

## SEMESTER - III

### AVIATION MANAGEMENT

AIRLINE AND AIRPORT MANAGEMENT	AIRLINE OPERATIONS AND SCHEDULING
<ol style="list-style-type: none"> <li>1. Organisation, global &amp; social environment</li> <li>2. Major players in the airline industry -</li> <li>3. Challenges and opportunities in airline industry</li> <li>4. Airport planning</li> <li>5. Organisation structure in an airline</li> <li>6. Airport Authority of India (AAI)</li> <li>7. Role of AAI -airline privatization</li> <li>8. Various air transport services</li> <li>9. An overview of airports</li> <li>10. Airport development and maintenance</li> <li>11. Role of DGCA</li> <li>12. Methodology followed by ATC and DGCA</li> <li>13. Management of bilaterals – economic regulations</li> <li>14. Role of air traffic control</li> <li>15. Control processes</li> </ol>	<ol style="list-style-type: none"> <li>1. Transportation model</li> <li>2. Unbalanced and degeneracy models</li> <li>3. Assignment problem</li> <li>4. transshipment model</li> <li>5. Critical Path Method (CPM)</li> <li>6. Program Evaluation Technique (PERT)</li> <li>7. Cost considerations in PERT and CPM</li> <li>8. Minimal spanning tree algorithm</li> <li>9. Maximal Flow model</li> <li>10. Fort and Fulkerson Algorithm</li> <li>11. Dijkstra's and Floyd's algorithm</li> <li>12. Overview of Operation control centre</li> <li>13. Flight Postponement and cancellation model-</li> <li>14. Airline operation Recovery</li> <li>15. Robust Crew Scheduling</li> <li>16. Robust Aircraft Routing</li> <li>17. Degradable Schedule Design.</li> </ol>

AIRLINE FINANCE	AVIATION LAW
<ol style="list-style-type: none"> <li>1. Foundations of Finance</li> <li>2. Capital Budgeting Techniques</li> <li>3. Inflation and Capital Budgeting</li> <li>4. Airline Financial Performance</li> <li>5. Inter Airline Comparison of Airline Ratios</li> <li>6. Valuation of Airlines as a whole</li> <li>7. Sources of Internal finance</li> <li>8. Sources of External finance</li> <li>9. Airline Privatization</li> <li>10. Budget Preparation and control</li> <li>11. Working capital Management</li> <li>12. Accounts receivable management and factoring</li> <li>13. Exchange rate Volatility</li> <li>14. Airline Foreign exchange risk management</li> <li>15. Fuel price exposure</li> <li>16. Aircraft leasing</li> <li>17. Aircraft securitizations</li> </ol>	<ol style="list-style-type: none"> <li>1. Paris Convention on Air Navigation 1919</li> <li>2. Birth of Indian Air Companies</li> <li>3. Aircraft Rules 1937</li> <li>4. International Airports Authority in India</li> <li>5. Chicago conference</li> <li>6. Liberalisation of International Air transportation</li> <li>7. Application of GATT Principles to International Air Transportation</li> <li>8. Liability of the Carrier under the Indian Carriage by Air Act 1972</li> <li>9. International Carriage - Hague Protocol 1955</li> <li>10. Montreal Interim Agreement 1966</li> <li>11. Privatisation</li> <li>12. Air Space Management in India</li> <li>13. Air law and Aviation Policy in India</li> <li>14. Air Routes and Aerodromes in India</li> <li>15. Development of Civil Aviation and Air law Policy</li> <li>16. Development of Aviation in India</li> <li>17. Future Outlook for National Airlines</li> </ol>

## AIR CARGO MANAGEMENT

1. Operations and Industry Regulations
2. Types of cargo
3. Air Cargo Tariff, Rates & Charges
4. Valuation charges and Disbursement
5. Overview of the Air Cargo Industry
6. Leveraging information technology in key areas of the industry
7. Air Cargo Competitive Landscape
8. Performance of leading air cargo operators
9. Applying gap analysis
10. History of automation in air cargo
11. Components of a comprehensive e-Cargo approach
12. Understanding the Technology of E-Cargo
13. Technology for the warehouse
14. Airport Cargo Activity & Cargo Zone
15. Aircraft Handling with Cargo
16. National Civil Aviation Policy
17. Air cargo focus

## SEMESTER - IV

### AVIATION MANAGEMENT

AIRLINE ECONOMICS	SUPPLY CHAIN MANAGEMENT
<ol style="list-style-type: none"><li>1. Economic Regulation, Regulatory Reform</li><li>2. Characteristics of International Service</li><li>3. Structure of Airline Industry</li><li>4. Airline Entry and Exit Policies</li><li>5. Government Regulation of Exit</li><li>6. International Entry</li><li>7. Current trends in International Airline</li><li>8. Accounting categories</li><li>9. Production function and Factor costs</li><li>10. Aircraft Selection as Determinants of Costs</li><li>11. Demand Characteristics</li><li>12. Travel agencies and computer reservation systems</li><li>13. Changing structure of Airline Passenger fares and Rate Regulation</li><li>14. International Rates</li><li>15. Dealing with Foreign Governments</li></ol>	<ol style="list-style-type: none"><li>1. Supply Chain, Fundamentals</li><li>2. Drivers of Supply Chain Performance</li><li>3. Overview of Supply Chain Models and Modeling Systems</li><li>4. Types of supply chains and examples</li><li>5. Management Capability</li><li>6. Types of Purchasing Strategies</li><li>7. Supplier Quality Management</li><li>8. World Wide Sourcing and SCM Metrics.</li><li>9. Distribution Network Design</li><li>10. Model for Facility Location and Capacity Location</li><li>11. Impact of uncertainty on Network Design</li><li>12. Supply Chain Network optimization Models.</li><li>13. Overview of Demand forecasting in the supply chain</li><li>14. Uncertainty in the supply chain</li><li>15. Safety Inventory</li><li>16. Supply chain performance measures</li><li>17. ESRM, eLRM , eSCM.</li><li>18. Internet-enabled supply chains</li><li>19. Supply chain integration</li></ol>

## CREW RESOURCE MANAGEMENT

1. Cognitive Skills, Interpersonal Skills
2. Factors affecting individual performance
3. Behavioral Markers
4. UK & JAA CRM Requirements
5. Objectives of CRM Training
6. CRM Training Methods
7. Basic Theory
8. Initial Training & Objectives
9. CRM for Cabin Crew
10. Instructor Requirements
11. Accreditation
12. Record Keeping
13. Facilitation Skills
14. Crew co – ordination, Crew Teams
15. Crew Communication
16. Crew Leadership
17. Crew Performance Assessment