

12. (b) (i) Describe any two storage allocation strategies in detail. (10)
 (i) How does the parameter passing technique call-by-value implemented? (6)
13. (a) (i) Explain the Back patching process for the following expression. (10)
 $p < q \text{ or } r < s \text{ and } t < u$

(ii) Define activation tree and what is meant by an activation of a procedure? (6)

(OR)

13. (b) Explain about the methods of translating Boolean Expressions (16)
14. (a) (i) Explain the various issues involved in the design of code generation (8)
 (ii) Describe in detail about run-time storage management (8)

(OR)

14. (b) (i) Construct a DAG for the following basic block and generate code by labeling the nodes based on the gencode() algorithm discussed. (8)

$d := b * c$
 $e := a + b$
 $b := b * c$
 $a := e - d$

(ii) Generate optimal code using Dynamic Programming technique for the assignment statement, $x := (a/b - c) / d$. Assume unit instruction costs (8)

15. (a) (i) Discuss peep hole optimization and the transformations on peep hole optimization (8)
 (ii) Explain the Optimization of Basic block (8)

(OR)

15. (b) (i) For the following flow graph, compute the definitions reaching each and every block (16)

