Branch-and-Bound: Assignment Problem, Knapsack Problem, Traveling Salesperson Problem.
Approximation Algorithms for NP-Hard Problems – Traveling Salesperson Problem, Knapsack Problem

UNIT – 8 **6 Hours**

PRAM ALGORITHMS: Introduction, Computational Model, Parallel Algorithms for Prefix Computation, List Ranking, and Graph Problems,

Text Books:

1. Anany Levitin: Introduction to The Design & Analysis of Algorithms, 2nd Edition, Pearson Education, 2007.
   (Listed topics only from the Chapters 1, 2, 3, 5, 7, 8, 10, 11).
2. Ellis Horowitz, Sartaj Sahni, Sanguthevar Rajasekaran: Fundamentals of Computer Algorithms, 2nd Edition, Universities Press, 2007.
   (Listed topics only from the Chapters 3, 4, 5, 13)

Reference Books:

1. Thomas H. Cormen, Charles E. Leiserson, Ronal L. Rivest, Clifford Stein: Introduction to Algorithms, 3rd Edition, PHI, 2010.
2. R.C.T. Lee, S.S. Tseng, R.C. Chang & Y.T.Tsai: Introduction to the Design and Analysis of Algorithms A Strategic Approach, Tata McGraw Hill, 2005.

UNIX AND SHELL PROGRAMMING
(Common to CSE & ISE)

Subject Code: 10CS44	**I.A. Marks : 25**
Hours/Week : 04	**Exam Hours: 03**
Total Hours : 52	**Exam Marks: 100**

PART – A

UNIT – 1 **6 Hours**

The Unix Operating System, The UNIX architecture and Command Usage, The File System

UNIT - 2 **6 Hours**

Basic File Attributes, the vi Editor

UNIT - 3 **7 Hours**

The Shell, The Process, Customizing the environment

UNIT - 4 **7 Hours**
More file attributes, Simple filters

PART – B

UNIT - 5 **6 Hours**
Filters using regular expressions,

UNIT - 6 **6 Hours**
Essential Shell Programming

UNIT - 7 **7 Hours**
awk – An Advanced Filter

UNIT - 8 **7 Hours**
perl - The Master Manipulator

Text Book:

1. Sumitabha Das: UNIX – Concepts and Applications, 4th Edition, Tata McGraw Hill, 2006.
   (Chapters 1.2, 2, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19)

Reference Books:

1. Behrouz A. Forouzan and Richard F. Gilberg: UNIX and Shell Programming**,** Cengage Learning, 2005.
2. M.G. Venkateshmurthy: UNIX & Shell Programming**,** Pearson Education, 2005.

MICROPROCESSORS
(**Common to CSE & ISE)**

Subject Code: 10CS45	**I.A. Marks : 25**
Hours/Week : 04	**Exam Hours: 03**
Total Hours : 52	**Exam Marks: 100**

PART A

UNIT – 1 **7 Hours**

Introduction, Microprocessor Architecture – 1: A Historical Background, The Microprocessor-Based Personal Computer Systems.
The Microprocessor and its Architecture: Internal Microprocessor Architecture, Real Mode Memory Addressing.