2007 ANDHRA UNIVERSITY
III B.TECH II SEMESTER DEGREE EXAMINATION
B.TECH COMPUTER SCIENCE ENGINEERING
COMPILER DESIGN

TIME : 3 HOUR

MARK : 70

FIRST QUESTION IS COMPULSORY

ANSWER ANY FOUR FROM THE REMAINING QUESTIONS

ALL QUESTIONS CARRY EQUAL MARKS

ANSWER ALL PARTS OF ANY QUESTION AT ONE PLACE

1. a) Differentiate between Phase and Pass

b) Define parsing tree

c) Define recursion

d) Differentiate between terminator and variable

e) Define DAG

f) Differentiate between assembler and interpreter

g) Define handle

2. a) Define FSM. Explain the application of FSM in the design of 'LEXICAL ANALYSER'.

b) Explain the application of grammar in the design of 'COMPILER'.

3. Construct First & Follow for the following grammar.
E ? TE1
E1 ? +TE1/E
T ? FT1
T1 ? FT1/E
F ? (E)/id

4. Define 'LEFT RECURSION'. Give algorithm for the elimination of "LEFT RECURSION".

5. a) Translate a* - (b+c) into postfix form.

b) Write quadruples, triples for the expression.
-(a+b) * (c+d) - (a+b+c)

6. Construct SLR parsing table for the following grammar
S1 ? S
S ? CC
C ? Cc
C ? d

7. Explain in brief in brief about intermediate code optimization algorithms.

8. Explain

a) Peephole optimization
b) Error detection and recovery.