## SEMESTER-I

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**PRACTICAL**

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## SEMESTER-II

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**Total** 11

## LIST OF ELECTIVES

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SEMESTER – I

10277DM101 DISCRETE MATHEMATICS

UNIT – I:  FUNDAMENTAL STRUCTURES


UNIT – II:  LOGIC


UNIT – III:  COMBINATORICS


UNIT – IV:  MODELING COMPUTATION AND LANGUAGES


UNIT – V:  DISCRETE PROBABILITY


REFERENCES

Unit I:


Unit II:


Unit III:


Unit IV:


Unit V:


REFERENCES:

7. Data structures using C and C++, Langsam, Augenstein and Tanenbaum, PHI.
Unit – I


Unit – II


Unit – III


Unit – IV

Network Management – Areas of Management : Network Monitoring – Network Controlling – SNMP – V1, V2, V3

Unit – V

RMON 1 – RMON 2 – Management Information Base – MIB – case study: NS2 Simulator

TOTAL:45

REFERENCES:

4. SNMP v1,v2,v3 & RMON 1 & 2 by William Stallings, Pearson Education Asia Inc.,
1. Linked lists
2. Multistacks
3. Double Ended Queue (Deques) & Circular Queues
4. Min Heap
5. Deaps
6. Leftist Heap
7. AVL Tree
8. B:Tree
9. Quick Sort
10. Greedy algorithm
11. Knapsack using Dynamic Programming
12. Graph coloring using backtracking
SEMESTER-II

10244CS104  ADVANCED DATABASE TECHNOLOGY

UNIT I  DISTRIBUTED DATABASES


UNIT II  OBJECT ORIENTED DATABASES


UNIT III  EMERGING SYSTEMS


UNIT IV  DATABASE DESIGN ISSUES


UNIT V  CURRENT ISSUES


TOTAL : 45

REFERENCES:

UNIT I  FUNDAMENTALS OF COMPUTER DESIGN AND PIPELINING  9


UNIT II  INSTRUCTION LEVEL PARALLELISM WITH DYNAMIC APPROACHES  9


UNIT III INSTRUCTION LEVEL PARALLELISM WITH SOFTWARE APPROACHES  9

Compiler techniques for exposing ILP – Static branch prediction – VLIW – Advanced compiler support – Hardware support for exposing more parallelism – Hardware versus software speculation mechanisms – Case studies.

UNIT IV MULTIPROCESSORS AND MULTICORE ARCHITECTURES  9


UNIT V MEMORY AND I/O  9


REFERENCES:

1. Socket Programming (Using Threads)
   a. TCP Sockets
   b. UDP Sockets
  c. Applications using Sockets (Chat/File Transfer)
2. Simulation of Routing Protocols
3. Development of applications such as DNS/HTTP
4. Performance evaluation of transport protocols using NS2 simulator,
5. Performance evaluation of any two routing protocols using NS2 simulator.
6. Study of all SQL commands
7. Implement the concept of Normalization
8. Implement the inventory control system with a reorder level
9. Develop a package for a bank to maintain its customer details
10. Develop a package for the payroll of a company.
ELECTIVES FOR SEMESTER-II

10244CSE11  OBJECT ORIENTED SYSTEMS ENGINEERING  3 0 0 3

UNIT I  CLASSICAL PARADIGM  9
System Concepts – Project Organization – Communication – Project Management

UNIT II  PROCESS MODELS  9

UNIT III  ANALYSIS  9

UNIT IV  DESIGN  9

UNIT V  IMPLEMENTATION, DEPLOYMENT AND MAINTENANCE  9

TOTAL: 45

REFERENCES

UNIT I INTRODUCTION AND QOS


UNIT II OPERATING SYSTEMS


UNIT III FILE SYSTEMS AND NETWORKS


UNIT IV COMMUNICATION


UNIT V SYNCHRONIZATION


TOTAL: 45

REFERENCES

UNIT I JAVA FUNDAMENTALS 9


UNIT II NETWORK PROGRAMMING IN JAVA 9


UNIT III DISTRIBUTED COMPUTING IN JAVA 9


UNIT IV MULTI–TIER APPLICATION DEVELOPMENT 9


UNIT V MOBILE APPLICATION DEVELOPMENT 9


TOTAL: 45

REFERENCES

UNIT I  DIGITAL IMAGE FUNDAMENTALS

Elements of digital image processing systems, Elements of visual perception, psycho visual model, brightness, contrast, hue, saturation, mach band effect, Color image fundamentals :RGB,HSI models, Image acquisition and sampling, Quantization, Image file formats, Two:dimensional convolution, correlation, and frequency responses.

UNIT II  IMAGE TRANSFORMS

1D DFT, 2D transforms – DFT, DCT, Discrete Sine, Walsh, Hadamard, Slant, Haar, KLT, SVD, Radon, and Wavelet Transform.

UNIT III  IMAGE ENHANCEMENT AND RESTORATION

Histogram modification and specification techniques, Noise distributions, Spatial averaging, Directional Smoothing, Median, Geometric mean, Harmonic mean, Contra harmonic filters, Homomorphic filtering, Color image enhancement. Image Restoration – degradation model, Unconstrained and Constrained restoration, Inverse filtering, Wiener filtering, Geometric transformations – spatial transformations, Gray: Level interpolation,

UNIT IV  IMAGE SEGMENTATION AND RECOGNITION


UNIT V  IMAGE COMPRESSION

Need for image compression, Huffman, Run Length Encoding, Arithmetic coding, Vector Quantization, Block Truncation Coding. Transform Coding – DCT and Wavelet. Image compression standards.

TOTAL: 45
REFERENCES:

UNIT I  GENERAL OVERVIEW OF THE SYSTEM


UNIT II  BUFFER CACHE


UNIT III SYSTEM CALLS FOR FILE SYSTEM


UNIT IV THE STRUCTURE OF PROCESSES


UNIT V PROCESS SCHEDULING AND MEMORY MANAGEMENT POLICIES


REFERENCES