

BSc Aviation and Tourism

Periyar institute of Distance education

1st YEAR

S.No	Paper code	Subject	Marks	Duration
1		Language 1	100	3
2		English 1	100	3
3		Aviation general rules and regulations	100	3
4		Air Transport overview	100	3
5		Basic principles of Tourism management	100	3
6		Administrative policies of Indian Tourism	100	3

SUBJECT

AVIATION GENERAL ENGINEERING

AIM: To introduce the basic concepts of aerospace engineering and the current developments in the field.

UNIT I AIRCRAFT CONFIGURATIONS

5

OBJECTIVE : To study different types of airplane – Light and Heavy.

Airplane, Components of An Airplane And Their Functions. Different Types of Flight Vehicles, Classifications. Types of Control Systems, Basic Instruments for flying.

UNIT II PRINCIPLES OF FLIGHT

10

OBJECTIVE : To Understand the basic properties and physical principles of flight.

Physical properties and structure of the atmosphere, Temperature, Pressure, Density and Altitude, Generation of Lift and Drag. Aerofoils, Mach Number, Rolling, Pitching and Yawing motions.

UNIT III AIRPLANE STRUCTURES AND MATERIALS

10

OBJECTIVE : To Study different materials used for construction of an airplane.

General types of construction, Monocoque, Semi-Monocoque, Wing and Fuselage Structure. Metallic and Non-Metallic materials, Use of Aluminium Alloy, Titanium, Stainless Steel and Composite materials.

UNIT IV POWER PLANTS USED IN AIRPLANES

10

OBJECTIVE : To Study different types of power plants used in aircrafts.

Basic ideas About Piston, Turboprop, Turboshaft, Turbofan and Turbojet engines, Use of Propeller and Jets for Thrust production. Advantages and Disadvantages.

UNIT V AIRCRAFT GROUND HANDLING AND SUPPORT EQUIPMENT 10

OBJECTIVE: To study procedure of ground handling of sophisticated aircraft.

Mooring, Jacking, Levelling And Towing Operations – Preparation – Equipment - Precautions – Engine Starting Procedures – Piston Engine, Turboprops and Turbojets – Engine Fire Extinguishing – Ground Power Units. Shop Safety – Environmental Cleanliness – Precautions.

TOTAL : 45 Periods

TEXT BOOKS

1. Anderson, J.D., "Introduction to Flight", McGraw-Hill, 1995.
2. KROES WATKINS DELP, "Aircraft Maintenance and Repair" – McGraw-Hill, New York 1993.

REFERENCES

1. Kermod, A.C., "Flight without Formulae", McGraw-Hill, 1997.
2. A & P MECHANICS, "Aircraft hand Book" – F. A. A. Himalayan Book House, New Delhi, 1996.
3. A & P MECHANICS, "General hand Book" – F. A. A. Himalayan Book House, New Delhi, 1996.

2nd YEAR

S.No	Paper code	Subject	Marks	Duration
1		Language 2	100	3
2		English 2	100	3
3		Aviation General Engineering	100	3
4		Aviation Safety and Security	100	3
5		Indian Tourism	100	3
6		Global Tourism	100	3

SUBJECT
AVIATION GENERAL RULES AND REGULATIONS

AIM: To teach the students rules and regulations to be followed by an operator of aircraft.

UNIT I RULES OF AIR

9

OBJECTIVE: To understand the rules of air..

Definitions – Aerodrome, Aeroplane, Air traffic, Alternate aerodrome, Apron, Controlled aerodrome, Controlled airspace, Manoeuvring area, Pilot-in-command, Psychoactive substances, Taxiway, Applicability Of The Rules Of The Air, Compliance with the Rules of the air, Problematic use of psychoactive substances, General Rules - Protection of persons and property, Avoidance of collisions, Lights to be displayed by aircraft, Signals - Distress And Urgency Signals

UNIT II OPERATION OF COMMERCIAL AIR TRANSPORT - AEROPLANES 9

OBJECTIVE: To understand the rules of operation of aeroplanes.

General Requirements - Compliance with laws, regulations and procedures, Safety Management, Flight Operations, Air Operator Permit, Minimum flight Altitudes, Aerodrome Operating minima, Fuel and Oil Records, Passengers, Flight Preparation, Oxygen Supply, Duties of pilot-in-command, Aeroplane Maintenance - Operator's maintenance responsibilities.

3rd YEAR

S.No	Paper code	Subject	Marks	Duration
1		Handling of Aviation Logistics	100	3
2		Environment and pollution control in Aviation Industry	100	3
3		Tourism planning and Marketing	100	3
4		Modern forms of Tourism	100	3
5		Project work	200	

SUBJECT
HANDLING OF AVIATION LOGISTICS

AIM: To study the concepts of air transportation and cargo management of aircraft.

UNIT I REQUIREMENTS FOR AIR TRANSPORT CARGO SERVICES IN INDIA 5

OBJECTIVE: To understand rules for air cargo services in India.

Air Cargo Operations, Eligibility Requirements, Procedural Requirements, Aircraft And Airworthiness Requirements, Operational Requirements, General Requirements.

UNIT II MANAGING AIR CARGO SERVICES 10

OBJECTIVE: To understand air cargo management.

Introduction, History of Air Cargo, Cargo-Only Carriers, Combination Carriers, Integrators, Managing Air Cargo Successfully - Fleet Management and Network Planning, Operations Management, E-Commerce, Marketing, Product Management, and Pricing, Challenges - Air cargo operations at airports, Pricing and revenue management, Security.

UNIT III AIR CARGO LOGISTICS IN INDIA 10

OBJECTIVE: To understand network of air cargo logistics in India.

Introduction, Air Cargo Logistics Operations, Stakeholders, Express Delivery Services, Domestic Cargo, Role of Air Cargo in Indian Economy, Structure of International Trade (Merchandise), Trends in Inbound / Outbound Air Cargo Traffic, Performance of Air Cargo throughput in Indian Airports, Dedicated Domestic freight operations, Forecast of the air freight traffic, Drivers of Air Cargo Traffic in India.

UNIT IV PERFORMANCE INDICATORS AND CHALLENGES

10

OBJECTIVE: To understand performance indicators and challenges in handling logistic operations.

Introduction – Dwell Time, Throughput efficiency at cargo terminals, Menace of Missing/Non-traceable Cargo, Challenges - Infrastructure Bottlenecks, Gaps in Key facility infrastructure at Cargo terminals in Gateway airports, Bottlenecks in truck docking, Inadequate X-ray screening facilities and lack of associated trained manpower, Absence of off-site facility such as Air Freight Station (AFS) for cargo processing, Special Cargo Infrastructure. Regulatory Hurdles and Other Processes / Procedures / Systems.

UNIT V FACILITY DEVELOPMENT AT AIRPORTS

10

OBJECTIVE: To understand various facilities at airports for logistic operations .

Models for Facility Development at Airports, Promote key gateway airports as Cargo Transshipment Hubs, Promote dedicated Freighter operations, 24X7 Operations in Air Cargo complex, Promote Air Cargo educational and professional training program for capacity building, Air Cargo Infrastructure Development at Airports, Initiatives needed from Central Board of Excise and Customs, Reduce delay in processing of Export Cargo out of cargo terminals, Decongestion of warehouse, Facilitate Transshipment, Initiatives needed from Bureau of Civil Aviation Security.

TOTAL : 45 Periods

TEXT BOOKS

1. Fedric J.H., Airport Management, 2000.
2. C.H. Friend, Aircraft Maintenance Management, 2000.

REFERENCES

1. Gene Kropf, Airline Procedures.
2. Wilson & Bryon, Air Transportation.
3. Philip Locklin D, Economics of Transportation.
4. Indian Aircraft manual – DGCA Pub.
5. Alexander T Wells, Air Transportation, Wadsworth Publishing Company, California, 1993.

AIR TRANSPORTATION OVERVIEW

UNIT-I

Airline Business foundation- Commercial foundation- Key Economic, political, revenue and cost trends- Strategies airlines adopting to sustain and grow their business: Strategy development- Impact of airline- Role of change management , organizational culture and leadership in successful airline performance- Impact of new digital technological on all aspects of the airline business.

UNIT- II

Air Transport Economics- Main benefits- Economic impact- Supply, demand, pricing and market structures- Key economic characteristics of the air cargo sector- competitive market structures (monopolies and oligopolies) to obtain advantages.

UNIT- III

Air transport value chain, characteristics of each stakeholder and profitability of each air transport sector- Air transport industry regulated why and how with examples of air transport economic regulation.

UNIT- IV

Managing across culture- Explore the ways in which culture (e.g national, corporate, functional) can be analyzed using proposed frame work- Explain hoe culture influences organizations- Evaluate different approaches to managing culture differences.

UNIT-V

Public International air law: the Chicago convention Regime- Private International air law and air carrier liability- Aviation Law.

References:

1. Stephan Holloway, "Straight and Level: Practical Airline Economics" Ashgate (2nd Ed.), 2003
2. Holden, "Cross Cultural Management", Pearson 2002
3. Anne Graham, "Managing Airports", 3rd Edition, Elsevier, 2008.
4. Dawna L. Rhoades, "Evolution of International Aviation", 2nd Ed., Ashgate, 2008.
5. Robert Caves, Geoffrey David Gosling, "Strategic Airport Planning", Pergamon, 1999.
6. Charles R. Goeldner, J.R. Brent Ritchie, "Tourism: Principles, Practices and Philosophies" John Wiley & Sons, Inc. (12th Ed) 2011.

BASIC PRINCIPLES OF TOURISM MANAGEMENT

Unit I:

Tourism: Concepts: Definition and historical development of Tourism Distinction between Tourist-Traveler-Visitor-Excursionist. Tourism system - Components of tourism and its characteristics-tourism Product- Types of Tourism products (TOPs, ROPs, BTEs)

Unit II:

Domestic and International tourism: Domestic tourism: features, pattern of growth, profile. International tourism: Generating and Destination regions. Pattern of growth and Profile.

Unit III:

Tourism Demand and Supply: Introduction to Tourism Demand; Determinants of tourism demands; Motivation and tourism demand; measuring the tourism demand. Factors affecting supply in Tourism.

Unit IV:

Tourism Impacts: Impacts: Positive and Negative Impacts of Tourism; Socio Cultural, Economic, Environmental and Political- Factors inhibiting growth of Tourism and travel industry- Global Tourism scenario and future- Growth and emerging trends in Indian Tourism.

Unit V:

International Tourism Institutions and organizations, and their role in promoting international movement- UNESCO, UNWTO , WTTC, TAAI, IATO, IATA, ITC.

Text Books:

1. A.K.Shastri: Tourism Development principles and practices
2. Seth: Tourism Management (New Delhi, Sterling)
3. Kaul: Dynamics of Tourism (New Delhi, Sterling)
4. Mill and Morrison – The Tourism system an Introductory Text (1992) Prentice Hall

ADMINISTRATIVE POLICIES OF INDIAN TOURISM

UNIT – I

Indian Tourism – current trends and development opportunities – Market study- Survey of Natural resources – Development of appropriate levels of Infrastructures (airports, seaports, inland waterways, roads, railways, water and energy supplies)

UNIT- II

Development of the appropriate legislative framework for economic activities, foreign investment, land tenure, Contracts law, Commercial law, Banking law – Promotion of foreign and domestic investment in Indian tourism.

UNIT –III

Schemes & tourism decisions: Government efforts – Planning tools – Guidelines – Rehabilitation and ecological restoration – the desertification – Protocols and conventions – The multipliers.

UNIT –IV

Tourism policy making: Meaning – Necessity of planning – urban and rural planning – Tourism policies in India – Process of planning – Assessment process – Execution process- Need for sustainable tourism.

UNIT- V

Economic Impact of Tourism – Cultural impact of Indian tourism – Social impact of Tourism – Tourism as a tool for building international relationship – Professionalization of Indian Tourism.

Reference Books:

- 1) Tourism Policy organization & Management: Rakesh Kapoor, Karishka. Publishers, New Delhi.
- 2) Tourism Management: Anurag Kothari, Wisdom press-New Delhi.
- 3) Tourism Development Revisited: Sutheshna Babu, Sitikantha Mishra, B.B. Parida, SAGE Publications, New Delhi.
- 4) Tourism and Development in India, Suhita Chopra, APH publishing corporation; New Delhi.
- 5) Tourism in the age of globalization; Binoy Srivastava, Swastik Publications, New Delhi.

AVIATION SAFETY AND SECURITY

UNIT-I

Safety data management and analysis- IATA six point safety strategy- Reduce operational Risk: loss of control in flight, controlled flight into Terrain, Runway safety, Flight management system, cabin safety, fatigue, phraseology- Enhance quality and compliance.

UNIT- II

Advocate for Improved Aviation Infrastructure- consistent Implementation of safety management system – Effective Recruitment and Training – Identify and Address Emerging safety Issues.

UNIT- III

Cabin Safety- Three point Restraint systems- Turbulence management- Inadvertent slide deployment prevention- unruly passenger prevention and management- electronic cigarettes- Safe services of Alcohol on Board- Managing medical events- Safety of informs and children on Board.

UNIT- IV

Health and safety: Food poisoning on board- passengers emitting radiation – Passive passenger contact screening for passenger agents- Request form for passenger contact tracing- Medical incident report form- Death on board- International transport of human remains- Thermometers on board- Oxygen delivery system for passengers- Cabin crew with insulin- treated diabetes- Cabin crew seizure disorders.

UNIT- V

Aviation security- Smart security- Passenger data- Cyber security- IATA practical advice for the airline industry- States request for data- Automated border control: biometrics, removal of deportees and inadmissible passengers; the threat to civil aviation- threat assessment and risk management- security management system and culture- Passengers security and cargo security- security quality control- contingency planning.

References:

1. Aviation and Airport Security: Terrorism and Safety Concerns, Kathleen M. Sweet
2. Commercial Aviation Safety, 5th Edition by Clarence Rodrigues
3. Practical Aviation Security, Second Edition: Predicting and Preventing Future Threats – Jeffrey Price.
4. Aviation Safety Programs: A Management Handbook – Richard H.Wood.

5. Handbook of Aviation Human Factors, Second Edition (Human Factors in Transportation)

INDIAN TOURISM

Unit I:

Tourism Products: Definition, Concept and classification. Cultural Heritage of India - Stages of evolution, continuity. Heritage – Meaning, types, of Heritage Tourism, Heritage Management Organizations- UNESCO, ASI, ICOMOS, INTACH.

Unit II:

Architectural Heritage of India: glimpses on the prominent architecture style flourished in different period. Different style of architecture in India - Hindu, Buddhist and Islamic. Selected case studies of World Heritage Sites in India

Unit III:

Pilgrimage Destinations: *Hindu-* Charo Dham Yatra, Jyotirlinga Yatra, Devi Yatra Vindhyaachal (U.P.) Kamakhya (Assam), Vaishnavadevi, Kashi, Prayag, Gaya, Ayodhya, Mathura–Vrindavana, Allahabad, Ujjain, Hardwar, Nasik, Gangasagar, Rameswaram. *Buddhist:* Lumbini, Bodhgaya, Sarnath, Kushinagar, Sharavasti, Sankisa, Vaishali, Rajgriha, Kapilvastu, Nalanda, Sanchi, Ajanta. *Jain:* Kashi, Pavapuri, Shatrunjaya, Girnar, Mt. Abu, Sharavanbelgola, Palitana *Muslim:* Ajmer Sharif, Nizamuddin (Delhi), Fatehpur Sikri, and some important Mazars. Sikh: Patna, Nanded, Guru-kaTal (Agra), Amritsar.

Unit IV:

Natural Resources: Wildlife Sanctuaries, National Parks and Natural Reserves in India (Jim Corbett Tiger Reserve, Bharatpur Bird Sanctuary, Valley of Flowers, Kanha, Kaziranga, Sasan Gir, Dachigam, Ranthambhore and Keoladeo Ghana) Hill Stations: Study of Hill Station attractions and their environs with case studies of Mussoorie, Nainital, Munnar and Ooty. Beaches and Islands: Beaches in Goa, Kerala, Orissa. Andaman Nicobar & Lakshwadip islands.

Unit V: Important Museum, Art Galleries and Libraries. Performing art of India: classical dances, folk dances and folk culture. Fairs and Festivals : Social, religious and commercial fairs of touristic significance.

Text Books:

1. Basham A. L. : The Wonder that Was India.
2. Basham A. L. : Cultural History of India
3. Peroy Brown : Islamic Architecture
4. Peroy Brown : Indian Architecture
5. James Burgess : Western Cave Temples of India

GLOBAL TOURISM

Unit I

Globalization & tourism sector Globalization & the business world, the tourism industry, challenges, Factors affecting Global & regional tourist movements, Demand and origin factors, destination & resource factors. Contemporary trends in international tourist movements.

Unit II

The emergence of international hotels & tourism. Historical aspects, development of chains, development abroad, airline connection. Political aspects of the international travel, tourism - Barriers to travel, tourism investment & business, regulations, international organizations dealing with barriers viz : WTO, IMF, IHA, need for government support of tourism, national tourism organizations, political stability, travel advisories, political risk, crisis management

Unit III

International hotels -Balancing global & local perspectives -Operating in a multinational environment ---International rules & regulations -a brief study. Human resources & cultural diversity -Understanding cultural diversity, cultural perceptions, business protocol, cultural considerations in negotiations.

Unit IV

International tourism sales & marketing -Market research, developing an international marketing strategy, understanding various travel distribution systems viz GDS, product positioning

Unit V

Global competition & the future -Long -term tourism growth trends, tourism growth in major regions, transportation developments, technology & automation, Development issues, tourism & the environment.

References:

1. International Tourism by H.L.Bhattia
2. Contemporary tourism: an international approach-Chris Cooper&C.Michael Hail
3. International cases in Tourism Management-Susan Horner&John Susan Brooke
4. The International Marketing of Travel and Tourism: A Strategic approach by Francois Vellas & Lionel Becherel ,5. Human Resource Management for Tourism ,Hospitality and Leisure Industries: An International Perspective by Tom Baum

ENVIRONMENT AND POLLUTION CONTROL IN AVIATION INDUSTRY

UNIT- I

Global and local emissions, noise, water/waste management and biodiversity- technological, Operational and infrastructural improvement- regulation and economic imitates.

UNIT- II

General overview of global warming – Aviation form pillar strategy- technology, operations, infrastructure, economic measures- specific goals and targets- Noise management – noise abatement procedure –Technological progress- Noise zoning- compensation issues- Operational restrictions- night curfew, noisy aircraft ban- Kyoto protocol for climatic effects- radiation exposure.

UNIT- III

Vision 2020 of aviation Development- Airport environmental Impact- airport environment capacity- Aviation fuel- it combustion and exhaust gases- Thematic strategy on air pollution.

UNIT- IV

Air Transport and its perspectives: Environmental aspects of air transport general purpose aviation segment air transport vision perspectives- air transport beyond 2020- Air engine exhaust gases: Airplane pollution system- Aero engine exhaust pollutants – exhaust pollutant reduction engine enhancement projects.

UNIT- V

Emission calculation: Airport activity- Air craft support equipment auxiliary power unit(APU) on road vehicles parking lots- Weather data – receptor location – Airport pollution sources- Airport Emissions- Movement date –Gate emissions- Taxiway emissions- Queue emissions- Runway pre-processing and Emissions.

References:

1. Aviation and Environment –Jon C Goodman
2. Aviation, environment, and world order 1980 by [Saligram Bhatt](#)
3. Aviation and the Environment by [Ruwantissa Abeyratne](#)
4. Transport and the Environment: Aviation and the Environment, Shipping and the Environment, Transport and Climate Change, Books LLC.
5. Greening airports; advance technology and operations by Milan Janic.
6. Airport Environmental Impact- Methodology of Atmospheric Protection vol.25 Institute of Aviation scientific publication

TOURISM PLANNING & MARKETING

Unit I:

Evolution of Tourism planning, Importance, Planning process, Planning approaches, Tourism planning. Concept, need, objective, institutional framework of public tourism policy. The role of govt., public and private sector in formulation of tourism policy. Policy making bodies and its process at national levels.

Unit II:

An outline of L.K. Jha Committee - 1963, National Tourism Policy - 1982, National Committee Report - 2002, National Action Plan on Tourism - 1992, the latest Policy Document on Tourism. Tourism Planning at International, national, regional, state and local level. Tourism and Five-year Plans in India. Agents and typologies of tourism development.

Unit III :

Introduction to tourism marketing, Evolution, Definition, nature, process and system services & their marketing nature, characteristics of tourism products, its issues and challenges : Marketing mix

Unit IV :

Market segmentation, Targeting and positioning. Definition of market segmentation, discussions in market segmentation, Market targeting process, product positioning – purpose, process

Unit V :

P's of marketing. Product – Product management, development, product lifecycle and branding Pricing – Factors influencing pricing, methods of price fixation and strategies Promotion – Promotion mix and tools, People – service encounters, managing tourism experience through people and important practices to manage people Process – Elements, managing process, developments in service processes in tourism, Physical evidence – Concept, role & components.

Text Books :

1. Indian Tourism Beyond the Millennium - Bezbaruah M.P. (New Delhi)
2. Tourism: Past Present & Future : Burkart A.J. and Medlik (London, Heinemann)
3. Tourism Dimensions : S.P. Tiwari (New Delhi)
4. Kotler P. Marketing Management C. Delhi – Prentice Hall India 1986
5. Katler Philip – Marketing for non-profit organization – Prentice Hall, New Jersey 1975
6. Jha S.M. – Tourism Marketing (Bombay – Himalaya)
7. Gavens: Marketing Management (Delhi – Himalaya)
8. Hollowacy I.C. and Plant R.V. (1992) Marketing for Tourism Pitman.

MODERN FORMS OF TOURISM

UNIT-I

Leisure Tourism – Destinations for Leisure Tourism around the world– Amusement parks – Historical monuments – Business tourism – Convention Tourism- Incentive tourism- Trade fairs and exhibitions.

UNIT- II

Wildlife tourism- Adventure Tourism- Wildlife, flora and fauna- Natural beauty- coastline/beaches- Wildlife safari parks- Mountain location, Rivers- Sports tourism- Agro rural tourism.

UNIT-III

Cultural and Heritage tourism- Ancient buildings, archeological sites, history and cultural – Religious tourism – Customs and traditions – festivals/fairs – folk arts and dances.

UNIT- IV

Ecotourism- Ecotourism for sustainable development – Ecotourism planning- Biodiversity conservation- Ecotourism and National resources Management- Development of Ecotourism in India.

UNIT- V

Medical and Health Tourism- Importance of Medical Tourism- Risks- Legal issues- Ethical issues- Destinations for Medical Tourism- Medical Tourism in India.

References:

- 1) Tourism Marketing – Ashok Manoram, Prateeksha publications, Jaipur.
- 2) Ecotourism and sustainable development – Satish chandra Niga, RAJat Publications. New Delhi.
- 3) Tourism marketing- Policies, perspectives and strategies- M.M. RAWAT, alfa Publications, New Delhi.
- 4) Tourism Planning and Development- Manish Rathi- Rajat Publications, New Delhi.

SUBJECT
AVIATION GENERAL ENGINEERING

AIM: To introduce the basic concepts of aerospace engineering and the current developments in the field.

UNIT I AIRCRAFT CONFIGURATIONS 5

OBJECTIVE : To study different types of airplane – Light and Heavy.

Airplane, Components of An Airplane And Their Functions. Different Types of Flight Vehicles, Classifications. Types of Control Systems, Basic Instruments for flying.

UNIT II PRINCIPLES OF FLIGHT 10

OBJECTIVE : To Understand the basic properties and physical principles of flight.

Physical properties and structure of the atmosphere, Temperature, Pressure, Density and Altitude, Generation of Lift and Drag. Aerofoils, Mach Number, Rolling, Pitching and Yawing motions.

UNIT III AIRPLANE STRUCTURES AND MATERIALS 10

OBJECTIVE : To Study different materials used for construction of an airplane.

General types of construction, Monocoque, Semi-Monocoque, Wing and Fuselage Structure. Metallic and Non-Metallic materials, Use of Aluminium Alloy, Titanium, Stainless Steel and Composite materials.

UNIT IV POWER PLANTS USED IN AIRPLANES 10

OBJECTIVE : To Study different types of power plants used in aircrafts.

Basic ideas About Piston, Turboprop, Turboshaft, Turbofan and Turbojet engines, Use of Propeller and Jets for Thrust production. Advantages and Disadvantages.

UNIT V AIRCRAFT GROUND HANDLING AND SUPPORT EQUIPMENT 10

OBJECTIVE: To study procedure of ground handling of sophisticated aircraft.

Mooring, Jacking, Levelling And Towing Operations – Preparation – Equipment - Precautions – Engine Starting Procedures – Piston Engine, Turboprops and Turbojets – Engine Fire Extinguishing – Ground Power Units. Shop Safety – Environmental Cleanliness – Precautions.

TOTAL : 45 Periods

TEXT BOOKS

1. Anderson, J.D., "Introduction to Flight", McGraw-Hill, 1995.
2. KROES WATKINS DELP, "Aircraft Maintenance and Repair" – McGraw-Hill, New York 1993.

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1. Kermode, A.C., "Flight without Formulae", McGraw-Hill, 1997.
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AIM: To teach the students rules and regulations to be followed by an operator of aircraft.

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OBJECTIVE: To understand the rules of air..

Definitions – Aerodrome, Aeroplane, Air traffic, Alternate aerodrome, Apron, Controlled aerodrome, Controlled

airspace, Manoeuvring area, Pilot-in-command, Psychoactive substances, Taxiway, Applicability Of The Rules Of

The Air, Compliance with the Rules of the air, Problematic use of psychoactive substances, General Rules -

Protection of persons and property, Avoidance of collisions, Lights to be displayed by aircraft, Signals - Distress

And Urgency Signals

UNIT II OPERATION OF COMMERCIAL AIR TRANSPORT - AEROPLANES 9

OBJECTIVE: To understand the rules of operation of aeroplanes.

General Requirements - Compliance with laws, regulations and procedures, Safety Management, Flight

Operations, Air Operator Permit, Minimum flight Altitudes, Aerodrome Operating minima, Fuel and Oil Records,

Passengers, Flight Preparation, Oxygen Supply, Duties of pilot-in-command, Aeroplane Maintenance - Operator's

maintenance responsibilities.

UNIT III CRITERIA FOR LEASING OF AIRCRAFT BY INDIAN OPERATORS 8

OBJECTIVE: To understand the procedure and rules of leasing of aircrafts.

Introduction, Operations with leased aircraft, Foreign registered aircraft leased to Indian operators, Indian

registered aircraft leased to foreign operator, Leasing aircraft from one Indian operator to another Indian operator ,

Grant of Permission.

UNIT IV REGISTRATION / DEREGISTRATION OF AIRCRAFT 10

OBJECTIVE: To understand the procedure of registration and deregistration of aircraft.

Definitions, Classification of Aircrafts, Procedure For Registration of Aircraft, Application For Registration of

Aircraft, Change of Ownership, Aircraft Imported By Air, Registration Certificate And Validity of Registration of

Aircraft, Issue of Duplicate Certificate of Registration, Cancellation of Registration of Aircraft, Fixation of

Nationality And Registration Markings, Identification Plate, Registration fees.

UNIT V PROVISION OF MEDICAL SUPPLIES IN AIRCRAFT 9

OBJECTIVE: To provide knowledge of medical assistance available in aircraft during emergency.

First- Aid Kit, Medical Kit, Universal Precaution Kit, Requirement of Medical Supplies, Contents of The First-

Aid Kit, Contents of Medical Kit, Contents of Universal Precaution Kit, Periodic Examination of The Kit ,

General Requirements.

TOTAL : 45 Periods

TEXT BOOKS

1. “Civil Aviation Requirements with latest Amendment)” – The English Book Store, 17-1, Connaught Circus, New Delhi.

2. Aeronautical Information Circulars.

REFERENCES

1. “Aircraft Manual (India) Volume” – Latest Edition, the English Book Store, 17-1, Connaught Circus, New Delhi.

SUBJECT

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AIM: To study the concepts of air transportation and cargo management of aircraft.

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Requirements, Operational Requirements, General Requirements.

UNIT II MANAGING AIR CARGO SERVICES 10

OBJECTIVE: To understand air cargo management.

Introduction, History of Air Cargo, Cargo-Only Carriers, Combination Carriers, Integrators, Managing Air Cargo

Successfully - Fleet Management and Network Planning, Operations Management, E- Commerce, Marketing,

Product Management, and Pricing, Challenges - Air cargo operations at airports, Pricing and revenue management,

Security.

UNIT III AIR CARGO LOGISTICS IN INDIA 10

OBJECTIVE: To understand network of air cargo logistics in India.

Introduction, Air Cargo Logistics Operations, Stakeholders, Express Delivery Services, Domestic Cargo, Role of

Air Cargo in Indian Economy , Structure of International Trade (Merchandise), Trends in Inbound / Outbound Air

Cargo Traffic , Performance of Air Cargo throughput in Indian Airports, Dedicated Domestic freight operations,

Forecast of the air freight traffic, Drivers of Air Cargo Traffic in India.

UNIT IV PERFORMANCE INDICATORS AND CHALLENGES 10

OBJECTIVE: To understand performance indicators and challenges in handling logistic operations.

Introduction – Dwell Time, Throughput efficiency at cargo terminals, Menace of Missing/Non-traceable Cargo,

Challenges - Infrastructure Bottlenecks, Gaps in Key facility infrastructure at Cargo terminals in Gateway airports,

Bottlenecks in truck docking, Inadequate X-ray screening facilities and lack of associated trained manpower,

Absence of off-site facility such as Air Freight Station (AFS) for cargo processing, Special Cargo Infrastructure.

Regulatory Hurdles and Other Processes / Procedures / Systems.

UNIT V FACILITY DEVELOPMENT AT AIRPORTS 10

OBJECTIVE: To understand various facilities at airports for logistic operations .

Models for Facility Development at Airports, Promote key gateway airports as Cargo Transshipment Hubs,
Promote dedicated Freighter operations, 24X7 Operations in Air Cargo complex, Promote Air Cargo educational
and professional training program for capacity building, Air Cargo Infrastructure Development at Airports,
Initiatives needed from Central Board of Excise and Customs, Reduce delay in processing of Export Cargo out of
cargo terminals, Decongestion of warehouse, Facilitate Transshipment, Initiatives needed from Bureau of Civil
Aviation Security.

TOTAL : 45 Periods

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1. Fedric J.H., Airport Management, 2000.
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OBJECTIVE: To understand network of air cargo logistics in India.

Introduction, Air Cargo Logistics Operations, Stakeholders, Express Delivery Services, Domestic Cargo, Role of

Air Cargo in Indian Economy , Structure of International Trade (Merchandise), Trends in Inbound / Outbound Air

Cargo Traffic , Performance of Air Cargo throughput in Indian Airports, Dedicated Domestic freight operations,

Forecast of the air freight traffic, Drivers of Air Cargo Traffic in India.

UNIT IV PERFORMANCE INDICATORS AND CHALLENGES 10

OBJECTIVE: To understand performance indicators and challenges in handling logistic operations.

Introduction – Dwell Time, Throughput efficiency at cargo terminals, Menace of Missing/Non-traceable Cargo,

Challenges - Infrastructure Bottlenecks, Gaps in Key facility infrastructure at Cargo terminals in Gateway airports,

Bottlenecks in truck docking, Inadequate X-ray screening facilities and lack of associated trained manpower,

Absence of off-site facility such as Air Freight Station (AFS) for cargo processing, Special Cargo Infrastructure.

Regulatory Hurdles and Other Processes / Procedures / Systems.

UNIT V FACILITY DEVELOPMENT AT AIRPORTS 10

OBJECTIVE: To understand various facilities at airports for logistic operations .

Models for Facility Development at Airports, Promote key gateway airports as Cargo Transshipment Hubs,

Promote dedicated Freighter operations, 24X7 Operations in Air Cargo complex, Promote Air Cargo educational

and professional training program for capacity building, Air Cargo Infrastructure Development at Airports,

Initiatives needed from Central Board of Excise and Customs, Reduce delay in processing of Export Cargo out of

cargo terminals, Decongestion of warehouse, Facilitate Transshipment, Initiatives needed from Bureau of Civil Aviation Security.

TOTAL : 45 Periods

TEXT BOOKS

1. Fedric J.H., Airport Management, 2000.
2. C.H. Friend, Aircraft Maintenance Management, 2000.

REFERENCES

1. Gene Kropf, Airline Procedures.
2. Wilson & Bryon, Air Transportation.
3. Philip Locklin D, Economics of Transportation.
4. Indian Aircraft manual – DGCA Pub.
5. Alexander T Wells, Air Transportation, Wadsworth Publishing Company, California, 1993.