

B.E. Information Technology (2012) (In Sem-I)  
Modern Compilers (Elective-I)  
2012 Pattern.

Marking Scheme  
**BE/In Sem - 65**

Max Marks - 30.

Q.1. (a) 02 marks - stack frame diagram.  
04 marks - explanation.

(b) IR definition - 1 mark.  
03 Marks - qualities of IR.

Q.2. (a) 6-1/2 mark for <sup>OR</sup> each phase (total 12 phase description).

(b) 04 marks - correct translation into IR tree.

Q.3. (a) 01 mark - Basic block

01 mark - trace

04 marks - algorithm for trace generation.

(b) 04 marks - correct tree of statement.  
OR.

Q.4 (a) 02 marks - Pentium architecture.

04 marks - 2 problems & their solutions.

(b) 04 marks - 2 marks for each definition & example.

Q.5. (a) 06 - correct algorithm for Mark-and-sweep.

(b) 02 marks - tricolor marking

02 marks - incremental garbage collection.

OR

Q.6. (a) 02 Marks - coalescing.

02 marks - Strategy for coalescing

(b) 04 marks - each phase of graph coloring with simplification