Study and Reference Guide
for written examinations for the

Flight Instructor Rating
Aeroplane

First Edition
2013
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GENERAL INFORMATION

EXAMINATION PREREQUISITES
Prior to taking a written examination, an applicant for a flight crew permit, licence or rating shall meet the prerequisites for the examination set out in the personnel licensing standards with respect to CAR 401.13(1):

   a) medical fitness;
   b) identification;
   c) a recommendation from the flight instructor who is responsible for the training of the applicant; and
   d) experience.

EXAMINATION RULES

CAR 400.02
(1) Except as authorized by an invigilator, no person shall, or shall attempt to, in respect of a written examination:

   (a) copy or remove from any place all or any portion of the text of the examination;
   (b) give to or accept from any person a copy of all or any portion of the text of the examination;
   (c) give help to or accept help from any person during the examination;
   (d) complete all or any portion of the examination on behalf of any other person; or
   (e) use any aid or written material during the examination.

(2) A person who commits an act prohibited under subsection (1) fails the examination and may not take any other examination for a period of one year.

MATERIALS REQUIRED
The examinations are generally delivered via computer however, we suggest bringing a pencil to execute calculations on blank note paper which will be provided prior the beginning of the examination. Electronic calculators are useful and are permitted if their memory is cleared before and after the examination. Computers capable of storing text are not approved. A list of approved electronic navigation computers is available at:

TIME LIMIT
The examination shall be completed during the 24-month period immediately preceding the date of the application for the rating.
REWRITING OF EXAMINATIONS

CAR 400.04

(1) Subject to subsections (2) and (6), a person who fails an examination or a section of a sectionalized examination required for the issuance of a flight crew permit, licence, rating or foreign licence validation certificate is ineligible to rewrite the examination or the failed section for a period of:

(a) in the case of a first failure, 14 days;
(b) in the case of a second failure, 30 days; and
(c) in the case of a third or subsequent failure, 30 days plus an additional 30 days for each failure in excess of two failures, up to a maximum of 180 days.

(2) to (4) Not applicable.

(5) Where a person requests to rewrite an examination, the Minister shall inform the person in writing of the date on which the person may rewrite the examination and whether the person is required to provide evidence of further study or instruction before rewriting the examination.

(6) If a person submits a request to the Minister to shorten the period between examination attempts, the Minister shall grant the request on receipt of confirmation that the person has reviewed their weak knowledge areas.

EXAMINATION FEEDBACK

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

Example of Feedback Statement:
Recall the privileges of a Private Pilot Licence.

FLIGHT INSTRUCTOR KNOWLEDGE REQUIREMENTS

Applicants for the Flight Instructor Rating shall demonstrate their knowledge by writing Transport Canada multiple choice examinations on the subjects contained in this guide. Applicants must be able to read the examination questions in either English or French without assistance.

All subjects in this guide are considered to be important to applicants for the Flight Instructor Rating – Helicopter.

A Class 4 flight instructor must have sufficient understanding of Air Law applicable to flight training, fundamentals of instructing, and aeronautical subjects to guide students for a Recreational Pilot Permit, a Private Pilot’s Licence, a Commercial Pilot’s Licence, a Visual Flight Rules (VFR) Over-the-Top Rating, and a Night Rating.

In order to effectively supervise other instructors, a Class 2 or 1 flight instructor must have a greater understanding, than a class 4 or 3 instructor, of the subjects described in this guide and of the guidance materials introduced. Further, a Class 2 or 1 instructor must also demonstrate knowledge of administrative procedures involved with the function of the chief flight instructor.

A Class 1 instructor must be a subject matter expert. In addition to the requirements in the preceding paragraph, a Class 1 instructor must be able to transmit, to the candidate for a Flight Instructor Rating, his or her knowledge and understanding of the learning process and be able
to guide the candidate for a Flight Instructor Rating in structuring, delivering and evaluating candidates for a licence or rating.

Applicants for the Class 1 Aerobatic Flight Instructor Rating will be examined only on the subjects in the section of this guide titled “Fundamentals of Instruction”, with the exception that subjects relating to basic “Flight Instruction (Air Exercises)” will not be part of the examination for that rating.

EXAMINATIONS

<table>
<thead>
<tr>
<th>Examination</th>
<th>Questions</th>
<th>Time Limit</th>
<th>Pass Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight Instructor Rating – Class 4 (AIRAF)</td>
<td>100</td>
<td>3 hours</td>
<td>70%</td>
</tr>
<tr>
<td>Flight Instructor Rating – Class 2 (AIRAT)</td>
<td>100</td>
<td>3 hours</td>
<td>70%</td>
</tr>
<tr>
<td>Flight Instructor Rating – Class 1 (AIRAT)</td>
<td>100</td>
<td>3 hours</td>
<td>80%</td>
</tr>
<tr>
<td>Flight Instructor Rating – Aerobatic Class 1 (FITEN)</td>
<td>25</td>
<td>1 hour</td>
<td>80%</td>
</tr>
</tbody>
</table>

An applicant for a Class 4 Flight Instructor Rating – Aeroplane who holds or has held within the preceding 24 months, a Flight Instructor Rating – Helicopter, shall be considered to have met the written examination requirement.

There is no Class 3 Flight Instructor Rating 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.
SUBJECTS

AIR LAW

Some Canadian Aviation Regulations (CARs) refer to their associated standards. Questions from the CARs may test knowledge from the regulation or the standard.

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LEARNING FACTORS
1. Readiness
2. Primacy
3. Relationship
4. Exercise
5. Intensity
6. Effect
7. Recency

FACTORS THAT AFFECT LEARNING
1. Attitude and behavior of instructors
2. Attitude and behavior of students
3. Learning curves
4. Personality differences
5. Problem/Suggested Action with different personalities
6. Characteristics of adult learners
7. Emotion
   - Mild emotion
   - Strong emotion
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   - Use of emotional escape mechanisms
8. Memory
9. Retention of learning

PREPARATION
1. Learning objectives
2. Lesson plan
3. Preparation of the classroom
4. Visual aids
5. Threshold knowledge test

PRESENTATION
1. Role of a teacher
2. Lecture method
3. Developmental teaching/guided discussion
4. Demonstration – performance method
5. Computer-based training

CRITIQUE
1. Characteristics of an effective critique
2. Rules for critiquing

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1. Questions – characteristics of effective questions/oral quizzes
2. Written test
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TECHNIQUES AND METHODS OF FLIGHT INSTRUCTION
1. Positive exchange of flight controls
2. Pre-flight briefing
3. Post-flight briefing
4. Preparatory ground instruction
5. Demonstration–performance method
6. Maneuvers-based training
7. Scenario-based training
8. Role playing
9. Instruction using simulators and training devices

FLIGHT INSTRUCTION (AIR EXERCISES)
1. As per the Aeroplane Flight Training Manual
2. As per the Flight Instructor Guide - Aeroplane (TP 975)

INTEGRATING HUMAN FACTORS INTO INSTRUCTION
1. The role of the instructor
2. Techniques to integrate Human Factors onto instruction
3. Assessing Human Factors Knowledge – Skills – Attitudes
4. Teaching the decision-making process
5. Evaluating Student Decision Making

COMMUNICATION
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3. Developing communication skills
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1. Threat and error management model
2. Threats
3. Errors
4. Undesired aircraft states
5. Countermeasures
6. Crew Resource Management
7. Single Pilot Resource Management

Applicants for the Flight Instructor Rating shall demonstrate their mastery of the subjects included in the following Study and Reference Guide:

STUDY AND REFERENCE GUIDE FOR COMMERCIAL PILOT LICENCE – AEROPLANE TP 12881E

FLIGHT TEST STANDARDS

Applicant for the Flight Instructor Rating shall be familiar with the following Flight Test Guides. They shall demonstrate their knowledge about the techniques, procedures and the marking criteria to be used by Civil Aviation Inspectors and Pilot Examiners for the conduct of the Flight Test.

FLIGHT TEST GUIDE – RECREATIONAL PILOT PERMIT TP 12475E
FLIGHT TEST GUIDE – PRIVATE PILOT LICENCE – AEROPLANE TP 13723E
FLIGHT TEST GUIDE – COMMERCIAL PILOT LICENCES – AEROPLANE TP 13462E
REFERENCES

- Flight Instructor Guide - Aeroplane TP 975E

- Flight Test Guide – Recreational Pilot - Permit – Aeroplane TP 12475E

- Flight Test Guide – Private Pilot Licence – Aeroplane TP 13723E

- Flight Test Guide – Commercial Pilot Licence – Aeroplane TP 13462E

- VFR Navigation Progress Test Guide – Aeroplane TP 13779

- Instructor Guide – GPS TP 12878E

- Instructor Guide – VFR OTT TP 12775E

- Study and References Guide Commercial Pilot Licence – Aeroplane TP 12881E

- Flight Training Manual – Aeroplane
  available from book stores and Flight Training Units

- How to Start a Flight Training Unit TP 12862E

- When In Doubt…TP 10643E

- 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)
  http://www.tc.gc.ca/eng/civilaviation/publications/menu.htm#training

- Canadian Aviation Regulations (CARs)
  http://www.tc.gc.ca/eng/civilaviation/reqserv/cars/menu.htm

- TC A.I.M. (Aeronautical Information Manual) (TP 14371E)

- Safety Management Systems (TP 14135E)
  http://www.tc.gc.ca/eng/civilaviation/publications/menu.htm#training

- Guidance Notes – Pilot Training – Stall/Spin Awareness – Power-Off Accuracy Approaches :
• The Aviation Instructor’s Handbook. This book is used in pilot training in the United States and is available at: http://www.faa.gov/library/manuals/aviation/

• The JAR/EASA Instructor’s Handbook. This book and other training manual can be obtained at: https://nordian.storesecured.com/items/educational-pilot-books/list.htm


• The ICAO Human Factors Training Manual (DOC 9683). This book and other publications produced by ICAO can be obtained at: http://www.icao.int


Other information can be obtain via different websites such as:


• Information on Customs Requirements is available from the Canada Border Services Agency at: http://www.cbsa-asfc.gc.ca/

• Information on the Canada Labour Code is available from Social Development Canada at: http://www.sdc.gc.ca/

• Publications used in pilot training in the United States are available in the catalog of U.S. Government Publication at: http://catalog.gpo.gov/F

Information on textbooks and other publications produced by commercial publishers can be obtained through local flying training organization, bookstores and similar sources.

ENQUIRIES

Information concerning the location of pilot training organizations and matters pertaining to flight crew licensing may be obtained by contacting the appropriate Transport Canada Regional Office. A complete listing may be found at: http://www.tc.gc.ca/eng/civilaviation/standards/general-exams-centres-2178.htm