

P2 Instruments Rating (IR)

I. Regulation

1. General rules
 - Responsibility of the pilot
 - Aircraft equipment
2. IFR rules
 - Minimum altitudes for IFR operations
 - Flight Plan change from IFR to VFR
 - Semicircular Cruising Level System
3. Weather conditions required for VFR flight
 - VMC minima

II. Basic Instrumental Flight

1. Flight by attitude
2. Basic flight instruments
 - Barometric instruments: altimeter, airspeed indicator, vertical speed indicator
 - Gyro instruments: attitude indicator, heading indicator, turn indicator
 - Engine instruments : tachometer, MAP gauge, torquemeter, EPR
 - The compass
 - Cross-checking and interpretation of instruments
3. Preflight checks
4. Normal maneuvers
 - Straight-and-Level flight
 - Climbs and descents
 - Turns
5. Abnormal maneuvers
 - The unusual attitudes
 - Flight with reduced cockpit
 - Takeoff without visibility
 - Flight in turbulence

III. Radio Navigation

- 1 . Electromagnetic waves
 - Classification of radio waves
 - Propagation of electromagnetic waves
 - Relative bearings

2. Navigating with the ADF
 - The Radio Direction Finder
 - ADF and NDB
 - ADF navigation

3. Navigating with the VOR and DME
 - The VOR stations and the on-board receiver
 - Interpretation of the VOR indications
 - VOR navigation
 - The operation of the DME system
 - The DME Arc

- 4 . The ILS
 - ILS categories
 - The LOC localizer and GS glide path
 - Markers
 - Onboard ILS receiver
 - Operational usage of ILS

5. The Transponder
 - Primary and Secondary Radar
 - Transponder
 - In-flight collision avoidance systems

6. Area navigation
 - RNAV Area navigation
 - GPS system
 - GPS receiver

7. Advanced instruments and automatic flight control
 - Remote Indicating Compass
 - RMI and HSI
 - Autopilot and Flight Director
 - EFIS electronic flight instruments
 - PFD, MFD, FMS, GPWS
 - The Radio Altimeter
 - The Ring Laser Gyro and AHRS

IV. Instrumental Procedures

1. General Rules
 - Aircraft categories
 - The Airport Operating Minima
2. The instrumental charts
 - Airport charts
 - The SID and STAR charts
 - En route Navigation charts
 - The Approach procedures charts
3. Airport equipment
 - Classification of airports
 - Runways, taxiways and signs, aprons
 - Airport lights
 - The transmissometers and the RVR
 - Airport maps
4. The Departure, En route and Arrival procedures
 - SID and Radar departures
 - Route types
 - The MEA/MEL, MOCA, MORA quotas
 - STAR and Radar vectoring
5. Holding procedures
 - The standard holding pattern
 - Entry procedures
6. Approach procedures
 - Classification of procedures
 - Structure of the procedures
 - Missed approach
 - Separation from obstacles
 - Precision approaches
 - Non-precision approaches
 - Circuit approaches
 - Radar vectoring for approach

V. Flight Planning

1. Reminder of VFR navigation
 - The Earth
 - Aeronautical cartography
 - The estimated navigation (Dead reckoning)
 - Flight planning and execution
 - Problems to be solved in flight
2. The Operational Flight Plan
 - Determination of airways, airspaces
 - The choice of flight altitude
 - Performance and fuel
 - Weights and balance
 - CFMU validation
3. The ATS Flight plan

VI. Radiotelephony procedures

1. General phraseology
2. Phraseology in the various phases of flight

VII. Meteorology

1. The atmosphere
2. Dangerous phenomena for flight

REQUIREMENTS

1. Examination must be flown entirely without the use of a flight director or autopilot.
2. Weather must be set so the member is flying under IMC conditions to non-precision approach minimums being used for the checkride. Weather settings, at the examiners discretion, may also be adjusted during the checkride to allow for various maneuvers, like circling, to be completed.
3. Aircraft allowed must be:
 - a. Fixed wing
 - b. Non-Complex (no retractable gear or controllable pitch propellers)
 - c. Single engine and Piston driven
 - d. Max Gross weight less than 5670kg (12,500lbs)