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PrepAlpine

Email: info@PrepAlpine.com

Website: PrepAlpine.com

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DAILY CURRENT AFFAIRS DATED 11.02.2026

GS Paper II: Current Affairs

1. Structural Challenges in India's Civil Aviation Sector

a. Introduction

Civil aviation is one of the fastest-growing components of India's infrastructure sector. It connects regions, supports trade and tourism, strengthens supply chains, and promotes national integration. For a large and diverse country like India, aviation is not merely a transport service but an instrument of economic cohesion.

India is currently the third-largest domestic aviation market in the world, operating more than 800 aircraft and handling over 350 million passengers annually. Passenger traffic is projected to reach nearly 715 million by 2030.

However, rapid expansion has not been matched by adequate human resource development, regulatory strengthening, and market resilience. The result is a structural imbalance between growth and preparedness.



b. Growth Trajectory of the Aviation Sector

i. Demand-Side Drivers

Rising incomes and middle-class expansion

- Higher disposable income has increased affordability of air travel.
- Aspirational consumption patterns have made flying more common.

Low-cost carrier model

- Budget airlines reduced fares significantly.
- Air travel expanded beyond elite segments to mass consumers.

Regional Connectivity (UDAN Scheme)

- Focus on connecting underserved and unserved airports.
- Promotes balanced regional development.

ii. Infrastructure Expansion

Airport modernisation

- Major airports like Delhi, Mumbai, Hyderabad and Bengaluru upgraded under PPP models.
- Increased passenger-handling capacity and service quality.

Greenfield airports

- Development of new airports such as Noida International Airport.
- Reflects long-term planning for future traffic growth.

iii. Market Structure

- IndiGo holds around 63–65% market share.
- Air India Group controls nearly 27–28%.
- Together they account for almost 90% of domestic traffic.

This duopolistic structure has implications for competition, pricing, and resilience.

c. Major Structural Challenges

i. Pilot Shortage and Human Resource Constraints

Scale of shortage

- Globally, airlines maintain 18–20 pilots per aircraft.
- Indian carriers operate with around 14 pilots per aircraft.
- Short-term requirement: ~7,000 additional pilots.
- Long-term requirement: 25,000–30,000 pilots.

Structural bottlenecks

- Limited number of Commercial Pilot Licences (CPLs).
- High cost of training and type-rating.
- Shortage of simulators and training infrastructure.
- Dependence on temporary foreign pilots.

Operational consequences

- Stretched crew capacity leads to cancellations.
- Limited buffer increases vulnerability during disruptions.

Fleet growth without proportional human capital development has created fragility.

ii. Flight Duty Time Limitation (FDTL) Norms

Purpose

- Regulates maximum flying hours and mandatory rest.
- Ensures safety by preventing fatigue.

Structural mismatch

- Airlines relied on high aircraft utilisation models.
- Stricter norms exposed shortage of pilots.

- Lack of planning created scheduling instability.

The issue lies in inadequate preparedness rather than regulation itself.

iii. Regulatory Capacity Constraints

Institutional limitations

- Directorate General of Civil Aviation (DGCA) faces manpower shortages.
- Limited inspection and audit capacity.

Governance implications

- Rapid fleet expansion requires stronger oversight.
- Safety enforcement becomes difficult without adequate staff.

Infrastructure growth without regulatory strengthening increases systemic risk.

iv. Market Concentration and Duopoly Risks

Reduced resilience

- Disruption in one dominant airline affects overall capacity.
- Smaller cities often depend on a single operator.

Consumer impact

- Limited alternatives during cancellations.
- Fare volatility due to reduced competition.

Market structure therefore affects both stability and affordability.

v. Fuel Cost Volatility

Cost structure

- Aviation Turbine Fuel (ATF) accounts for 30–40% of operating costs.
- Linked to global crude oil prices and exchange rate fluctuations.

Policy factors

- State-level tax variations increase cost differentials.
- Limited fuel hedging compared to global carriers.

Fuel volatility translates into fare instability and financial stress.

vi. Fragility of Regional Airlines

Historical failures

- Kingfisher Airlines.
- Jet Airways.
- Go First.

Structural reasons

- High debt burdens.
- Managerial inefficiencies.
- Thin demand on certain regional routes.

Regional connectivity requires ecosystem support, not merely route allocation.

d. Systemic Nature of the Problem

Indian airlines operate with near-total crew and aircraft utilisation, leaving minimal spare capacity. Globally, airlines maintain 20–25% buffer crew strength. In India, limited operational cushion means minor disruptions escalate into large-scale cancellations.

The challenge is therefore structural: expansion has outpaced institutional capacity, human resources, and regulatory preparedness.

e. Importance of Aviation for India

- Promotes regional integration, especially in remote and Northeastern regions.
- Supports tourism, hospitality, and cargo logistics.
- Facilitates time-sensitive trade and supply chains.
- Generates employment and enhances global competitiveness.

Given this importance, reform must strengthen foundations rather than slow growth.

f. Way Forward

i. Strengthen Pilot Ecosystem

- Expand training academies and simulators.
- Reduce financial barriers to type-rating.
- Undertake long-term workforce planning.

ii. Enhance Regulatory Capacity

- Fill DGCA vacancies.
- Adopt risk-based audits.
- Improve enforcement mechanisms.

iii. Address Market Concentration

- Ensure transparent slot allocation.
- Encourage competition and code-sharing.
- Support financially viable regional carriers.

iv. Rationalise Fuel Costs

- Consider inclusion of ATF under GST.
- Promote fuel hedging practices.
- Provide calibrated tax rationalisation.

v. Strengthen Infrastructure Beyond Metros

- Upgrade tier-two and tier-three airports.
- Improve air traffic management systems.
- Integrate passenger and cargo infrastructure.

Conclusion

India's civil aviation sector reflects impressive expansion but underlying structural vulnerability. The policy priority is to shift from growth in scale to growth in resilience. Sustainable aviation requires strong institutions, adequate human capital, balanced competition, and stable cost structures.

Only with capacity-aligned and safety-centred development can aviation remain a durable engine of inclusive economic growth.

GS Paper III: Security

2. Mandatory Labelling of Photorealistic AI Content: Amendment to the Information Technology Rules

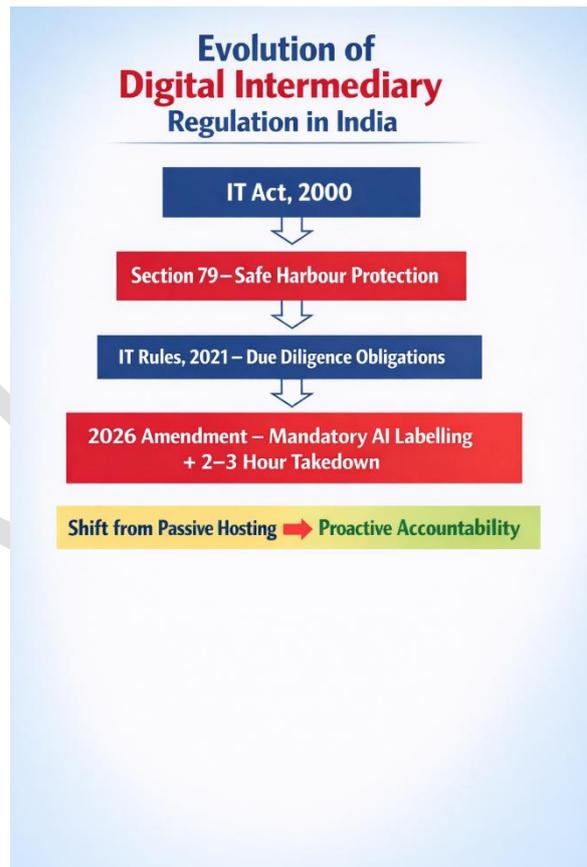
a. Introduction

Artificial Intelligence (AI) can now create highly realistic images, videos and audio clips that look completely authentic but are actually fabricated. Such content is often called synthetic media or deepfakes. A deepfake is digitally manipulated content that imitates a real person's face or voice using AI algorithms.

While these tools have positive uses in films, education and research, they also pose serious risks such as reputational harm, financial fraud, electoral misinformation and even threats to national security.

To address these risks, the Union Government has amended the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules. The amendment mandates clear labelling of photorealistic AI-generated content and introduces stricter compliance timelines for digital platforms. The aim is to improve accountability in the digital ecosystem while protecting constitutional rights.

To understand the significance of this amendment, it is important to first examine the legal background governing digital intermediaries in India.



b. Legal and Regulatory Background

i. Safe Harbour under the IT Act

Section 79 of the Information Technology Act, 2000

- Provides “safe harbour” protection to intermediaries such as social media platforms.
- Intermediaries are not automatically liable for user-generated content if they follow due diligence requirements.

Meaning of Safe Harbour

- It protects platforms from being treated as publishers of user content.
- Protection is conditional upon compliance with government rules.

ii. IT Rules, 2021

Introduced due diligence obligations.

- Grievance redressal mechanisms.
- Content takedown procedures.

Emerging gap

- Rapid increase in deepfakes and AI-enabled impersonation scams.
- Non-consensual intimate imagery and election misinformation exposed regulatory weaknesses.

Thus, the amendment must be seen as a response to technological advancement that outpaced earlier regulation.

c. Key Provisions of the Amendment

i. Mandatory Labelling

Scope

- Any AI-generated or significantly modified content that appears realistic and depicts a natural person or real-world event must be clearly labelled.
- Applies to audio, visual and audio-visual content.

Definition of Synthetic Content

- Content created or altered algorithmically in a way that creates an impression of authenticity.
- Minor automated corrections such as basic photo enhancement are exempted.

ii. Strict Takedown Timelines

Court or government orders

- Content must be removed within three hours.

Sensitive material (e.g., deepfake nudity)

- Must be removed within two hours.

Failure to comply may result in loss of safe harbour protection, making platforms legally liable.

iii. User Disclosure Requirements

- Platforms must seek disclosure from users regarding whether content is AI-generated.
- Responsibility is shared between users and platforms.

These provisions reflect a move from passive regulation to active digital accountability.

d. Why Regulation of Synthetic Media is Necessary

i. Protection of Individual Rights

Right to dignity and privacy

- Article 21 guarantees the right to life and personal liberty.
- The Supreme Court has recognised privacy and reputation as part of Article 21.

Harm caused by deepfakes

- Non-consensual intimate imagery causes severe psychological damage.
- Reputation may be irreparably harmed.

Thus, regulation protects constitutional rights.

ii. Electoral Integrity

- Free and fair elections are part of the basic structure of the Constitution.
- AI-generated misinformation can distort voter perception.
- Even short-term circulation of fake content can influence public opinion.

Regulation therefore safeguards democratic processes.

iii. National Security

- Deepfakes can inflame communal tensions.
- Can be used in misinformation campaigns or psychological warfare.
- May create panic during crises.

Hence, synthetic media regulation has collective security implications.

iv. Consumer Protection

- Voice cloning scams have increased.
- Fraudsters impersonate trusted individuals to extract money.
- Labelling improves transparency and digital trust.

The need for regulation therefore arises from both individual and societal harms.

e. Governance and Regulatory Implications

i. Shift in Regulatory Philosophy

Earlier model

- Platforms acted mainly as passive conduits.

New model

- Greater proactive responsibility.
- Safe harbour linked strictly to compliance.

This reflects a move toward stronger platform accountability.

ii. Administrative Challenges

Technological detection difficulties

- AI detection tools are not fully reliable.
- Risk of false positives and false negatives.

Capacity constraints

- Smaller platforms may lack technical resources.
- Two-to-three-hour timelines require 24/7 monitoring.

Thus, implementation feasibility remains a critical issue.

f. Concerns and Criticisms

i. Freedom of Speech

- Article 19(1)(a) guarantees freedom of expression.
- Restrictions must be “reasonable” under Article 19(2).
- Broad takedown powers may risk arbitrary censorship.

Satire, parody and artistic content may be unintentionally removed.

ii. Risk of Over-Removal

- Platforms may remove content excessively to avoid liability.
- Fear of losing safe harbour may lead to precautionary censorship.

iii. Executive Overreach

- Centralised removal powers may disturb institutional balance.
- Transparent procedures and judicial oversight are essential.

Balancing regulation with constitutional freedoms remains the core governance challenge.

g. Comparative Perspective

- **European Union**
Digital Services Act emphasises transparency, risk assessment and algorithm audits.
- **United States**
State-level laws addressing election-related deepfakes.
- **China**
Mandatory watermarking of AI-generated content.

India's model combines mandatory labelling with strict takedown timelines and links compliance to safe harbour protection.

h. Way Forward

i. Technological Strengthening

- Develop watermarking standards for AI content.
- Encourage collaboration between platforms and research institutions.

ii. Institutional Safeguards

- Independent appellate mechanisms.
- Judicial review of takedown decisions.
- Clear procedural transparency.

iii. Digital Literacy

- Public awareness about identifying deepfakes.
- Inclusion of digital ethics in education.

iv. Policy Harmonisation

- Align AI regulation with Digital Personal Data Protection framework.
- Ensure coherence between privacy, consent and content governance laws.

Conclusion

The amendment mandating labelling of photorealistic AI-generated content represents a significant development in India's digital governance framework. It aims to protect individuals from deepfake harms while reinforcing intermediary accountability through strict timelines and conditional safe harbour protection.

Its long-term success will depend on balanced enforcement, institutional capacity, technological readiness and strong safeguards for freedom of expression. As AI capabilities expand, regulation must evolve carefully to ensure that innovation strengthens democracy instead of weakening it.

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Dear Aspirant,

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While every effort has been made to balance depth with brevity, please keep the following in mind:

1. Orientation & Purpose

This compilation is curated primarily from the UPSC Mains perspective — with emphasis on conceptual clarity, analytical depth, and interlinkages across GS papers.

However, the PrepAlpine team is simultaneously developing a dedicated Prelims-focused Current Affairs Series, designed for:

- factual coverage
- data recall
- Prelims-style MCQs
- objective pattern analysis

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