**Module I Introduction to AIS**

General, definitions, Common Reference Systems for Air Navigation, Horizontal reference system, Vertical reference system, Temporal reference system, Miscellaneous Specifications, Purpose of an Aeronautical Information Service (AIS), Needs of the operator, Need for uniformity, State Responsibilities, AIS responsibilities and functions, Exchange of aeronautical data and aeronautical information, Copyright, Cost Recovery, Information management requirements, Aeronautical data and aeronautical information validation and verification, Data quality specifications: Data Accuracy, Data Resolution, Data Integrity, Data traceability, Data timeliness, Data completeness, Data format, Data error detection, Data protection, aeronautical data publication resolution and integrity classification, Metadata, Use of automation, Quality management system, Human factors considerations, Scope of aeronautical data and aeronautical information, collection of information: Assignment of Responsibility for Origination of Raw Data, Basic Information, Information of a Temporary Nature and of Short Duration, Working Arrangements, Modes of Communication, Technical orientation, status and establishment, Size and scope of AIS, Working arrangements, Liaison with related services, AIS setup in India, Source of aeronautical information, Aeronautical information/data flow, basic reference material (publications of ICAO and other international organizations) :ICAO publications, Standards and Recommended Practices, Procedures for Air Navigation Services, Designators and indicators, Facility and service documents, Air Navigation Plan Publications, Other publications, International Air Transport Association (IATA)/International Aeradio Limited (IAL), International Telecommunication Union (ITU), World Meteorological Organization (WMO), Aeronautical information in a standardized presentation, Aeronautical Information Publication (AIP), AIP Amendments, AIP Supplements, NOTAM, Aeronautical information circulars (AIC), Pre-flight information bulletins (PIB), Checklists and lists of valid NOTAM, Schedule of AIRAC effective dates, Significant dates, Holiday Periods.

**Module II - Aeronautical Information Products and Services**

Aeronautical information publication (AIP): Contents, General specifications, Distribution.

Part 1 GENERAL (GEN):

GEN 0.1 Preface, GEN 1. National regulations and requirements, GEN 2. Tables and codes, GEN 3. Services, GEN 4.Charges for aerodromes and air navigation services.

PART 2 EN-ROUTE (ENR):

ENR 1. General rules and procedures, ENR 2. Air traffic services airspace, ENR

3. ATS routes, ENR 4. Radio navigation AIDS/systems, ENR 5. Navigation warnings, ENR 6. En-route charts,

PART 3 AERODROMES (AD):

AD 1. Aerodromes/heliports introduction, AD 2. Aerodromes, AD 3. Heliports, AIP Amendments and AIP Supplements: Specifications for AIP Amendments, Specifications for AIP Supplements, Distribution.

NOTAM: Origination, Duration of NOTAM, General Specifications, General Instructions for origination and cancellation of NOTAM, Priorities, NOTAM numbering, The NOTAM Code and Abbreviations, Trigger NOTAM, Instructions for the Completion of The SNOWTAM Format, Instructions for the Completion of the ASHTAM Format, Checklist and Summary of NOTAM

AERONAUTICAL INFORMATION CIRCULARS (AIC):

Origination, General specifications, Distribution. PRE-FLIGHT AND POST-FLIGHT INFORMATION:

Pre-flight information, Responsibility for execution, Bulletin types, Automated Pre Flight aeronautical information systems, Facilitation of self-briefing, Verbal Briefing, Post-flight information,

AIS principles and procedures while working in ARO: Wall displays,

AERONAUTICAL CHARTS AND SYMBOLS: The Need for Aeronautical Charts, Operational requirements for charts, Mandatory and Non Mandatory ICAO Charts, Title, Symbols, Units of measurement, Scale and projection, Date of validity of aeronautical information, Abbreviations, Political boundaries, Colors, Relief, Prohibited, restricted and danger areas, Magnetic variation, Aeronautical data, World Geodetic System1984(WGS-84)

**Module III - The transition from AIS to AIM**

ICAO AIS TO AIM roadmap, introduction, roadmap steps, Three Phases of the Roadmap, AICM/AIXM, Scope, E-AIP, ICAO Compliance, Relation to AIXM, Advantages for users of an eAIP, Advantages for producers of an eAIP.

DIGITAL NOTAM: Introduction, Definition of traditional NOTAM, Definition of Digital NOTAM, Digital NOTAM Specification.

DIGITAL DATA SETS: AIP data set, Terrain and obstacle data sets, Coverage areas and requirements for data provision, Terrain data sets, Obstacle data sets, Aerodrome mapping data sets, Instrument flight procedure data sets.