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Study and Reference Guide  
for written examinations for the  
**Flight Instructor Rating**

Gyroplane

First Edition  
September 2012

Canada

**Please direct your comments, orders and inquiries to:**

The Order Desk  
Multimedia Products and Services  
Transport Canada (AARAMPS)  
2655 Lancaster Rd.  
Ottawa ON K1B 4L5

Telephone: 1-888-830-4911(in North America) 613-991-4071(other countries)  
Fax: 613-991-1653  
EMail:MPS@tc.gc.ca

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## GENERAL

### 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 subsection 401.13(1) of the personnel licensing standards with respect to:

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

### KNOWLEDGE REQUIREMENTS

- (1) This Study and Reference Guide sets out the knowledge required to obtain the Flight Instructor Rating - Gyroplane. It should be used in conjunction with the *Study and Reference Guide – Pilot Permit - Gyroplane* (TP 13975E). The written examination for the instructor rating covers topics taken from these guides.
- (2) It is essential for instructors to be good teachers and, as they gain experience, to take on administrative tasks. Accordingly, the written examination for the Flight Instructor Rating is divided into three sections:
  - a) Fundamentals of Instructing
  - b) Administrative and Licensing Procedures, and
  - c) Aeronautical Knowledge.

### 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.

### 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) A person who fails the Student Pilot Permit or Private Pilot Licence for Foreign and Military Applicants, Aviation Regulations (PSTAR) examination is eligible to rewrite the examination at any time after the person has received notice of the failure and has reviewed their weak knowledge areas.
- (3) A person who fails an examination required for the issuance of an aircraft maintenance engineer (AME) licence or rating is eligible to rewrite the examination in accordance with the criteria specified in Chapter 566 of the Airworthiness Manual.
- (4) A person who passes a sectionalized examination but fails one or more Sections of that examination shall rewrite the failed Section or Sections in one sitting.
- (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 in the results letter will inform the candidate where questions were answered incorrectly.

### Example of a Feedback Statement

Identify the atmospheric conditions favourable to thunderstorm formation.

## EXAMINATION

Applicants for the Flight Instructor Rating – Gyroplane must pass the appropriate Transport Canada multiple choice examination on subjects contained in this guide.

Examination	Questions	Time Limit	Pass Mark
GYRIP	75	3 hours	70%

## **PART 1 FUNDAMENTALS OF INSTRUCTING**

### **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
  - a) Nervous or under-confident
  - b) Over-confident or conceited
  - c) Forgetful of Instruction
  - d) Inconsistent
  - e) Slow Starter
  - f) Fast Starter
  - g) Immature
  - h) Airsickness
- 5 Problem/Suggested Action with different personality
- 6 Characteristics of adult learners
- 7 Emotion
  - a) Mild emotion
  - b) Strong Emotion
  - c) Disruptive emotion
  - d) Use of Emotional Escape Mechanisms
    - o Projection
    - o Rationalization
    - o Resignation
    - o Flight
    - o Aggression
- 8 Short-term memory
- 9 Long-term memory
- 10 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/ teaching by questioning
- 4 Demonstration – performance method

### **CRITIQUE**

- 1 Characteristics of an effective critique
- 2 Rules for critiquing

### **EVALUATION METHODS**

- 1 Question –characteristics of effective questions
- 2 Written test
- 3 Practical test
- 4 Self-evaluation

### **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 In-flight Teaching — techniques/air exercises

### **INTEGRATING HUMAN FACTORS INTO INSTRUCTION**

- 1 The role of the instructor
- 2 Technique to integrate Human Factors into instruction
- 3 Assessing Human Factors Knowledge – Skills – Attitudes
- 4 Teaching decision-making process
- 5 Evaluating Student Decision Making

### **COMMUNICATION**

- 1 Good communication style
- 2 Indicators of good communication
- 3 Developing Communication Skills
- 4 Barriers to effective communication

## **THREAT AND ERROR MANAGEMENT**

- 1 Threat and error management model
- 2 Threats
- 3 Errors
- 4 Undesired aircraft states
- 5 Countermeasures
- 6 Single Pilot Resource Management

## **PART 2 ADMINISTRATIVE AND LICENSING PROCEDURES**

### **ISSUE, PRIVILEGES, REVALIDATION OF FLIGHT CREW PERMIT, ENDORSEMENTS AND RATINGS**

- 1 General Conditions
- 2 Written Examination Procedures
- 3 Flight Testing Procedures
- 4 Student Pilot Permit
- 5 Gyroplane Pilot Permit
- 6 Aircraft Type Ratings
- 7 Night Rating
- 8 Flight Instructor Rating
- 9 Transport Canada Forms
- 10 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

## **AERONAUTICAL KNOWLEDGE**

See the *Study and Reference Guide - Pilot Permit – Gyroplane* (TP 13975E).

- 1 Air Law, Regulations and Procedures
- 2 Navigation and Radio Aids
- 3 Meteorology
- 4 Airframes, Engines and Systems
- 5 Theory of Flight
- 6 Flight Instruments
- 7 Flight Operations
- 8 Human Factors
- 9 Emergency Procedures

## RECOMMENDED STUDY MATERIAL

- 1 Flight Instructor Guide (revised 1998) TP 975E
- 2 Study and Reference Guide — Pilot Permit - Gyroplane (TP 13975E)
- 3 Human Factors for Aviation — Basic Handbook (TP 12863E)
- 4 Human Factors for Aviation — Advanced Handbook (TP 12864E)
- 5 Human Factors for Aviation — Instructor's Guide (TP 12865E)
- 6 Canadian Aviation Regulations, in particular Part IV

Information on text books 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/eng/civilaviation/standards/general-exams-centres-2178.htm>