COURSE CODE	COURSE TITLE	L	T	P	C
1152IT102	NETWORK PROTOCOLS	3	0	0	3

Course Category:

~~Foundation (0)~~ / ~~Program Core~~ **(1)** / **Program Elective** ~~(2) / Allied Elective (3) / University Elective (4) / Value Education Elective (5) / Independent Learning (6) / Industry – Higher Learning Institute Interaction (7).~~

a.Preamble

This course covers a few basic concepts of security protocols and network management .protocols.

b.Prerequisite Courses:

- Computer Networks

c.Related Courses:

High Speed Networks

d.Course Educational Objectives :

Students undergoing this course are expected to

- To understand the existing network architecture models and analyze the their performance
- To understand the high speed network protocols and design issues.
- To learn Network Security Technologies and Protocols
- To study various protocols in wireless LAN, MAN.

a. Course Outcomes :

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Explain terms and concepts of Network technologies (Frame relay protocol architecture,ISDN,BISDN)	K2
CO2	Ability to study, analyze and design seven layers of protocols of wired and wireless networks	K2
CO3	Explore the elements of various cryptographic models.	K2
CO4	Design various Network management protocols	K2
CO5	Evaluate the QoS related performance measurements of Network management protocols	K3

UNIT I FRAME RELAY AND ISDN **9**

Frame relay protocol architecture − Call control − Data transfer − Overview of ISDN − Channels −User access − Protocols.

UNIT II ATM AND BISDN **9**

ATM protocol architecture − Transmission of ATM cells − ATM adaptation layer −Congestion control − Broadband ISDN.

UNIT III SECURITY PROTOCOLS **9**

Private key encryption − Data encryption system, public key encryption − RSA − Elliptic curve −
Cryptography − Authentication − Web security − Current protocols.

UNIT IV NETWORK MANAGEMENT FUNDAMENTALS **9**

Network management requirements − Network monitoring − Network control − SNMP − Concepts, MIBs − Implementation issues.

UNIT V NETWORK MANAGEMENT PROTOCOLS **9**

SNMP V2 system architecture − Protocols − SNMP V3 − RMON − CMIP.

Total: 45 Periods

TEXT BOOKS

1. William Stallings, “Data and Computer Communications”, 5th Edition, PHI, 1997.

2. William Stallings, “SNMP, SNMPV2, SNMPV3 and RMON1 and 2”, 3rd Edition, Addison
Wesley, 1999.

REFERENCES

1. Mani Subramanian, “Network Management−Principles and Practices”, Addison Wesley, 2000.

2. William Stallings, “Cryptography and Network Security”, PHI, 2000.