

Flight Crew

#### STUDY GUIDE

This study guide is designed to support students and trainee pilots preparing for the **Operational Procedures and Air Law** examination. These subjects form a critical foundation for safe and legal aviation practice, encompassing both regulatory knowledge and practical decision-making in various flight operations.

In the **Operational Procedures** section, you'll explore the standard practices and protocols that govern normal, abnormal, and emergency situations. This includes understanding flight crew responsibilities, communication procedures, weather-related considerations, and operational limitations under different types of airspace and conditions.

The **Air Law** portion covers the legal framework that regulates aviation activities. You'll study the roles of national and international aviation authorities, the rules of the air, licensing requirements, aircraft documentation, and the responsibilities of pilots-in-command under various legal and regulatory scenarios.

This guide condenses the essential concepts, key regulations, and procedural knowledge required for the exam. Use it alongside your official training materials, instructor guidance, and regulatory documents (such as ICAO Annexes, national regulations, and operational manuals) to ensure a thorough and well-rounded understanding.

Mastery of these topics not only contributes to exam success but also lays the groundwork for responsible and competent airmanship throughout your flying career.

The following are the main areas you should focus on while preparing for your Air law examination. The major areas along with subparts are detailed below.

# 1. International Agreements and Organizations

- ICAO (International Civil Aviation Organization): Annexes, SARPs, Chicago Convention (1944), ICAO Council.
- Chicago Convention: Sovereignty of airspace, Article 1-96 overview.
- Other Agreements: Warsaw Convention, Montreal Convention, Tokyo, The Hague, and Montreal Protocols.
- Regional Bodies: EASA, FAA, IATA, EUROCONTROL.

#### 2. Airworthiness of Aircraft

- Definition & Importance
- Certificates:
  - Certificate of Airworthiness (CofA)
  - Airworthiness Review Certificate (ARC)
  - Maintenance Release
- Maintenance Requirements: CAMO, MEL, ADs, SBs

#### 3. Aircraft Nationality and Registration Marks

- Markings Rules: Prefixes (e.g.,8Q- for Maldives, G- for UK, N- for US), ICAO standards (Annex 7).
- Registration Requirements: Unique identity displayed clearly.

# 4. Flight Crew Licensing

- Types of Licenses: PPL, CPL, ATPL, MPL
- Ratings: Type Rating, Instrument Rating, Class Rating
- Medical Certification: Class 1, 2, 3 standards
- Validity & Renewal

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# 5. Rules of the Air (Annex 2)

- Right of Way Rules
- VFR vs. IFR
- Visual Flight Rules (VFR)
- Instrument Flight Rules (IFR)
- Cruising Levels
- Flight Plan Requirements

#### 6. Instrument Procedures

# Departures

• SID (Standard Instrument Departure): Purpose, design criteria.

# **Approach Procedures**

- STAR (Standard Terminal Arrival Routes)
- Precision vs. Non-Precision Approaches
- ILS, VOR, NDB, RNAV Approaches

# Circling Approach

- Weather Minimums
- MDA/DA Considerations
- Maneuvering for Landing

# **Holding Procedures**

- Standard Holding Patterns
- Entry Procedures
- Timing, Speed, and Altitude Rules

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# 7. Altimeter Setting Procedure

- QNH, QFE, Standard Setting (1013.25 hPa)
- Transition Altitude and Level
- Altimeter Errors

#### 8. SSR and ACAS

- SSR (Secondary Surveillance Radar):
  - o Transponder Modes A, C, and S
- ACAS (Airborne Collision Avoidance System):
  - o TCAS I & II, RA and TA

# 9. Airspace

- ICAO Airspace Classes (A-G)
- Controlled vs. Uncontrolled
- Airspace Structure (TMA, CTA, FIR, UIR)
- Restricted, Prohibited, Danger Areas

# 10. Air Traffic Services (ATS)

- Components: ATC, FIS, Alerting Services
- Responsibilities and Functions
- Frequencies, Clearances, and Separation

#### 11. Separation

- Types: Vertical, Lateral, Longitudinal
- Wake Turbulence Categories
- Minima for IFR Flights

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#### 12. Control of Aircraft

- Clearances & Instructions
- Pilot & Controller Responsibilities
- Lost Communication Procedures

#### 13. Aeronautical Information Service (AIS)

- Publications:
  - o AIP, NOTAM, AIC, Charts
- Structure and Use
- AIRAC Cycle

# 14. Aerodromes - Physical Characteristics

- Runways, Taxiways, Aprons
- Runway Length, Slope, Surface Type
- RESA, Stopway, Clearway

#### 15. Aerodromes – Visual Aids

# Markings and Signs

- Runway Markings: Threshold, Aiming Point, Touchdown Zone
- Taxiway Signs: Mandatory, Information, Location

# Aerodrome Lighting

- Runway Edge Lights, Approach Lights, PAPI/VASI
- Taxiway Lighting, Stop Bars
- Emergency Lighting Systems

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# 16. Obstacle Marking and Aerodrome Services

- Marking/Lighting Requirements for Obstacles
- · Rescue and Fire Fighting Categories
- Meteorological and ATC Services

# 17. Facilitation (Annex 9)

- Passenger and Cargo Clearance
- Customs, Immigration, Health Regulations
- Security Screening and Passenger Rights

# 18. Search and Rescue (SAR) – Annex 12

- SAR Regions (SRR)
- Alert Phases: INCERFA, ALERFA, DETRESFA
- Responsibilities of RCCs

# 19. Security (Annex 17)

- · Airport and Aircraft Security Measures
- Access Control, Baggage Screening
- Handling of Unlawful Interference

# 20. Aircraft Accident and Incident Investigation (Annex 13)

- Definitions: Accident vs. Incident
- Notification and Reporting
- Investigation Process
- State Responsibilities: State of Occurrence, Registry, Operator, etc.

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