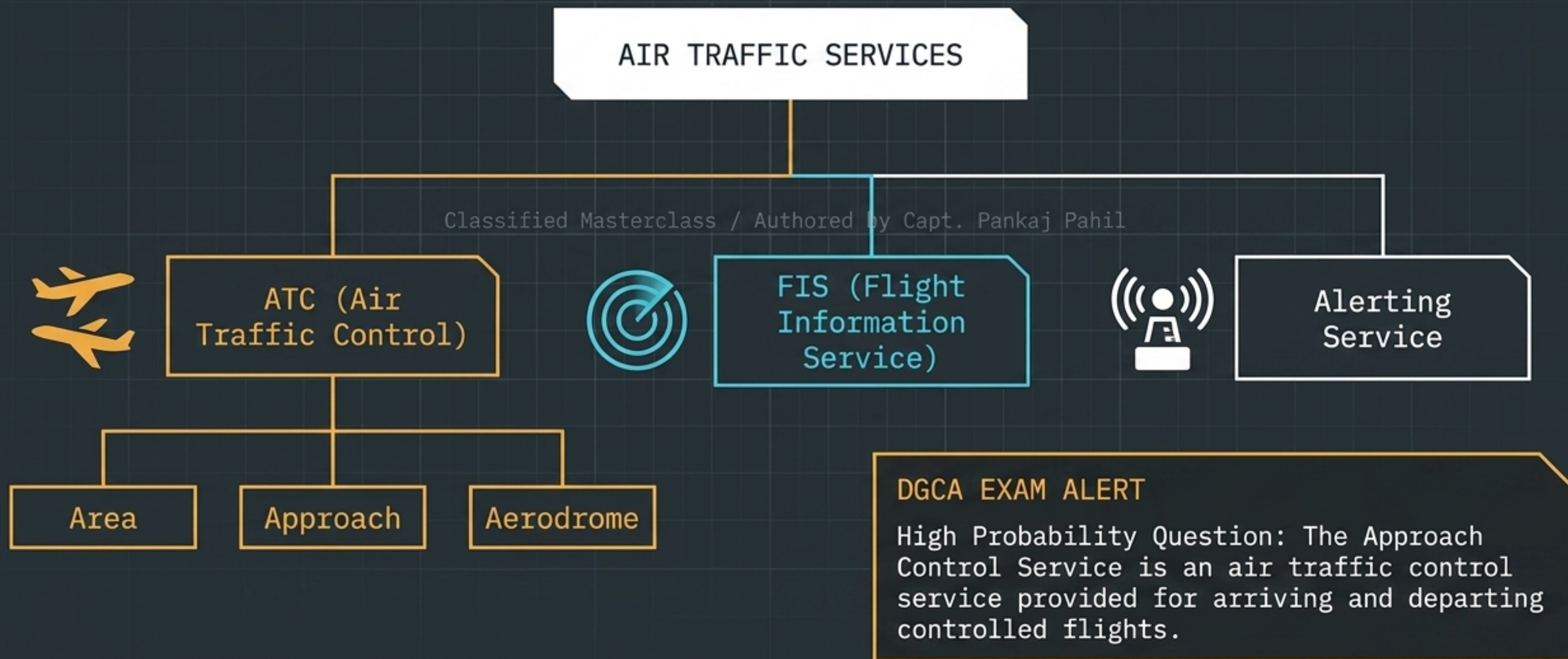


# The Prime Directive: Objectives & Divisions of ATS

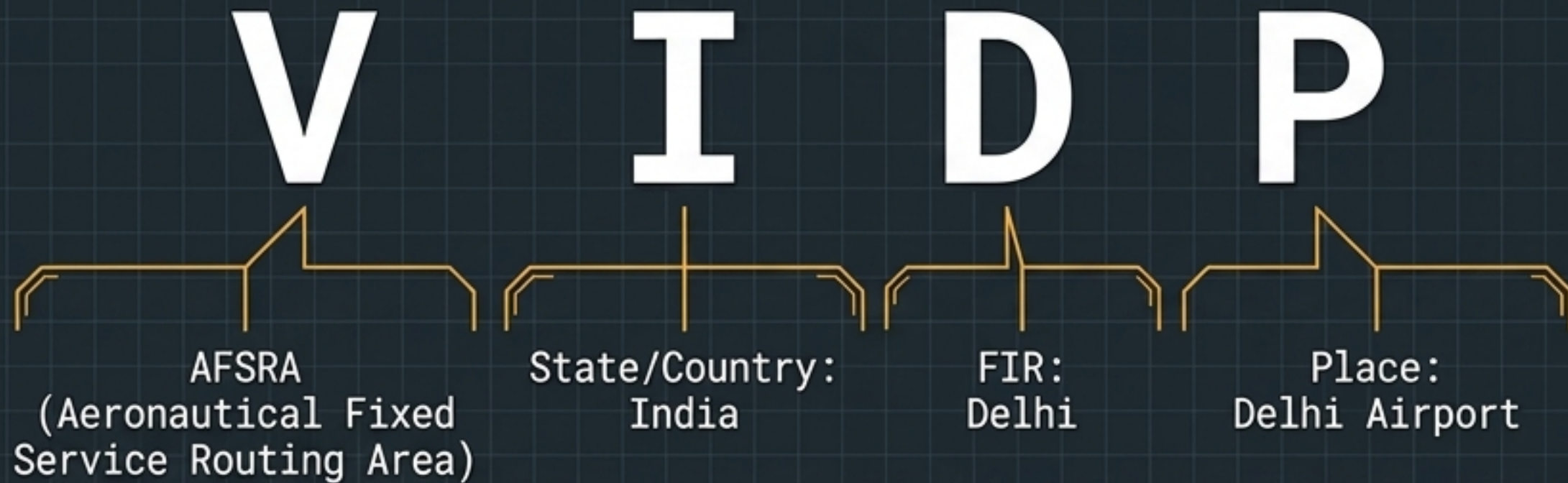
Air Traffic Services (ATS) exist to establish order in the sky, primarily by preventing metal-on-metal contact and expediting traffic flow, while providing essential safety data.



# Global Airspace Geography: Decoding FIR Location Indicators

Every aviation facility globally is assigned a 4-letter **ICAO Location Indicator**. Understanding this code instantly reveals the geographical hierarchy of the station.

## Decoding Tree



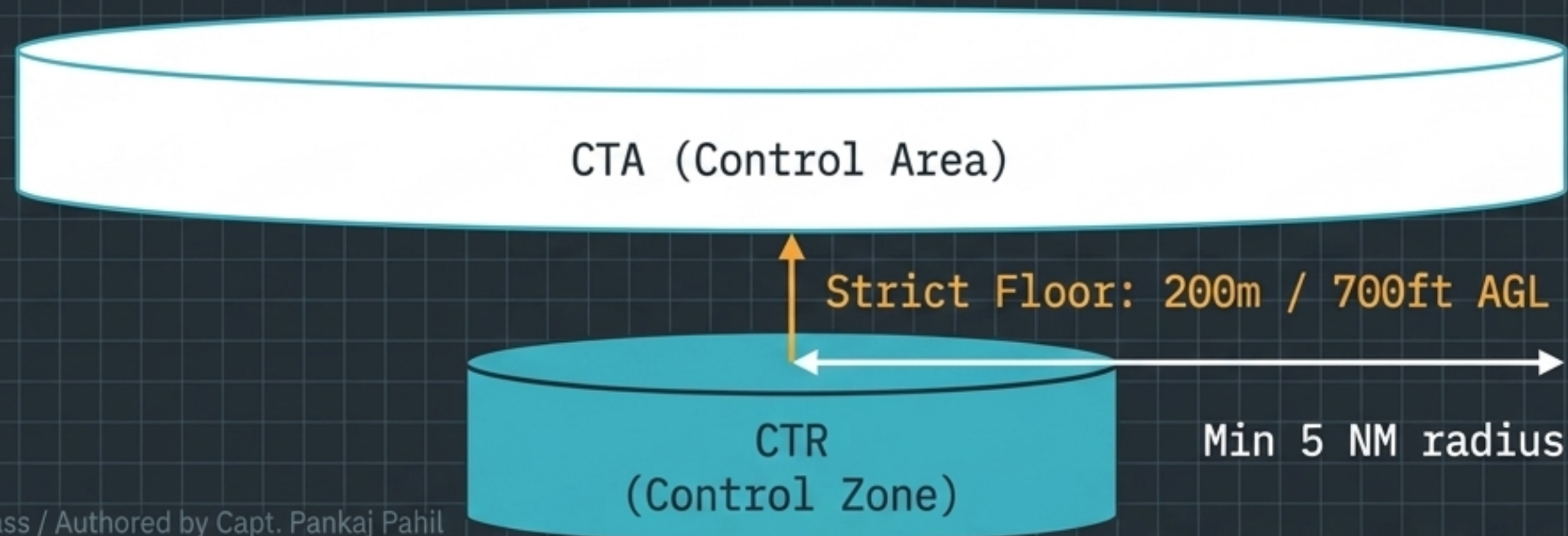
### DGCA EXAM ALERT

High Probability Question: Which of the following airspace falls under Kolkata FIR? (Look for the 'E' identifier, e.g., VEB/VED).

# Controlled Airspace Architecture: CTA vs. CTR

Controlled airspace is structured in specific geometric volumes to protect aircraft during different phases of flight.

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- CTA: Never touches the surface.
- CTR: Starts from the surface to protect arriving/departing IFR traffic.

## DGCA EXAM ALERT

High Probability Question: A lower limit of a Control Area shall be established at a height above the ground level or water of not less than 200 metres.

# ATS Classification Matrix: The Controlled Tiers (A, B, C)

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Class	Flights Permitted	Separation Provided	Speed Limit
A	IFR only	All aircraft separated	Not applicable
B	IFR & VFR	All aircraft separated from all aircraft <b>VFR from VFR separation</b>	Not applicable
C	IFR & VFR	IFR from IFR/VFR. VFR receives traffic info regarding VFR	250kt IAS below 10,000ft AMSL

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## EXAM TIP



Class B is the ONLY airspace where ATC takes responsibility for separating VFR from VFR. In Class C, VFR must see-and-avoid other VFR.

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## DGCA EXAM ALERT

High Probability Question: An ATS airspace where IFR and VFR flights are permitted... VFR flights receive traffic information in respect of other VFR flights, is classified as Class C.

# ATS Classification Matrix: Advisory & Uncontrolled (D, E, F, G)

Class	Flights Permitted	Separation Provided	Speed Limit	ATC Clearance / Comms (VFR)
<b>D</b>	IFR & VFR	IFR separated from IFR. VFR gets traffic info	250kt below 10,000ft	Required
<b>E</b>	IFR & VFR	IFR separated from IFR	250kt below 10,000ft	<b>NO CLEARANCE / NO RADIO</b>
<b>F</b>	IFR & VFR	Advisory airspace	250kt below 10,000ft	No clearance
<b>G</b>	IFR & VFR	Uncontrolled / FIS only	250kt below 10,000ft	No clearance

## 👁️ EXAM TIP

As airspace becomes less congested, restrictions loosen. The burden of separation shifts from ATC to the pilot's visual lookout.

## DGCA EXAM ALERT

High Probability Question: To perform a VFR flight in airspace classification E, a clearance is not required / two-way radio communication is not required.

# Special Operations Airspace: Prohibited, Restricted, Danger

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**P - PROHIBITED**

Flight not permitted at ANY time under ANY circumstances.

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**R - RESTRICTED**

Flight restricted according to specific, strict conditions.

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**D - DANGER**

Activities dangerous to flight exist at specified times (notified by NOTAM). Pilots are cautioned but not **legally banned**.

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## CODE DECONSTRUCTION

# VO (R) - 81

AFSRA

Chennai FIR

Restricted Status

Identifier Number  
(unduplicated within state)

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## DGCA EXAM ALERT

High Probability Question:  
Identify the components of a special use airspace designator.  
Numbers are unduplicated within the state or territory.

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# Military Airspace Dynamics: TSA vs. TRA

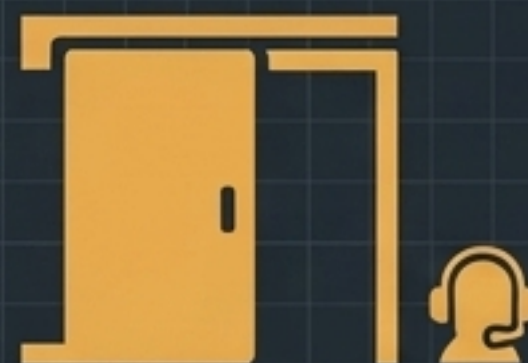
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## TSA (Temporary Segregated Area)

Exclusive use for a specific user. **NO OTHER TRAFFIC** allowed to transit under any circumstances.

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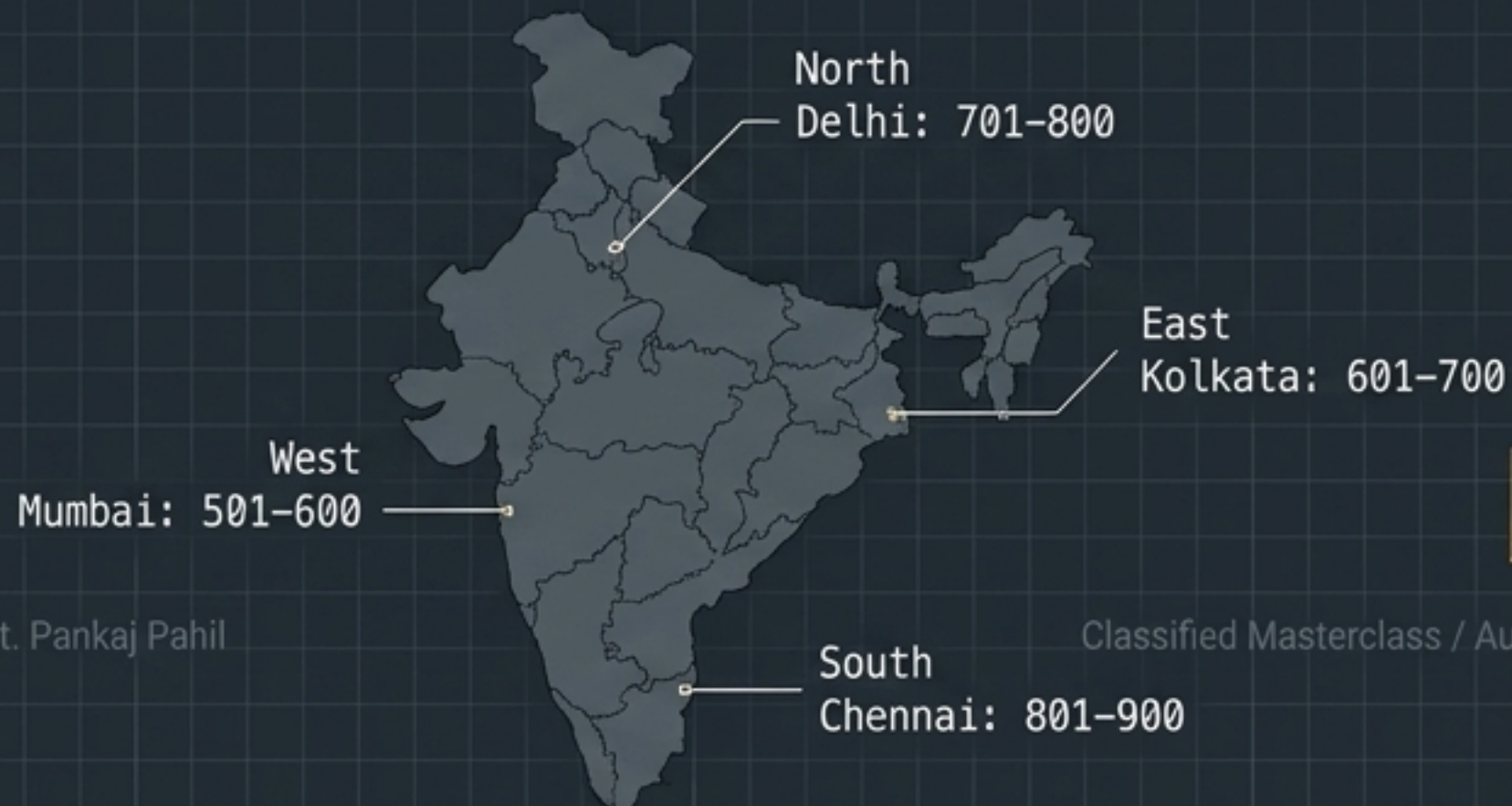


## TRA (Temporary Reserved Area)

Specific use, but other traffic **MAY** be allowed to transit strictly under ATC clearance.

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### DGCA EXAM ALERT

**High Probability Question:** TSA801(A) is an airspace temporarily segregated and allocated in Chennai FIR.

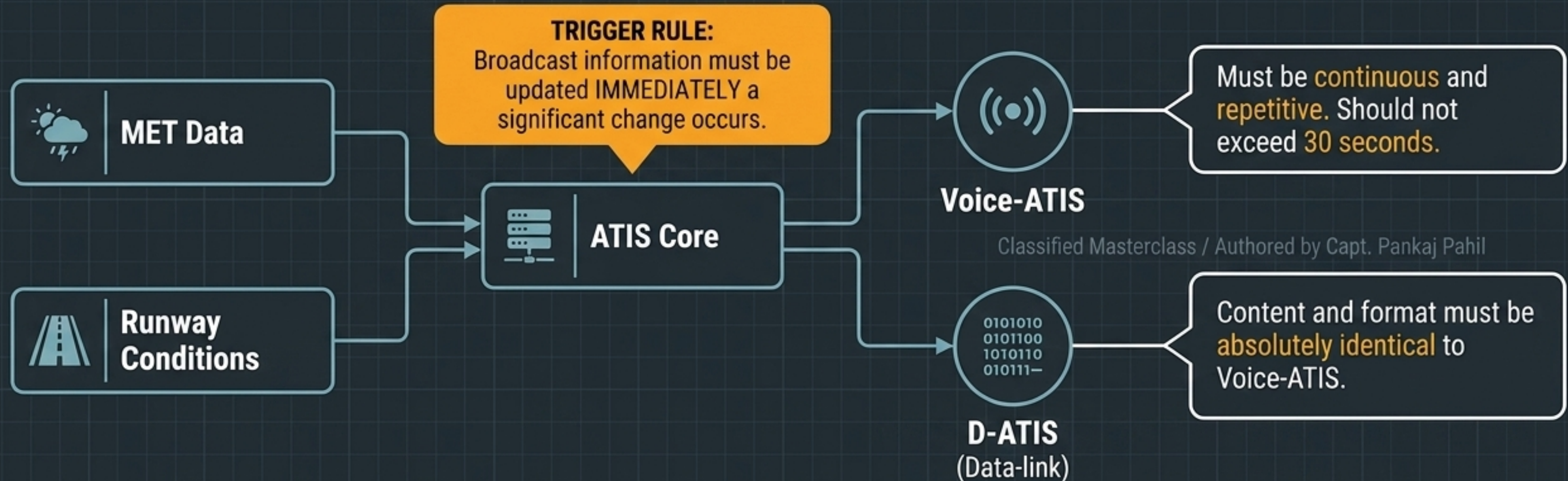


# Terminal Automation: Voice-ATIS & D-ATIS Parameters

ATIS reduces VHF channel congestion by broadcasting routine terminal weather and runway conditions on a continuous automated loop.

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## DGCA EXAM ALERT

**High Probability Question:** Whenever ATIS is provided, the broadcast information shall be updated immediately a significant change occurs.

# Voice Protocols: Mandatory ATC Read-Back Clearances

Safety-critical instructions require a strict verbal read-back to ensure the pilot has perfectly understood and committed to the controller's directive.



CLEARED TO LAND  
RUNWAY 27L,  
ALT 3000FT,  
HEADING 250

## MANDATORY READ-BACK ITEMS:

- ATC route clearances
- Clearances to enter, land on, take off from, hold short of, cross, and backtrack on any runway
- Runway-in-use and altimeter settings
- SSR codes, level instructions, heading, and speed

CLEARED TO LAND  
RUNWAY 27L,  
ALT 3000FT,  
HEADING 250



## EXAM TIP



**CPDLC Exception:**  
Voice read-back of CPDLC (Data-link) messages is strictly NOT required.

## DGCA EXAM ALERT

**High Probability Question:** Read-back of clearances...  
The flight crew shall read back: clearances to enter, land on, take off from, hold short of, cross and backtrack on any runway.

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# Alerting Service Escalation Phase I: INCERFA

## The Uncertainty Phase



30 MINUTES

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### TRIGGERS FOR INCERFA (UNCERTAINTY PHASE):

- TRIGGER 1: NO communication received within 30 minutes after a communication should have been received, or from the time an unsuccessful attempt to establish communication with such aircraft was first made, whichever is the earlier.
- TRIGGER 2: Aircraft fails to arrive within 30 minutes of the estimated time of arrival (ETA) last notified to or estimated by air traffic services units, whichever is the later, except when no doubt exists as to the safety of the aircraft and its occupants.

### EXAM TIP

30 is the critical trigger number for Uncertainty. If a scenario mentions "30 minutes", it is almost always pointing to the INCERFA phase.

### DGCA EXAM ALERT

High Probability Question: An aircraft fails to arrive within 30 minutes of the ETA which was last notified to ATC. Which phase is this? -> INCERFA.

# Alerting Service Escalation Phase II: ALERFA

The Alert Phase (Apprehension)



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## TRIGGERS FOR ALERFA (ALERT PHASE):

- **TRIGGER 1:** Aircraft cleared to land fails to land within 5 minutes of ETA, and comms have not been reestablished.
- **TRIGGER 2:** Known or believed to be subject to unlawful interference (hijacking).
- **TRIGGER 3:** Operating efficiency impaired, but not to the extent that a forced landing is likely.

## EXAM TIP

Unlawful interference completely bypasses INCERFA and goes straight to ALERFA. Failing to land 5 minutes after clearance is also an immediate trigger.

## DGCA EXAM ALERT

**High Probability Question:** Which of the following statements describes the Alert Phase (ALERFA)?

An aircraft which has been cleared to land fails to land within 5 minutes of the ETA.

# Alerting Service Escalation Phase III: DETRESFA

The Distress Phase (Grave and Imminent Danger)



INCERFA

ALERFA

## TRIGGERS FOR DETRESFA (DISTRESS PHASE):

- TRIGGER 1: Fuel on board is considered to be exhausted, or insufficient to reach safety.
- TRIGGER 2: Operating efficiency impaired to the extent that a forced landing is likely.
- TRIGGER 3: Reasonable certainty that the aircraft and occupants are threatened by grave and imminent danger.

## EXAM TIP

In DGCA exams, 'Fuel on board is considered to be exhausted' is the definitive answer for triggering a DETRESFA distress phase.

## DGCA EXAM ALERT

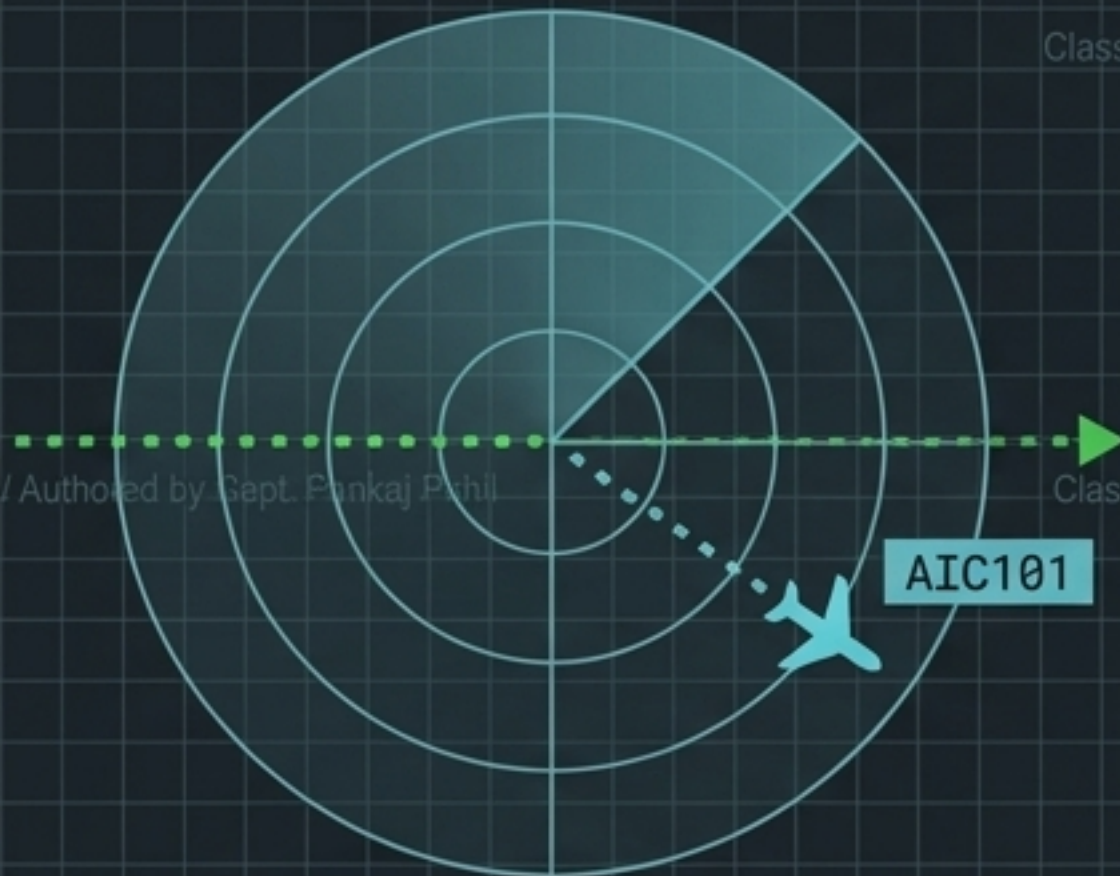
High Probability Question:  
DETRESFA is where:

The fuel on board is considered to be exhausted.

# Radar Diagnostics: Strayed vs. Unidentified Aircraft

When ATC observes an anomaly on radar, they must classify it correctly to apply the right operational procedures. Do not mix these definitions up on the exam.

## STRAYED AIRCRAFT



**STRAYED AIRCRAFT:** Identity is **KNOWN**, but has **deviated significantly** from its intended track or reports that it is lost.

## UNIDENTIFIED AIRCRAFT



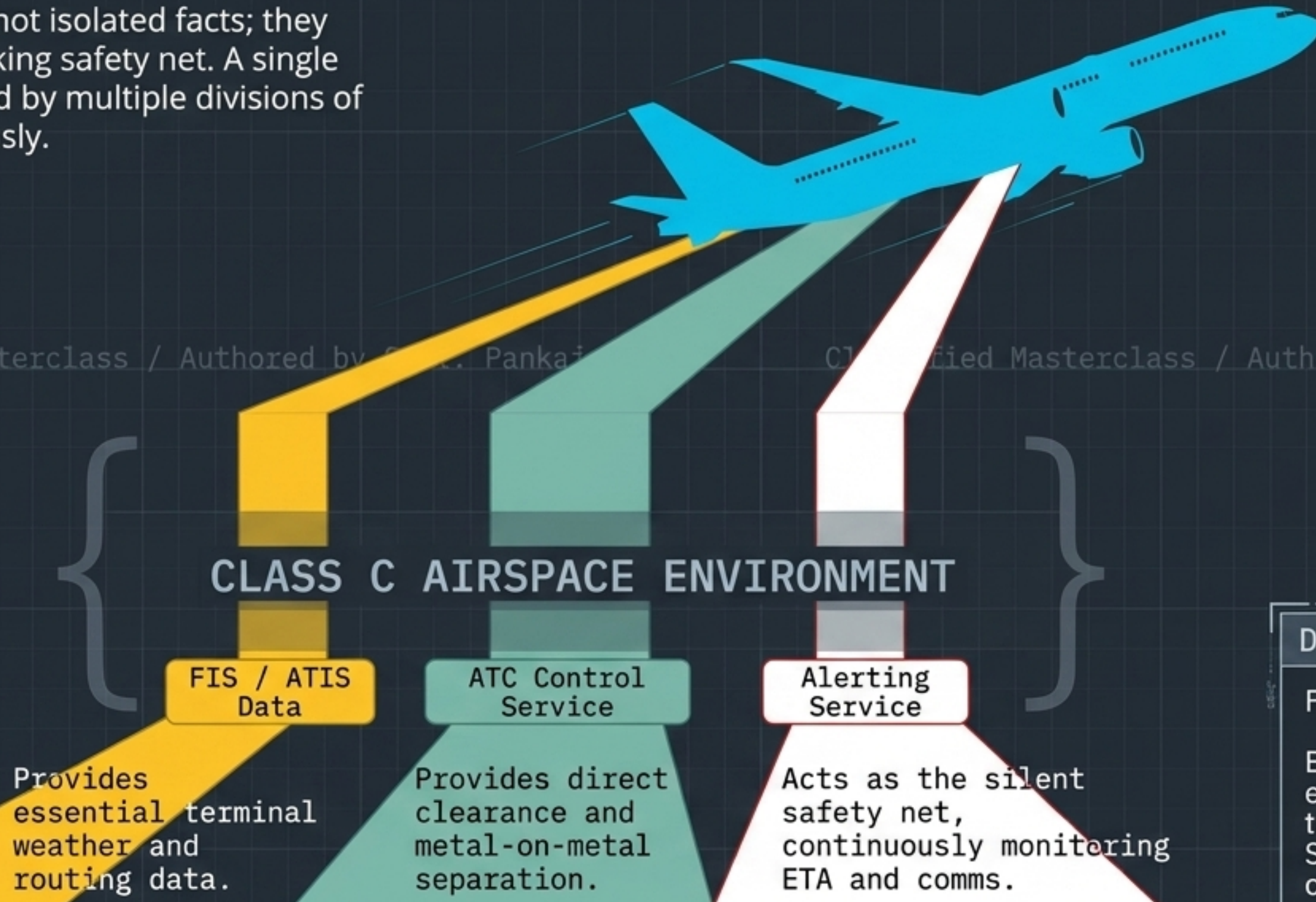
**UNIDENTIFIED AIRCRAFT:** Aircraft observed or reported in a given area, but identity is completely unknown.

### DGCA EXAM ALERT

High Probability Question:  
A strayed aircraft is an aircraft:  
that has deviated significantly from  
its intended track or reports that  
it is lost.

# Masterclass Synthesis: The Interconnected ATS Ecosystem

Regulations are not isolated facts; they form an interlocking safety net. A single flight is protected by multiple divisions of ATS simultaneously.



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## DGCA EXAM ALERT

Final Masterclass Reminder:

Exam success lies in taxonomy. Read every scenario twice to determine if the question is asking about Separation (ATC), Information (FIS), or Emergency (Alerting).