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Barbados Civil Aviation Department

**BCAD Document PLAC-070** 

# GROUND AND FLIGHT INSTRUCTOR KNOWLEDGE TEST GUIDE

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Subject: GROUND AND FLIGHT INSTRUCTOR KNOWLEDGE TEST GUIDE

**BCAD Advisory Circular PLAC-070** 

Date: 07/11/21

#### **PURPOSE**

- 1. (1) The purpose of this Barbados Civil Aviation Department (BCAD) Advisory Circular (PLAC) is to provide guidance for applicants preparing to take the Ground and/or Flight Instructor knowledge tests. Appendices provide subject matter outline, reference material, and sample questions with learning statements.
- (2) Barbados Civil Aviation Regulations (BCAR) can be obtained from the Barbados Government printery, Bay Street, St. Michael, Barbados. BCAR General Application & Personnel Licensing Regulations cover the requirements for personnel licensing.
- (3) This PLAC can be purchased from the Barbados Civil Aviation Department, Grantley Adams International Airport, Christ Church, Barbados or downloaded from the BCAD website at <a href="http://www.bcad.gov.bb">http://www.bcad.gov.bb</a>.
- (4) Comments and/or questions regarding this PLAC should be sent to Barbados Civil Aviation Department, Grantley Adams International Airport, Christ Church, Barbados.

#### INTRODUCTION

- 2. (1) What is required to become a skilled and effective instructor? Although some individuals possess more knowledge and skills than others, no one is a natural-born instructor. Competent instructors become so through study, training, and experience.
- (2) This knowledge test guide will answer most questions about taking the Instructor knowledge tests by covering the following areas: knowledge test eligibility requirements; knowledge areas on the tests; descriptions of the tests; process for taking a knowledge test; validity of Airman Knowledge Test Reports; use of test aids and materials; cheating or other unauthorized conduct; retesting procedures; and obtaining training and testing publications and general information.
  - (3) This guide will help applicants in preparing to take one or all of the following tests:
    - (a) Fundamentals of Instructing (FOI);
    - (b) Ground Instructor—Basic (BGI);
    - (c) Ground Instructor—Advanced (AGI);
    - (d) Flight Instructor—Aeroplane (FIA);
    - (e) Flight Instructor—Helicopter (FRH);
    - (f) Flight Instructor—Glider (FIG);
    - (g) Flight Instructor Aeroplane Added rating (AFA);
    - (h) Flight Instructor Helicopter Added rating (HFA);
    - (i) Ground Instructor—Instrument (IGI);
    - (j) Flight Instructor—Instrument Aeroplane (FII);
    - (k) Flight Instructor—Instrument Helicopter (FIH).

- (4) This guide is not offered as an easy way to obtain the necessary information for passing the knowledge tests. Rather, the intent of this guide is to define and narrow the field of study to the required knowledge areas included in the tests.
- (5) The BCAD airman knowledge tests are a very effective instrument for aviation safety and regulatory compliance. However, these tests can only sample the vast amount of knowledge every pilot needs to operate safely in an ever increasingly complex airspace system.

#### KNOWLEDGE TEST ELIGIBILITY REQUIREMENTS

**3.** Individuals pursuing an Instructor Rating should review BCAD Regulations 2007: General Application and Personnel Licensing Regulation – Pilot Licences, Ratings and Authorisations; and/or Pilot Training Personnel. The applicant for an instructor knowledge test must be at least 18 years old and have a BCAD Class medical certificate, as appropriate, to the licence and rating sought.

#### KNOWLEDGE AREAS ON THE TESTS

- **4.** (1) Instructor tests are comprehensive because they must test the applicant's knowledge in many subject areas.
- (2) Applicants pursuing an instructor rating or added rating should review the appropriate regulations in BCAR General Application and Personnel Licensing Regulation for the knowledge areas on the tests.

# **DESCRIPTIONS OF THE TESTS**

- 5. (1) If applicants are pursuing initial flight or ground instructor licensing, he must successfully complete the fundamentals of instructing knowledge test. However, if the applicant holds a current teacher's certificate issued by a national or local authority that authorizes him to teach at the secondary or higher education level, or the applicant provides evidence of an equivalent level of experience acceptable to BCAD, the applicant can receive credit for this test.
- (2) All test questions are the objective, multiple-choice type. Each question can be correctly answered by the selection of a single response. Each test question is independent of other questions; therefore, a correct response to one does not depend upon, or influence, the correct response to another. **The minimum passing score is 75 percent.**
- (3) The following tests each contain **100 questions**. Applicants are allowed a **maximum of 2.5 hours** to complete each test:
  - (a) Ground Instructor—Advanced;
  - (b) Ground Instructor—Instrument;
  - (c) Flight Instructor—Aeroplane;
  - (d) Flight Instructor—Helicopter;
  - (e) Flight Instructor—Glider;
  - (f) Flight Instructor—Instrument Aeroplane;
  - (g) Flight Instructor—Instrument Helicopter.

- (4) The following test contains **80 questions,** and applicants are allowed a **maximum of 2.5 hours** to complete the test.
  - (a) Ground Instructor—Basic.
- (5) The following test contains **50 questions**, and applicants are allowed a **maximum of 1.5 hours** to complete the test.
  - (a) Fundamentals of Instructing.
- (6) The following tests each contain **25 questions**, and applicants are allowed a **maximum of 1** hour to complete each test.
  - (a) Flight Instructor—Aeroplane Added rating;
  - (b) Flight Instructor—Helicopter Added rating.
- (7) Communication between individuals through the use of words is a complicated process. In addition to being an exercise in the application and use of aeronautical knowledge, a knowledge test is also an exercise in communication since it involves the use of the written language. Since the tests involve written rather than spoken words, communication between the test writer and the person being tested may become a difficult matter if care is not exercised by both parties. Consequently, considerable effort is expended to write each question in a clear, precise manner. Test applicants should be sure to carefully read the instructions given with each test, as well as the statements in each test item.
  - (8) When taking a test, keep the following points in mind:
    - (a) Answer each question in accordance with the latest regulations and guidance publications;
    - (b) Read each question carefully before looking at the possible answers. Test applicants should clearly understand the problem before attempting to solve it;
    - (c) After formulating an answer, determine which choice corresponds with that answer. The answer chosen should completely resolve the problem;
    - (d) From the answers given, it may appear that there is more than one possible answer; however, there is only one answer that is correct and complete. The other answers are either incomplete, erroneous, or represent common misconceptions;
    - (e) If a certain question is difficult, it is best to mark it for review and proceed to the next question. After answering the less difficult questions, return to those marked for review and answer them. The review marking procedure will be explained to test applicants prior to starting the test. Although the computer should alert test applicants to unanswered questions, applicants should make sure every question has an answer recorded. This procedure will enable test applicants to use the available time to maximum advantage;
    - (f) When solving a calculation problem, the answer closest to the applicant's solution should be selected. The problem has been checked with various types of calculators; therefore, if the problem has been solved correctly, the applicant's answer will be closer to the correct answer than any of the other choices.

# PROCESS FOR TAKING A KNOWLEDGE TEST

- **6.** (1) The first step in the process of taking a knowledge test is to contact the BCAD office. They can provide applicants with information relating to knowledge test prerequisites, required authorizations and endorsements, testing locations, and the appropriate fees. In addition applicants should visit the BCAD website at <a href="http://www.bcad.gov.bb">http://www.bcad.gov.bb</a>.
- (2) The second step in the process of taking a knowledge test is for the applicant to complete the required training and receive an endorsement from an authorized instructor or aviation training organization.
  - (3) Acceptable forms of endorsement are:
    - (a) A certificate of graduation or a statement of accomplishment certifying the satisfactory completion of the ground school portion of a course for the certificate or rating sought. The certificate or statement may be issued by an approved aviation training organization;
    - (b) A written statement or logbook endorsement from an authorized ground or flight instructor certifying that the applicant has completed an applicable ground training or home study course and is prepared to take the knowledge test;
    - (c) A failed, passed, or expired Airman Knowledge Test Report, provided the airman still has the original Airman Knowledge Test Report in his/her possession;
    - (d) An "expired test/credit" letter issued by the BCAD (in lieu of a duplicate Airman Knowledge Test Report).
- (4) The third step in the process of taking a knowledge test is for the applicant to receive written authorization from BCAD.
- (5) The fourth step in taking a knowledge test is to proceed to the BCAD computer test centre. An applicant for a knowledge test must provide proper identification. Testing centre personnel will not begin the test until the test applicant's identification is verified.
- (6) Upon completion of the knowledge test, each applicant will receive the Airman Knowledge Test Report showing their test score. The Airman Knowledge Test Report is certified with an embossed seal to authenticate the validity of the document.
- (7) The Airman Knowledge Test Report lists the learning statement codes for questions answered incorrectly. The total number of codes shown on the test report is not necessarily an indication of the total number of questions answered incorrectly.
- (8) The Appendices of this Knowledge Test Guide contain a list of reference materials for applicants to study during their training for an instructor licence. The questions on the knowledge test will come from these reference materials. BCAD Advisory Circular PLAC-xxx, Learning Statement Reference Guide for Airman Knowledge Testing, contains learning statements and the corresponding codes used for airman knowledge testing. Applicants should match the learning statement code on their test report to these codes to review their areas of deficiency.
- (9) A list of reference materials has been prepared by BCAD to establish specific references for all knowledge standards and is to be used when preparing for an airman knowledge test. The list of reference materials is contained in the Appendix to this Knowledge Test Guide.
- (10) An applicant's instructor is required to provide instruction on each of the knowledge areas listed on the Airman Knowledge Test Report and to complete an endorsement of this instruction. The Airman

Knowledge Test Report must be presented to the flight test examiner prior to taking the skill test. During the oral portion of the skill test, the examiner is required to evaluate the noted areas of deficiency.

(11) Applicants requiring a duplicate Airman Knowledge Test Report due to loss or destruction of the original, should send a signed request to the Barbados Civil Aviation Department, Grantley Adams International Airport, Christ Church, Barbados.

#### VALIDITY OF AIRMAN KNOWLEDGE TEST REPORTS

7. Airman Knowledge Test Reports for an instructor licence are valid for 24 calendar months. The applicant should plan to complete the skill test during the 24 calendar month validity period. If the Airman Knowledge Test Report expires before completion of the skill test, the applicant must retake the knowledge test.

#### USE OF TEST AIDS AND MATERIALS

- **8.** Knowledge test applicants may use aids, reference materials, and test materials within the guidelines listed below. All models of aviation-oriented calculators may be used, including small electronic calculators that perform only arithmetic functions (add, subtract, multiply, and divide). Simple programmable memories, which allow addition to, subtraction from, or retrieval of one number from the memory, are permissible. Also, simple functions, such as square root and percent keys are permissible. The following guidelines apply:
  - (a) Applicants may use any reference materials provided with the test. In addition, applicants may use scales, straightedges, protractors, plotters, navigation computers, log sheets, holding pattern entry aids, and electronic or mechanical calculators that are directly related to the test;
  - (b) Manufacturers permanently inscribed instructions on the front and back of such aids, e.g., formulas, conversions, regulations, signals, weather data, holding pattern diagrams, frequencies, weight and balance formulas, and air traffic control procedures are permissible;
  - (c) BCAD personnel may provide a calculator to applicants and/or deny use of the applicant's personal calculator based on the following limitations:
    - (i) Prior to, and upon completion of the test, while in the presence of the proctor, applicants must actuate the ON/OFF switch and perform any other function that ensures erasure of any data stored in memory circuits, including removal of batteries;
    - (ii) The use of electronic calculators incorporating permanent or continuous type memory circuits without erasure capability is prohibited. The proctor may refuse the use of the applicant's calculator when unable to determine the calculator's erasure capability;
    - (iii) Printouts of data must be surrendered at the completion of the test if the calculator incorporates this design feature.
    - (iv) The use of magnetic cards, magnetic tapes, modules, computer chips, or any other device upon which pre-written programs or information related to the test can be stored and retrieved is prohibited;
    - (v) Applicants are not permitted to use any booklet or manual containing instructions related to use of test aids.
  - (d) Dictionaries are not permitted in the testing area;
  - (e) The BCAD test proctor makes the final determination relating to test materials and personal possessions the applicant may take into the testing area.

# CHEATING OR OTHER UNAUTHORIZED CONDUCT

**9.** Computerized knowledge testing must be carried out in accordance with the strictest security procedures to avoid test compromise. The BCAD Test Examiner will terminate a test at any time that he/she suspects that a cheating incident has occurred. A BCAD investigation will then be conducted. If the investigation determines that cheating or unauthorized conduct has occurred, then any airman licence, certificate, or rating the applicant holds may be revoked, and the applicant will be prohibited for 1 year from applying for or taking any test for a licence, certificate or rating under BCAR General Application and Personnel Licensing Regulations.

#### RETESTING PROCEDURES

- **10.** (1) Applicants who receive a grade lower than 75 percent and who wish to retest must present the following to BCAD testing centre personnel when appearing for the purpose of retesting:
  - (a) A failed Airman Knowledge Test Report;
  - (b) A written endorsement from an authorized instructor certifying that additional instruction has been given, and the instructor finds the applicant competent to pass the test;
  - (c) A written authorization from BCAD to retake the test.
- (2) Applicants possessing an Airman Knowledge Test Report with a score of 75 percent or higher who decide to retake the test in anticipation of a better score, may retake the test after 30 days from the date their last test was taken. The BCAD will not allow applicants to retake a passed test before the 30-day period has lapsed. Prior to retesting, applicants will be required to surrender their current Airman Knowledge Test Report to the test proctor. The last test taken will reflect the official final score.

# OBTAINING TRAINING AND TESTING PUBLICATIONS AND GENERAL INFORMATION

**11.** Most of the current BCAD airman training and testing publications can be obtained in electronic format from BCAD at the BCAD website at <a href="http://www.bcad.gov.bb">http://www.bcad.gov.bb</a>.

#### AIRMAN KNOWLEDGE TEST ITEMS

12. Sample questions, and their corresponding learning statements and codes, are contained in the appendix to this test guide. They are representative of questions on airman knowledge tests. These will help airmen become familiar with similar questions found on the airman knowledge tests. The knowledge test is not designed to intimidate any prospective airman; it is designed to measure the level of competency required to receive a BCAD licence, authorisation or rating. The list of reference materials contained in the appendix to this test guide is provided to ensure that instructors and students are able to determine the importance of the subject matter to be taught and learned.

# COMPUTER TESTING SUPPLEMENTS

13. The computer testing supplements contain the graphics, legends, and maps that are needed to successfully respond to certain knowledge test items. These supplements will be provided by BCAD test centre personnel during the airman knowledge test.

#### KNOWLEDGE TEST GUIDES

**14.** The knowledge test guides describe the knowledge testing policy and procedures for each licence area.

# OTHER COMPUTER TESTING INFORMATION

**15.** Other computer testing information provides specific test information, such as test name, test code (three-digit test identifiers), number of questions, and the time (hours) allotted for each knowledge test. The test identifiers will assist airmen in selecting the proper test for the licence/rating being sought.

# REFERENCE MATERIALS / LEARNING STATEMENTS CODES

16. The appendices of this guide contain listings of reference materials and sample test questions with
related learning statements used for airman knowledge testing. The listings of reference materials and sample questions have been prepared by the BCAD to establish specific references for all knowledge standards. The
listings contain reference materials to be used when preparing for all airman knowledge tests. The learning statements contained in BCAD Advisory Circular PLAC-052, should be referred to when reviewing areas of
deficiency on airman knowledge test reports.

E. A. Archer Director of Civil Aviation

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#### APPENDIX A

#### LIST OF INSTRUCTOR REFERENCE MATERIALS FOR ALL CERTIFICATIONS

The publications listed below contain study material applicants need to be familiar with when preparing for instructor knowledge tests. Most of these publications can be purchased from Barbados Civil Aviation Department, or be downloaded from the BCAD web site at <a href="http://www.bcad.gov.bb">http://www.bcad.gov.bb</a>>. ICAO publications can be purchased from ICAO at <a href="http://www.icao.int">http://www.icao.int</a>>. The latest revision of the listed references should be requested.

- (1) Barbados Civil Aviation Regulations (BCAR), in particular:
  - (a) BCAR General Application and Personnel Licensing
  - (b) BCAR Aircraft Operations
  - (c) BCAR Airworthiness
  - (d) BCAR Instruments and Equipment
  - (e) BCAR Aerial Work
- (2) ICAO Annexes: 3, 10 Volume II, 11 and 14 (pertinent parts)
- (3) ICAO Document 4444: General provisions, Aero Control service, Approach control service, Aerodrome control service, and Flight information and alerting service.
- (4) Aeronautical Information Manual (AIM)
- (5) Aeronautical Information Publication (AIP) Barbados
- (6) Aircraft Electricity and Electronics
- (7) Airport/Facility Directory
- (8) Automatic Flight Control
- (9) Enroute Low Altitude Chart
- (10) Enroute High Altitude Chart
- (11) Sectional Aeronautical Chart
- (12) Instrument Approach Procedure Chart
- (13) Transport Category Aircraft Systems Jeppesen Sanderson
- (14) Flight Theory for Pilots IAP Inc. Publications
- (15) FAA AC 00-6 Aviation Weather (adopted in cooperation with FAA)
- (16) FAA AC 00-24 Thunderstorms (adopted in cooperation with FAA)

# **APPENDIX A (CONTINUED)**

# LIST OF INSTRUCTOR REFERENCE MATERIALS FOR ALL CERTIFICATIONS

- (17) FAA AC 00-45 Aviation Weather Services (adopted in cooperation with FAA)
- (18) FAA AC 20-43 Aircraft Fuel Control (adopted in cooperation with FAA)
- (19) FAA AC 60-22 Aeronautical Decision Making (adopted in cooperation with FAA)
- (20) FAA AC 61-107 Operations of Aircraft at Altitudes Above 25,000 Feet (adopted in cooperation with FAA)
- (21) FAA AC 90-48 Pilot's Role in Collision Avoidance (adopted in cooperation with FAA)
- (22) FAA AC 91-6 Water, Slush, and Snow on the Runway (adopted in cooperation with FAA)
- (23) FAA AC 91-13 Cold Weather Operation of an Aircraft (adopted in cooperation with FAA)
- (24) FAA AC 91-43 Unreliable Airspeed Indication (adopted in cooperation with FAA)
- (25) FAA-H-8083-1 Aircraft Weight and Balance Handbook (adopted in cooperation with FAA)
- (26) FAA-H-8083-3 Airplane Flying Handbook (adopted in cooperation with FAA)
- (27) FAA-H-8083-9 Aviation Instructor Handbook (adopted in cooperation with FAA)
- (28) FAA-H-8083-13 Glider Flying Handbook (adopted in cooperation with FAA)
- (29) FAA-H-8083-15 Instrument Flying Handbook (adopted in cooperation with FAA)
- (30) FAA-H-8083-25 Pilot's Handbook of Aeronautical Knowledge (adopted in cooperation with FAA)

# APPENDIX B

# FUNDAMENTALS OF INSTRUCTING (FOI)

#### SUBJECT MATTER OUTLINE

The following outlines the major topics and underlying content areas on the Fundamentals of Instructing knowledge test.

- (1) In addition to specific requirements listed in this section, and except as identified in (2) below, applicants for instructor licences, ratings and authorizations shall have received and logged training from an authorized instructor on the fundamentals of instructing and have passed a knowledge test on the following areas of instructing:
  - (a) techniques of applied instruction.
  - (b) assessment of student performance in those subjects in which ground instruction is given.
  - (c) the learning process.
  - (d) elements of effective teaching.
  - (e) student evaluation and testing, training philosophies.
  - (f) training program development.
  - (g) lesson planning.
  - (h) classroom instructional techniques.
  - (i) use of training aids, including flight simulation training devices as appropriate.
  - (j) analysis and correction of student errors.
  - (k) human performance relevant to flight instruction.
  - (1) hazards involved in simulating system failures and malfunctions in the aircraft.
  - (m) principles of threat and error management.
- (2) The following applicants do not need to comply with paragraph (1) of this subsection:
  - (a) The holder of an instructor licence issued under this part who has already passed the knowledge test in the areas of instructing.
  - (b) The holder of a current teacher's certificate issued by a national or local authority that authorises the person to teach at a secondary educational level or higher.
  - (c) A person who provides evidence of an equivalent level of experience acceptable to BCAD.

# **APPENDIX B-1**

# FUNDAMENTALS OF INSTRUCTING (FOI)

# SAMPLE QUESTIONS, LEARNING STATEMENTS AND ANSWERS

# 1. When has instruction taken place?

- A—When all the required material has been presented.
- B—When a procedure has been explained, and the desired student response has occurred.
- C—When the student hears what is presented.

Answer B—Recall regulations - instructor requirements / responsibilities

#### 2. A written test having the characteristic of discrimination will

- A—be easy to give and easily graded.
- B—distinguish between students both low and high in achievement.
- C—include a representative and comprehensive sampling of the course objectives.

Answer B—Recall student evaluation - written tests / oral quiz / critiques.

- 3. After individuals are physically comfortable and have no fear for their safety, which human needs become the prime influence on their behavior?
- A—Social.
- B—Physical.
- C—Egoistic.

Answer A—Recall human behavior - social / self fulfilment / physical

- 4. Faulty performance due to student overconfidence should be corrected by
- A—increasing the standard of performance for each lesson.
- B—praising the student only when the performance is perfect.
- C—providing strong, negative evaluation at the end of each lesson.

Answer A—Recall FOI techniques / human behavior - dangerous tendencies

# APPENDIX C

GROUND INSTRUCTOR – BASIC (BGI)
GROUND INSTRUCTOR – ADVANCED (AGI)
FLIGHT INSTRUCTOR – AEROPLANE (FIA)
FLIGHT INSTRUCTOR – HELICOPTER (FRH)
FLIGHT INSSTRUCTOR – GLIDER (FIG)
FLIGHT INSTRUCTOR – AEROPLANE ADDED RATING (AFA)
FLIGHT INSTRUCTOR – HELICOPTER ADDED RATING (HFA)

#### SUBJECT MATTER OUTLINE

The following outlines the major topics and underlying content areas on the Ground Instructor – Basic and Advanced, Flight Instructor – Aeroplane/Helicopter/Glider, Flight Instructor – Aeroplane/Helicopter Added Rating knowledge tests.

- 1. Receive and log training from an authorized instructor and pass a ground instructor knowledge test on:
  - (a) The aeronautical knowledge areas required for the issuance of a pilot licence in the associated category or class rating.
  - (b) The aeronautical knowledge areas for the instrument rating applicable to the category for which instrument flight instructor privileges are sought.
- 2. Meet the requirements for fundamentals of instructing.

# **APPENDIX C-1**

# FLIGHT AND GROUND INSTRUCTOR (BGI), (AGI), (FIA), (FRH), (FIG), (AFA), (HFA)

# SAMPLE QUESTIONS, LEARNING STATEMENTS AND ANSWERS

- 1. To act as pilot-in-command of an aeroplane that has retractable landing gear, flaps, and a controllable pitch propeller, a pilot is required to
- A successfully complete a skill test in such an aeroplane.
- B have a logbook endorsement from an authorized flight instructor certifying proficiency in an aeroplane with more than 200 horsepower.
- C receive an endorsement certifying ground and flight training from an authorized flight instructor in such an aeroplane, or approved flight training device, and a high performance aeroplance endorsement.

**Answer C— Recall regulations - experience / training requirements** 

- 2. While maintaining a magnetic heading of  $180^\circ$  and a true airspeed of 130 knots, the  $270^\circ$  radial of a VOR is crossed at 1037 and the  $260^\circ$  radial at 1042. The approximate time and distance to the station would be
- A-30 minutes and 65 NM.
- B—42 minutes and 104 NM.
- C—44 minutes and 96 NM.

Answer A— Calculate distance / bearing from/to a station

- 3. The pivotal altitude for eights-on-pylons is dependent primarily upon the
- A groundspeed.
- B true airspeed.
- C distance from the pylon.

**Answer A— Recall flight operations - maneuvers** 

4. What is the location of the CG if 60 pounds are removed from Station 70?

Aircraft weight 8,420 lbs CG location Station 85

- A 85.1.
- B 84.9.
- C 84.1.

Answer A— Calculate mass and balance

- 5. If the same angle of attack is maintained in ground effect as when out of ground effect, lift will
- A increase, and induced drag will decrease.
- B decrease, and parasite drag will increase.
- C decrease, and parasite drag will decrease.

Answer A— Recall aircraft performance - ground effect

# APPENDIX D

# GROUND INSTRUCTOR – INSTRUMENT (IGI) FLIGHT INSTRUCTOR – INSTRUMENT AEROPLANE (FII) FLIGHT INSTRUCTOR – INSTRUMENT HELICOPTER (FIH)

# SUBJECT MATTER OUTLINE

The following outlines the major topics and underlying content areas on the Ground Instructor Instrument, Flight Instructor – Aeroplane Instrument and Flight Instructor – Helicopter Instrument knowledge tests.

- 1. Receive and log training from an authorized instructor and pass a flight instructor knowledge test on:
  - (a) The aeronautical knowledge areas for a student, private and flight instructor pilot license applicable to the aircraft category for which flight instructor privileges are sought.
  - (b) The aeronautical knowledge areas for the instrument rating applicable to the category for which instrument flight instructor privileges are sought.
- 2. Meet the requirements for fundamentals of instructing.

#### **APPENDIX D-1**

# GROUND INSTRUCTOR – INSTRUMENT (IGI) FLIGHT INSTRUCTOR – INSTRUMENT AEROPLANE (FII) FLIGHT INSTRUCTOR – INSTRUMENT HELICOPTER (FIH)

# SAMPLE QUESTIONS, LEARNING STATEMENTS AND ANSWERS

- 1. How long does a pilot meet the recency of experience requirements for IFR flight after successfully completing an instrument competency check if no further IFR flights are made?
- A—90 days.
- B—6 calendar months.
- C—12 calendar months.

Answer B—Recall regulations - pilot currency requirements

- 2. When an altimeter is changed from 30.11 inches Hg to 29.96 inches Hg, in which direction will the indicated altitude change and by what value?
- A—Altimeter will indicate 15 feet lower.
- B—Altimeter will indicate 150 feet lower.
- C—Altimeter will indicate 150 feet higher.

Answer B—Recall altimeter - settings / setting procedures

- 3. What responsibility does the pilot in command of an IFR flight assume upon entering VFR conditions?
- A—Report VFR conditions to ARTCC so that an amended clearance may be issued.
- B—Use VFR operating procedures.
- C—To see and avoid other traffic.

Answer C—Recall regulations - pilot-in-command authority / responsibility

- 4. The sensations which lead to spatial disorientation during instrument flight conditions
- A—are frequently encountered by beginning instrument pilots, but never by pilots with moderate instrument experience.
- B—occur, in most instances, during the initial period of transition from visual instrument flight.
- C—must be suppressed and complete reliance placed on the indications of the flight instruments.

Answer C—Recall physiological factors - spatial disorientation

- 5. What is the primary pitch instrument during a stabilized climbing left turn at cruise climb airspeed?
- A—Attitude indicator.
- B—VSI.
- C—Airspeed indicator.

Answer C—Recall basic instrument flying - fundamental skills