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VI- SEMESTER B.Tech [CO]
MID SEMESTER EXAMINATION MARCH-2018

CO-302: Compiler Design

Time: 1:30 Hours Max. Marks: 30

Note : 1) Attempt all questions.
2) All parts of a question must be attempted together.
3) Assume suitable missing data, if any.

Q.No. 1

a. Give an example of grammer to show that determinism cannot eliminate ambiguity ? (2)

b. Write a regular expression for real number and draw FA for that regular expression ? (3)

c. How a compiler differentiate between keywords and identifiers ? (3)

Q.No. 2

a. Rectify the problems with the following grammers to make them suitable for LL(1) parsing: (4)

i) S →Sa/Sb/AB/C/DEF

ii) A→da/acB ; B→abB/daA/Af

b. Design a PDA accepting language $L=\{a^n b^n \mid n \geq 0\}$ (4)

Q.No. 3

a. For the string id+id*id+id and the grammer (4)

E →E+T/T T→T*F/F F→id

Find i) leftmost derivation ii)rightmost derivation iii) parse tree

iv) Is the grammer ambiguous ?

b. For the grammer (10)

S→aBDh B→cC C→bC/Є D→EF
E→g/Є F→f/Є

Check whether the string "acbbgfh" is parsable by LL(1) parser or not
(Є is epsilon . Show all steps involved in parsing)