Study and Reference Guide

Flight Instructor Rating

Aeroplane and Helicopter

Fifteenth Edition
August 2005
GENERAL

KNOWLEDGE REQUIREMENTS

This Study and Reference Guide provides a syllabus for the knowledge requirements for the Flight Instructor Rating. It should be used in conjunction with Study and Reference Guide TP 12881E for Aeroplanes or TP 2476E for Helicopters. Written examinations for the instructor ratings sample topics taken from these guides.

All flight instructors must have a comprehensive knowledge of subject areas required for the Commercial Pilot Licence. It is also essential to be a good teacher, and as experience is gained, administrative duties must also be assumed. Accordingly, the written examination for the flight instructor ratings include sections relating to three general areas:

1. Training Procedures,
2. Administration and Licensing Procedures, and
3. Aeronautical Knowledge.

The relative emphasis on each section will depend upon the class of Flight Instructor Rating.

A Class 4 instructor must have sufficient knowledge of training and licensing procedures, and aeronautical knowledge to guide students to obtain a recreational permit, private licence, commercial licence, VFR over-the-top rating, and night rating.

A Class 2 instructor must demonstrate knowledge of administrative and licensing procedures involved with the supervision of instructors and operation of flight training units. A Class 2 flight instructor's understanding of training and licensing procedures, and aeronautical knowledge is expected to be greater than that of a Class 4 instructor.

A Class 1 instructor must possess the knowledge to teach others to use instructional techniques. A Class 1 flight instructor's understanding of training procedures, administration and licensing procedures, and aeronautical knowledge is expected to be greater than that of a Class 2 instructor.

There is no Class 3 Flight Instructor Rating examination.
EXAMINATIONS

Applicants for Class 1, 2 and 4 flight instructor ratings are required to write the appropriate Transport Canada multiple choice examination on subjects contained in this guide. As well, **aeroplane** candidates are to refer to the knowledge requirements in reference guide TP 12881E, and **helicopter** candidates are to refer to reference guide TP 2476E.

Aeroplane:

<table>
<thead>
<tr>
<th>Class</th>
<th>Examination</th>
<th>Questions</th>
<th>Time Limit</th>
<th>Pass Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>AIRAF</td>
<td>100</td>
<td>3 hours</td>
<td>70%</td>
</tr>
<tr>
<td>2</td>
<td>AIRAT</td>
<td>100</td>
<td>3 hours</td>
<td>70%</td>
</tr>
<tr>
<td>1</td>
<td>AIRAT</td>
<td>100</td>
<td>3 hours</td>
<td>80%</td>
</tr>
</tbody>
</table>

Helicopter:

<table>
<thead>
<tr>
<th>Class</th>
<th>Examination</th>
<th>Questions</th>
<th>Time Limit</th>
<th>Pass Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>HIRAF</td>
<td>75</td>
<td>3 hours</td>
<td>70%</td>
</tr>
<tr>
<td>4</td>
<td>FIREN</td>
<td>40</td>
<td>2 hours</td>
<td>70%</td>
</tr>
<tr>
<td>2</td>
<td>HIRAT</td>
<td>100</td>
<td>3 hours</td>
<td>70%</td>
</tr>
<tr>
<td>1</td>
<td>HIRAT</td>
<td>100</td>
<td>3 hours</td>
<td>80%</td>
</tr>
</tbody>
</table>

Applicants for a Class 4 Flight Instructor Rating – Helicopter are required to write the FIREN examination on instrument instruction in addition to the HIRAF examination.

Class 2 and Class 1 candidates write the same examination, however, a mark of 80% or higher is required to meet Class 1 standards.

**EXAMINATION RESULTS: FEEDBACK STATEMENTS**

Feedback statements on the results letter will inform the candidate where questions were answered incorrectly.

**Example of a Feedback Statement**

Identify the atmospheric conditions favorable for thunderstorm formation.
TRAINING PROCEDURES

FLIGHT TEST GUIDES
1 Flight Test Exercises – Performance Criteria

INSTRUCTIONAL TECHNIQUES/LEARNING
1 Learning Process
2 Learning Factors
3 Memory/Forgetting
4 Listening
5 Motivation
6 Student/Instructor Relationship
7 Lesson Preparation
8 Training Aids
9 Questioning
10 Lecturing
11 Demonstration-performance
12 Developmental Teaching
13 Group Activities
14 Student Teaching
15 Self Study
16 Critiquing/Feedback
17 Student Progress
18 Evaluation
19 Integrating Human Factors

GROUND INSTRUCTION
1 Ground School
2 Preparatory Ground Instruction
3 Pre-flight Briefing
4 Post-flight Briefing

IN-FLIGHT INSTRUCTION
1 Planning
2 In-flight Teaching – techniques/air exercises
ADMINISTRATION AND LICENSING PROCEDURES

ISSUE, PRIVILEGES, REVALIDATION OF FLIGHT CREW LICENCE, PERMITS, ENDORSEMENTS AND RATINGS

1 General Conditions
2 Written Examination Procedures
3 Flight Testing Procedures
4 Student Pilot Permit
5 Recreational Pilot Permit
6 Private Pilot Licence
7 Commercial Pilot Licence
8 Aeroplane Class Ratings
9 Aircraft Type Ratings
10 Night Rating
11 VFR Over-The-Top Rating
12 Instrument Rating
13 Flight Instructor Rating
14 Transport Canada Forms
15 Medical Certificate

REGULATIONS AND STANDARDS FOR FLIGHT TRAINING

1 General
2 Flight Training Program
3 Personnel and Aircraft
4 Flight Training Operations

REGULATIONS AND STANDARDS FOR FLIGHT TRAINING UNITS

1 General Information
2 Certification
3 Personnel
4 Aircraft
5 Flight Training Operations

REGULATIONS FOR SYNTHETIC FLIGHT TRAINING EQUIPMENT

1 CAR 606.03

AERONAUTICAL KNOWLEDGE

Refer to Study and Reference Guide TP 12881E – Aeroplanes or TP 2476E – Helicopters.

• Air Law and Procedures
• Navigation and Radio Aids
• Meteorology
• Airframes, Engines and Systems
• Theory of Flight
• Flight Instruments
• Flight Operations
• Human Factors
RECOMMENDED STUDY MATERIAL

- Flight Test Guide Recreational Pilot Permit TP 12475E
- Flight Test Guide Private Pilot License - Aeroplane - TP 13723E
- Flight Test Guide Commercial Pilot License - Aeroplane - TP 13462E
- Private and Commercial Pilot Licence - Helicopters TP 3077E
- Flight Instructor Guide (Revised 1998) TP 975E
- Helicopter Flight Instructor Guide (Revised 1995) TP 4818E
- Study and Reference Guide Recreational Pilot Permit - Aeroplane (TP 12467E)
- Study and Reference Guide Private Pilot Licence, including Helicopter to Aeroplane Pilot Licence - Aeroplane (TP 12880E)
- Study and Reference Guide Commercial Pilot Licence, including Helicopter to Aeroplane Pilot Licence - Aeroplane (TP 12881E)
- Study and Reference Guide Private and Commercial Pilot Licence, including Aeroplane to Helicopter Pilot Licences - Helicopter (TP 2476E)
- Human Factors for Aviation - Basic Handbook (TP 12863E)
- Human Factors for Aviation - Advanced Handbook (TP 12864E)
- Human Factors for Aviation - Instructor's Guide (TP 12865E)
- Instrument Procedures Manual (TP 2076E)

Information on textbooks and other publications produced by commercial publishers can be obtained through local flying training organizations and bookstores.

ENQUIRIES

Information concerning the location of pilot training organizations and matters pertaining to flight crew licensing may be obtained by contacting the appropriate Regional Offices. A complete listing may be found at: http://www.tc.gc.ca/CivilAviation/General/Exams/Centres.htm