

DGCA GROUND SCHOOL — AIR REGULATIONS

CHAPTER 3

Aircraft Nationality & Registration Marks

A complete, exam-focused study companion for CPL & ATPL student pilots covering identification plates, mark measurements, the Indian VT / VU / U system, certificate & register of aircraft, and modern aircraft leasing through GIFT-City.

Prepared by **Ghost Aviator** Subject — **Air Regulations** Target — **CPL / ATPL**

Format — **Notes + 15 MCQ Bank**

Reference: ICAO Annex 7 (Rules of the Air, 1937) • CAR Section 2 — Airworthiness, Series F Part I, Issue II (Revision 13 Jun 2017 & 12 Apr 2024).

① HOW TO USE THESE NOTES

The colour code is consistent across the Ghost Aviator library:

- **Blue** — Definitions & core concepts.
- **Green** — Standard procedures & allowances.
- **Red** — Strict limitations, warnings & prohibitions.
- **Amber / dashed** — Memory aids & exam traps.

Exact regulatory values are pinned like this — **at least 50 cm** — because the examiner tests the number, not the paraphrase.

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GHOST AVIATOR

1 Annex 7 — What It Sets Out

Every aircraft has a "name badge" — a nationality mark that identifies the country of registry and a registration mark that identifies the individual airframe. ICAO Annex 7 is the international rulebook that tells States how to pick, size and display those badges.

① WHAT ANNEX 7 DOES

Annex 7 sets out procedures for **selection by ICAO Contracting States of nationality marks** from the **nationality symbols included in the radio call signs allocated to the States of Registry by the ITU**.

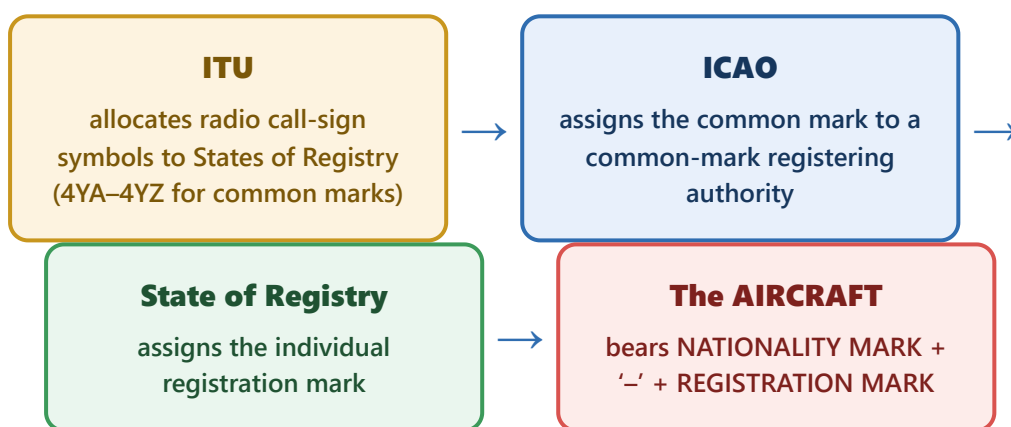
- It sets **standards for the use of letters, numbers and other graphic symbols** in the nationality and registration marks.
- It spells out **where these characters will be located** on different types of airborne vehicles — lighter-than-air and heavier-than-air aircraft alike.
- It calls for the **registration of the aircraft** and provides a sample **Certificate of Registration** for use by ICAO Contracting States.
- The certificate **must be carried in the aircraft at all times**.

⚠ WHO ALLOTS WHAT — THE THREE BODIES

Three international bodies interact:

- **ITU (International Telecommunication Union)** — allocates the underlying radio call-sign symbols to the States of Registry. It also allots the symbols 4YA to 4YZ for **common marks** to two or more States carrying out joint operations.
- **ICAO (International Civil Aviation Organisation)** — assigns the common mark to a common-mark registering authority.
- **State of Registry / Common-Mark Registering Authority** — assigns the individual registration mark to each aircraft.

FLOW — HOW A REGISTRATION ENDS UP ON YOUR AIRCRAFT



2 Identification Plate

① THE PLATE — WHAT IT IS

An aircraft **shall carry an identification plate** inscribed with **at least** its:

- Nationality or common mark; and
- Registration mark.

⚠ MATERIAL & LOCATION RULE

The plate **shall be made of fireproof metal or other fireproof material of suitable physical properties** and shall be secured to the aircraft in a **prominent position near the main entrance** — or, for special cases:

- **(a) Unmanned free balloon** — **affixed conspicuously to the exterior of the payload.**
- **(b) Remotely piloted aircraft (RPA)** — secured in a prominent position near the main entrance or compartment; or **affixed conspicuously to the exterior of the aircraft** if there is no main entrance or compartment.

✓ THE REGISTRATION MARK ITSELF

The registration mark shall be **letters, numbers, or a combination of letters and numbers** consisting of **1 to 5 digits or characters**, and shall be that **assigned by the State of Registry or common-mark registering authority.**

★ MEMORY HOOK

"**Fireproof, near the main entrance, 1–5 characters.**" Three facts, three marks in the exam.

3

The Registration Mark — Assignment & Confusion Rules

A registration mark must never be mistakable for a distress or urgency signal on the radio — otherwise a routine call could be read as a life-and-death broadcast.

⚠ COMBINATIONS THAT MUST BE AVOIDED

When letters are used for the registration mark, combinations **shall NOT be used which might be confused with:**

- The **five-letter combinations** used in the **International Code of Signals, Part II**;
- The **three-letter combinations beginning with Q** used in the **Q Code**;
- The **distress signal SOS**, or other similar urgent signals — for example **XXX**, **PAN** and **TTT**.

Table 3.1 — Radio Urgency & Distress Signals To Avoid Confusing With

SIGNAL	MEANING & WHERE IT COMES FROM
SOS	The classic international distress signal .
XXX	An urgency signal — the radio-telegraphy equivalent of PAN (very high urgency without being an outright distress).
PAN	The radio-telephony urgency signal (spoken "PAN-PAN") — indicates a situation of urgency but not immediate danger.
TTT	The safety signal in radio telegraphy — precedes safety messages.
Q-Codes	Three-letter combinations beginning with Q (e.g. QNH, QFE, QDM) reserved for aeronautical procedure.

★ EXAM TRAP

In the question bank, the "example" the examiner picks for a forbidden combination will be one of **XXX**, **PAN**, **TTT** or **SOS**. Distractors like RCC, LLL, DDD are simply not on the list — but they are only wrong *as examples*, not as legal combinations.

4

Measurements of Nationality, Common & Registration Marks

Annex 7 fixes the minimum character height so that marks stay legible at range. The numbers are simple and heavily tested — learn them cold.

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4.1 Heavier-Than-Air Aircraft

✓ CHARACTER HEIGHT — HEAVIER-THAN-AIR

- **Wings** — height of marks shall be **at least 50 cm**.
- **Fuselage (or equivalent structure) and vertical tail surfaces** — height of marks shall be **at least 30 cm**.
- **Letters and numbers in each separate group of marks shall be of equal height.**

4.2 Lighter-Than-Air Aircraft

✓ CHARACTER HEIGHT — LIGHTER-THAN-AIR

- Height of marks on lighter-than-air aircraft **other than unmanned free balloons** shall be **at least 50 cm**.
- Measurements for **unmanned free balloons** shall be **determined by the State of Registry**, taking into account the **size of the payload** to which the identification plate is affixed.

WHERE MARKS SIT ON A HEAVIER-THAN-AIR AIRCRAFT — AND HOW TALL

HEAVIER-THAN-AIR

All characters in one group must be equal height.

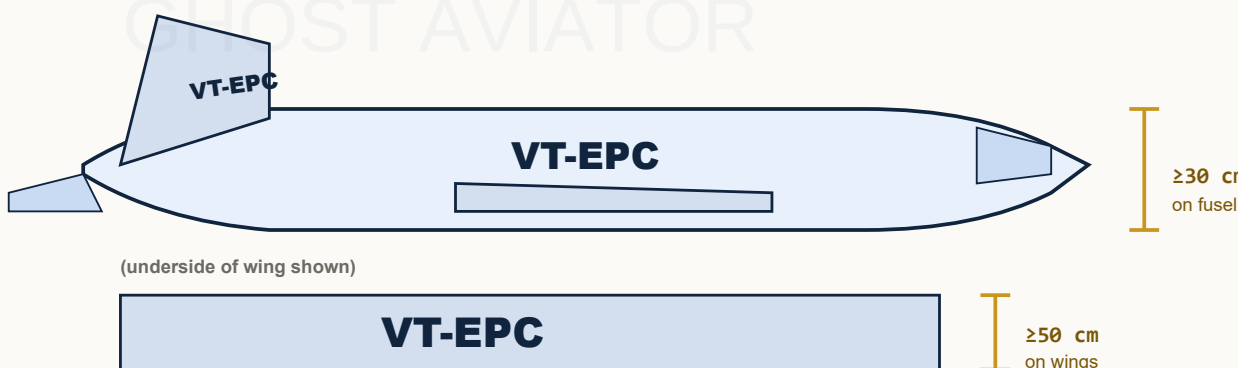


Table 4.1 — Quick-Reference: Minimum Character Heights

AIRCRAFT TYPE	LOCATION	MINIMUM HEIGHT
Heavier-than-air	Wings	50 cm
	Fuselage (or equivalent structure) & vertical tail surfaces	30 cm
Lighter-than-air	All types except unmanned free balloons	50 cm
	Unmanned free balloons	Determined by the State of Registry based on payload size

★ **MEMORY HOOK**

"Fifty on wings, thirty on the fuselage." Lighter-than-air airships and balloons follow the same 50 cm rule as the wings — because on those bodies the mark is *the only* mark visible.

5 National Provisions — Certificate, Cancellation, Register

Annex 7 sets the international rulebook; the CAR then bolts it into Indian law. Three practical items to know: who issues the Certificate of Registration, what it contains, and when the DGCA can pull it.

5.1 Certificate of Registration

① **AUTHORITY TO REGISTER**

The authority empowered to **register aircraft and grant the Certificate of Registration in India** shall be the **Central Government**.

✓ PARTICULARS ON THE CERTIFICATE OF REGISTRATION

The certificate shall include the following:

- **Type of aircraft;**
- **Constructor's number;**
- **Year of manufacture;**
- **Nationality and registration marks** (as referred to under these rules);
- **Full name, nationality and address of the owner;**
- **Usual station of aircraft;**
- **Date of registration;**
- **Period of validity.**

Leased aircraft — additional entries: the certificate shall **also include the validity of the lease** and the **names, nationalities and addresses of the lessor and the lessee.**

5.2 Cancellation of Registration

⚠ GROUNDS ON WHICH THE DGCA MAY CANCEL

The registration of an aircraft registered in India **may be cancelled at any time by the DGCA**, if satisfied that:

1. Such registration is **not in conformity with the provisions of the rules**; or
2. The registration has been obtained by **furnishing false information**; or
3. The aircraft could **more suitably be registered in some other country**; or
4. The aircraft has been **destroyed or permanently withdrawn from use**; or
5. It is **inexpedient in the public interest** that the aircraft should remain registered in India; or
6. The **lease** in respect of the aircraft: (i) has **expired**, (ii) has been **terminated by mutual agreement** between the lessor and the lessee, or (iii) has been **otherwise terminated** in accordance with the provisions of the Lease Agreement or terms of the lease; or
7. The **Certificate of Airworthiness** in respect of the aircraft has **expired for a period of five years or more.**

CANCELLATION OF REGISTRATION — THE SEVEN DGCA TRIGGERS

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Aircraft registered in India

1. Registration not in conformity with the rules

2. Registration obtained by furnishing FALSE information

3. Aircraft could more suitably be registered in another country

4. Aircraft DESTROYED or permanently WITHDRAWN from use

5. Inexpedient in the PUBLIC INTEREST for aircraft to remain registered

6. LEASE expired / terminated / mutually or otherwise ended

7. C of A expired for 5 YEARS OR MORE



DGCA may CANCEL the registration

5.3 Register of Aircraft

✓ THE REGISTER — PUBLIC RECORD

A **register of aircraft registered in India shall be maintained by the Director-General** and shall include the same particulars as those provided in the Certificate of Registration. The register shall be **open to inspection by members of the public** at such times and subject to such conditions as may be specified by the Director-General. The **Register of Aircraft is also available on the DGCA website.**

★ EXAM HOOK — VALIDITY OF REGISTRATION

A Certificate of Registration is **not time-limited**. It remains valid from the date of registration **until it is cancelled by the DGCA** on one of the grounds above — not for a fixed year, and not merely until the aircraft is destroyed (destruction is one of several triggers, not the only one).

6 How Indian Marks Are Affixed — VT, VU & U

India's ITU allocation and its actual on-airframe practice are two different stories — a favourite examiner trap. Get both straight.

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6.1 ITU Allocation vs. Actual Practice

⚠ ALLOCATED VS. USED

- India has been **allotted nationality symbols** AT to AW by the ITU.
- However, India **continues to use pre-Independence nationality marks**.
- Civil aircraft: VT.
- Air Force aircraft: VU.
- Unmanned aircraft registered in India: U followed by **6 alpha-numeric characters** (0–9 or A–Z), e.g. UB67DFC.

ANATOMY OF AN INDIAN CIVIL REGISTRATION



NATIONALITY MARK **HYPHEN**
(CIVIL = VT)

REGISTRATION
(3 ROMAN LETTERS)

Air-Force example: **VU-AWB** • Unmanned example: **UB67DFC** (U + 6 alpha-numeric)

① THE RULE — NATIONALITY & REGISTRATION MARKS TOGETHER

The nationality mark is followed by a **hyphen** and a registration mark **consisting of 3 letters** — e.g. VT-EPC or VU-AWB — in **Roman character without ornamentation**.

Table 6.1 — Indian Nationality Marks At a Glance

AIRCRAFT TYPE	NATIONALITY MARK	FORMAT	EXAMPLE
Civil	<u>VT</u>	VT – 3 Roman letters, no ornamentation	VT-EPC
Air Force	<u>VU</u>	VU – 3 Roman letters, no ornamentation	VU-AWB
Unmanned (India)	<u>U</u>	U + 6 alpha-numeric characters (0–9 or A–Z)	UB67DFC

6.2 How the Marks Are Affixed

✓ THE MARKS SHALL:

- a. Be **painted on the aircraft**, or fixed by any other means ensuring a **similar degree of permanency**, in the form and manner specified by the Director-General from time to time;
- b. Be **inscribed together with the full name and address of the registered owner** on the owner's name plate, in the form and manner specified by the Director-General from time to time; and
- c. **Always be kept clean and visible.**

★ EXAM TRAP

The nationality marks **allotted** to India by ITU are **AT to AW** (not VT or VU). The nationality marks **actually used** in India are **VT, VU and U**. Two different questions, two different answers — do not confuse them.

7 Use of State Marks

The exterior of an aircraft is legally regulated real estate. What may — and may not — be displayed on it is spelled out plainly.

⚠ THE NO-ADVERTISEMENT RULE

An aircraft **shall not bear on any part of its exterior surface any Advertisement or any sign or lettering except** those under these rules and **as required or permitted by the Director-General.**

✓ WHAT IS PERMITTED

- The **name of the aircraft** and the **name and emblems of the owner** may be displayed **if** the location, size, shape and colour of the lettering and signs:
 - Do **not interfere** with easy recognition of, and
 - Are **not capable of confusion** with, the nationality and registration marks of the aircraft.
- **National flags or colours** may be displayed on the aircraft in such a manner that they are **distinct** and **not likely to create confusion** with the markings used by military aircraft.

⚠ STATE AIRCRAFT MARKS ARE OFF-LIMITS

An aircraft **other than a State aircraft shall not bear any mark or sign prescribed for use by a State aircraft**. Civil aircraft may not "impersonate" military/state markings.

8 Leasing — Lessor, Lessee, IFSC & GIFT City

Modern airline fleets are largely leased. India's new leasing hub — IFSC/IFSCA at GIFT City — is a favourite recent examiner topic.

8.1 Definitions

Table 8.1 — The Four Terms You Must Know

TERM	DEFINITION
Lease	An agreement by a person (the lessor) to furnish an aircraft to another person (the lessee) to be used for compensation or hire purposes , for a specified period or a defined number of flights .
Lessor	The party furnishing the aircraft under a lease.
Lessee	The party using the aircraft under the provisions of a lease.
Leasing Company — GIFT City	Leasing companies/entities registered with IFSC and approved by IFSCA for undertaking leasing of aircraft.

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8.2 Who Operates The Aircraft?

⚠ THE OPERATIONAL CONTROL RULE

The **lessee operator** of the aircraft **must hold the necessary economic and operating authority** for the aircraft and **must exercise operational control over the aircraft**.

Accordingly, the **lessee must provide**:

- The necessary **flight and cabin crew** members;
- **Ground personnel**;
- **Dispatchers**; and
- **Ground facilities** to operate the aircraft.

THE LEASE RELATIONSHIP — WHO OWNS, WHO OPERATES, WHO APPROVES



8.3 IFSC, IFSCA & GIFT City

① THE THREE INSTITUTIONS

- **IFSC (International Financial Services Centre)** — a financial centre that caters to customers **outside the jurisdiction of the domestic economy**.
- **IFSCA (International Financial Services Centres Authority)** — the **unified authority for the development and regulation of financial products, financial services and financial institutions** in the IFSC in India.
- **GIFT City – Gujarat International Finance Tec-city SEZ** is India's **first International Financial Services Centre** under the **Special Economic Zone Act, 2005**. It is headquartered at **GIFT City, Gandhinagar in Gujarat**.

★ EXAM HOOKS — LEASING

- Operational control over the leased aircraft is exercised by the **lessee**.
- A company undertaking to lease aircraft in India must be approved by the **IFSCA** (not DGCA, not MOCA).
- GIFT City is in **Gandhinagar, Gujarat**, under the **SEZ Act, 2005**.

9 Practice Question Bank — 15 MCQs

① HOW TO USE THIS BANK

All **15 questions** from the chapter are reproduced below. The **correct option is highlighted green and marked ✓**, with a one-line rationale. A consolidated **answer key grid** follows.

1 The registration mark shall be letters, numbers or a combination of letters and numbers, and shall be that assigned by:

A The International Telecommunication Union

B The state of registry or common mark registering authority ✓ Correct

C The state of registry only

Why: *ITU allots the underlying symbols, but the individual registration mark itself is assigned by the State of Registry (or the common-mark registering authority for joint operations).*

2 The common mark shall be selected from the series of symbols included in the radio call signs allocated:

A To state of the operator

B To the International Civil Aviation Organisation by the International Telecommunication Union ✓ Correct

C To the state of registry by the International Civil Aviation Organisation

Why: *The common-mark series (4YA–4YZ) is allocated by the ITU to ICAO for use by common-mark registering authorities.*

3 The assignment of the common mark to a common mark registration authority will be made by:

A The International Civil Aviation Organisation ✓ Correct

B The state of registry

C The International Telecommunication Union

Why: *ICAO takes the pool of symbols provided by ITU and assigns a common mark to each common-mark registering authority.*

4 When letters are used for the registration mark, combinations shall not be used which might be confused with urgent or distress signals, for example:

A XXX ✓ Correct

B RCC

C DDD

Why: XXX is a radio-telegraphy urgency signal — expressly listed alongside PAN and TTT as an example to avoid.

5 When letters are used for the registration mark, combinations shall not be used which might be confused with:

A Three-letter combinations used in the international code of signals

B Four-letter combinations beginning with Q

C Five-letter combinations used in the international code of signals ✓ Correct

Why: Annex 7 specifies avoiding five-letter combinations from Part II of the International Code of Signals (and three-letter combinations beginning with Q — the Q Code).

6 The height of the marks on the fuselage (or equivalent structure) and on the vertical tail surfaces of heavier-than-air aircraft shall be:

A At least 20 centimetres

B At least 40 centimetres

C At least 30 centimetres ✓ Correct

Why: Fuselage / vertical tail marks — minimum 30 cm.

7 The height of the marks on lighter-than-air aircraft other than unmanned free balloons shall be at least:

A 60 centimetres

B 50 centimetres ✓ **Correct**

C 1 meter

Why: *Lighter-than-air (airships, manned balloons) — minimum 50 cm. Unmanned free balloons are the exception (set by the State of Registry).*

8 When letters are used for registration mark, combinations shall not be used which might be confused with urgent signals, for example:

A LLL

B PAN ✓ **Correct**

C RCC

Why: *PAN is the radio-telephony urgency signal — expressly listed in the rule.*

9 When letters are used for registration mark, combinations shall not be used which might be confused with urgent signals, for example:

A LLL

B TTT ✓ **Correct**

C RCC

Why: *TTT is the radio-telegraphy safety signal — listed alongside XXX and PAN.*

10 The height of the marks under the wings of heavier-than-air aircraft shall be at least:

A 50 centimetres ✓ **Correct**

B Between 40 and 50 centimetres

C 60 centimetres

Why: Wing marks — minimum 50 cm on heavier-than-air aircraft.

11 A certificate of registration is valid from the date of registration to:

A 1 year

B Till the aircraft is destroyed in an accident

C Till it is cancelled by DGCA ✓ **Correct**

Why: The certificate has no fixed expiry — it remains valid until DGCA cancels it (destruction is only one of seven cancellation grounds).

12 Nationality marks allotted to India by ITU are:

A Letters VT and VW, both included

B Letters VT only

C Letters AT to AW ✓ **Correct**

Why: ITU allotted AT–AW to India, though India continues to use pre-Independence VT and VU in practice.

13 Nationality marks used in India are:

A Letters VT, VU and U ✓ **Correct**

B Letters VT and VU only

C Letters AT to AW

Why: VT for civil, VU for Air Force, and U + 6 alpha-numeric characters for unmanned aircraft.

14 Who exercises operational control over the leased aircraft?

A Lessor

B Lessee ✓ Correct

C IFSC

Why: The lessee must hold the economic and operating authority and provide the crew, dispatchers and ground facilities — operational control sits with the lessee.

15 A company undertaking to lease aircraft in India must be approved by:

A DGCA

B IFSCA ✓ Correct

C MOCA

Why: Aircraft-leasing companies at IFSC (GIFT City) are approved by the IFSCA.

Consolidated Answer Key — All 15 Questions

Quick-Reference Answer Grid

Q	A	Q	A	Q	A	Q	A	Q	A
1	B	4	A	7	B	10	A	13	A
2	B	5	C	8	B	11	C	14	B
3	A	6	C	9	B	12	C	15	B

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