

[DGCA]

[ICAO ANNEX 2]



# RULES OF THE AIR: VISUAL STUDY GUIDE

High-Yield Visualizations & Mental Models  
for DGCA Exam Prep

Capt. Pankaj Pahil - Authorized

Authorized Study Material

[RESPONSIBILITY]

[ALTITUDE]



### Acrobatic Flight

Must be >600m (2000ft) AGL, not within 2 NM of aerodrome perimeter unless >1800m height, and prohibited over congested areas.



### Minimum Safe Safe Heights

No flying over congested areas or open-air assemblies unless at a height permitting safe landing in emergencies.



### Pre-Flight

Familiarization with current weather, fuel requirements, and alternative courses of action.



### Substances

Zero tolerance for problematic psychoactive substances impairing human performance.

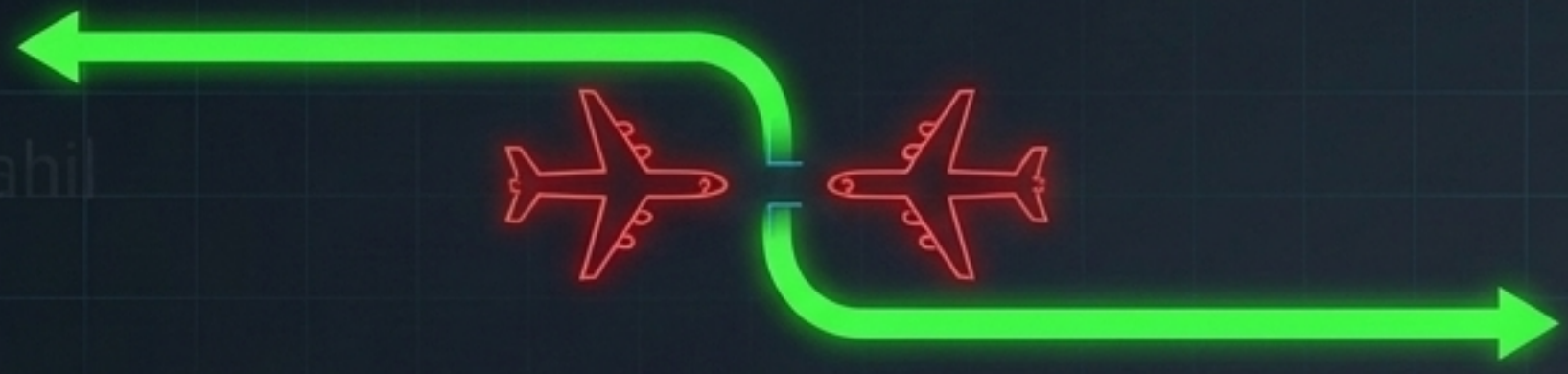
# PIC Authority

TIME  
08:45:22 UTC

[IN-FLIGHT]

[COLLISION AVOIDANCE]

### APPROACHING HEAD-ON



Both aircraft alter heading to the RIGHT.

ALTITUDE 6000 FT - HEADING 090/270

### CONVERGING



Aircraft that has the other on its RIGHT gives way.  
(Power-driven gives way to airships/gliders/balloons).

ALTITUDE 5000 FT - CROSSING PATHS

### OVERTAKING



Approaching from rear at an angle  $<70^\circ$ . The overtaking aircraft alters heading to the RIGHT to keep clear.

ALTITUDE 4000 FT - OVERTAKING ANGLE  $<70^\circ$

### LANDING



Aircraft in flight gives way to aircraft landing.  
If two are landing, the lower aircraft has priority.

ALTITUDE 1500 FT / 1000 FT - APPROACH PRIORITY

# [NIGHT OPS]





# [LIGHTS]

**Red Light**  
(Port/Left side,  
110° coverage)

**Green Light**  
(Starboard/Right  
side, 110° coverage)

**White Light**  
(Tail/Rearward,  
140° coverage)

## Visual Cues & Rules

	Seeing <b>Red &amp; Green</b> = Head-on (Danger)
	Seeing just <b>White</b> = Aircraft is flying away from you
	Seeing <b>Red &amp; White</b> = Aircraft moving right to left
	Seeing <b>Green &amp; White</b> = Aircraft moving left to right

[IFR]

[VFR]

[NAVIGATION]



### CVSM vs. RVSM

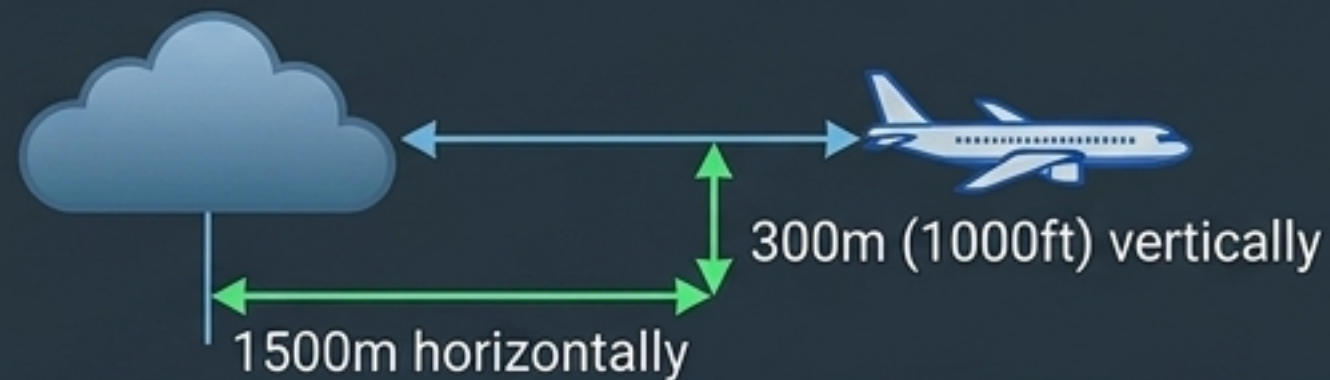
1	Below FL290	1000ft separation
2	Above FL290 (RVSM)	1000ft separation up to FL410
3	Non-RVSM airspace above FL290	2000ft separation

[VFR]

[WEATHER]



8km Flight Visibility



5km Flight Visibility

5km Flight Visibility. Clear of cloud and with the surface in sight.

**Special VFR:** Authorized in control zones when ground visibility is not less than 1500m (1000m for helicopters).



## DELAYS

ATC MUST BE NOTIFIED IF DELAYED BY > **15 MINUTES** OR MORE FROM DEPARTURE TIME OF FILED FLIGHT PLAN.

## SUBMISSION WINDOW

## ADHERENCE & DEVIATIONS

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AT LEAST 180 MINUTES (3 HRS) BEFORE EOBT, BUT NO EARLIER THAN 120 HOURS.

- REGAIN TRACK AS SOON AS PRACTICABLE IF OFF TRACK.
- INFORM ATC IF TRUE AIRSPEED VARIES BY +/- MACH 0.02 OR +/- 19 KM/H (10 KT).
- NOTIFY IF TIME ESTIMATE CHANGES BY >2 MINUTES.

[EMERGENCY]

[COMMUNICATIONS]



## Radio Communication Failure (RCF)

If VMC

Continue in VMC

Land at nearest suitable aerodrome

Report arrival to ATC expeditiously

If IMC

Non-Radar Airspace

Maintain speed/level for **20 minutes** following failure to report over compulsory point, then adjust to filed flight plan.

Radar Airspace

Maintain speed/level for **7 minutes** following reaching minimum flight altitude, setting transponder to 7600, or failure to report, then adjust.

Approach

Commence descent at/as close as possible to Expected Approach Time (EAT) or Estimated Time of Arrival (ETA).

[ATC SIGNALS]

[AERODROME]

# AERODROME INSTRUCTIONS

Light Signal	Aircraft in Flight	Aircraft on Ground
 Steady Green	Cleared to land	Cleared for takeoff
 Steady Red	Give way to other aircraft/circle	Stop
 Series of Green Flashes	Return for landing	Cleared to taxi
 Series of Red Flashes	Aerodrome unsafe, do not land	Taxi clear of landing area
 Series of White Flashes	Land at aerodrome/proceed to apron	Return to starting point
 Red Pyrotechnic	Notwithstanding previous instructions, do not land for the time being.	-

**[AERODROME]**

**[GROUND SIGNALS]**



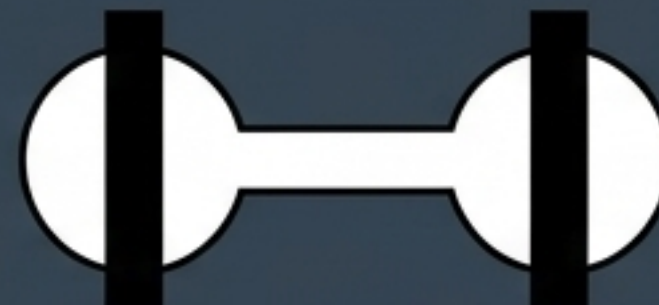
**Prohibition of landing.**



**Need for special precautions while approaching/landing.**



**Use runways and taxiways only.**



**Use runways only (maneuvers not confined).**



**Closed runways or taxiways.**



**Air Traffic Services Reporting Office.**



**Glider flights in operation.**

[INTERCEPTION]

[EMERGENCY]

## Interceptor Aircraft Signals

**Visual:** Rocks wings, flashes nav lights at irregular intervals. → You have been intercepted, follow me.

**Visual:** Abrupt break-away maneuver, climbing turn of 90 degrees or more. → You may proceed.

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## Intercepted Aircraft Responses

**Visual:** Rocks wings, flashes nav lights. → Understood, will comply.

### Radio & Comms Protocol:

- Attempt contact on 121.5 MHz or 243 MHz.
- Set Transponder to Mode A, Code 7700.
- **Phraseology:** CALL SIGN, WILCO (Understood/Comply), CAN NOT (Unable), REPEAT, AM LOST, MAYDAY.

[GROUND OPS]

[MARSHALLING]

# MARSHALLING MOVEMENT SIGNALS

## Identify Gate

Raise fully extended arms straight above head with wands pointing up.



## Straight Ahead

Bend extended arms at elbows and move wands up and down from chest height to head.



## Turn Left

With right arm and wand extended at a 90° angle to body, make "come ahead" signal with left hand.



## Turn Right

With left arm and wand extended at a 90° angle to body, make "come ahead" signal with right hand.



## Normal Stop

Fully extend arms and wands at a 90° angle to sides and slowly move to above head until wands cross.



## Emergency Stop

Abruptly extend arms and wands to top of head, crossing wands.



[GROUND OPS]

[EMERGENCY SIGNALS]

# GROUND & ARFF EMERGENCY SIGNALS



## Set Brakes

Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of thumbs up acknowledgment from flight crew.



## Release Brakes

Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. Do not move until receipt of "thumbs up" acknowledgment from flight crew.



## Chocks Inserted

With arms and wands fully extended above head, move wands inward in a "jabbing" motion until wands touch. Ensure an acknowledgment is received from flight crew.



## Start Engine

Right hand at head level making a circular motion, left arm raised pointing straight out to the engine.



## Cut Engines

Right arm extended with wand drawn horizontally across the throat in a sharp slicing motion.



## ARFF Fire

Right wand making a wide fanning motion from shoulder down to knee, left wand pointing directly horizontally toward the fire area.

Recommend Evacuation:  
Arm extended horizontally, beckoning motion backward.

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[EMERGENCY]

[SECURITY]

[QUICK REFERENCE]

**7700**

**Distress (Grave/Imminent Danger).**  
Transmit: MAYDAY, SOS.  
Visual: Red Flare.

**PAN-PAN**

**Urgency (Difficulties without immediate assistance required).**  
Visual: Repeated switching on/off of landing lights.

**7500**

**Unlawful Interference (Hijacking). Attempt to broadcast on VHF.**  
If forced off track, proceed 150m (500ft) off standard cruising level (if 1000ft separation applies) or 300m (1000ft) off (if 2000ft separation applies).

**7600**

**Radio Communications Failure (RCF)**



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