.8 NM.
- C) 2.2 NM.

64 . PLT012

On a cross-country flight, point X is crossed at 1015 local. What is your expected arrival time at point Y? Use the following information to determine your ETA.

Distance between X and Y = 32 NM

Forecast wind = 240° at 25 kts

Pressure altitude = 5,500 ft

Ambient temperature = +05 °C

True course = 100°

The indicated airspeed is 110 knots.

- A) 1040 local.
- B) 1059 local.
- C) 1029 local.

65 . PLT012

If an aircraft is consuming 91 pounds of fuel per hour and groundspeed is 168 knots, how much fuel is required to travel 457 NM?

- A) 291 pounds.
- B) 265 pounds.
- C) 248 pounds.

66 . PLT320

The angular difference between true north and magnetic north is

- A) magnetic deviation.
- B) magnetic variation.
- C) compass acceleration error.

67 . PLT202

Which statement is true concerning the operation of DME?

- A) DME operates in the VHF frequency band.
- B) Distance information received from DME is the actual horizontal distance from the station.
- C) DME coded identification is transmitted once for each three or four times that the VOR coded identification is transmitted.

68 . PLT202

Which distance is commonly displayed by a DME indicator?

- A) Slant-range distance in statute miles.
- B) Slant-range distance in nautical miles.
- C) The distance from the aircraft to a point at the same altitude directly above the VORTAC.

69 . PLT202

Which DME indication should you receive when you are directly over a VORTAC site at approximately 6,000 feet AGL?

- A) 0.
- B) 1.
- C) 1.3.

70 . PLT064

(Refer to FAA-CT-8080-5G, Figure 45.) What is the elevation of the Thomas Airport (T69) (area 5)?

- A) 122 feet MSL.
- B) 43 feet MSL.
- C) 48 feet MSL.

71 . PLT132

What is V<sub>2</sub> speed?

- A) Takeoff decision speed.
- B) Takeoff safety speed.
- C) Minimum takeoff speed.

72 . PLT457

To be eligible for a Student Pilot Certificate limited to airplanes, an applicant is required to be at least how old?

- A) 14 years.
- B) 16 years.
- C) 17 years.

73 . PLT457

The minimum age requirement for the applicant who is seeking a Student Pilot Certificate limited to glider operations is

- A) 14 years.
- B) 16 years.
- C) 17 years.

74 . PLT407

What night flight training is required for an unrestricted Private Pilot Certificate with an airplane rating?

- A) 3 hours to include 10 takeoffs and 10 landings and one cross-country flight of over 100 nautical miles.
- B) 3 hours to include five takeoffs and five landings (each landing from a traffic pattern).
- C) 1 hour to include three takeoffs and three landings.

75 . PLT448

What is the minimum age required to be eligible for a Commercial Pilot Certificate?

- A) 17.
- B) 18.
- C) 21.

76 . PLT461

Position lights are required to be displayed on all aircraft in flight from

- A) sunset to sunrise.
- B) 1 hour before sunset to 1 hour after sunrise.
- C) 30 minutes before sunrise to 30 minutes after sunset.

77 . PLT451

Your student holds a private pilot certificate with an airplane rating and wishes to obtain a rotorcraft category rating. You inform the student that

- A) none of the training/flight experience obtained toward the airplane rating can be used for the rotorcraft
- B) he/she must complete the rotorcraft practical test in its entirety as per the private pilot rotorcraft practical test standards.
- C) some of the training/flight experience acquired toward the airplane rating can be used to meet the rating requirements for a rotorcraft category rating.

78 . PLT372

An aircraft's last annual inspection was performed on July 12, this year. The next annual inspection will be due no later than

- A) July 13, next year.
- B) July 31, next year.
- C) 12 calendar months after the date shown on the Airworthiness Certificate.

79 . PLT220

If an aircraft is not equipped for night flight and official sunset is 1730 EST, the latest a pilot may operate that aircraft without violating regulations is

- A) 1629 EST.
- B) 1729 EST.
- C) 1829 EST.

80 . PLT463

Under what condition, if any, may a pilot allow a person who is obviously under the influence of intoxicating liquors or drugs to be carried aboard an aircraft?

- A) Under no condition.
- B) Only if a second pilot is aboard.
- C) Only if the person is a medical patient under proper care or in an emergency.

81 . PLT451

As pilot, what is the minimum flight time in an aircraft an applicant must have for a Commercial Pilot Certificate with an airplane rating?

- A) 250 hours.
- B) 200 hours.
- C) 150 hours.

82 . PLT404

When must each occupant of an aircraft wear an approved parachute?

- A) When flying over water beyond gliding distance to the shore.
- B) When practicing spins or other flight maneuvers for any certificate or rating.
- C) When an intentional maneuver that exceeds 30° noseup or nosedown relative to the horizon is made.

83 . PLT404

How often are emergency locator transmitters required to be inspected?

- A) Every 12 months.
- B) Every 24 months.
- C) After every 100 hours of flight time.

84 . PLT288

What is the wind shear forecast in the following TAF?

TAF

KCVG 23105 1Z 12012KT 4SM -RA BR OVC008

WS005/27050KT TEMPO 1719 1/2 SM -RA FG

FM1930 090 12KT 1SM -DZ BR VV003 BECMG 20215SM HZ=

- A) 5 feet AGL from 270° at 50 KT.
- B) 50 feet AGL from 270° at 50 KT.
- C) 500 feet AGL from 270° at 50 KT.

85 . PLT288

Which primary source should be used to obtain forecast weather information at your destination for the planned ETA?

- A) Winds Aloft Chart.
- B) Weather Depiction Charts.
- C) Terminal Aerodrome Forecast (TAF).

86 . PLT290

Convective SIGMETs are issued for which weather conditions?

- A) Any thunderstorm with a severity level of VIP 2 or more.
- B) Cumulonimbus clouds with tops above the tropopause and thunderstorms with 1/2-inch hail or funnel clouds.
- C) Embedded thunderstorms, lines of thunderstorms, and thunderstorms with 3/4 inch hail or tornadoes.

87 . PLT288

When the visibility is greater than 6 SM on a TAF it is expressed as

- A) 6PSM.
- B) P6SM.
- C) 6SMP.

88 . PLT076

(Refer to FAA-CT-8080-5G, Figure 7.) What wind is forecast for STL at 9,000 feet?

- A) 230° true at 32 knots.
- B) 230° true at 25 knots.
- C) 230° magnetic at 25 knots.

89 . PLT290

Which in-flight advisory would contain information on severe icing?

- A) PIREP.
- B) SIGMET.
- C) CONVECTIVE SIGMET.

90 . PLT081

(Refer to FAA-CT-8080-5G, Figure 5.) In the TAF for KMEM, what does `SHRA` stand for?

- A) Rain showers.
- B) A shift in wind direction is expected.
- C) A significant change in precipitation is possible.

91 . PLT344

You may anticipate fog when the temperature-dew point spread is

- A) 15 °F or less and decreasing.
- B) 15 °F or more and increasing.
- C) 5 °F or less and decreasing.

92 . PLT068

(Refer to FAA-CT-8080-5G, Figure 14.) Interpret the weather symbol depicted in Utah on the 12 hour Significant Weather Prognostic Chart.

- A) Moderate turbulence, surface to 18,000 feet.
- B) Thunderstorm tops at 18,000 feet.
- C) Base of clear air turbulence, 18,000 feet.

93 . PLT512

A surface inversion can

- A) indicate the chance of gusty winds.
- B) produce poor visibility.
- C) mean an unstable air mass.

94 . PLT512

An increase in temperature with an altitude increase

- A) is indication of an inversion.
- B) denotes the beginning of the stratosphere.
- C) means a cold front passage.

95 . PLT051

Regarding Convective Outlook Charts, when well-organized severe thunderstorms are expected, but in small numbers and/or low coverage, the risk is referred to as

- A) SLGT.
- B) POSSIBLE.
- C) MDT.

96 . PLT059

(Refer to FAA-CT-8080-5G, Figure 3.) What is the reported duration of the rain at the time of the observation at KBRO?

- A) 25 minutes.
- B) 6 minutes.
- C) 19 minutes.

97 . PLT021

Determine the condition of the aircraft.

Pilot = 160 lb; 26 inch arm

Passenger = 120 lb; 26 inch arm

Baggage = 80 lb; 62 inch arm

Fuel = 24 gal; 7 inch arm

Airplane empty weight = 730.5 lbs

Empty CG = 17 inches

MAC = 59 inches

MGTOG = 1,320 lbs

- A) The aircraft is slightly over MGTOG with the CG aft of the aft limit of 37% MAC.
- B) The aircraft is under MGTOG with the CG at 35.2% MAC.
- C) The CG is forward of the aft limit of 37% and the aircraft is 100 pounds under MGTOG.

98 . PLT021

What is the maximum weight that could be added at Station 150.0 without exceeding the aft CG limit?

- A) 70.0 pounds.
- B) 69.5 pounds.
- C) 35.9 pounds.

99 . PLT328

With respect to using the weight information given in a typical aircraft owner's manual for computing gross weight, it is important to know that if items have been installed in the aircraft in addition to the original

- A) allowable useful load is decreased.
- B) allowable useful load remains unchanged.
- C) maximum allowable gross weight is increased.

100 . PLT021

(Refer to FAA-CT-8080-5G, Figure 36. Chart moments are divided by 100 but not labeled.) What effect does a 35-gallon fuel burn have on the weight and balance if the airplane weighed 2,890 pounds and the MOM/100 was 2,452 at takeoff?

- A) Weight is reduced by 210 pounds and the CG moves aft.
- B) Weight is reduced by 270 pounds and the CG is unaffected.
- C) Weight is reduced to 2,680 pounds and the CG moves forward.