Seat No.	

SV-206

Total No. of Pages : 2

T.E. (CSE) (Part - II) (Semester - VI) Examination, May - 2019
COMPILER CONSTRUCTION (Revised)
Sub. Code : 66858

Day and Date : Monday, 13-05-2019

Time : 09.30 a.m. to 11.30 a.m.

Total Marks : 50

Instructions : 1) All questions are compulsory.
2) Figures to the right indicate full marks.

SECTION - I

Q1) a) Describe the use of DFA for a construction of a lexical analyzer. Illustrate with example. [4]

OR

a) Construct finite automata accepting the set of all strings ending with 101 where the Language is defined on {0, 1}. [4]

b) Enumerate and describe the different compiler construction tools. [6]

Q2) a) Compute the FIRST and FOLLOW sets for the grammar given below [6]

$E \rightarrow TE'$

$E' \rightarrow +TE' | \varepsilon$

$T \rightarrow FT'$

$T' \rightarrow *FT' | \varepsilon$

$F \rightarrow (E) | id$

OR

a) Explain different error-recovery techniques used in syntax analysis. [6]

b) Explain Specification of Tokens in Lexical Analysis. [4]

Q3) What are features of LR parser? Write the LR parsing algorithm. [5]

P.T.O.

SECTION - II

Q4) a) What are S attributed definitions? Explain with the help of an example. [6]

OR

a) What is backpatching? Explain it with a suitable SDD. [6]

b) Generate three address code for the following block : [4]

a = b * (c + d)

e = ((a + b) * (a + c))

Q5) a) What is a dominator tree? Draw the dominator tree for the given flow graph. [6]

OR

a) What is peephole optimization? Describe different characteristics of peep-hole Optimization. [6]

b) Discuss different issues in design of code generator. [4]

Q6) What is a basic block? Draw DAG for the given basic block [5]

a=b+c

b=b–d

c=c+d

e=b+c