

UNIT - 8

Introduction to wireless LAN 802.11X technologies, Evolution of Wireless LAN Introduction to 802.15X technologies in PAN Application and architecture Bluetooth Introduction to Broadband wireless MAN, 802.16X technologies.

TEXT BOOK:

1. **Wireless Telecom Systems and networks**, Mullet: Thomson Learning 2006.

REFERENCE BOOKS:

1. **Mobile Cellular Telecommunication**, Lee W.C.Y, MGH, 2nd, 2009.
2. **Wireless communication** - D P Agrawal: 2nd Edition Thomson learning 2007.
3. **Fundamentals of Wireless Communication**, David Tse, Pramod Viswanath, Cambridge 2005.
4. S. S. Manvi, M. S. Kakkasageri, "**Wireles and Mobile Network concepts and protocols**", John Wiley India Pvt. Ltd, 1st edition, 2010.
5. "**Wireless Communication – Principles & Practice**", T.S. Rappaport, PHI 2001.

DIGITAL SWITCHING SYSTEMS

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|---------------------------|----------|------------|-------|
| Subject Code | : 10EC82 | IA Marks | : 25 |
| No. of Lecture Hrs/Week | : 04 | Exam Hours | : 03 |
| Total no. of Lecture Hrs. | : 52 | Exam Marks | : 100 |

UNIT - 1

Developments of telecommunications, Network structure, Network services, terminology, Regulation, Standards. Introduction to telecommunications transmission, Power levels, Four wire circuits, Digital transmission, FDM, TDM, PDH and SDH, Transmission performance.

UNIT - 2

EVOLUTION OF SWITCHING SYSTEMS: Introduction, Message switching, Circuit switching, Functions of switching systems, Distribution systems, Basics of crossbar systems, Electronic switching, Digital switching systems.

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H.O.D.

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Mysore - 570 015

DIGITAL SWITCHING SYSTEMS: Fundamentals : Purpose of analysis, Basic central office linkages, Outside plant versus inside plant, Switching system hierarchy, Evolution of digital switching systems, Stored program control switching systems, Digital switching system fundamentals, Building blocks of a digital switching system, Basic call processing.

UNIT - 3

TELECOMMUNICATIONS TRAFFIC: Introduction, Unit of traffic, Congestion, Traffic measurement, Mathematical model, lost call systems, Queuing systems.

UNIT - 4

SWITCHING SYSTEMS: Introduction, Single stage networks, Gradings, Link Systems, GOS of Linked systems.

UNIT - 5

TIME DIVISION SWITCHING: Introduction, space and time switching, Time switching networks, Synchronisation.

UNIT - 6

SWITCHING SYSTEM SOFTWARE: Introduction, Scope, Basic software architecture, Operating systems, Database Management, Concept of generic program, Software architecture for level 1 control, Software architecture for level 2 control, Software architecture for level 3 control, Digital switching system software classification, Call models, Connect sequence, Software linkages during call, Call features, Feature flow diagram, Feature interaction.

UNIT - 7

MAINTENANCE OF DIGITAL SWITCHING SYSTEM: Introduction, Scope, Software maintenance, Interface of a typical digital switching system central office, System outage and its impact on digital switching system reliability, Impact of software patches on digital switching system maintainability, Embedded patcher concept, Growth of digital switching system central office, Generic program upgrade, A methodology for proper maintenance of digital switching system, Effect of firmware deployment on digital switching system, Firmware-software coupling, Switching system maintainability metrics, Upgrade process success rate, Number of patches applied per year, Diagnostic resolution rate, Reported critical and major faults corrected, A strategy improving software quality, Program for software process improvement, Software processes improvement, Software processes, Metrics, Defect analysis, Defect analysis.



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UNIT - 8

A GENERIC DIGITAL SWITCHING SYSTEM MODEL: Introduction, Scope, Hardware architecture, Software architecture, Recovery strategy, Simple call through a digital system, Common characteristics of digital switching systems. Analysis report. Reliability analysis.

TEXT BOOKS:

1. **Telecommunication and Switching, Traffic and Networks** - J E Flood: Pearson Education, 2002.
2. **Digital Switching Systems**, Syed R. Ali, TMH Ed 2002.

REFERENCE BOOK:

1. **Digital Telephony** - John C Bellamy: Wiley India India Pvt. Ltd, 3rd Ed, 2008.

ELECTIVE -4 (GROUP D)

DISTRIBUTED SYSTEM

| | | | |
|---------------------------|-----------|------------|-------|
| Subject Code | : 10EC831 | IA Marks | : 25 |
| No. of Lecture Hrs/Week | : 04 | Exam Hours | : 03 |
| Total no. of Lecture Hrs. | : 52 | Exam Marks | : 100 |

UNIT - 1

CHARACTERIZATION OF DISTRIBUTED SYSTEMS: Introduction, Examples of distributed systems, Resource sharing and the web, Challenges.

UNIT - 2

SYSTEM MODELS: Introduction, Architectural models, Fundamental mode.

UNIT - 3

INTERPROCESS COMMUNICATION: Introduction, The API for the internet protocols, External data representation and marshalling, Client-server communication, Group communication.

UNIT - 4

DISTRIBUTED OBJECTS AND REMOTE INVOCATION: Introduction, Communication between distributed objects, Remote procedure call, Events and notifications.