Mid-semester examination, M.Sc. Semester 2
(Finite automata and compiler design)
Full Marks - 20
Time - 1 hour

Answer any four questions. **[4 x 5 marks = 20 marks]**

1. Write the formal definition of regular grammar. Give the regular grammar for the language $L = \{0^n \mid n>=1\}$ over $T = \{0\}$.
2. Design a DFA that accepts an odd number of *1*s.
3. What is an ambiguous grammar ? How can you eliminate ambiguity ? Explain with an example. Justify also.
4. Name and explain the different error recovery strategies used in parsing.
5. Write quadruples, triples, and indirect triples for the expression:

$$(a*b) + (c+d) - (a+b+c+d)$$