

DO NOT DESTROY THIS TEST REPORT  
 This Test Report must be presented  
 for retesting or certification.

DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION  
**AIRMAN WRITTEN TEST REPORT (RIS: AC 8080-2)**

TEST		GRADES BY SECTION							FAA OFFICE NO.	TEST DATE	EXPIRATION DATE
TAKE NO.	TITLE *	1	2	3	4	5	6	7			
02	FN	90	92	88	95				GL 31	04-02-81	04-30-83
EXPIRATION DATE (Last day of month)											

**MECHANICS ONLY - EXPIRATION DATE CODES**  
 The first character designates the month; the second and third characters, the year. January through September as shown by numbers 1 through 9; October as "O"; November as "N"; December as "D".

\*See codes on reverse side:

LAST NAME, FIRST MIDDLE

LAPOOK GARY JOEL  
 4442 S HOMAN  
 CHICAGO IL

60632

EXAMPLES:

Month (June) 6 75 D 75  
 Year (1975)  
 Month (December)  
 Year (1975)

NOTE: TO FIND THE SUBJECT AREA IN WHICH QUESTIONS WERE MISSED, COMPARE THE CODES SHOWN BELOW WITH THE CODED ITEMS ON THE ENCLOSED SUBJECT AREA OUTLINE.

SECTION SUBJECT AREA CODES

- 1 C11 C15
- 2 F03 H02
- 3 K05 L01 N03
- 4 P03 Q03

FRAUDULENT ALTERATION OF THIS FORM BY ANY PERSON IS A BASIS FOR SUSPENSION OR REVOCATION OF ANY CERTIFICATES OR RATINGS HELD BY THAT PERSON.

ISSUED BY: ADMINISTRATOR  
 FEDERAL AVIATION ADMINISTRATION

MAR 1981

90 92 88 95

FLIGHT NAVIGATOR

Written Test Subject Matter Outline

To find the questions you missed (by knowledge areas), compare the subject matter codes on the enclosed Airman Written Test Report, AC Form 8080-2, with the coded items on the subject matter outline below.

NOTE: The total number of questions you missed cannot be determined by the number of subject matter codes shown on the enclosed examination report, since one or more questions were missed in each subject matter item identified.

FEDERAL AVIATION REGULATIONS AND ICAO  
RULES OF THE AIR

A. FAR 63--Certification: Flight Crewmembers  
Other Than Pilots

- A01. Subpart A, General
- A02. Subpart C, Flight Navigators

B. FAR 91--General Operating and Flight Rules

- B01. Compliance with ATC clearances and instructions (91.75)
- B02. Altimeter settings (91.81)
- B03. Minimum altitudes for IFR operations (91.119)
- B04. IFR cruising altitude or flight level (91.121)

C. FAR 121--Certification and Operations:  
Domestic, Flag, and Supplemental Air  
Carriers and Commercial Operators of  
Large Aircraft

- C01. Airplane performance--applicability (121.171)
- C02. Airplane performance--general (121.173)
- C03. Transport category airplanes: reciprocating engine powered: weight and takeoff limitations (121.175 and 121.177)
- C04. Transport category airplanes: turbine engine powered: takeoff limitations (121.189)
- C05. Transport category airplanes: turbine engine powered: landing limitations: destination and alternate airports (121.195 and 121.197)
- C06. Flight recorders (121.343)
- C07. Flight navigator (121.389)
- C08. Crewmember emergency training (121.417)
- C09. Flight navigator training (121.426)
- C10. Flight time limitations (121.493/121.483)
- C11. Dispatch or flight release (121.613 and 121.615)
- C12. Alternate airport, destination and departure (121.621 and 121.617)

- C13. Alternate airport weather minimums (121.625)
- C14. Dispatching authority (121.593 and 121.595)
- C15. Fuel supply (121.641 and 121.645)
- C16. Factors for computing fuel required (121.647)

D. ICAO--Rules of the Air--Annex 2

- D01. General flight rules, Chapter 3
- D02. Visual Flight Rules, Chapter 4
- D03. Instrument Flight Rules, Chapter 5

FUNDAMENTALS OF AIR NAVIGATION

E. Earth and Coordinate Systems

- E01. Chart projection features
- E02. Direction--true, magnetic, compass, grid
- E03. Great circle and rhumb-line courses
- E04. Position referenced to parallel 60°N.

F. Celestial Navigation

- F01. Basic definitions and relationships
- F02. Elements of astronomical triangle
- F03. Time diagrams and the air almanac
- F04. Star identification
- F05. Errors effecting LOPs
- F06. Special solutions related to upper and lower transits of the local meridian

G. Navigation Instruments and Related Theory

- G01. Compass systems
- G02. Airspeed indicators and machmeters
- G03. Altimeters
- G04. Temperature indicators
- G05. Absolute altimeters
- G06. Sextants

H. Air Navigation Systems--Operating Principles

- H01. Loran
- H02. Doppler
- H03. Inertial
- H04. Other

- I. Altimetry Procedures
  - I01. Solution for drift
  - I02. Pressure line of position

- J. Flight Planning Procedures
  - J01. Route and altitude selection
  - J02. Cruise control techniques
  - J03. Decision points--PNR/ETP

#### METEOROLOGY

- K. Basic Weather Principles
  - K01. Air mass characteristics
  - K02. Winds and pressure systems
  - K03. Atmospheric stability and lapse rates
  - K04. Fronts and frontal weather
  - K05. Thunderstorms
  - K06. Fog
  - K07. Precipitation products
  - K08. Troposphere details

- L. High Altitude Weather Details
  - L01. Jet streams
  - L02. Clear air turbulence
  - L03. Tropopause
  - L04. Geostrophic wind
  - L05. Forecasting weather movement
  - L06. Stratosphere details

- M. Aviation Weather Reports and Forecasts

- M01. Hourly sequence reports
- M02. Terminal forecasts
- M03. Area forecasts

- N. Weather Charts--Theory and Interpretation of Data

- N01. Surface
- N02. Significant weather
- N03. Constant pressure
- N04. Tropopause/vertical wind shear

#### PLOTTING AND COMPUTING

- O. Flight Planning Procedures
  - 001. En route time
  - 002. Fuel requirements and endurance
  - 003. Planned takeoff or landing gross weight
  - 004. Decision points

- P. Positioning
  - P01. Dead reckoning procedures--advance estimates and positions
  - P02. Celestial fixes
  - P03. Loran and radar fixes

- P04. Combined fix methods
- P05. Wind between fixes, computer solutions
- P06. Wind by air plot
- P07. Headings and courses--compass/grid
- P08. ETAs
- P09. Airspeed to maintain schedule
- P10. Drift by altimetry

- Q. Special Solutions

- Q01. Latitude by meridian altitude--upper and lower transit
- Q02. Latitude by Polaris
- Q03. Compass deviation
- Q04. Star identification--star diagrams
- Q05. Search patterns
- Q06. Date/time calculations
- Q07. Line of sight computation
- Q08. Fixing position on coast line

#### STUDY MATERIALS

##### Federal Aviation Regulations

- Part 63--Certification: Flight Crewmembers Other Than Pilots
- Part 91--General Operating and Flight Rules
- Part 121--Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft

##### ICAO Rules Of The Air

May be ordered from:

International Civil Aviation Organization  
(Attention: Distribution Officer)  
P.O. Box 400, Succursale: Place de l'Aviation Internationale  
1000 Sherbrooke Street West  
Montreal, Quebec, Canada H3A2R2

Flight Navigator Written Test Guide, AC 63-2A  
Air Navigation, H. O. Pub. No. 216, U.S.  
Navy Hydrographic Office  
Air Navigation, AF Manual 51-40  
Aviation Weather, AC 00-6A  
Aviation Weather Services, AC 00-45A

Orders for study materials should include remittance by check or money order made payable to the Superintendent of Documents, and should be addressed to:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402.