Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
ETE802	Telecom Network Management	4	--	--	-	--	--	4
		Examination Scheme						
		ISE	MSE		ESE			
		10	30		100 (60% Weightage)			

Pre-requisite Course Codes	ETC 603: Computer Communication and Networks
After successful completion of the course, student will be able to	

Course Outcomes	CO1	Explain the need for interoperable network management & analyze the trends and development of the Telecommunications Network Management.	
	CO2	Demonstrate broad knowledge of fundamental principles and technical standards underlying	
	CO3	Describe the concepts and architecture behind standards based network management associated with SNMP and CMIP.	
	CO4	Apply basic of telecommunication, networking and information technologies and architect and implement networked informative systems.	
	CO5	Continuously improve their technology knowledge and communication skills.	

Module No.	Unit No.	Topics	Ref.	Hrs.
1		**Overview of Network Management**	**2,3**	**06**
	1.1	Case histories on network, system and service management, challenges of IT managers		
	1.2	Network Management: Goals, organization and functions		
	1.3	Network management architecture and organization network management perspectives		
2		**OSI Network Management**	2,3	08
	2.1	Network management standards		
	2.2	Network management models		
	2.3	Organization model		
	2.4	Information model		
	2.5	Communication model and functional model		
	2.6	Abstract syntax notation – encoding structure, macros functional model CMIP/CMISE		
3		**Internet Management (SNMP)**	1,2,3	13
	3.1	SNMP-organizational model-		
	3.2	System overview.		

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	3.3	Information model, communication model, functional model		
	3.4	SNMP proxy server, Management information, Protocol		
	3.5	Remote monitoring. RMON		
4	**Broadband Network Management**		1,3	10
	4.1	Broadband networks and services, ATM Technology – VP, VC, ATM Packet, Integrated service, ATM LAN emulation, Virtual LAN		
	4.2	ATM Network Management – ATM network reference model, integrated local management interface. ATM management information base, role of SNMP and ILMI in ATM management.		
	4.3	M1, M2, M3, M4 interface. ATM digital exchange interface management		
5	**Network Management Applications**		2,3	08
	5.1	Configuration management.		
	5.2	Fault management		
	5.3	Performance management		
	5.4	Event correlation techniques		
	5.5	Security management		
	5.6	Accounting management, report management, policy based management services		
	5.7	Level management	1,2,3	
6	**Telecommunication Management Networks(TMN)**			07
	6.1	Need for TMN		
	6.2	Conceptual model		
	6.3	TMN standards		
	6.4	TMN management services architecture and TMN implementation		
			Total	**52**

References:

1. Mani Subramaniam, ―*Network Management Principles and Practise"*, Addison Wisely, New York, 2000.
2. Lakshmi G. Raman, ― *Fundamental of Telecommunications Network Management"* Eastern Economy Edition, IEEE Press New Delhi.
3. Salh Aiidarons, Thomas Plevoyak ―*Telecommunications Network Technologies and implementations"* Eastern Economy Edition, IEEE press New Delhi-1998.