



Vidyavardhaka Sangha®, Mysore
VIDYAVARDHAKA COLLEGE OF ENGINEERING

Autonomous Institute, affiliated to Visvesvaraya Technological University, Belagavi
(Approved by AICTE, New Delhi & Government of Karnataka)

Accredited by NBA (CV, CS, EE, EC, IS & ME) | NAAC with 'A' Grade

P.B. No. 206, Gokulam III Stage, Mysuru-570 002, Karnataka, India

Phone: +91 821 4276201 / 202 / 225, Fax: +91 824 2510677

Web: <http://www.vvce.ac.in>

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SEMESTER – VI

Course Name : Technical Proficiency Enhancement Course (For CS, IS and AI&ML Branch)

Course Code : 21TP67

PART – A : REGULAR PROGRAMS

SEARCHING AND SORTING

1. Insertion Sort - Part 1
2. Insertion Sort - Part 2
3. Correctness and the Loop Invariant
4. Running Time of Algorithms
5. Counting Sort 1

RECURSION AND BIT MANIPULATION

6. The Power Sum
7. Counter Game

GREEDY AND DYNAMIC PROGRAMMING

8. Sherlock and Cost
9. Marc's Cakewalk

STRINGS

10. Strong Password
11. Caesar Cipher
12. Pangrams

RANGE QUERIES

13. Prefix Sum Array
14. Fenwick Tree Construction
15. Fenwick Tree - Sum of Elements



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PART B : ADDITIONAL PROGRAMS LIST

SEARCHING AND SORTING

1. Closest Numbers
2. Ice Cream Parlor

RECURSION AND BIT MANIPULATION

3. Maximizing XOR
4. Sum vs XOR
5. Flipping Bits

GREEDY AND DYNAMIC PROGRAMMING

6. Mark and Toys
7. Greedy Florist

STRINGS

8. Camelcase
9. Mars Exploration
10. Funny String
11. Alternating Characters
12. Beautiful Binary String

RANGE QUERIES

13. Fenwick Tree – Add a value