**IT-5203 (Telecommunication Network Management):**

Telecommunications Network Fundamentals: Standards and Architecture, Telecommunications Decision Sequence: Managing Network Design , Network management standards, network management model, organization model, information model abstract syntax notation 1 (ASN.1), encoding structure, macros, functional model. Network management application functional requirements: Configuration management, fault management, performance management, Error correlation technology, security management, accounting management, common management, report management, polity based management, service level management, management service, community definitions, capturing the requirements, simple and formal approaches, semi formal and formal notations. Telecommunication management network (TMN) architecture: Terminology, functional architecture, information architecture, physical architecture, TNN cube, TMN and OSI. Information Modeling for TMN: Rationale for information modeling, management information model, object oriented modeling paradigm, structure of management information, managed object class de\_nition, management information base (MIB), Common management information service element (CMISE) Simple network management protocol (SNMP): SNMPv1: managed networks, SNMP models, organization model, information model, SNMPv2 communication model, functional model, major changes in SNMPv2, structure of management information (SMI), MIB, SNMPv2 protocol, compatibility with SNMPv1, SNMPv3, architecture, applications, MIB security, remote monitoring (RMON) SMI and MIB, RMQN1 and RMON2. Network management examples: ATM integrated local management interface, ATM MIB.M1, M2,M3, M4, interfaces, ATM digital exchange interface management, digita1 subscriber loop (DSL) and asymmetric DSL (ADSL) technologies, ADSL con\_guration management, performance management of new emerging technologies. Network management tools: Network statistics management, network manage-

ment system, Trustworthiness: Reliability and Security, Managing the Telecommunications Resource: Security and Network Management

**Reference Books:**

1. Telecommunication Network Management - Haojin Wang Mc-Graw Hill

2. Network Management - Principles and Practice - Mani Subramanian,

3. Telecommunications network management- Henry Haojin Wang

4. Fundamentals of Telecommunications Network Management - Lakshmi G. Raman