

Paper III (Ph.D. Course work) :Advance Paper in relevant area

Subject :Computer Science

Unit 1:Internet Of Things

Introduction & Concepts: Introduction to Internet of Things, Physical Design of IOT, Logical Design of IOT, IOT Enabling Technologies, IOT Levels. Need for IOT Systems Management, IOT Design Methodology, Overview of IOT protocols.

Unit 2: Network Security

Security in Computing Environment: Need for Security, Security Attack, Security Services, Information Security, Methods of Protection, Characteristics of Good Encryption Technique, Properties of Trustworthy Encryption Systems, Types of Encryption Systems. Overview of IP Security (IPSec), IP Security Architecture, overview of Web security.

Unit 3: Machine Learning & Neural Network

Overview of ML, types of Problems, Types of machine learning (Supervise, unsupervised and reinforcement). Basics of Classification, Regression, clustering. Overview of Neural Network, Back propagation Neural Network, Recurrent Neural Network.

Unit 4:Data Mining and Data Warehouse

Classification of Data Mining Systems, Major issues in Data Mining, Data Mining Techniques: automatic, cluster detection, Decision trees, Data warehousing concepts, Goals & objectives, Issues involved in Data Warehousing, The three C's of Data Warehousing : Commitment, Completeness & Connectivity, OLAP, Types of Data Warehouse, overview of web mining.

Unit-5: Soft Computing

Overview of Soft Computing, Difference between Hard and Soft computing, Major Areas of Soft Computing, Applications of Soft Computing, Fuzzy Set theory, Fuzzy versus Crisp set, Fuzzification, Minmax Composition, Fuzzy Logic, Predicate logic, Fuzzy Classification.