



GOVERNMENT OF INDIA
OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION
TECHNICAL CENTRE, OPP. SAFDARJUNG AIRPORT, NEW DELHI

**CIVIL AVIATION REQUIREMENTS
SECTION 7 – FLIGHT CREW STANDARDS
TRAINING AND LICENSING**

**SERIES 'G' PART VI
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**SUBJECT: RADIO TELEPHONE OPERATOR (RESTRICTED): EXAMINATION AND
ISSUE OF CERTIFICATE AND LICENCE**

1. INTRODUCTION:

- 1.1 Radio Telephone Operator (Restricted) Certificate and Licence Rules 2025 inter alia authorizes the Directorate General of Civil Aviation to issue directions relating to the examination, grant and extension of Radio Telephone Operator (Restricted) Certificate and Licence to personnel engaged in the operation of radio telephone or telegraph for the conduct of operation and maintenance of aircraft and associated equipment.
- 1.2 This Civil Aviation Requirement (CAR) is issued under the provisions of Rule 18 of Radio Telephone Operator (Restricted) Certificate and Licence Rules 2025 and lays down the procedures for examination and certification of personnel engaged in the operation of radio telephone or telegraph for the conduct of operation and maintenance of aircraft and associated equipment.
- 1.3 This CAR lays down the requirements to be fulfilled by the applicant for appearing in the examination, conduct of examination and requirements for issue of Radio Telephone Operator (Restricted) Certificate and Licence.

2. Definitions:

In this CAR, unless the context otherwise requires, -

- i. "RTR" means Radio Telephone Operator (Restricted);
- ii. "International Telecommunication Convention" means the Convention of the International Telecommunication Union signed at Geneva in 1992 or any subsequent revision or modification thereof, which the Government of India has ratified or accepted.

- iii. "Radio Regulations" means the Regulations adopted by the World Radiocommunication Conference (Geneva 1995) and includes every revision or modification thereof which the Government of India has ratified or accepted.

3. Examination:

- 3.1 The Radio Telephone Operator (Restricted) Certificate and Licence examination consists of the following parts:
- a) Written Examination
 - b) Practical Examination
- 3.2 An applicant is required to pass both the examinations for issue of RTR Certificate and Licence, unless exempted.
- 3.3 The candidate shall obtain Computer number from Central Examination Organization (CEO), DGCA as per requirements mentioned in Para 6 of CAR Section 7 Series B Part 1 for appearing in Radio Telephone Operator's (Restricted) written and practical examination.

4. Payment of Examination Fees:

- 4.1 The requirement of Examination Fee as applicable for written examination and practical examination is stipulated in the Rule 9 of the Radio Telephone Operator (Restricted) Certificate and Licence Rules 2025.
- 4.2 The mode of payment for written examination is described in the "User Manual for RTR Certificate and Licence Examination" published in pariksha.dgca.gov.in.
- 4.3 Fee for practical examination is to be paid online through "bharatkosh.gov.in" on the eGCA portal.

5. Exemption from RTR Certificate and Licence written examination

- 5.1 The following categories of candidates may be exempted as per sub-rule (4) of Rule 8 of RTR Certificate and Licence Rules 2025 from written examination:
- i. A qualified pilot from the Indian Air Force, Indian Navy or Indian Army or Indian Coast Guard who produces satisfactory evidence of 1000 hours of flying experience.
 - ii. A person holding a valid Radio Telephone Operator's (Restricted) Certificate and Licence issued under the Indian Wireless Telegraphy (Commercial Radio Operator's Certificate of Proficiency and Licence to Operate Wireless Telegraphy) Rules 1954.

Note: As per Rule 20 of the Radio Telephone Operator (Restricted) Certificate and Licence Rules, 2025, the operation of Certificates and Licences issued under the Indian Wireless Telegraphy (Commercial Radio Operator's Certificate of Proficiency and Licence to Operate Wireless Telegraphy) Rules, 1954, shall continue to remain valid.

- iii. A person holding valid Flight Radio Telephone Operator's Licence or its

equivalent issued by Commonwealth countries or Philippines.

- 5.2 The applicant not meeting the requirements of Para 5.1 shall pass written examination and practical examination for issue of Radio Telephone Operator's (Restricted) Certificate and Licence.
- 5.3 Applicant meeting the criteria as per Para 5.1 above, will be required to apply for grant of exemption from written examination, on eGCA portal. On successful grant of exemption applicant will be able to apply for Practical exam as per the process mentioned in Para 7 on eGCA portal. The validity of exemption shall be three years.

6. Procedure of RTR Certificate and Licence written examination

- 6.1 The details regarding submission of online application for RTR Certificate and Licence written examination, publication of list of Admitted / Rejected Candidates, procedure of conducting Radio Telephone Operator's (Restricted) Written Examination, identification of Candidates and publication of result are available in Para 6 of CAR Section 7 Series B Part 1.
- 6.2 Syllabus and Pattern of Examination: The RTR Certificate and Licence written examination will be online computer based theoretical knowledge examination of 50 Multiple Choice (Objective) questions as per the syllabus prescribed in Annexure A. The examinations will be conducted in English language.
- 6.3 Pass Marks for Radio Telephone Operator's (Restricted) written Examination:
- A candidate who secures a minimum of 70% marks in the Radio Telephone Operator's (Restricted) Certificate and Licence written examination will be declared pass and will be eligible to appear in Radio Telephone Operator's (Restricted) Practical examination.
- 6.4 Validity of Radio Telephone Operator's (Restricted) written examination

The Radio Telephone Operator's (Restricted) written examination will be valid for three years from the date of passing the written examination.

7. Procedure for Radio Telephone Operator's (Restricted) Certificate and Licence Practical exam

- 7.1 Eligibility:
- Candidates who have successfully passed Radio Telephone Operator's (Restricted) Certificate and Licence written examination or otherwise exempted as per Para 5 above will be eligible to appear for Radio Telephone Operator's (Restricted) Practical examination.
- 7.2 Application for practical exam
- i. Applicant is required to register in eGCA portal on DGCA website www.dgca.gov.in. (The detailed steps for registration in eGCA portal are

mentioned in the “User Manual” published to this effect DGCA website www.dgca.gov.in and before filing an online application.)

- ii. Candidates passed written examination or exempted from written examination as per Para 5.1 can select the date for practical exam on eGCA portal.
- iii. The candidate will be issued admit card on his eGCA portal, three days prior to date of practical exam.
- iv. Selected slot for practical exam will not be rescheduled or cancelled.
- v. No refund of fees will be made for candidates not appearing for practical exam.
- vi. Candidates not appearing in practical exam on the selected practical exam date would be declared as “ABSENT” and it would be counted towards practical exam attempt.
- vii. Director (RTR) may reschedule the slots of practical exam in case of unforeseen situations/unavailability of RTR lab or any other operational requirements.

7.3 Details of Practical examination

- 7.3.1 The total duration of the practical examination will be approximate 30 minutes.
- 7.3.2 The practical test will comprise of practical exercise conducted over simulated environment based on flight radiotelephony in English language. The candidate will be assessed on:
 - i. Practical knowledge of radiotelephone operation and procedure for different phases of flight.
 - ii. Ability to send correctly and to receive correctly message by radiotelephone.
 - iii. General knowledge of the Regulations applying to radiotelephone communications and specifically of that part of those Regulations relating to the safety of life.
 - iv. Knowledge of the special provisions governing aeronautical fixed, mobile and radio navigation service (for aeronautical service only).

7.4 Passing Marks for practical examination:

A candidate who secures a minimum of 50% marks in the practical examination will be declared pass in the exam.

7.5 Result of practical examination:

- 7.5.1 The result of the RTR practical exam will be made available to the respective candidate on his eGCA portal or registered email.
- 7.5.2 The candidate who passes the practical examination will be eligible to apply for RTR Certificate and Licence.
- 7.5.3 The candidate will have a total of three attempts to appear for practical examination

subject to the validity of his written examination after payment of requisite fees.

7.5.4 In case, a applicant fails in all the three attempts of practical examination, he / she shall be required to re-appear in the written examination for appearing in further practical examination.

7.5.5 The applicant exempted from written examination as per Para 5 will be given three attempts to appear for practical exam subject to validity of exemption. Exempted candidates failing in all three attempts shall then be required to appear for written examination prior to further practical exam attempts as per Para 7.5.2.

8. Issue of RTR Certificate and Licence

On successfully passing the practical examination applicant will be required to pay the requisite fees and apply for RTR Certificate and Licence on eGCA portal. The candidate will be issued RTR Certificate and Licence subject to correctness and completeness of the application.

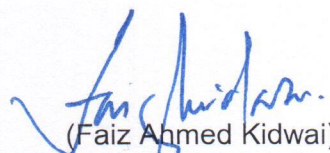
9. Extension of validity of RTR Certificate and Licence:

9.1 The candidate seeking extension of RTR Certificate and Licence beyond the age of eighty years unless suspended or cancelled may be extended on production of experience certificate of not less than three months in a station working in the aero mobile service in preceding one year from date of application.

9.2 The licence for such candidates will be extended on yearly basis.

10. Model requirements and guidance for organisations providing training in Radio Telephony

10.1 The model requirements and guidance for organisations providing training in Radio Telephony is attached in Annexure B


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SYLLABUS

1. RTR Certificate and Licence Written exam

I. Regulations and Procedure

- i. International Telecommunication Convention and Radio Regulations.
- ii. General and Aeronautical 'Q' Code signals and other abbreviations as contained in Annex10 (vol. I & II) of ICAO.
- iii. General Radio-telephone Communication procedure and radio telephone communication procedure for distress, urgency and direction finding.
- iv. Procedure for distress communication in maritime mobile service.
- v. Words and figures spelling used in radio telephony.
- vi. Licensing requirement of installation and operation of radio apparatus used in aircraft.
- vii. Minimum requirement of radio equipment to be carried on aircraft as prescribed in Annexure 6 of the ICAO and DGCA in India.
- viii. FIR in India and main Radio communication and Navigation facilities available together with principal frequencies to be used for communication and navigation within India.
- ix. Meteorological codes, Pre Flight briefing service and their usages.
- x. Knowledge of notices to airmen issued by the Civil Aviation Authorities in India, as applicable to the Aeronautical mobile and Air traffic control services.

II. Radio Principles and Practice:

- i. Electrical units such as volt, Ampere, Ohm and Watt, Wavelength, frequency and their relationship.
- ii. Radio frequency propagation day and night frequencies, skip distance fading ground shadow and its effect on communication choice of frequencies to attain maximum efficiency in handling air ground HF communications.
- iii. System employed for air ground communications including ,intercommunications and announcing system of aircraft,
- iv. Radio-navigation Aids, operation of microphones and headphones, squelch, AVC , Volume control tuning of transmitter, simplex and duplex operation; advantages and disadvantages of Radio telephone communication; limitations of range due to frequency interference etc.

III. Radio Telephony:

- i. General operating procedures: Transmitting technique, Transmission of letters, Transmission of numbers, Transmission of time, Standard words and phrases, Call signs, Call signs for aeronautical stations, Aircraft call signs, Communications, Establishment and continuation of communications, Transfer of communications, Issue of clearance and read-back requirements, Test procedures.
- ii. General phraseology: An explanation of the role of phraseologies and plain language in radiotelephony communications, Level instructions, Position

reporting, Flight plans

- iii. Aerodrome control: aircraft: Departure information and engine starting procedures, Push-back, Taxi instructions, Take-off procedures, Aerodrome traffic circuit, Final approach and landing, Go around, after landing, essential aerodrome information.
- iv. General ATS surveillance service phraseology: Identification and vectoring, Traffic information and avoiding action, Secondary surveillance radar, Radar assistance to aircraft with radio communications failure, Alerting phraseologies
- v. Aerodrome control: vehicles: Movement instructions, Crossing runways, Vehicles towing aircraft
- vi. Approach control: IFR departures, VFR departures, IFR arrivals, VFR arrivals, Vectors to final approach, Surveillance radar approach, Precision radar approach.
- vii. Area control: Area control units, Position information, Level information, Flights joining airways, Flights leaving airways, Flights crossing airways, Flights holding en route, ATS Surveillance, Automatic Dependent Surveillance (ADS), Oceanic control
- viii. Distress and urgency procedures and communications failure procedures: Distress messages, Aircraft in distress, Imposition of silence, Termination of distress and silence, Urgency messages, Emergency descent, Aircraft communications failure.
- ix. Transmission of meteorological and other aerodrome information: Runway Visual Range (RVR), Runway surface conditions
- x. Miscellaneous flight handling: Selective Calling (SELCAL), Fuel dumping, Wake turbulence, Wind shear, Direction finding, ACAS manoeuvres.

Annexure B

A. Model requirements and guidance for organisations providing training in Radio Telephony

1. **Preferred organisations:** DGCA approved Scheduled Operator/ Non-Scheduled Operator/ Private Operator/ ANSP/ Approved Flying Training Organization or Aviation English language Training Organization approved by DGCA.

2. **Facilities**

The Training organization shall establish facility appropriate to the size and scope of the training and shall provide physical environment conducive to the learning. These shall include:

- i. General:

- a) Adequate Office Space for operational and administrative staff.
 - b) Storage area including secure area for training and personnel records.

- ii. Classrooms, Library and training aids:

- a) At least one AV equipped class room. The classrooms shall be properly lighted and furnished. The size of the rooms shall be appropriate to accommodate the maximum number of trainees expected to be trained at any time. The optimum number of students recommended per class is twelve (12) with maximum (25). Size of room approx. 400 sq. feet. (16 sq feet (4x4) per person.)
 - b) Library/e-library with adequate number of text books/ e-books for enhancing radio telephony.
 - c) Training aids like computer, projector/suitable monitor, multimedia, Aviation English language learning software etc.

- iii. Radio Telephony Communication lab:

- a) ATC and Pilot communication lab for practical radiotelephony communication for practice through computers, RT communication circuit and flight simulation software and relevant programme. Model requirement of RTR lab are attached in Annexure G.
 - b) Voice logging system with time stamping, annotation, and storage capacity for 6 months.

3. **Personnel**

Post Holders Depending upon the size and scope of the organization, a post holder may perform a combination of key roles and the same shall be described in the training and procedures manual.

- a) Accountable Manager: The organization shall appoint an accountable manager who has corporate authority for ensuring that training can be financed and carried out to the standard required by Aircraft Rules and this CAR. He should possess **a minimum of five years of experience** in aviation, training, assessment, or regulatory compliance functions. The accountable manager shall ensure that all necessary resources are available to accomplish training in accordance with laid down standards and establish and promote the quality standards for the training.
- b) Radiotelephony Instructor
- An RTR Instructor is a person who has attended the 02-day Certification Workshop to deliver theoretical and/or practical training for candidates preparing for the Restricted Radiotelephony (Aeronautical) Licence examination.(First Time to be conducted by DGCA)
 - Shall hold or held CPL or above, with a minimum 2 years of teaching experience in an Instructor Role with a Training Institute/FTO/ATO or possess a minimum of 1500 hrs Flying Experience or 5 yrs of operational experience in aviation radiotelephony and be successfully evaluated to impart RTR training.
 - Shall undergo a refresher once every two years, conducted at RTTO
 - Must have demonstrated good integrity.
 - Must demonstrate language proficiency at ICAO Level 5 or above.
 - May hold a role as trainer in the past / Completed TTT (Train The Trainer course)
 - In-depth knowledge of ICAO Doc 9432
- c) Head of Training for Radio Telephony Training Organization (RTTO)
- Shall hold or has held Flight Crew/ ATC Licence /rating, with overall experience of at least 7 years of Flying/Air Traffic Control.
- or
- Any suitably qualified person having expertise in Radio Telephony training/testing with a minimum experience of 05 years.
- d) Quality Assurance Manager –
- Shall hold or has held Flight Crew/ ATC Licence /rating with overall experience of at least 5 years of Flying/Air Traffic Control and shall have been trained in Quality Assurance/ Quality Management /Quality Auditing;

or
Any person having trained in and have at least two years of
experience of Quality Assurance/ Quality Management /Quality
Auditing

B. Recommended Training Hours

Module	Recommended Hours
Module 1. Regulations	
1.1 Aeronautical Telecommunication	2.5 Hours
1.2 Aircraft Communication & Navigational Aids:	2.5 Hours
Module 2 Radio Principle & Practice	10 Hours
Module 3. Procedures	
3.1 General Procedures	15 Hours
3.2 Radio Telephony including two mock tests	18 Hours
Total Hours	48 hours
<i>* The training hours may vary as per requirement of training organisation</i>	

C. Requirements of Practical Training for RTR

1. Compliance with Regulatory Standards

The simulation environment must fully comply with international standards for radiotelephony communication as outlined in ICAO Annex 10, Doc 9432, and ITU Radio Regulations. The guidelines for ideal lab design are provided below to ensure uniformity.

2. Training and Assessment Features

The simulation lab should facilitate training of radiotelephony candidates across diverse operational scenarios. The system must simulate all phases of a typical flight, including:

- Taxi, Takeoff, Climb, Cruise, Descent, Approach, and Landing
- Realistic traffic conflicts and coordination
- Emergency scenarios: distress, urgency, and medical
- Varying flight routes and airfield layouts

- Environmental variables like weather conditions and traffic density
- Voice variations in air traffic controllers
- Crew Resource Management (CRM) interactions (e.g., communication between Captain, Cabin Crew, ATC)

D. Guidance for establishment of RTR lab for training of candidates

S.No.	Components of RTR lab	Description
1	System Overview of Radio Telephony Restricted (RTR) Lab:	The AV system will facilitate training and assessments by enabling seamless communication, content sharing, live streaming, and recording between the pilot (Candidate) and trainers. The design consists of two rooms: one for the pilot (Candidate) and one for the trainers. The system will incorporate high-quality audio and video solutions, recording and streaming capabilities, and an intuitive control interface for trainers.
2	System Components	
2.1	Display Systems	
	Pilot (Candidate) Room Display:	➤ The pilot (Candidate) will view content shared by trainers on this display.
	Trainer Room Display:	➤ Displays shared content and video feedback in split-screen mode.
2.2	Audio Systems	
	Pilot (Candidate) and Trainer Headsets:	➤ Push-to-talk microphone with headset for communication between pilot (Candidate) and trainers.
	Handheld Microphones:	➤ Wireless handheld microphones may be provided for additional communication or announcements from trainers side.

	Audio Recording:	➤ All conversations between the pilot (Candidate) and the trainers will be recorded for feedback purpose
2.3	Video Systems	
	Cameras:	➤ The trainer should provide examination environment as far as practicable. Preferably neither the candidate nor the trainers should be able to see each other during the test.
	Document Camera:	➤ Provided to allow trainers to share physical documents or instant handwritten notes directly on the pilot (Candidate)'s screen display.
	Video Recording:	➤ All video footage (pilot (Candidate) reaction, shared content) in synchronization with audio will be recorded and stored for future assessment.
2.4	Content Sharing & Display Management	
	Content Sharing:	➤ Each trainers will have a desktop workstation /laptop /tab with the ability to share content (one at a time) with the pilot (Candidate)'s display.
3.0	Additional Features	
	Content Backup:	➤ All recordings will be stored on an designated server.
	Digital Clocks	➤ Digital time displays must be installed on both sides

		(trainers and candidate) to maintain synchronized timing.
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E. Mechanisms for quality assurance of training organisations.

- a) The organisation shall establish a quality assurance system, which ensures that training and instructional practices comply with all relevant regulatory training requirements.
- b) The Quality Assurance System must include a system for conducting internal audit covering the entire area of operation within 12 months. The internal audit shall be conducted by those who are not involved in day to day instructional activity and shall be conducted using customized checklist(s). Each deficiency must be addressed properly to enhance the quality of training.