

Pune Vidyarthi Griha's
COLLEGE OF ENGINEERING, NASHIK – 4
COMPUTER ENGINEERING DEPARTMENT

Subject : COMPILER

ASSIGNMENT NO – 06

Unit : VI

1. Discuss the principle sources of code optimization. Give proper examples.
2. Write a short note on data flow analysis.
3. Explain fundamental data flow properties.
4. What are induction variables? Explain induction variable elimination algorithm?
5. What do you mean by a common sub-expression? Discuss the algorithm for elimination of common sub-expression.
6. Write a short notes on : 1) Reaching definition 2) Live variables
7. Compare quadruples, triples and indirect triples with respect to their use in code optimization.
8. What is control-flow analysis?

Consider following basic block :

$$T_1 = b + c$$

$$T_2 = d * e$$

$$T_3 = b + c$$

$$T_4 = T_2 * T_3$$

$$T_5 = T_4 * f$$

$$x = T_1 - T_5$$



9. Which of the local optimization techniques are possible to be carried out with above basic block?

***** **Best of Luck** *****